

**A STUDY ON LIVING CONDITIONS OF SALT WORKERS WITH SPECIAL
REFERENCE TO MUTHIAHPURAM AREA OF THOOTHUKUDI DISTRICT**

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BY

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CERTIFICATE

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CHAPTER 1

1.1 INTRODUCTION

Salt is one of the basic needs of the human beings. It is also one of the older commodities that were produced, exchanged and later traded. Of the food items produced and exported from India, Salt plays a major role in contributing towards the earning of foreign exchange. As one of the most important mineral sources of the country, its export value is equivalent to that of seafood and keeps on increasing every year.

In the 16th century, the salt manufacturing was a source of income for the government. The government had a monopoly control over salt production and trading. Since the early part of the 20th century salt producers have been adding iodine to table salt. This private effort alone has protected countless pregnant mothers and children from diseases such as neural retardation of children caused chiefly due to iodine deficiency.

Although, salt production and the related logistical activities need higher investment and operational costs, the profitability is higher and best commensurate with acreage unless the yield or production is thwarted by natural calamities such as disproportionate monsoon, storm and the like. In addition, after considering its importance with respect to foreign exchange and food value, the industry delves into every possible area of enhancement to develop the related optimum technology.

1.2 ECONOMIC IMPORTANCE OF SALT

Salt is an important secondary food than a food additive. Salt is present in all naturally available food items such as cereals, fruits, vegetables and the like. As a

mineral, it is an essential ingredient which is vital for the bodily metabolic functions of humans and animals.

Iodine and other chemicals are added with salt in small quantities to help in preventing thyroid disorders and other serious abnormalities. Salt is crucial for many industries. Its compounds make it one of the most important materials in the chemical industry, since more than 50 per cent of the chemical products depend on it at a stage of their manufacture.

It is also used in the manufacturing of thousands of other commodities including glass, paper, rubber and textiles as well as in water softening systems for industry and domestic use. Furthermore, it is used as a de-icing agent and as most commonly known food ingredient. The chemical industry is by far the largest consumer of salt. It is the raw material for the production of chlorine (Cl) and caustic soda (sodium hydroxide, NaOH) which is one of the most abundant and common chemical elements on Earth.

Further, it is an extremely effective disinfectant and essential component in the chemical manufacture of thousands of vital products used every day, such as PVC (used in the construction of houses), for instance. Caustic soda solution is an essential ingredient in many industrial operations, including pulp and paper, detergent and the chemical processing industry.

It is also used in alumina, petrochemical and textile industries. In addition, it is present, as a very important mineral diet in nearly all living organisms including plants. India is the third largest Salt producing Country in the World after China and USA with Global annual production being about 230 million tonnes.

The average annual supplies of salt for human consumption are about 59 lakh tonnes and that for industrial consumption is about 107 lakh tonnes. India exports surplus production of salt to the tune of about 35 lakh tonnes on an average; During the year

2011-12, a record export of 38 lakh tonnes was achieved primarily due to surge of demand from China.

Other major countries importing salt from India are Japan, Bangladesh, Indonesia, South Korea, North Korea, Malaysia, U.A.E., Vietnam, Qatar and the like. Government of India has adopted the strategy of Universal Salt Iodisation and Consumption for elimination of Iodine Deficiency Disorders (IDD) in the country under the National Iodine Deficiency Disorders Control Programme(NIDDCP).

The word ‘salt’ generally refers to ‘common salt’ or Sodium Chloride [NaCl]. The word “Sodium” (Na) refers to a highly unstable metal that can burst into flame and the word “chlorine” (Cl) refers to a poisonous gas. But the two combine to give sodium chloride that is., salt is physiologically absolutely necessary for human life and for animals.

Chemically, it is 60.66 per cent chlorine and 39.34 per cent sodium. Saltiness is one of the basic human tastes. Salt in its natural form as a crystalline mineral is known as rock salt or halite. Salt is present in vast quantities in the sea where it is the main mineral constituent, with the open ocean having about 35 grams (1.2 oz) of solids per litre, a salinity of 3.5 per cent. Salt is one of the oldest and most ubiquitous of food seasonings and salting is an important method of food preservation.

1.3 GLOBAL SALT INDUSTRY

In the globe, salt is obtained from two sources: rock salt and brine. Rock salt is simply crystallized salt, also known as halite. It is the result of the evaporation of ancient oceans millions of years ago. Large deposits of rock salt are found in the United States, Canada, Germany, Eastern Europe, and China.

In the United States, salt domes are found along the Gulf Coast of Texas and Louisiana. Rock salt occurs in vast beds of sedimentary evaporate minerals that

result from the drying up of enclosed lakes, playas, and seas. Salt beds may be up to 350 m thick and underlie broad areas.

Salt is extracted from underground beds either by mining or by solution mining using water. Brine is the water containing a high concentration of salt. The most obvious source of brine is the ocean, but it can also be obtained from salty lakes such as the Dead Sea and from underground pools of salt water.

Large deposits of brine are found in Austria, France, Germany, India, the United States, and the United Kingdom. China and U.S. dominate in world salt production, combining for 40 per cent of the world's quarter billion tonnes of salt produced each year.

By the late 1880s, open pans were replaced by a series of closed pans, in a device known as a multiple-effect vacuum evaporator, which had been used in the sugar industry for about 50 years. Today the United States is the world's largest producer of salt, followed by China, Russia, Germany, the United Kingdom, India, and France¹.

The manufacture of salt is one of the oldest chemical industries. A major source of salt is seawater and the world's oceans are the virtually inexhaustible source of salt, and this abundance of supply means that reserves have not been calculated.

1.4 INDIAN SALT INDUSTRY

India is the third largest salt producing country in the World after USA and China with Global annual production being about 230 million tonnes. The growth and

¹ Sailesh Mohan, S. and Prabhakaran, D., "Review of Salt and Health: Situation in South East Asia Region" Published Technical paper of World Health Organisation, the Regional Office of South East Asia, Bangkok, Technical Working Group Meeting on Regional Action Plan, Thailand, 11-13 June 2013.

achievement of Salt Industry over the last 60 years has been spectacular. When India attained Independence in 1947, salt was being imported from the United Kingdom and Aden to meet its domestic requirement. But today it has not only achieved self-sufficiency in production of salt to meet its domestic requirement, but also in a position of exporting surplus salt to foreign countries.

The production of salt during 1947 was 1.9 million tonnes which has increased tenfold to record 22.18 million tonnes during 2011-12. In a very short period of time sufficiency was achieved in 1953 and made a dent in the export market. Since then, the country has never resorted to imports.

Exports touched an all-time high of 1.6 million tonnes in the year 2001. The per-capita consumption of salt in the country is estimated at about 12 kg, which includes edible as well as industrial salt. The current annual requirement of salt in the country is estimated to be 60 lakhs tonnes for industrial use. Caustic soda, soda ash, chlorine and the like are the major salt-based industries. Besides about 15 lakhs tonnes of salt are exported every year.

In India, Sea salt constitutes about 70 per cent of the total salt production in the country. Salt manufacturing activities are carried out in the coastal states of Gujarat, Tamil Nadu, Andhra Pradesh, Maharashtra, Karnataka, Orissa, West Bengal, Goa and hinter land State of Rajasthan. Among these States only Gujarat, Tamil Nadu and Rajasthan produce salt surplus to their requirement.

These three states produce about 70 per cent, 15 per cent and 12 per cent respectively of the total salt produced in the country and cater to the requirement of all the salt deficit and non-salt producing states. Private sector plays a dominant role contributing over 95 per cent of the salt production, while the public sector contributes about 2 to 3 per cent and the co-operative sector contributes about 3 per cent.

TABLE 1.1
STATE-WISE PRODUCTION OF SALT IN INDIA (In Lakh Tonnes)

Year	Gujarat	Tamil Nadu	Rajas Than	Andhra Pradesh	Maha Rashtra	Other States	Total
2005-'06	146.92 (77.45)	21.86 (11.52)	13.76 (7.25)	4.28 (2.26)	1.92 (1.01)	0.95 (0.50)	189.69 (100)
2006-'07	137.23 (76.67)	20.50 (11.45)	15.60 (8.72)	3.18 (1.78)	1.88 (1.05)	0.59 (0.32)	178.98 (100)
2007-'08	127.65 (71.54)	19.18 (10.75)	25.30 (14.18)	3.2 (1.79)	2.4 (1.34)	0.72 (0.40)	178.45 (100)
2008-'09	149.04 (77.82)	16.52 (8.63)	20.52 (10.72)	3.01 (1.57)	1.88 (0.98)	0.54 (0.28)	191.51 (100)
2009-'10	178.71 (74.61)	24.01 (10.03)	29.87 (12.47)	4.39 (1.83)	1.85 (0.77)	0.68 (0.28)	239.51 (100)
2010-'11	145.15 (77.99)	21.44 (11.52)	14.28 (7.67)	2.99 (1.61)	1.80 (0.97)	0.44 (0.24)	186.10 (100)
2011-'12	170.19 (76.73)	24.77 (11.17)	21.89 (9.87)	3.05 (1.38)	1.55 (0.70)	0.34 (0.15)	221.79 (100)
2012-'13	194.24 (79.13)	26.70 (10.88)	18.25 (7.44)	4.03 (1.64)	1.60 (0.65)	0.65 (0.26)	245.47 (100)
2013-'14	180.95 (78.61)	25.87 (11.24)	17.01 (7.39)	4.43 (1.92)	1.45 (0.63)	0.48 (0.21)	230.19 (100)
2014-'15	217.67 (80.96)	22.74 (8.46)	21.58 (8.03)	5.01 (1.86)	1.59 (0.59)	0.28 (0.10)	268.87 (100)
2015-'16	227.07 (82.14)	19.82 (7.17)	23.84 (8.62)	3.93 (1.42)	1.40 (0.51)	0.38 (0.14)	276.44 (100)

Source: Annual Reports of the Salt Department, India

From above Table 1.1, it is clear that Gujarat occupies the Top most leading position in its contribution to the production of salt in India with the highest average score of 170.44 lakh tonnes(77.89%) of past eleven years' salt production. The second leading position is secured by Tamil Nadu with the average score of 22.13 lakh tonnes (10.11%) followed by Rajasthan with the average score of 20.17 lakh tonnes (9.22%).

Andhra Pradesh stands in a fourth position with 3.77 lakh tonnes (1.72%) followed by Maharashtra with the lowest score of 1.76 lakh tonnes (0.81%) and all other states contribute very meager proportion of 0.55 lakh tonnes (0.25%) collectively.

While compared to Gujarat, salt production in Tamil Nadu is not appreciable due to the factors such as highest electricity cost, non-availability of subsidies and the like. Though Tamil Nadu state secures negative growth rate percentage of 0.98, it leads second in the average salt production of past ten years from 2005-2016.

MAJOR SALT PRODUCING STATES IN INDIA

Sea water is an inexhaustible source of salt. Salt production along the coast is limited by weather and soil conditions. The major salt producing centers are

- Marine Salt works along the coast of Gujarat (Jamnagar, Mithapur, Jhakhar, Chira, Bhavnagar, Rajula, Dahej, Gandhidham, Kandla, Maliya, Lavanpur),
- Tamil Nadu (Thoothukudi, Vedaranyam, Covelong),
- Andhra Pradesh (Chinnaganjam, Iskapalli, Krishnapatnam, Kakinada & Naupada),
- Maharashtra (Bhandup, Bhayandar, Palghar),
- Orissa (Ganjam, Sumadi) and
- West Bengal (Contai)
- Inland Salt Works in Rajasthan using lake brine and sub-soil brine viz. Sambhar Lake, Nawa, Rajas, Kuchhaman, Sujangarh and Phalodi
- Salt works in Rann of Kutch using sub-soil brine viz: Kharaghoda, Dhrangadhra; Santalpur
- Rock Salt Deposits at Mandi in the State of Himachal Pradesh

1.5 TAMIL NADU SALT INDUSTRY

Tamil Nadu is the second largest producer of salt in India, next only to Gujarat. The salt in the state is produced from saltpans along the sea coast. Thoothukudi and Nagapattinam are the two major salt producing districts, accounting for about 80 per cent of the state's salt production. An estimated 32,000 acres of land is used for salt

production in the state, providing livelihoods for large number of people along the coast.

The salt production processes followed in Tamil Nadu are highly primitive and involves intensive manual labour. Moreover, salt being considered as an industry, the policies and priorities are mostly industry related and very little that are workers centric. Apart from these vulnerabilities, the industry is also highly disaster-prone, as these are located along the coastal areas².

1.6 MAJOR SALT PRODUCING CENTRES IN TAMIL NADU

Major Salt Producing Centres in Tamil Nadu namely Thoothukudi, Nagapattinam (Vedaranyam) and Marakkanam have different kinds of salt producers such as marginal, medium and large salt factories of both private and public sector undertakings, cooperative societies, and sub-lease producers. Different types of salt workers are involved in various production and post-production activities.

The profiles of these districts are given separately as below:

1.6.1 Thoothukudi District

Thoothukudi has 20,000 acres of saltpans covering Thoothukudi town, Arumuganeri, Kayal Pattinam, Kulasekarapatinam, Veppalodai and Vembar spread over twenty-two villages. Thoothukudi produces the maximum salt in the state. The saltpans are developed in lands leased either by central government or by the state government.

Central Government leased lands are by and large taken up by Salt Producers' Cooperative Societies and private producers (large, medium and marginal). The

² Balram, V., "A Study on Cost Techniques of Solar Salt Production and Marketing in Tamilnadu", Journal of Agricultural and Applied Economics, Vol-6, 1990.

State Government lands are leased to the Tamil Nadu Salt Corporation. Apart from this, about 8,000 acres of private lands are converted into saltpans.

There is a trend in converting the saltpan area for house sites near Thoothukudi city, given the increase in demand for housing, and parking lots for the Thoothukudi Port. The district is well connected to railway transport system and hence transport of salt is much easier compared to other places like Vedaranyam.

1.6.2 Nagapattinam District – Vedaranyam:

During the 1930s British government levied heavy tax on salt production in India. Mahatma Gandhi started the salt sathyagraha movement against the British government. This salt sathyagraha ignited the national struggle for India's freedom. In Tamil Nadu Dr. Rajagopalachari led the salt yatra and Sardar Vedarathinam Pillai from Vedaranyam took part in the yatra.

Hence, Vedaranyam finds a place in the history of freedom struggle. Vedaranyam has 10,350 acres of saltpan area. Out of which 7,000 acres of state government lands are with two major private salt factory units. One is Sanmar with 3,500 acres and the other is Gujarat Heavy Chemicals Ltd with 3,500 acres of saltpans.

In addition to these, another 350 acres of state government land is used by two other private units. The remaining 3,000 acres of Central Government land is leased to 750 units, who are marginal, medium, large producers and Cooperative Society producers. Vedaranyam faces lack of infrastructure facility like rail transport system and other facilities for the workers and the marginal producers.

The saltpans in Vedaranyam are spread over a stretch of 12 kilometres in a contiguous manner. There are 29 villages engaged in salt production in Vedaranyam.

The distance between the habitations and location of the saltpans ranges between 0.5 to 5 kilometres³.

One third of these villages have landless households who work in saltpans. The majority of the people living in these villages belong to backward community. There are sub-lease holders who un-officially lease the land from the official lease holders of the government. These sub-lease holders pay Rs.5,000 per acre of salt pan as lease amount to the official lease-holders.

1.6.3 Villupuram District – Marakkanam:

The people of ten villages are engaged in salt production in Marakkanam in Villupuram district. Majority of the workers are from the schedule caste communities, who are socially marginalized and economically poor. Salt pan work has been their primary source of livelihood for over 20 years.

The total salt pan area in Marakkanam is 2,900 acres of which 1,500 acres are with a private industry called Padma Chemicals. 60 per cent of the salt pan lands in Marakkanam belong to Central Government and 40 per cent belong to State Government.

There are two Adhidraavidar Workers' Cooperative Societies involved in salt production and one is not functioning. It was reported that there are 92 lessees, but the actual number of lessees will be about two hundred. This is because of the prevalent practice of sub-lease to others.

It was found out from the study that the majority of the salt workers in Marakkanam borrow money from moneylenders at an exorbitant rate of interest. There is

³ Amirthalangam, S., "A Study on Environmental and Living Factors of Salt Workers in Tamil Nadu", Journal of Applied Economics, Vol.7, 2002, pp.17-23.

monopoly of trade in salt with one trader who has been controlling the price and market of salt.

TABLE 1.2
DISTRICT-WISE PRODUCTION OF SALT IN TAMIL NADU (In '000
Tonnes)

Year	Thoothu Kudi	Nagapatti nam	Ramana thapuram	Villu Puram	Tanjore	Other Districts	Total
2005-'06	1451.27 (66.38)	306.71 (14.03)	189.21 (8.65)	62.83 (2.87)	0.5 (0.02)	175.68 (8.04)	2186.20 (100)
2006-'07	1167.17 (56.94)	405.89 (19.80)	212.8 (10.38)	64.08 (3.13)	0.9 (0.04)	198.96 (9.71)	2049.80 (100)
2007-'08	1142.96 (59.60)	366.33 (19.10)	223.19 (11.64)	57.27 (2.99)	0.88 (0.05)	127.17 (6.63)	1917.80 (100)
2008-'09	1063.10 (64.34)	253.37 (15.33)	158.15 (9.57)	45.29 (2.74)	2.26 (0.14)	130.13 (7.88)	1652.30 (100)
2009-'10	1524.05 (63.48)	420.87 (17.53)	228.8 (9.53)	67.94 (2.83)	7.68 (0.32)	151.52 (6.31)	2400.86 (100)
2010-'11	1364.09 (66.04)	331.55 (16.05)	200.22 (9.69)	49.46 (2.39)	5.95 (0.29)	114.37 (5.54)	2065.64 (100)
2011-'12	1548.65 (66.16)	421.38 (18.00)	226.28 (9.67)	43.86 (1.87)	9.18 (0.39)	91.35 (3.90)	2340.70 (100)
2012-'13	1593.59 (65.57)	484.97 (19.95)	238.63 (9.82)	36.66 (1.51)	12.05 (0.50)	64.63 (2.66)	2430.53 (100)
2013-'14	1635.99 (63.46)	567.35 (22.01)	256.05 (9.93)	38.27 (1.48)	17.18 (0.67)	63.27 (2.45)	2578.11 (100)
2014-'15	1554.17 (61.58)	585.3 (23.19)	257.05 (10.19)	41.6 (1.65)	20.15 (0.80)	65.47 (2.59)	2523.74 (100)
2015-'16	1422.90 (62.02)	503.23 (21.93)	239.81 (10.45)	50.75 (2.21)	16.54 (0.72)	61.19 (2.67)	2294.42 (100)

Source: Annual Reports of the Salt Department, Tamil Nadu

From above Table 1.2, it is inherent that of the total salt produced in Tamil Nadu, Thoothukudi occupies the major proportion with the highest average score of 1406.18 thousand tonnes (63.29%) and captures the leading position followed by

Nagapattinam with the average score of 422.45 thousand tonnes (19.02%) in the last eleven years from 2005-'06 to 2015-'16 with the second position.

Ramanathapuram stands in third position with average score of 220.93 thousand tonnes (9.94%) followed by Villupuram with the average score of 50.73 thousand tonnes (2.28%) and captures fourth position. Athiramaipattinam in Tanjore district occupies the very lowest average of 8.48 thousand tonnes (0.38%) and the other districts in Tamil Nadu occupy the considerable average score of 113.07 thousand tonnes (5.09%).

While comparing the Compound Growth rate of Top 5 leading Districts in salt production, Tanjore secures the leading position and shows the highest positive growth rate percentage of 41.9 and Nagapattinam shows the next highest positive growth rate percentage of 5.08 followed by Ramanathapuram with the highest positive growth percentage of 2.398 whereas these three districts secured second, fifth and third position respectively on the basis of average salt production of past eleven years from 2005-2016.

The negative Compound Growth rate score of 0.197 is secured by Thoothukudi whereas it secures First leading position in the average salt production of past eleven years from 2005-2016.

1.7 SALT INDUSTRY IN THOOTHUKUDI

Thoothukudi has the highest number of salt workers in the state and it produces the maximum salt production in the state. The saltpans are developed in lands leased either by central government or by the state government.

A notable feature of Thoothukudi District is that it has the highest concentration of small units who are classified as unorganized units by the salt department. The estimated salt production by these units outstrips the production of organized units

in the district. The unorganized manufacturers who operate less than 10 acres of land account for nearly 88 per cent of total number of units⁴.

The III category organized salt producers (i.e., co-operative societies) who also operate less than 10 acres of land, occupy 9 per cent of salt units. About 1 per cent of the units are large units and another 2 per cent are medium sized units. The small unorganized units account for nearly 54 per cent of the quantum of salt produced in Thoothukudi region. While the production per acre is the least (50 tonnes per annum) among large units, it is the highest for the small units that is 124 tonnes per acre per annum.

At the preliminary level, small units look more than doubly efficient as compared to large units. Small salt producers who operate outside the control regime of the salt department dominate Thoothukudi region. They are known as Thanpadu Uppu Urpathialargal and this Tamil nomenclature translates into English as Self Labouring Salt Producers⁵.

The presumption is that substantial labour required for salt production in their farms would come from them or their family. They get some help from outside labour. However, not many such self-labouring salt producers are there in Thoothukudi. The standard labour requirement to harvest salt from a 10-acre saltpan is 5 male labourers and 5 female labourers and they need to work almost on a daily basis for nearly eight months in a year and it is hard labour.

⁴ Dr.D. Amutha, Migration of Unorganised Workers in Tuticorin City-An Analysis, Integral Review: A Journal of Management, 2015.

⁵ Sivarama Krishnan, V., "A Report on the Status of Salt Industry in Thoothukudi District", Unpublished Research Article Submitted to Bharathiyar University, 2002.

Hence, they hire labour on a regular basis to work on their farm. There are many salt producers who own 30-40 acres of saltpan but in many different names of the family members⁶. In this sense, they are not self-labouring salt producers but in terms of size of the farm, most of them are small producers except for a few.

MAJOR SALT PRODUCING CENTERS IN THOOTHUKUDI

Major Salt Producing Centres in Thoothukudi namely Levingipuram, Sevendakulam, Karapad, Urani, Urani Extension, Arasadi, Veppalodai, Melmanthai, Vaipar and Kayalpatnam have different typologies of salt producers such as marginal, medium and large salt factories of both private and public sector undertakings, cooperative societies and sub-lease producers.

AREA-WISE PRODUCTION OF SALT IN THOOTHUKUDI

An important feature of salt production in Thoothukudi region is that the small producers just produce the basic edible salt. They do not engage themselves in any value addition activity. Some of them do crushing and iodizing facilities in their salt pans but invariably sell the basic salt. It is the middlemen or trader who undertakes further processing of salt based on their specific requirement. They are constrained by their scale of operation and the emphasis is on volumes.

TABLE 1.3
AVERAGE PRODUCTION OF SALT IN THOOTHUKUDI CIRCLE (in Tonnes)

Year	Levin gi pura m	Sevan d akula m	Kara Pad	Uran i	Uran i Exten sion	Arasa Di	Veppal o dai	Mel Man thai	Vaipa r	Kayal Patna m	Total Produc tion
2005 -06	15,955	30,285	18,888	41,157	75,984	10,472	166,767	53,145	10,707	121,992	5,45,352
%	(2.93)	(5.55)	(3.46)	(7.55)	(13.9)	(1.92)	(30.58)	(9.75)	(1.96)	(22.3)	(100)

⁶ Subburaj, N., "Investigation of Salt Workers in Arumuganeri Area of Thoothukudi" Asia Pacific Journal of Research, Vol-8, Issue No-4, 2011.

2006 -'07	18,60	28,516	22,95 4	48,88 5	91,93 2	10,60 0	120,62 4	72,42 4	15,24 0	138,31 1	5,68,15 6
%	(3.29)	(5.02)	(4.04)	(8.60)	(16.18)	(1.87)	(21.23)	(12.7)	(2.68)	(24.34)	(100)
2007 -'08	18,630	28,850	22,16 0	53,04 8	63,31 4	8,200	136,52 0	62,93 1	11,16 7	116,35 5	5,21,175
%	(3.58)	(5.54)	(4.25)	(10.1)	(12.1)	(1.57)	(26.20)	(12.0)	(2.14)	(22.3)	(100)
2008 -'09	17,100	24,560	19,06 7	32,23 9	55,29 0	8,065	127,79 0	42,03 5	11,45 0	87,061	4,24,65 7
%	(4.03)	(5.78)	(4.49)	(7.59)	(13.0)	(1.90)	(30.09)	(9.90)	(2.70)	(20.5)	(100)
2009 -'10	19,960	25,780	25,86 9	39,61 0	63,98 0	11,01 0	133,40 6	72,59 0	15,50 9	122,93 4	5,30,648
%	3.76	4.86	4.88	7.46	12.06	2.08	25.14	13.68	2.92	23.17	100
2010 -'11	13,430	26,970	25,52 3	43,96 2	62,43 9	5,980	121,66 4	48,33 8	11,95 9	124,26 0	4,84,525
%	2.77	5.57	5.27	9.07	12.89	1.23	25.11	9.98	2.47	25.65	100
2011 -'12	16,330	32,745	25,09 8	40,50 0	70,73 7	10,48 5	115,79 0	76,80 0	13,26 9	130,33 9	5,32,093
%	2.77	5.57	5.27	9.07	12.89	1.23	25.11	9.98	2.47	25.65	100
2012 -'13	18,275	33,300	28,03	44,61	58,79 0	11,26 0	119,89 1	77,192	13,960	109,84 4	5,15,216
%	3.55	6.46	5.44	8.67	11.41	2.19	23.27	14.98	2.71	21.32	100
2013 -'14	17980	32050	27590	43645	53152	9,920	112,24 8	90,634	15,058	126,60 1	5,28,87 8
%	3.40	6.06	5.22	8.25	10.05	1.88	21.22	17.14	2.85	23.94	100
2014 -'15	15580	27800	16744	32160	44200	12,50 0	91,221	105,34 6	10,078	110,11 9	4,65,748
%	3.35	5.97	3.60	6.91	9.49	2.68	19.59	22.62	2.16	23.64	100
2015 -'16	12,570	26,080	19,58 5	25,14 2	34,10 5	9,012	79,502	67,93 9	9,580	98,706	3,82,22 1
%	3.29	6.82	5.12	6.58	8.92	2.36	20.80	17.77	2.51	25.82	100

Source: Annual Reports of the Salt Department, Thoothukudi District

Table 1.3 shows the Percentage Analysis from which it is inherent that Veppalodai leads in Salt production in Thoothukudi District with the average percentage of 24.4 in the past eleven years from 2005-2016 followed by Kayalpatnam in a second position with the average score of 23.52 and Melmanthai in a third position with the average score of 13.69. All the other areas namely Urani Extension, Urani, Sevanthakulam, Karapad, Levingipuram, Vaipar and Arasadi secures the consequent places in the contribution of salt produced in the study area.

1.8 GROWTH RATE OF SALT PRODUCTION IN THE WORLD, INDIA, TAMIL NADU AND THOOTHUKUDI

Owing to its unimaginable range of uses both in households and industry, even first world countries such as the United States, Japan and European Union focus on both increasing the yield and improving the quality of salt. Hence, in respect of Indian subcontinent, the important utility value of salt enables entrepreneurs to sell salt abroad at a lucrative price, which is unimaginable compared to the local markets.

The growth and achievement of Salt Industry over the last 60 years has been spectacular. When India attained Independence in 1947, salt was being imported from the United Kingdom and Aden to meet its domestic requirement. But today it has not only achieved self-sufficiency in production of salt to meet its domestic requirement, but also in a position of exporting surplus salt to foreign countries.

Moreover, of the Indian GDP (Gross Domestic Product), contribution by way of salt accounts for about 8.1 per cent⁷. India is the third largest Salt producing Country in the World after China and USA with Global annual production being about 230 million tonnes. Private sector plays a dominant role contributing over 65 per cent of the salt production in the country, while the public sector contributes about 2 per cent.

The production of salt in 1947 was 1.9 million tonnes which has increased tenfold to record 22.18 million tonnes during 2011-'12. In a very short period of time sufficiency was achieved in 1953 and made a dent in the export market. Since then, the country has never resorted to imports. Exports touched an all-time high of 1.6 million tonnes in the year 2001. Besides about 15 lakhs tonnes of salt are exported

⁷ Salt Annual Report of 2010, Salt Department of Tamil Nadu.

every year⁸. The co-operative sector contributes about 9 per cent whereas the small-scale sector (less than 10 acres) accounts for nearly 24 per cent of the total salt production in the country⁹.

Growth rate means the percentage of excess of current year's salt production compared to previous year's salt production. The common growth rate of every salt production is computed to know the average growth rate during the study period. The Growth Rate of Salt production in the World, India, Tamil Nadu and Thoothukudi from 2005-06 to 2015-16 are analyzed and shown in Table 1.4.

TABLE 1.4
GROWTH RATE OF TOTAL SALT PRODUCTION IN THE WORLD,
INDIA, TAMILNADU AND THOOTHUKUDI

Year	World	India	Tamilnadu	Thoothukudi
	Salt Production (In Million Metric Tonnes)	Salt Production (In Metric Tonnes)	Salt Production (In Thousand Tonnes)	Salt Production (In Hundred Tonnes)
2005-'06	249	18969.00	2186.2	1640.48
2006-'07	261	17898.20	2049.8	1379.96
2007-'08	266	17845.20	1917.8	1366.16
2008-'09	276	19151.20	1652.3	1221.25
2009-'10	279	23951.30	2400.86	1752.83
2010-'11	280	18610.10	2065.64	1718.33
2011-'12	286	22179.10	2340.70	1853.6
2012-13	280	24546.90	2430.53	1924.72
2013-'14	262	23019.30	2578.11	1897.78
2014-'15	266	26887.10	2523.74	1611.19
2015-'16	273	27643.70	2294.42	1450.37

Source: Source: Annual Reports of the Salt Department, India

It is found from Table 1.4 that the salt production in the world increased from 249 million metric tonnes in 2005-'06 to 273 million metric tonnes in 2015-'16. The

⁸ Salt Annual Report of 2013, Salt Department, Thoothukudi.

⁹ saltcomindia.com

growth rate of total salt production in the world varies between negative growth rate percentage of 6.43 in the year 2013-'14 and highest positive growth rate percentage of 4.82 in the year 2006-'07. It is inherent from above table that the salt production in India increased from 18,969.00 metric tonnes in 2005-'06 to 27,643.70 metric tonnes in 2015-'16.

The growth rate of total salt production in India varied between the negative growth rate percentage of 22.30 in the year 2010-'11 and highest growth rate percentage of 25.06 per cent in the year 2009-'10. It shows that the overall growth rate of salt production in India during the period from 2005-2016 was 3.84 per cent and which is higher than the global growth rate of salt production. It is also clear from above table that the salt production in Tamil Nadu increased from 2,186.20 thousand tonnes in 2005-'06 to 2,294.42 thousand tonnes in 2015-'16.

The growth rate of total salt production in Tamil Nadu varies between lowest negative growth rate percentage of 13.96 in the year 2010-'11 and highest growth rate percentage of 45.30 in the year 2009-'10. Moreover, it shows the overall growth rate of salt production in Tamil Nadu during the period from 2005-2015 which was 0.48 per cent and it is lesser than the Indian growth rate of salt production.

Above table also shows that the salt production in Thoothukudi decreased from 1640.48 thousand tonnes in 2005-'06 to 1450.37 thousand tonnes in 2015-'16. The growth rate of total salt production in Thoothukudi varies between the negative growth rate percentage of 15.88 in the year 2006-'07 and the highest growth rate percentage of 43.53 in the year 2009-'10.

Moreover, it shows the overall negative growth rate of Salt production in Thoothukudi during the period from 2005-2015 and which is 1.22 percent and it is lesser than the Tamil Nadu state compound growth rate of salt production which is 0.48.

1.9 NATURE OF THOOTHUKUDI SALT PRODUCERS

Another important feature of salt production by the small producers in Thoothukudi region is that they just produce the basic edible salt. They do not engage themselves in any value addition activity. Some of them do crushing and iodizing facilities in their pans but invariably sell the basic salt.

It is the middlemen or trader who undertakes further processing of salt based on their specific requirement. They are constrained by their scale of operation and the emphasis is on volumes. Consequently, substantial quantity of their production is of lower quality. This lower quality salt is identified as 'light weight salt' and is scrapped once in five days whereas table salt requires nearly fifteen days for crystallization.

Despite a higher price for table salt, most of the producers go in for light weight salt. The space constraint and the low salt content in the sub soil brine compound the problem further. Since the small producers do not have much of space, the condenser crystalliser ratio is not strictly maintained. The small producers expand the area of crystallisers at the cost of condensers.

At another level, they are unable to maintain a chain of crystalliser for series feeding. Only a few large salt producers in the region have enough space to have series feeding system and consequently they are in a position to optimally use the raw material and maximise profit. In the absence of series feeding, small producers are constrained to reduce the condensers and keep on producing low value high volume light weight salt.

The traders of Thoothukudi take up the additional processing of the basic salt. In fact, the basic salt is differentiated further by the size and colour. Salt with higher whitish tinge, low level of moisture and bigger size is rated the best. The lowest in the quality is the one with brownish tinge, high moisture levels and of small size.

The basic salt therefore is composed of many qualities as defined by the combination of above-mentioned variables.

Factors that condition this quality include natural or physical conditions and the financial conditions. One important factor to be considered is the scrap variable. The small-scale producers with inadequate space invariably try to optimize by going in for quick scrapping of the salt resulting in low quality light weight salt.

On the other hand, salt pans with adequate space and finances maintain the condenser-crystallizer ratio and allow the salt to mature resulting in good quality salt¹⁰. The colour of the salt depends on the quality of the brine, level of bed preparation, rainy season and the like.

Even if they have the appropriate crystallizer condenser ratio, if the bottom most layer of salt that is left unscrapped to act as a buffer between the brine and the soil will be disturbed. If the bed is not sufficiently prepared or the bed is new or there is a heavy downpour, the brine will mix with the soil.

The eventual product therefore would not be of adequate quality (both in terms of purity and colour) and will be brownish in colour. That is why the brownish tinge is taken as an indicator of poor quality. The traders depending on the specific order locate the required product and they take up further processing of the basic commodity.

Therefore, the quality of the salt is in the control domain of the producers. The role of trader is just to locate the product and market it in the desired place. Principally, in Thoothukudi coastal areas, any salt pan operation comprises of the following five components:

¹⁰ Sivarama Krishnan, V., “A Report on the Status of Salt Industry in Thoothukudi District”, Unpublished Research Article Submitted to Bharathiyar University, 2002.

1. Abstraction of brine; 2. Impounding of brine in reservoirs; 3. Concentrating in condensers; 4. Precipitating salt in pans and 5. Stock piling or salt heaps.

1.10 KINDS OF MIDDLEMEN IN THOOTHUKUDI SALT TRADING

Salt trading activity goes on throughout the year. Various types of salt are procured, processed to various levels and reached many different places. Given the nature of the activity and the huge network that they cater to the traders in Thoothukudi are of various types. Each one specializes on a particular type of trade.

Players of Salt Trade

- Salt Brokers
- Exporters
- Big Wholesalers
- Small Wholesalers
- Line Businessmen
- Big producers and
- Traders.

1.10.1 Salt Brokers

Salt brokers play the crucial role of the intermediary between the producers and traders. The quantity of salt required, the desired quality, expected price, credit requirement, cash disbursal and other such crucial aspects of business are communicated by both the parties (buyer and seller) through the salt broker.

Salt brokers also take up the responsibility of ensuring the adherence to the contract by both parties. Every deal is settled through them. The salt broker charges 1 per cent of the total transaction as his fee for the service from both the parties.

The broker does not have capital of his own. His success lies in enforcing contracts between both parties. However, his activity is mainly confined to the procurement

of the basic salt. There are two kinds of salt brokers in Thoothukudi. The big ones deal with the orders for ship loads and train loads.

The small ones deal with lorry loads. The challenge faced by the big salt broker is the tight time schedule. They get just 24-48 hours to locate and finalize the deal for thousands of bags of salt. The small salt brokers get a regular order and their income through commission is also low.

1.10.2 Exporters

Thoothukudi having a port is the home for many export houses for several decades. The export houses were exporting various items essentially to East Asian and South Asian Countries. Among other items that are exported by these houses, salt is one. Salt was mainly exported to Sri Lanka, Malaysia, Indonesia and Philippines. Whatever salt is exported from Thoothukudi is not of high quality.

The market has become so competitive and hence salt is not exported based on letter of credit. Exporters take enormous risk when they export without letter of credit. The importer can easily evade payment when they do not commit themselves through their banks in the form of letter of credit. Only those export houses that have managed to establish a trustworthy relation with their importers over a long period of time can afford to risk such business dealings. Hence, there is a fall in export of salt to these countries.

1.10.3 Large Scale Wholesale Traders

Large scale wholesale traders are few in number but they cater to substantial portion of the requirement of individual states like Karnataka or Odissa or Andhra Pradesh. Many of them have their clans as the traders at the other end. They used to move rakes and rakes of salt from Thoothukudi to various destinations. They get a regular supply of salt from about 50-60 small producers throughout the year.

They engage salt brokers to procure additional salt as and when it is necessary. Many of them also own a saltpan. They also have a fleet of heavy vehicles to move the salt. Invariably all the largescale wholesale traders have crushing, washing and iodising units.

Many of them also extend credit to small producers and hedge their price of salt. That would constitute about one fifth of their total salt turnover in terms of quantity. All of them have one or more brand of packet salt. Substantial portion of the salt that is moved via road is packet salt. Apart from packed edible salt, they handle a variety of salt both for edible and industrial purpose.

1.10.4 Small Scale Wholesale Traders

The business practices and the logistics of the small sized wholesale traders in Thoothukudi region is a scaled down version of the large whole sale traders. Instead of catering to the requirement of an entire state, the smaller ones have clients in a particular region. Consequently, these traders do not handle a range of salt products like the large traders.

The payment schedules are similar to the large-scale wholesalers. However, the credit limit goes beyond 30 days' time. Time taken for full settlement varies depending on the business practice in each region. If the outstanding is cleared promptly within 30 days, the price quoted is lower and longer payment schedule attract higher prices.

The common ethics that governs salt trade is that no one will deny payment for salt. The culture associated with salt as a symbol of faithfulness goes a long way in building up mutual trust between various players in the market.

1.10.5 Line Businessmen

This constituency is the largest among a variety of players in salt trade in Thoothukudi. The modus operandi of these traders is to identify a particular area as

their target. They take lorry loads of salt and try to push it to as many local traders as possible on the way till they reach the destination. Their supply is not based on specific orders from the retailers or other traders.

They solicit orders from them after taking the commodity to their doorsteps. Such unsolicited supplies naturally do not attract any advance payment. At the most they get the transport cost at the time of unloading the salt. After some time, the trader undertakes periodic trips to collect the outstanding. Simultaneously, they deliver the next consignment. Along with a partial payment towards earlier dues, a new order is placed.

1.10.6 Big Producers and Traders

There are three important nodes in the destination. Primary wholesalers, secondary wholesalers and retailers are these nodes. Unlike in the production point, there are numerous middlemen or a huge network of other services like processing, packing, transport and labour arrangements at the destination points. According to the destination point, they place the orders, receive the consignment, store it and distribute it.

1.10.7 Primary Wholesalers

Primary wholesalers are generally located in big market towns and they deal only with salt. Primary wholesalers identify new sources of supply when they attempt to build their own brands. Usually, the big traders or producers do not undertake job work of packing salt in some other brand for the primary wholesalers.

Considering higher margins with own brands, many primary wholesalers have tried to build their own brand but source the product from some other suppliers from Thoothukudi. The primary wholesalers do not handle the whole range of salt. Each centre has a particular preference. The primary wholesalers do not maintain a huge inventory. Salt is stored in the pan and is procured as and when it is required.

1.10.8 Secondary Wholesalers

The next link in the supply chain of salt is the secondary wholesalers. They are dispersed and are located mainly in small towns catering to the retailers within small radius. Unlike the primary wholesalers, the secondary ones do not exclusively trade in salt. They procure and distribute a range of edible items. The incidence of such procurement is much higher among the traders in Tamil Nadu. Predominantly, supplies are from primary wholesalers. They get a credit for two or three weeks. Entire transaction with the retailers is through cash and they also extend credit to them.

1.10.9 Retailers

The interface between the whole set of nodes that produce and trades in salt and the consumers is the retailers¹¹. At one extreme, there are supermarkets and at the other extreme is the village grocer. Salt is traded in all these outlets. While supermarkets provide a range of varieties or rather brands, the village grocer provides just the basic salt either in the form of crystal or in powder. Consumer preference is felt by the retailers.

1.11 STATEMENT OF THE PROBLEM

Salt is rather an important secondary food than a food additive. Although, unlike others, it is not edible by itself, salt is present in all naturally available food items such as cereals, fruits, vegetables and the like. As a mineral, it is an essential ingredient vital for the bodily metabolic functions of human beings and animals.

¹¹ Natarajan, M., “A Study on Economic Activities of Unorganized Sector with Special Reference to Saltpan Workers in Southern Tamil Nadu”, Unpublished Research Article, Department of Commerce, M K University, Madurai, 2009.

In addition, it is present as a very important mineral diet in nearly all living organisms including plants. It is next in importance only to the primary requirements such as sunlight, air and rainwater for the sustenance of life.

Like the availability of primary requirements, salt too is abundant by available in nature and hence its importance and utilities have been taken for granted by humans. Yet, its preciousness, that could outweigh that of gold, shall be noted only when it goes scarce. Such an important natural resource is abundantly available in India.

Especially, Tamil Nadu which is bestowed with about one thousand kilometers of coastline has vast potential for salt production and the same potential has rightly been utilized at Thoothukudi, which contributes about eighty percent of Tamil Nadu's salt. Like agriculture, Salt production needs deep human intervention to get quality output.

Salt production is seriously affected by the natural constraints such as heavy rainfall, air pollution and other such natural calamities together with economic constraints such as slackness of demand, inadequate supply, shortage of labour, competition from Gujarat, heavy competition prevailing in the local salt market, fluctuations in price and the like.

Hence, income from the salt market is largely volatile in nature. The risk bearing capacity of the salt workers is a function based on personal, economic, environmental and chronological factors in consonance with their age, education, occupation, income, family size, nature of management of salt production and the like.

Salt production in Thoothukudi has come down drastically in the recent years owing to various factors. The trend in the market has been fluctuating as both domestic and international markets are not enterprising. Shrinking manpower has also affected the industry, as the younger generation is not keen on working in salt pans.

Even area under salt pans is decreasing year by year. The study area is very important in the sense that the Asia's best salt is produced in Tamil Nadu and about eighty percentage of salt produced in Tamil Nadu is from Thoothukudi District. Hence, a comprehensive study that delves into the various interrelated aspects of salt production and trading will throw deep insight into the strengths and weaknesses of the present setup.

Besides suggesting improvements for better functionality to overcome the threats which the industry is facing now, the study puts forward possible measures to encounter them in the future. The present study is an attempt to discuss the contemporary structure with regard to salt production and distribution.

The chosen area for the study is Muthiahpuram area of Thoothukudi in Tamil Nadu which produces substantial quantities of edible salt for consumption basically in the Southern India. Thus, in order to study about the various aspects such as the socio-economic status of the salt workers and their health problems has been chosen for the research study.

1.12 OBJECTIVES OF THE STUDY

The specific objectives of the study area:

1. To study the socio-economic status of the sample salt workers in the study area.
2. To know the working and living conditions of the salt workers.
3. To understand the different category of salt workers in Muthiahpuram area of Thoothukudi district.
4. To examine the reasons for going to job in salt units in Muthiahpuram area.
5. To analyse the monthly income, expenditure and saving of the salt workers.
6. To find out the nature of occupational diseases of the salt workers.

7. To offer suitable suggestions from the findings of the study.

1.13 METHODOLOGY

The study is both descriptive and analytical in nature. The study is based on survey method and is dependent both on primary and secondary data. The primary data collected from 60 salt workers in Muthiahpuram area of Thoothukudi district in Tamil Nadu by using interview schedules.

Primary data are those which are collected from the respondents for the very first time and therefore they are called as first handed information and they are original in character. The field survey has been carried out from February 2022 to April 2022. The data collection pertains to 2 months.

The study administers a comparison of salt production in the world, India, Tamil Nadu and Thoothukudi District through secondary data collected from Salt Department, Thoothukudi. The sample was selected from four types of business organizations operating in Salt Industry in the study area based on the data provided by the Salt Department of Thoothukudi, Thanpadu Uppu Vyabarigal Sangam, Thoothukudi Salt Producers' Association, Thoothukudi Salt Exporters' Association and also from the persons engaged in salt Production in micro and macro level.

Secondary data are collected mainly from the Annual Reports of the Salt Department for different years, Records of various Salt Associations, various books related to the topic, articles, newspapers, reputed journals, government publications, websites and the like.

1.14 LIMITATIONS OF THE STUDY

The present study also has limitations;

1. The sample was restricted only to the salt workers of Muthiahpuram area of Thoothukudi district in Tamil Nadu.
2. There was a bias in answering some questions of schedule on the part of the respondents.
3. The facts and figures given by the respondents may not be correct as most of the figures based on memory.
4. Since most of the salt workers were illiterate and were unwilling to furnish the data, much encouragement had to do for getting their response.

1.15 SCHEME OF WORK

The present study on “*A Study on Living Conditions of Salt Workers with Special Reference to Muthiahpuram Area of Thoothukudi District*” has been divided into five chapters.

The chapter I is an introductory chapter which discusses the economic importance of salt, global salt industry, Indian salt industry, major salt producing states in India, major salt producing centres in Tamilnadu, salt industry in Thoothukudi, growth rate of salt production in the world, India, Tamilnadu and Thoothukudi, nature of Thoothukudi salt producers, kinds of middlemen in Thoothukudi salt trading, statement of the problem, objectives of the study, methodology, limitations and scheme of work.

Chapter II elucidates the history and production process of salt.

Chapter III discusses the review of literature for the present study, and it describes the profile of the study area.

Chapter IV deals with the socio-economic status of the sample salt workers.

Chapter V presents the summary of findings, suggestions and conclusion.

CHAPTER II

HISTORY AND PRODUCTION PROCESS OF SALT

2.1 HISTORY OF SALT

While people have used canning and artificial refrigeration to preserve food for the last hundred years or so, salt has been the best-known food preservative, especially for meat for many thousands of years and still date. Some of the earliest evidence of salt processing dates back to around 6,000 years ago, when people living in Romania were boiling spring water to extract the salts and the salt works in China has been found which dates to approximately the same period.

Salt became an important article of trade and was transported by boat across the Mediterranean Sea, along specially built salt roads, and across the Sahara in camel caravans. The scarcity and universal need for salt has led nations to go to war over salt and use it to raise tax revenues.

Salt is also used in religious ceremonies and has other cultural significance. In the early years of the Roman Republic, with the growth of the city of Rome, roads were built to make transportation of salt to the capital city easier. An example was the Via Salaria, leading from Rome to the Adriatic Sea.

The Adriatic, having a higher salinity due to its shallow depth, had more productive solar ponds compared with those of the Tyrrhenian Sea, much closer to Rome. It is commonly believed that Roman soldiers were at certain times paid with salt. They say the soldiers who did their job well were "worth their salt."

The word 'salary' derives from the Latin word *salrium*, possibly referring to money given to soldiers so that they could buy salt. During the late Roman Empire and throughout the Middle Ages, salt was a precious commodity carried along the salt roads into the heartland of the Germanic tribes. Caravans consisting of as many as

forty thousand camels traversed four hundred miles of the Sahara bearing salt to inland markets in the Sahel, sometimes trading salt for slaves.

2.2 SOURCES OF SALT PRODUCTION

The main sources of salt in India are:

- Sea Brine
- Lake Brine
- Sub-soil Brine and
- Rock Salt Deposits

2.2.1 Sea Brine

Sea brine is a large area of brine on the ocean basin. These pools are bodies of water that have salinity three to five times greater than the surrounding ocean. For deep-sea brine pools, the source of the salt is the dissolution of large salt deposits through salt tectonics. The brine often contains high concentrations of methane providing energy to chemosynthetic animals that live near the pool.

2.2.2 Lake Brine

Lake brines develop as a result of high evaporation rates in an arid climate with a lack of an outlet to the ocean. The high salt content in these bodies of water may come from minerals deposited from the surrounding land. Another source for the Lake brine may be that the body of water was formerly connected to the ocean. While the water evaporates from the lake, the salt remains. Eventually, the body of water will become brine. The Sambhar Salt Lake, India's largest Salt Lake located at Rajasthan is the best example of such Lake.

2.2.3 Sub-soil Brine

Sub soil brine is the important inland source for production of salt and other important marine chemicals. The bittern available from subsoil brine has nearly

same potassium chloride content as that of sea bittern of the same density which is 25g. per litre of sub soil bittern.

Thus, it is a good source for recovery of potassium chloride in India. As there are no mineral deposits of potash and entire requirements are met through imports only, economic process for the recovery of potash from the source like sub soil brine will be of great importance.

2.2.4 Rock Salt Deposits

Halite, commonly known as rock salt is the mineral form of sodium chloride (NaCl). Halite forms isometric crystals. The mineral is typically colourless or white, but may also be light blue, dark blue, purple, pink, red, orange, yellow or gray depending on the amount and type of impurities.

It commonly occurs with other evaporated deposit minerals such as several of the sulfates, halite, and borates. Halite occurs in vast beds of sedimentary evaporated minerals that result from the drying up of enclosed lakes, playas, and seas. Salt beds may be hundreds of meters thick and underlie broad areas.

In India, the occurrence of rock salt is scanty and Himachal Pradesh is the sole holder of country's rock salt resources¹². The only producer, Hindustan Salt Ltd, Jaipur produces salt from its mines located in the districts of Mandi and Himachal Pradesh.

2.3 SALT PRODUCTION PROCESS

On an industrial scale, salt is produced in one of two principal ways.

- Evaporation of salt water (Brine)
- Solar Evaporation of sea water

¹² Satyavani, T. and Ranjan, T., et.al., “A Study on the Status of Child Labourers in the Saltpans of Little Rann of Kutch”, Global Journal of Commerce and Economics, Vol.3, 2006, pp.17-23.

- Evaporation by using some heating device
- Mining

2.3.1 Solar Evaporation of Seawater

Solar salt is produced using sea brine, sub-soil brine and lake brine. Salt produced from such brines is invariably contaminated with impurities such as Ca_2 , Mg_2 , SO_4 and heavy metals. Moreover, the salt tends to be less white than desirable. It is, therefore, of great importance to devise means of making purer solar salt in cost-effective manner.

The present technology relates to a cost-effective process for the preparation of solar salt of a specification which is ideal for industrial applications, especially wherein both the absolute purity of the salt as well as the ratio of Ca to Mg are important, from sea and sub-soil brines. Sea/subsoil brine as the case may be is concentrated to 24° Be' in specially designed solar pans.

The concentrated brine is clarified with suitable agents and the clarified brine is allowed to enter the salt crystallizing pans preventing the insoluble fine gypsum particles and earthen impurities from entering the crystallizers along with the brine. Thereafter the pH of the brine is adjusted to an optimum value. The salt crystallized between 25° Be' and 28.5° Be' is harvested and heap washed. The heap washed salt is found to be of high purity with ideal Ca to Mg ratio suitable for chlor-alkali manufacture.

The process is based on the modification of salt crystal morphology during salt crystallization from concentrated brines in the solar pans through controlled nucleation which, in turn, is achieved by preventing the suspended gypsum particles and insoluble impurities from entering the crystallizers along with concentrated brine.

The salt crystals were made defect free minimizing the chance of entrapment of impurities ensuring the production of high purity solar salt. The process is cost effective and can be implemented in any solar salt works under predetermined parameters. Although salt from sea water is produced by solar evaporation, there are systems of evaporating the sea water and/ or brine namely,

- Single
- Double and
- Multi-pond systems

2.3.2 Single - Pond System

It is a batch wise process in which the sea water is impounded in all the ponds and salt is scrapped after evaporation which in turn reduced the production cost. However, complete evaporation in the same pond results in the crystallization of all the salts present in brine which makes Sodium Chloride impure. Though production cost will be lower, quality of salt is very much reduced in this system and the production rate is also limited.

2.3.3 Double-Pond System

It is the process of salt recovery from sea water with the division of the evaporation basin into two. The first basin, usually called nurse pond, was used for the production of sodium chloride which in turn fed into the second basin called crystallizer. Thus, this process made it possible to achieve continuous crystallization and to eliminate the impurities which remain in the first basin itself.

2.3.4 Multi- Pond System

The third and most decisive system concerned was the division of the nurse pond into several interconnected basins. With this design, sea water enters the first basin. As it flows through successive ponds and evaporates in the sun, its concentration increases. Nursing ponds cover around 90 per cent (to concentrate brine from 3.5° to

26°Be) of the total area of the saltern and create a complete, living ecosystem. These three stages (reservoirs, condensers and crystallizers) constitute the basic steps towards improving the salt manufacturing technology.

2.3.5 Salt Mining

Although mining salt was generally more expensive than extracting it from brine via solar evaporation of seawater, the introduction of this new source reduces the price of salt due to a reduction of monopolization. In the case of salt production from rock salt, undercutting, drilling and blasting are used to extract large chunks of rock salt from the mining area.

These chunks are then crushed repeatedly to reduce the size, and meanwhile dust particles are removed using sieves and filters. These small salt particles are then passed through graded screens for sorting by size, and then packed for use.

2.3.6 Open Pan Production from Brine

One of the traditional methods of salt production in more temperate climates is using open pans. In open-pan production, salt brine is heated in large, shallow open pans. The pans were made of either a type of ceramic called briquet age or lead. Later it was made from iron.

This change coincided with a change from wood to coal for the purpose of heating the brine. Brine would be pumped into the pans and concentrated by the heat of the fire burning underneath. As crystals of salt formed, these would be raked out and more brine added.

2.3.7 Closed Pan Production under Vacuum

The open pan salt works has effectively been replaced with a closed pan system where the brine solution is evaporated under a partial vacuum.

2.4 KINDS OF SALT

Salt is produced from salt mines or by the evaporation of seawater or mineral-rich spring water in shallow pools. Its major industrial products are caustic soda and chlorine, and it is used in many industrial processes and in the manufacture of polyvinyl chloride, plastics, paper pulp and many other products.

Of the annual production of around two hundred million tonnes of salt in the world, only about 6 per cent is used for human consumption and other uses include water conditioning processes, de-icing highways and agricultural use. Edible salt is sold in forms such as sea salt and table salt which usually contains an anti-caking agent and may be iodized to prevent iodine deficiency. There are three types of salt produced and traded.

- Industrial Salt (High Quality)
- Edible Salt (Medium Quality)
- Allied purpose Salt (Low Quality)

2.4.1 Edible Salt

Depending on the specific requirements of customers and their demand, further processing is done in basic salt to get the fine edible salt. While the urban wholesalers insist on iodized crystal and powder salt, there are still many retail outlets in rural areas where they do not insist on iodized salt. The next level of differentiation is packaging of the salt.

The quantity to be packed, the kind of package to be used are the factors that would differentiate the product further. An important differentiation is brand building which is not a very important business activity in the study area. Only very few big production and trading houses try to build a brand but not in a grand scale. Some table salt sold for consumption contains additives which address a variety of health concerns, especially in the developing world.

The identities and amounts of additives vary widely from country to country. Iodine is an important micronutrient for humans, and a deficiency of the element can cause lowered production of thyroxin (hypothyroidism) and enlargement of the thyroid gland (endemic goiter) in adults or cretinism in children.

Another marker of differentiation is with regard to further processing of salt is to ensure its free flow¹³. This process involves additional cost both in terms of material input as well as additional labour cost. Processing for free flowing is minimal in Thoothukudi. The following are the kinds of edible salt normally produced and traded.

- Crystal salt Vs. Powder salt
- Iodized salt Vs. Non-Iodized salt
- Packaged salt Vs. Non-packaged salt
- Branded salt Vs. Unbranded salt
- Fortified table salt Vs. Double Fortified salt
- Free flowing salt Vs. Non-free flowing salt

2.4.2 Industrial Salt

Salt is crucial for many industries. Its compounds make it one of the most important materials in the chemical industry. More than 50 per cent of the chemical products depend on it at a stage of their manufacture. It is also used in the manufacturing of thousands of other commodities including glass, paper, rubber, textiles as well as in water softening systems for industry and domestic use. Furthermore, it is used as a de-icing agent and as most commonly known food ingredient¹⁴.

¹³ Petchimuthu, S., "Salt Production up in Thoothukudi" Times of India, July 13, 2015, p.7.

¹⁴ Prabakaran John, B. and Jegadis Chandrabose, M.M., "Fall in Salt Export from Thoothukudi", The Hindu, April 11, 2015, p.7.

2.4.3 Bromine

This is heavy, low-friction, reddish brown liquid which easily vapors at room temperature in the form of red vapor with releasing of strong unpleasant odor, similar to the odor of chlorine and which has irritating influence to eyes and upper airways. Bromine density exceeds water density more than three times.

It easily dissolves in the water or carbon bisulfide, making red solution. It is less active than chlorine but more active than iodine. It easily compounds with many elements, makes bleaching effect and makes sores when coming on the skin. Bromine is significantly dangerous to the health and when working with it safety measures should be taken.

2.4.5 Gypsum

Gypsum is one of the important industrial minerals. In India, cement industry is the major end use consumer of gypsum followed by industries producing fertilizer and plaster of paris. Acidic soil is treated with gypsum which occurs in nature as sedimentary evaporated deposits on land.

Gypsum is colourless when perfectly crystallized. But the massive gypsum is colourless to white, when pure. It is grey or black or pink or brown or yellow when impure¹⁵. It is a hydrous calcium sulphate ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) having a composition of 79 per cent of calcium sulphate and 21 per cent of water.

2.5 PROCESS OF IODISATION OF SALT

¹⁵ Ramakrishnaraj, P., “Income and Expenditure Pattern of Salt Workers in Sahupuram of Arumuganeri” Unpublished Research Article, Department of Economics, Bharathidhasan University, Tiruchirappalli, 2009.

Iodine and other chemicals are added in small quantities to help in preventing thyroid disorders and other serious abnormalities. Iodization of salt could be accomplished by one or more of the following processes: -

- Spray mixing process
- Drip feed process
- Dry mixing process
- Iodized Vacuum Salt Process
- Refining process

2.5.1 Spray Mixing Process

In the Spray Mixing Process, salt in crystalline or in crushed form is dumped into a feed hopper. A stainless-steel wire-mesh (3' x 3'6") fitted to the hopper screens off lumps of salt and prevents gunny bags/baskets being drawn. From the feed hopper the salt is carried by an inclined rubber belt conveyor moving at a speed of 100 ft. per minute.

The Salt is discharged from the belt conveyor into a mixing chamber at the rate of 5 tonnes per hour. In the salt, 3 to 4 per cent aqueous solution of KIO_3 (Potassium Iodate) is sprayed through special type of stainless nozzles designed to deliver a flattened spray that spreads over the entire width of the salt stream falling from the belt.

The iodate solution is held under pressure in a stainless-steel drum of 80 litres capacity. The pressure in the storage drum is maintained at 20 per second with the help of an air compressor equipped with a regulator. The salt crystals unevenly wetted with KIO_3 solution are mixed thoroughly by a stainless-steel screw conveyor which pushes out the iodized salt through twin outlets for bagging.

Now-a-days mobile salt iodization units are used widely for spray process which can be taken from salt works to salt works and within salt works in salt storage area.

Crushers can also be fitted below the feed hopper for producing crushed and powdered variety of iodized salt.

2.5.2 Drip-Feed Process

Common Salt can also be iodized by Drip-Feed Process. In this process Kurkutch variety of common salt is fed into the grinder, where 3 to 4 per cent solution of potassium iodate is fed through hollow needle at the inlet of the crushing zone. Mixing of the solution with salt crystals and grinding of salt crystals take place simultaneously.

The ground salt is fed to screw conveyor underneath the roller grinder for effecting homogeneous mixing of potassium iodate and the flow of potassium iodate solution is being monitored and controlled through appropriate regulating device. The salt manufactured by this method does not remain free flow and become cakes during the long storage.

2.5.3 Dry Mixing Process

In this Dry Mixing Process, a stock mixture of Potassium Iodate and anti-caking chemicals like Tri-calcium phosphate or Calcium Carbonate is prepared in proportion 1:10. The stock mixture is again mixed with 10 parts of free-flowing Sodium Chloride, the entire pre-mix passing through 180 microns of 15 sieves.

The salt to be iodized is fed into a hopper of bulk controller and passes into an enclosed worm-screw mixer. At a point near the base of the bulk-controller a mixture of Potassium Iodate and anti-caking agent is fed into a worm-screw mixer conveyor through a process feeder so as to give the desired quality of Iodized Salt. However, nowadays this process is not adopted.

2.5.4 Refining Process

In this process, Raw Salt is first fed through a volumetric belt Feeder for size reduction to less than 2 mm in presence of brine. This slurry by gravity is fed to a

series of tanks with a jet of brine in the upward direction. Fresh water is fed at various points of the washery to keep the soluble at working limits. This slurry is then fed to the certitude; the filtrate by gravity goes to the filtrate tank.

This filtrate is then pumped back into the washery to keep the slurry concentration at 60 per cent. The Bleed brine is sent to the tank for the removal of insoluble by giving sufficient setting time. The pure brine is again pumped back into the system to maintain the slurry concentration as well as maintain and remove soluble and insoluble so that they are in working limits.

The cake which is continuously discharged from the centrifuge is taken on a belt conveyer. Potassium Iodate solution of 5 percent and Potassium Ferrocyanide is sprayed on to the salt which is fed into the fluidized bed dryer. The moisture maintained at the outlet of the dryer is below 0.2 percent. The dried product is sieved into different particles sizes. The iodized salt is mixed with an anti-caking agent and packed by Form Fill and seal machines or manually in retail pouches.

2.5.5 Iodized Vacuum Salt Process

Under this method, Iodized salt is produced by injection of potassium iodate solution in a controlled manner into the wet salt from the centrifuge which is then dried in fluidized bed dryers and packed. By far the largest proportion of evaporated salt is produced by boiling the salt brines in an evaporator.

There may be only one evaporator body (single effect) or up to four evaporators can be connected in series so that the steam produced in the preceding evaporator body is used as the heating steam in the following evaporator (multiple effect evaporation). The solar evaporated brine of 24-degree Baume is fed to sophisticated multiple effect evaporators. With the increase in the concentration due to evaporation, the precipitation of salt takes place in the evaporators and Magma is drawn out and centrifuged to get vacuum salt.

CHAPTER III

REVIEW OF PREVIOUS STUDIES AND PROFILE OF THE STUDY AREA

3.1 REVIEW OF PREVIOUS STUDIES

In his work, J. Jeyaranjan (2011)¹⁶ examines a synoptic view of Tamil Nadu's salt manufacturing. For the study, a total of 250 people were chosen, with 150 being salt producers and 100 being salt traders. The primary data was gathered using a questionnaire. Secondary information was gathered from the salt department's public and unpublished documents. Percentage analysis was used to examine many areas of the study, including the salt trading distribution chain, various types of producers and dealers, salt exchanged types, transportation system, and so on.

The international salt industry was studied by W. Akzo Nobel (2012)¹⁷. It provides historical statistics for the salt market (e.g., chemical manufacture, road deicing, food processing, and livestock) in major nations throughout the world for the years 2000, 2005, and 2010, as well as forecasts for 2015 and 2020.

Chris Kresser (2012)¹⁸ explored the historical relevance of salt and its role in humanity's evolution, the physiological role of salt in the human body, and the regulation of plasma sodium levels in the human body in his research article. The essay also discussed the causes of low blood pressure, the recommended salt intake

¹⁶ J. Jeyaranjan "Salt Production and Trading in South India", Published Research Article, Submitted to Institute of Development Alternatives, Thiruvannamiyur, Chennai, 2011.

¹⁷ W. Akzo Nobel, "World Salt 2015" Published Research Article of Freedonia Group, Online Journal, Volume 5, Issue-3, February 2012, pp.17-23.

¹⁸ Chris Kresser, "Shaking up the Salt Myth: The Human Need for Salt", The Hindu, April 13, 2012, p.6.

for maintaining a healthy salt level in the body, and diseases linked to low salt intake, among other things.

G. Arumugasamy and R. Sam Renu (2013)¹⁹ conducted a statistical assessment of the salt industry in the research area, focusing on the amount of salt produced and the challenges faced by salt producers. In the study region, there are 180 salt workers and 70 salt producers, with 90 salt workers and 35 salt producers chosen using stratified random sampling. The study looked into a variety of topics, including the nature of employment, the salt employees' preferred side jobs, wage payment satisfaction, and other social programmes.

M. Krishnamurthi (2013)²⁰ has advocated for the establishment of a special welfare board for salt workers in Thoothukudi, the state's and India's largest salt producer. The union made a number of initiatives to bring unorganised workers together in order to improve and secure full protection and livelihood rights. The current welfare boards were providing monetary rewards to the registered workforce for marriage, education, natural death, accidental death, and other necessities.

J. Jeyaranjan (2014)²¹ conducted a statistical assessment of the salt sector in the study area, focusing on the amount of salt produced and the issues that Salt Co-operatives confront. The study looked into a variety of topics, including salt branding

¹⁹ G. R. Arumugasamy and Sam Renu, et.al., “Problems and Prospects of Salt Industry in Kanyakumari District”, Indian Journal of Marketing, Vol-35, 2013.

²⁰ M. Krishnamurthi, "Welfare Board Sought for Thoothukudi Salt Workers", The Hindu, September 9, 2013, p 9.

²¹ J. Jeyaranjan, “Increasing the Quality and Quantity of Edible Salt Produced by Salt Co-operatives in Tamil Nadu and Andhra Pradesh” Published Research Article, Submitted to The Golbal Alliance for Improved Nutrition (GAIN), Institute of Development Alternatives, Chennai, 2014.

and marketing techniques employed by cooperative societies, the current financial state of salt cooperatives, and their mode of operation, among others.

R. Banumathi and S. Nadarajan (2015)²² conducted a survey on the Tamil Nadu salt industry to determine the state's marketing strategy. A non-random sampling strategy was used to collect primary data from 100 employees in Tamil Nadu's salt industries. The study's goal was to investigate and discuss the salt industry's marketing tactics and practises in India, as well as to gain a better understanding of the salt market's numerous competitors. Furthermore, different brands employ different promotion tactics to promote their products, according to the findings.

S. Dhemia and K. Varma (2015)²³ conducted a study to develop public awareness and education activities to assist individuals in making informed food choices, to provide guidance to the food industry on ways to reduce sodium in processed foods, and to learn more about sodium reduction in the areas of food science and health, as well as to improve the efficiency of pharmacological therapies and reduce the global risk of cardiovascular disease. The study's major goal is to figure out what causes a decrease in cardiovascular morbidity and mortality.

In their article, G. Grahadurai and A.R.A.S. Dhanabalan (2015)²⁴ state that, unlike prior years, salt production in Thoothukudi has failed to get started this year. Every

²² R.. Banumathi. and S Nadarajan, "Marketing Strategies and Practices with Reference to Salt Industries in Tamil Nadu India" International Journal Of Management (IJM), Dept. of Management Studies, Anna University, Tirunelveli, Volume 6, Issue 3, March 2015, pp.34-37.

²³ S. Dhemia and K. Varma, "Salt Intake in India – An Alarming Situation" International Journal of Food, Agriculture and Veterinary Sciences ISSN: 2277-209X (Online) An Open Access, Online International Journal Available at <http://www.cibtech.org/jfav.htm> 2015 Vol. 5 (1) January-April, pp. 1-10.

²⁴ G. Grahadurai and A.R.A.S. Dhanabalan, "Salt Production Yet to Take Off in Thoothukudi", The Hindu, February 1, 2015, p. 6.

year, production usually starts in the first week or the middle of February. However, after the early arrival of the northeast monsoon last year, continuous rains until the end of December caused production to be delayed. In March, it's expected to resume. Only if the salt quality is good will market conditions be favourable to manufacturers.

PROFILE OF THE STUDY AREA

3.2 THOOTHUKUDI DISTRICT AT A GLANCE

The district started functioning as the twentieth District in Tamil Nadu with effect from October 20, 1986 with Thoothukudi as its headquarters. This district is located between 8°-05' and 9°-30' of northern latitude and 77°-05' and 78°-25' of the eastern longitude.

This district is bound by Virudhunagar and Ramanathapuram districts in the north, Kanyakumari district in the south, the Gulf of Mannar in the east and Tirunelveli district in the west. It is spread over an area of 4621 sq.kms.

Administrative Regions

The district now consists of eight Taluks namely Thoothukudi, Tiruchendhur, Sathankulam, Srivaikundam, Kovilpatti, Ottapidaram, Ettayapuram and Vilathikulam. It comprises two revenue divisions, seven revenue Taluks and 12 development blocks. The administrative set up of the district is as follows:

The district has 20 town panchayats, 2 municipalities and 465 revenue villages. The district is industrially advanced with the majority of the industries located in and around Thoothukudi.

TABLE 3.1
POPULATION AND NUMBER OF WORKERS IN THOOTHUKUDI
DISTRICT (2012-13)

S.No.	Category	Number	Percentage
1.	Population	1565743	
	Male	764087	48.80
	Female	801656	51.20
	Total	15655743	100.00
2.	Cultivators	71315	4.55
3.	Agricultural Labourers	167387	10.69
4.	Marginal Workers	88944	5.68
5.	Other Workers	346036	22.10
6.	Non-Workers	892061	56.98
Total Population		1565743	100.00

Source: Assistant Director of Statistics, Thoothukudi.

Land-Use Pattern

Agro-climatic conditions of any region namely soil, irrigation, rainfall and the like, besides the ownership pattern of land, determine their use. The Thoothukudi district extends over a geographical area of 4, 59,054 hectares, of which net sown area accounts for 41.02 per cent. The pattern of land utilisation that 2.40 per cent of the total geographical area is under forest and 4.28 per cent is barren and uncultivable land. Land put to non-agricultural uses is 15.63 per cent and cultivable waste is 4.31 per cent. Current fallows and other fallows form 13.33 per cent and 10.12 per cent of geographical area respectively.

TABLE 3.2
LAND USE PATTERN IN THE THOOTHUKUDI DISTRICT (2012-13)

S.No.	Classification	Areas (in Hectares)	Percentage
1.	Forests	11012	2.40
2.	Barren Uncultivable lands	19662	4.28
3.	Land put to non-agricultural uses	71772	15.63
4.	Cultivable waste	19779	4.31
5.	Permanent pastures and other grazing lands	5132	1.12
6.	Land under miscellaneous tree crops	35771	7.79
7.	Current fallows	61189	13.33
8.	Other fallows	46441	10.12
9.	Net area sown	188296	41.02
10.	Total geographical area	459054	100.00

Source: Assistant Director of Statistics, Thoothukudi District, 2012-13

Operational Holdings

The average size of land holdings of the district is 1.54 hectares as compared to 1.08 hectares in the state. Sixty-four per cent of the holdings are below 1 hectare and holdings with less than 2 hectares account for 83.50 per cent of the total number of holdings. Nearly 12 per cent of the holdings are between two and five hectares. Holdings with more than five hectares constitute 3.79 per cent of the total number.

TABLE 3.3
SIZE-WISE DISTRIBUTION OF AGRICULTURAL HOLDINGS IN
THOOTHUKUDI DISTRICT (2012-13)

Size of Holdings (in Ha.)	Number of Operational Holdings	Percentage to Total Number of Holdings	Area under the Holdings (in Ha.)	Percentage to Total Area
0 – 0.5	92118	41.11	22889.83	8.06
0.5 – 1.0	53040	23.67	37642.50	13.26
1.0 – 2.0	41956	18.72	59406.95	20.92
2.0 – 3.0	16101	7.18	39358.40	13.86
3.0 – 4.0	7940	3.54	27493.61	9.68
4.0 – 5.0	4460	1.99	19902.81	7.01
5.0 – 7.5	4595	2.05	27836.45	9.81
7.5 – 10.0	2035	0.91	17229.31	6.07
10.0 – 20.0	1524	0.68	20173.95	7.11
20.0 and above	333	0.15	11982.95	4.22
Total	224102	100.00	283916.76	100.00

Source: Assistant Director of Statistics, Thoothukudi District, 2012-13.

On the whole the majority of the holdings in the district are medium and small size holdings. The average size of holdings ranges from 0.91 hectares in Srivaikundam taluk to 2.03 hectares in Vilathikulam taluk. The percentage of holdings ranging from 0.1 to 2.0 hectares to total holdings in each taluk is 72 per cent, 76 per cent, 72 per cent, 92 per cent, 88 per cent and 86 per cent in Kovilpatti, Ottapidaram, Vilathikulam, Sathankulam, Srivaikuntam, Tiruchendhur and Thoothukudi Taluks respectively.

Irrigation

The main sources of irrigation in the district is through canals, tanks and wells accounting for 3,873 hectares, 18,040 hectares and 20,527 hectares of net area irrigated respectively during 2009-10. The gross area irrigated by canals has decreased from 12.09 per cent in 2009-10. The gross area irrigated by canals has decreased from 12.09 per cent in 1998-99 to 10.70 per cent in 2009-10. The gross area irrigated by tanks also has decreased from 44.10 per cent in 1998-99 to 44.17 per cent in 2009-10. The gross irrigated by well has increased from 38.82 per cent in 1998-99 to 45.12 per cent in 2009-10.

TABLE 3.4
AREA IRRIGATED BY DIFFERENT SOURCES IN THOOTHUKUDI DISTRICT

Year	Net Area Irrigated			Total Gross Irrigated Area		
	Canals	Tanks	Wells	Canals	Tanks	Wells
1998-99	4873 (9.98)	22145 (45.34)	21825 (44.68)	7218 (12.09)	29323 (44.10)	23183 (38.82)
1999-2000	4346 (14.00)	16471 (53.07)	10219 (32.93)	6708 (13.60)	21611 (43.82)	21001 (42.58)
2007-08	3834 (9.35)	15899 (38.74)	21290 (51.90)	4785 (11.12)	16524 (38.41)	21717 (50.47)
2008-09	3945 (0.74)	19687 (43.61)	21508 (47.65)	4468 (9.52)	20505 (43.91)	21722 (46.52)
2009-10	3873 (8.13)	18040 (42.51)	20527 (48.37)	5354 (10.70)	22095 (44.17)	22570 (45.12)

Source: Assistant Director of Statistics, Thoothukudi District, 2012-13.

Note: Figures in brackets represent the percentage to total irrigated area.

Srivaikundam and Tiruchendhur Taluks have the benefit of canal irrigation besides tank and well irrigation systems. Irrigation by tanks is widely prevalent in

Thoothukudi and Tiruchendhur Taluks. Sathankulam and Kovilpatti Taluks are irrigated mainly by wells.

3.3 EXPORT OF THOOTHUKUDI SALT

Since salt products have been exported from Thoothukudi to countries abroad including Indonesia, United Arab, Sri Lanka and Vietnam, the demand is still high and maximize profits of the manufacturers. After a few good years, the salt industry in Thoothukudi is experiencing rough times.

Industry representatives attribute this to the drop in exports, the state administration's action against salt pans and a fall in prices. The industry, which largely comprises of small and medium farmers meets 70 per cent of the total salt requirement of Tamil Nadu and about 30 per cent of the country's demand for salt.

Indonesia tops the list of importers of salt from Thoothukudi followed by Bangladesh and Malaysia. Competition from Gujarat and from countries such as Australia where prices are lower, also play a major role in the fall in exports. Among the states of India,

Gujarat is the largest manufacturer of salt, accounting for 70 per cent of the country's output. In Gujarat, the cost of production is only Rs.150 per tonne compared to Rs.450 per tonne in Thoothukudi²⁵. The difference is mainly owing to power and labour costs. In Gujarat, sea water is stored in reservoirs naturally during high tide, but in Thoothukudi, it has to be pumped up from bore wells, which requires power.

²⁵ Laxmi, V.V. and Selva Mathan, T.P.S., "Dip in Salt Export from Thoothukudi", The Hindu, January 2, 2013, p.6.

3.4 SECTOR-WISE PRODUCTION OF IODIZED SALT IN THOOTHUKUDI

Iodized salt is the table salt mixed with a minute number of various salts of the iodine element. The ingestion of iodine prevents iodine deficiency. Worldwide, iodine deficiency affects about two billion people and is the leading preventable cause of intellectual and developmental disabilities.

Where natural levels of iodine in the soil are low and the iodine is not taken up by vegetables. Further, iodine added to salt provides the small but essential amount of iodine needed by humans. Iodine and other chemicals are added in small quantities to the salt to help in preventing thyroid disorders and other serious abnormalities. The sector wise production of Iodized salt is collected from Thoothukudi Salt Department and presented in Table 3.5.

TABLE 3.5
SECTOR-WISE PRODUCTION OF IODIZED SALT IN THOOTHUKUDI
(In lakh Tonnes)

Year	Organised Sector	Unorganised Sector	Total
2005-'06	1.28 (35.65)	2.31 (64.36)	3.59 (100)
2006-'07	3.04 (45.44)	3.65 (54.56)	6.69 (100)
2007-'08	3.74 (57.01)	2.82 (42.99)	6.56 (100)
2008-'09	2.39 (38.24)	3.86 (61.76)	6.25 (100)
2009-'10	7.39 (42.16)	10.14 (57.84)	17.53 (100)
2010-'11	2.19 (16.83)	10.82 (83.17)	13.01 (100)
2011-'12	2.78 (30.29)	6.4 (69.71)	9.18 (100)

2012-13	3.64 (40.63)	5.32 (59.37)	8.96 (100)
2013-'14	3.63 (49.59)	3.69 (50.41)	7.32 (100)
2014-'15	3.76 (53.33)	3.29 (46.67)	7.05 (100)
2015-'16	2.9 (49.32)	2.98 (50.68)	5.88 (100)

Source: Annual Reports of the Salt Department, Thoothukudi District

From above Table 3.5, it is clear that Unorganized Sector in Thoothukudi District contributes more (5.03 lakh tonnes on an average) to the Iodized Salt Production than the Organized Sector which contributes the average score of 3.34 lakh tonnes (39.90%) in the past eleven years from 2005-2016.

CHAPTER IV

ANALYSIS AND INTERPRETATION

The socio-economic status of the workers depends upon their age, gender, religion, educational qualification, marital status, number of family members, monthly earnings, saving habits, reasons for going to job in salt work industries, a distance from the factory, mode of conveyance, mode of payment, and so on. In this chapter, the researcher has analysed the socio-economic conditions of the salt work employees in Muthiahpuram area of Thoothukudi district.

TABLE 4.1
SEX-WISE CLASSIFICATION OF THE RESPONDENTS

Sl. No	Sex	No. of Respondents	Percentage
1.	Male	43	71.67
2.	Female	17	28.33
	Total	60	100.00

Source: Primary data.

It could be observed from Table 4.1 that out of the total respondents, 71.67 per cent are male, whereas the remaining 28.33 per cent are females. Hence most of the respondents are male in the selected salt industries in Muthiahpuram.

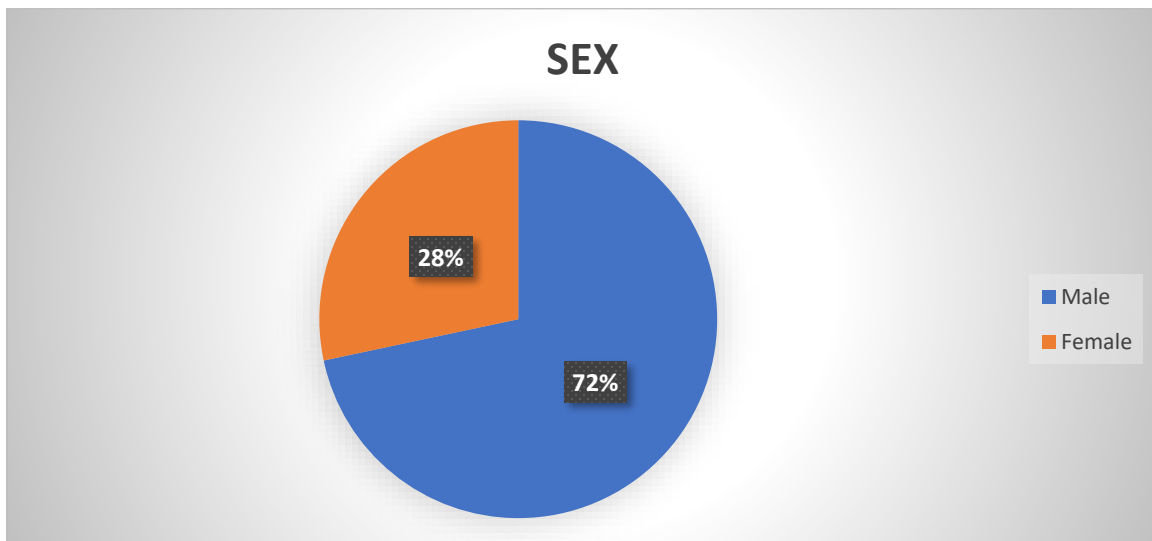


TABLE 4.2
AGE-WISE CLASSIFICATION OF THE RESPONDENTS

Sl. No	Age	No. of Respondents	Percentage
1.	Below 30	6	10.00
2.	31 – 40	13	21.67
3.	41 – 50	21	35.00
4.	51 – 60	15	25.00
5.	Above 60 years	5	8.33
	Total	60	100.00

Source: Primary data.

It could be inferred from Table 4.2 that the important age groups of the respondents are 51-60 years and 41- 50 years. They constitute 25.00 and 35.00 per cent of the total, respectively. It is followed by 31 – 40 years, below30 years, and above 60 years which constitute 21.67 per cent, 10.00 per cent and 8.33 per cent, respectively. It is concluded that most of the respondents fall under the age group of below 41-50 years in the study area. The mean age of salt workers worked out to be 45.5 years.

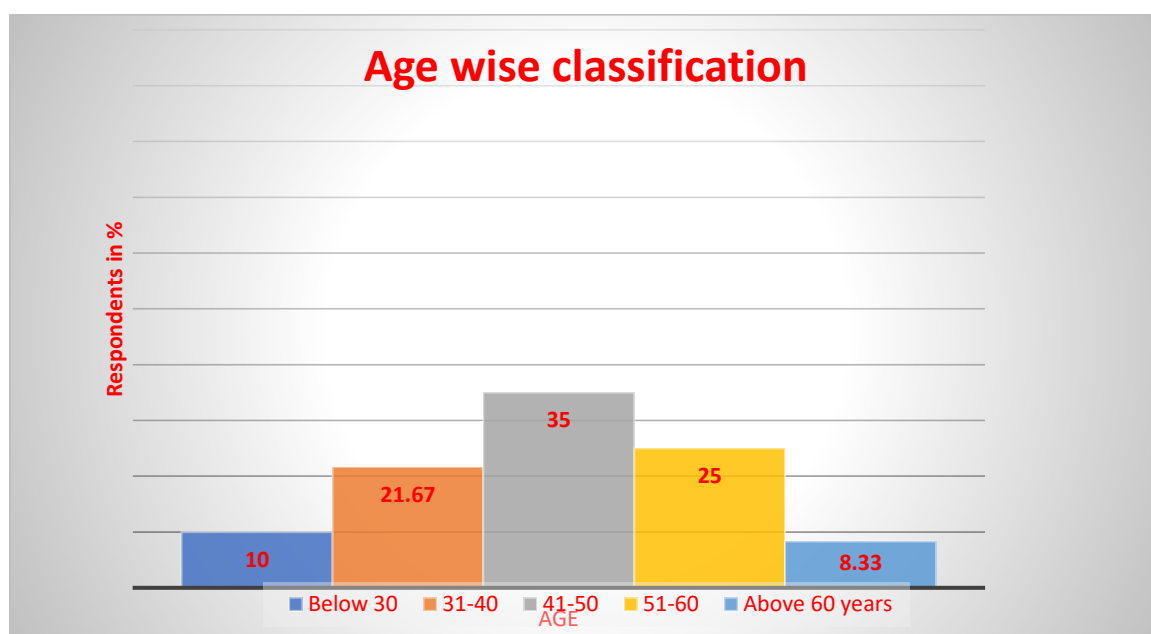


TABLE 4.3
MARITAL STATUS OF RESPONDENTS

Sl. No	Marital Status	No. of Respondents	Percentage
1.	Un married	7	11.67
2.	Married	53	88.33
	Total	60	100.00

Source: Primary data.

It could be evident from Table 4.3 that most of the respondents are married. They constitute 88.33 per cent of the total. It was followed by unmarried, which constituted 11.67 per cent.

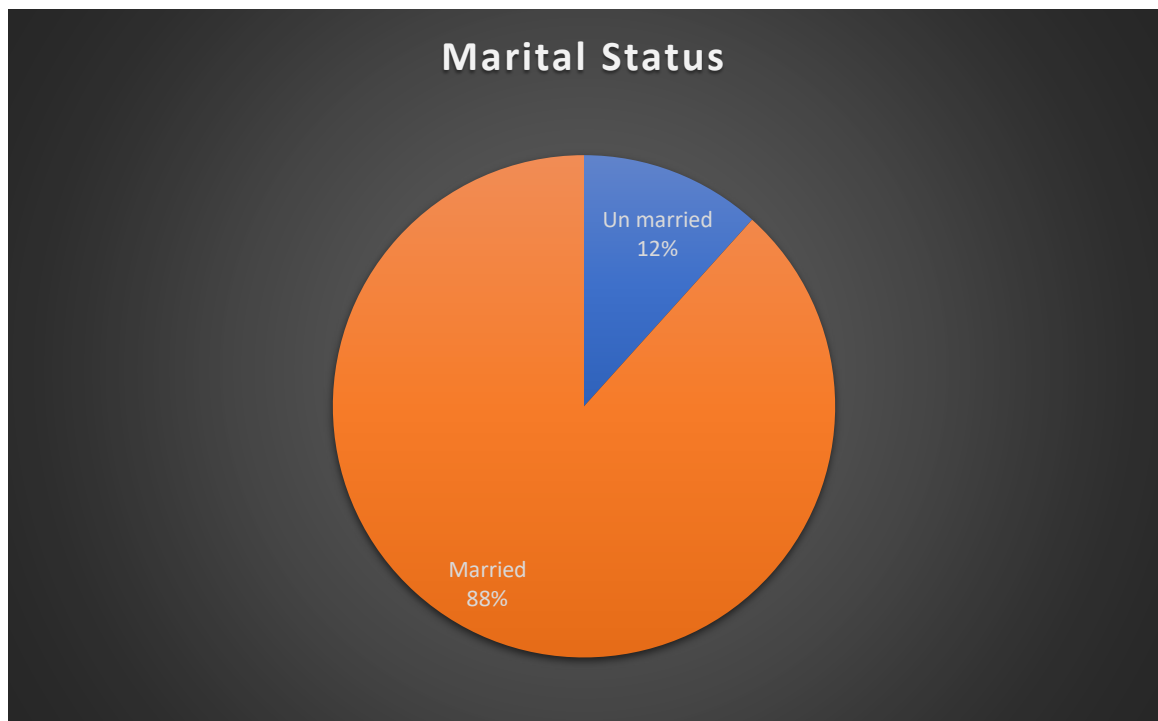


TABLE 4.4
CLASSIFICATION OF RESPONDENTS BASED ON RELIGION

Sl. No	Religion	No. of Respondents	Percentage
1.	Hindu	43	71.67
2.	Muslim	5	8.33
3.	Christian	12	20.00
	Total	60	100.00

Source: Primary data.

It is found from Table 4.4 that most of the respondents are Hindus, which constitutes 71.67 per cent. It was followed by Christians and Muslims, which constitute 20.00 per cent and 8.37 per cent, respectively. It is concluded that among the 60 respondents selected under study, 43 are Hindus, 12 are Christians, and only 5 are Muslims in Muthiahpuram area of Thoothukudi district.

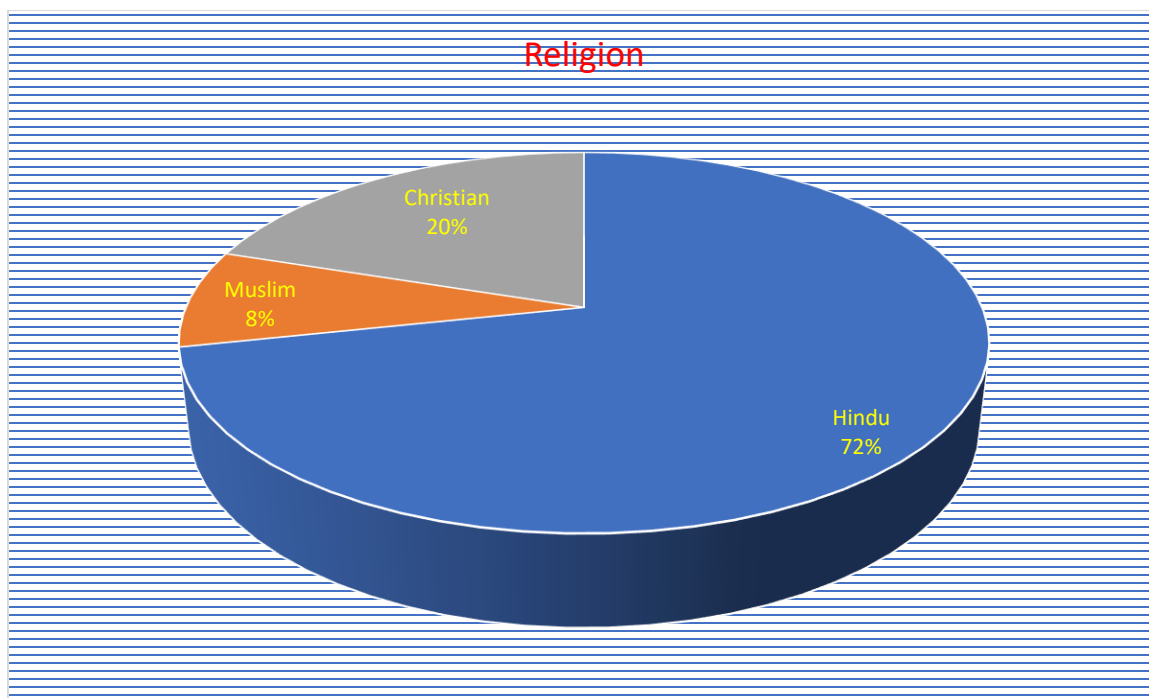


TABLE 4.5
COMMUNITY-WISE CLASSIFICATION OF THE RESPONDENTS

Sl. No.	Community	No. of Respondents	Percentage
1.	Scheduled Caste\Tribe	17	28.33
2.	Most Backward Caste	13	21.67
3.	Backward Caste	24	40.00
4.	Forward Caste	6	10.00
	Total	60	100.00

Source: Primary data.

It could be seen from Table 4.5 that out of 60 respondents, 24 (40.00 per cent) are Backward Class, and it was followed by Scheduled Caste/Scheduled Tribes, Most Backward Class and Forward Class, which constitute 28.33 per cent, 21.67 per cent and 10.00 per cent respectively. It is concluded that most of the respondents come under the category of Backward Class.

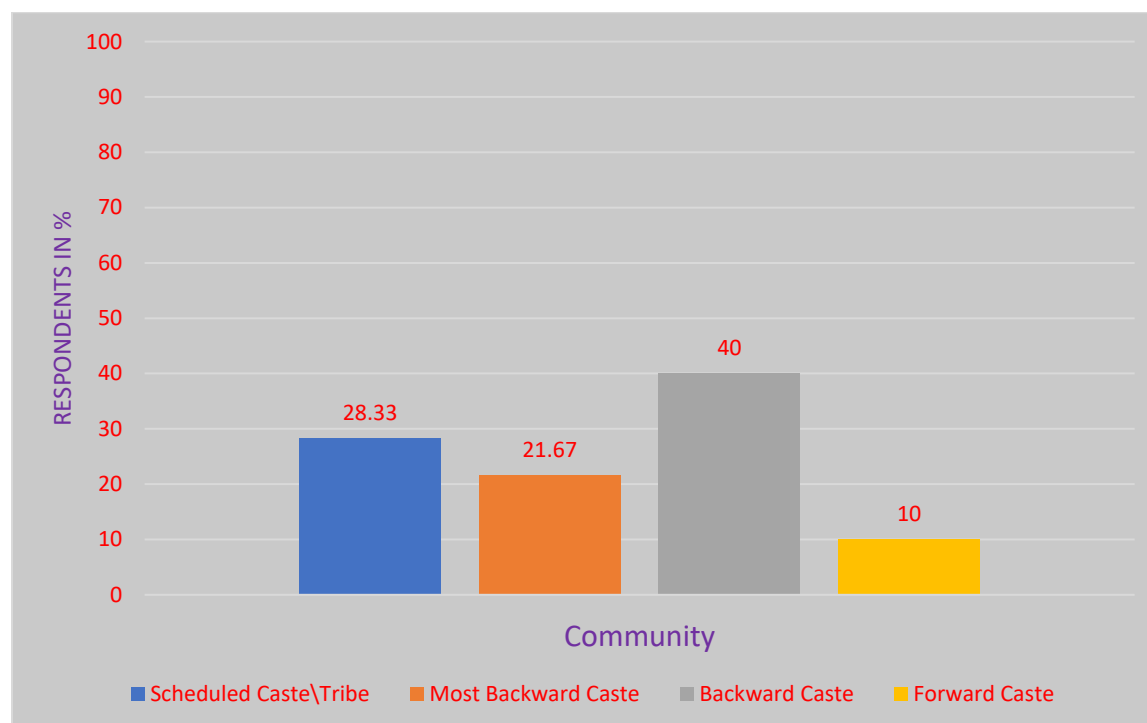


TABLE 4.6
LEVEL OF EDUCATION OF THE RESPONDENTS

Sl. No	Level of Education	No. of Respondents	Percentage
1.	Illiterate	23	38.33
2.	Primary	15	25.00
3.	Secondary	10	16.67
4.	Higher Secondary	7	11.67
5.	Collegiate	5	8.33
	Total	60	100

Source: Primary data.

Table 4.6 illustrates the level of education among the respondents. The important level of education among them is illiterate, which constitutes 38.33 per cent of the total. The number of respondents with primary, secondary school, higher secondary, and collegiate education constitute 25.00, 16.67 per cent, 11.67 and 8.33 per cent of the total, respectively. It is concluded that most respondents have illiterates in the study area.

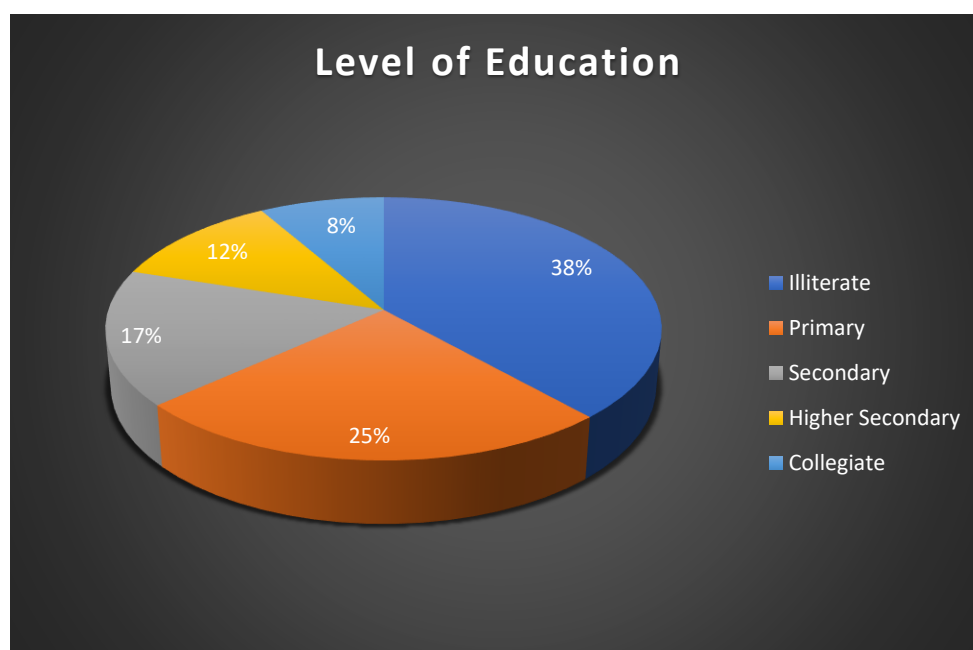


TABLE 4.7
NATURE OF FAMILY OF THE RESPONDENTS

Sl. No.	Nature of Family	No. of Respondents	Percentage
1.	Nuclear Family	46	76.67
2.	Joint Family	14	24.33
	Total	60	100.00

Source: Primary data.

It could be identified from Table 4.7 that a maximum of 76.67 per cent of the total respondents belong to the nuclear family system, whereas the remaining 24.33 per cent of the respondents belong to the joint family system. It is concluded that most of the respondents belong to the nuclear family in the study area.

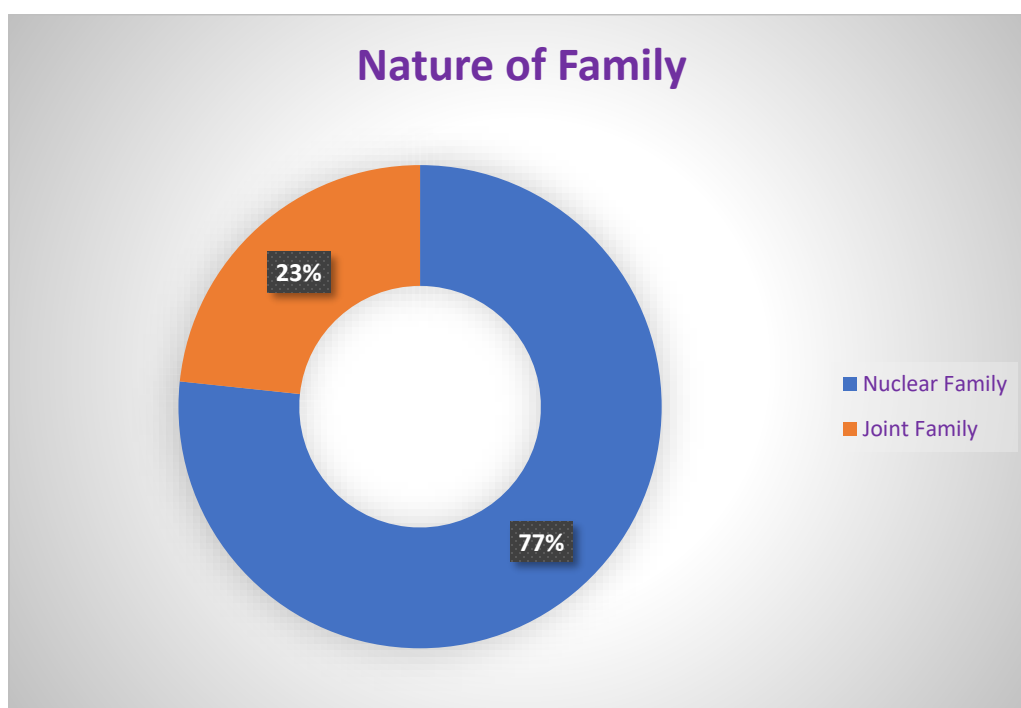


TABLE 4.8
FAMILY SIZE OF THE RESPONDENTS

Sl. No.	Family Size	No. of Respondents	Percentage
1.	Less than 3	10	16.67
2.	3 – 4	25	41.67
3.	4 – 5	17	28.33
4.	Above 5	8	14.33
	Tota	60	100.00

Source: Primary data.

It could be illustrated from Table 4.8 that the important family sizes among the respondents are three to four members and four to five members per family, which constitute 41.67 and 28.33 per cent of the total, respectively. The number of respondents who have a family size of fewer than three members and above five members in their family constitutes 16.67 cents and 14.33 per cent, respectively. The analysis reveals that the important family size among the respondents is three to four members in the study area.

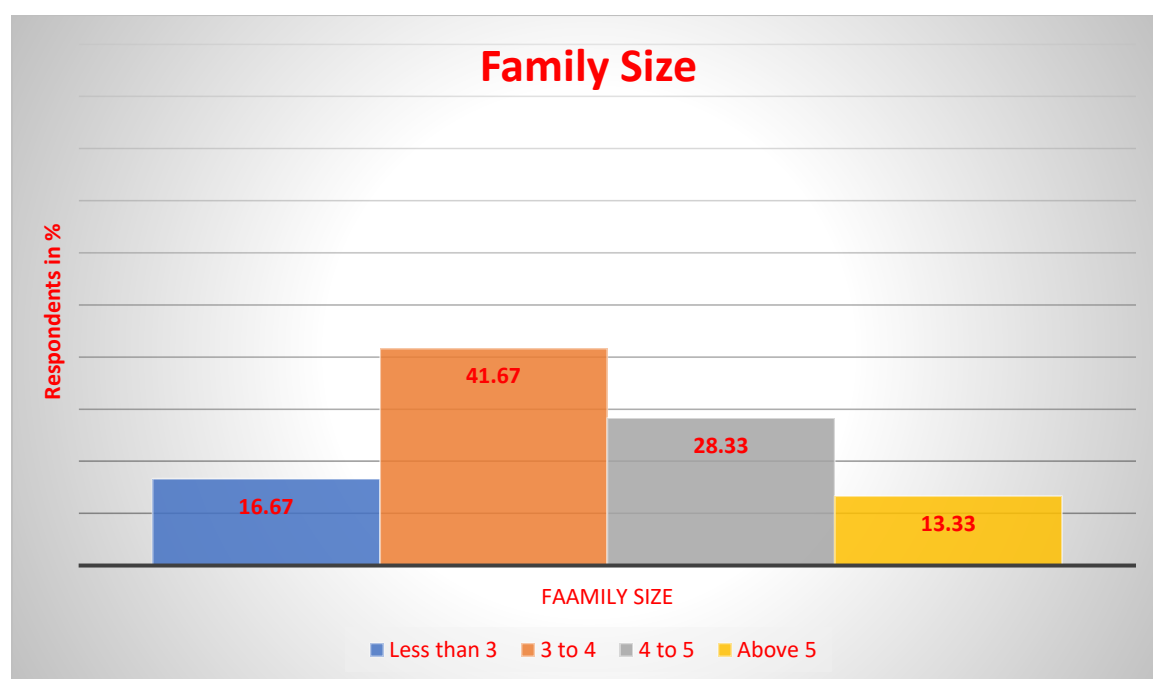


TABLE 4.9
MONTHLY INCOME OF THE EMPLOYEES

Sl.No	Monthly income	Number of Respondents	Percentage
1.	Below Rs. 3,000	8	14.33
2.	Rs. 3,001 and Rs. 3,500	12	20.00
3.	Rs. 3,501 and Rs. 4,000	19	31.67
4.	Rs. 4,001 and Rs. 4,500	16	26.67
5.	Rs. 4,501 and above	5	8.33
	Total	60	100.00

Source: Primary data

It is inferred from Table 4.9 that those 19 (31.67%) respondents earn a monthly income between Rs. 3,501 and Rs. 4,000, 16 (26.67 %) respondents earn a monthly income between Rs. 4,001 and Rs. 4,500, 12(20.00%) respondents earn a monthly income between Rs. 3,001 and Rs. 3,500, 8 (14.33%) respondents earn a monthly income below Rs. 3,000 and the rest 5 (8.33%) respondents earn a monthly income of and above. The mean monthly family income of the households works out to be Rs. 3,734.84.

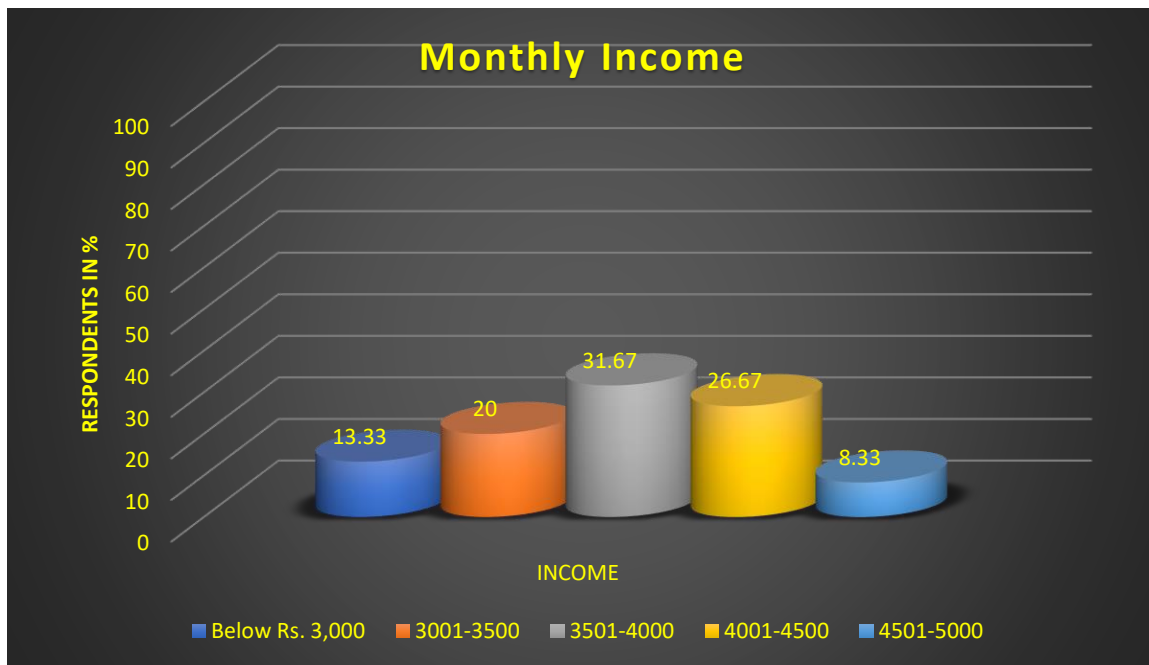


TABLE .4.10
NATURE OF HOUSE OF THE EMPLOYEES

Sl. No.	Nature of House	No. of Respondents	Percentage
1.	Thatched house	8	14.33
2.	Tiled house	21	35.00
3.	Roof concrete house	31	51.67
	Total	60	100.00

Source: Primary data

It is concluded from Table 4.10 those 31 (51.67 %) respondents live in roof concrete houses, 21 (35.00 %) respondents live in tiled houses and the rest 8 (14.33 %) respondents live in thatched houses.

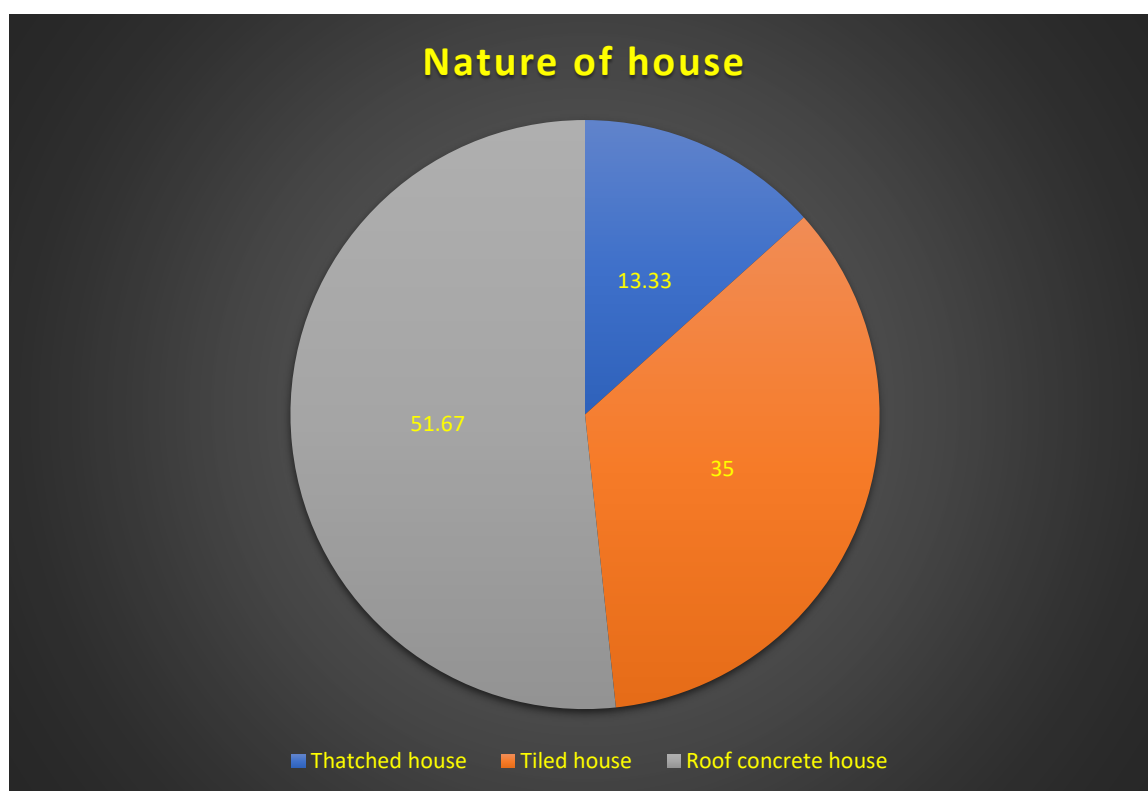


TABLE 4.11
HABIT OF SAVINGS AMONG THE SALT WORKERS

Sl. No.	Habit of savings (Rs.)	No. of Respondents	Percentage
1.	No savings	18	30.00
2.	Save below Rs.500 per month	27	45.00
3.	Save between Rs.501 to Rs. 1,000	15	25.00
	Total	60	100.00

Source: Primary data

It is inferred from Table 4.11 that those 18 (30.00 %) respondents do not have savings at all, 27 (45.00 %) respondents save below Rs. Five hundred per month, and the rest 15 (25.00 %) respondents save between Rs. 501 and Rs. 1,000 per month.

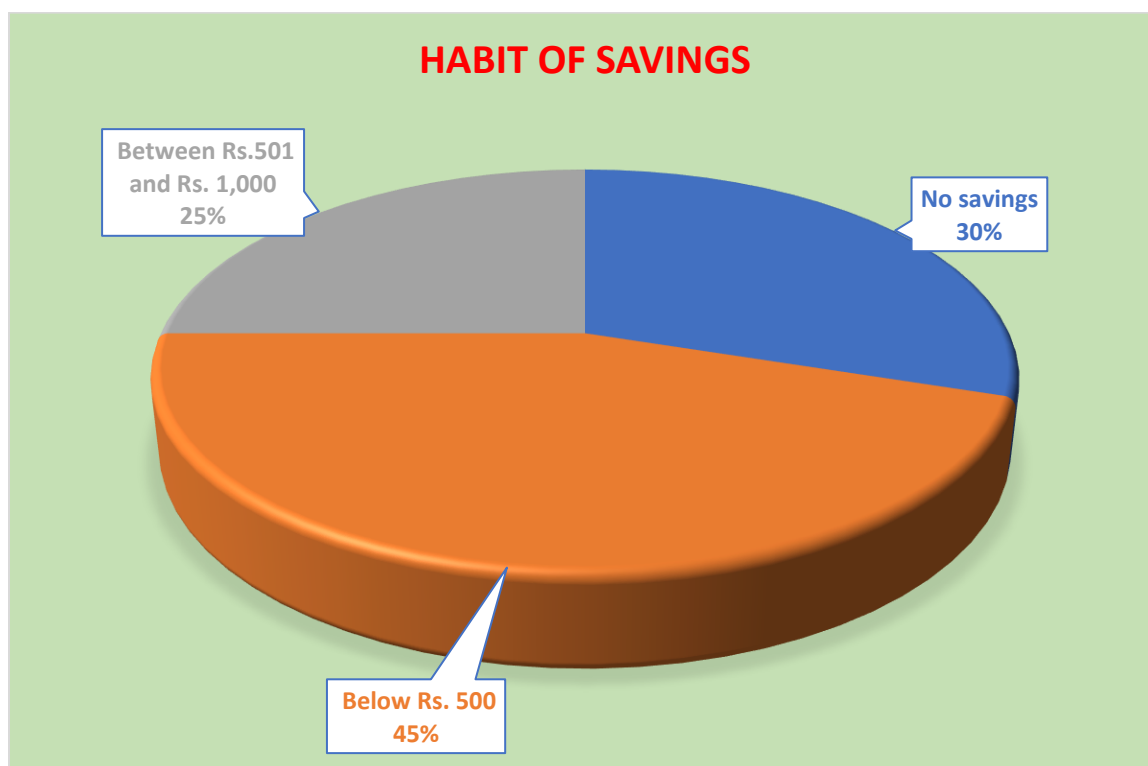


TABLE 4.12
NUMBER OF RESPONDENTS IN DEBT

Sl. No	Debt details	Number of Respondents	Percentage
1.	No debt	9	15.00
2.	Debt owes to employer	21	35.00
3.	Debt owes to the money lender	30	50.00
	Total	60	100.00

Source: Primary data

Table 4.12 shows that 9 (15.00 %) respondents are not in any debt, 30 (50.00 %) respondents have borrowed from the money lenders, and the rest 21 (35.00 %) respondents have borrowed from their employers.

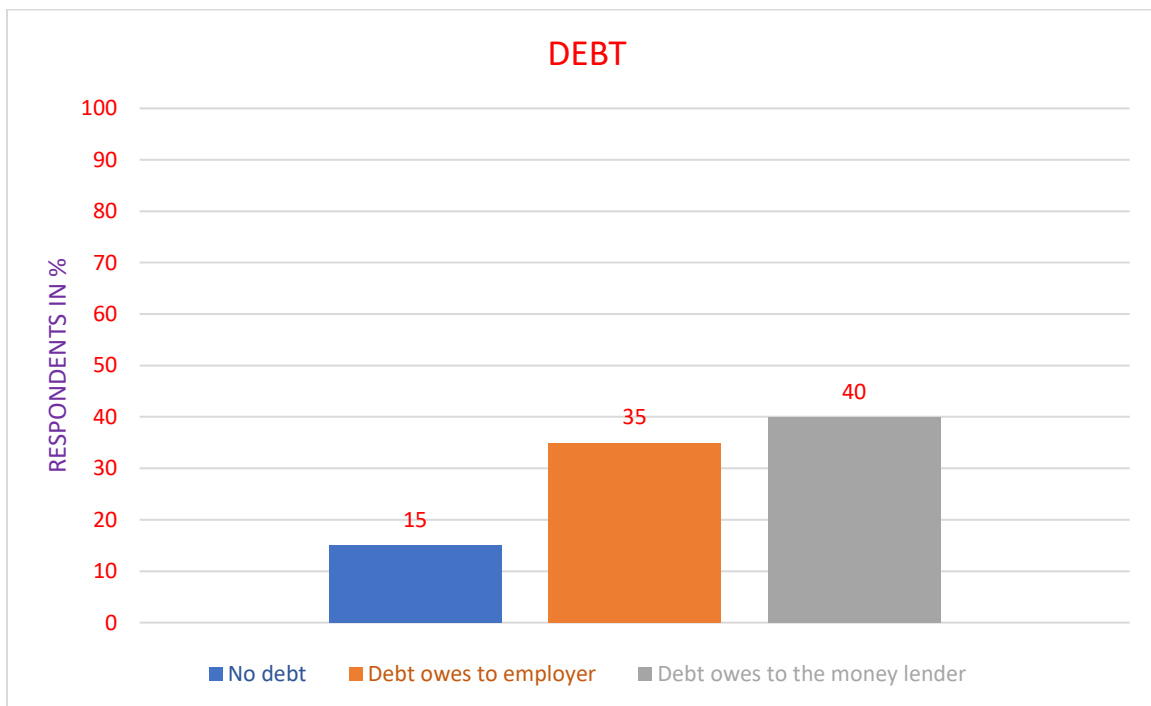


TABLE 4.13
NUMBER OF RESPONDENTS GETTING ADVANCES

Sl. No.	Getting advances	No. of Respondents	Percentage
1.	Yes	41	68.33
2.	No	19	31.67
	Total	60	100.00

Source: Primary data

It could be seen from Table 4.13 that 68.33 % of respondents get advances from their employers.

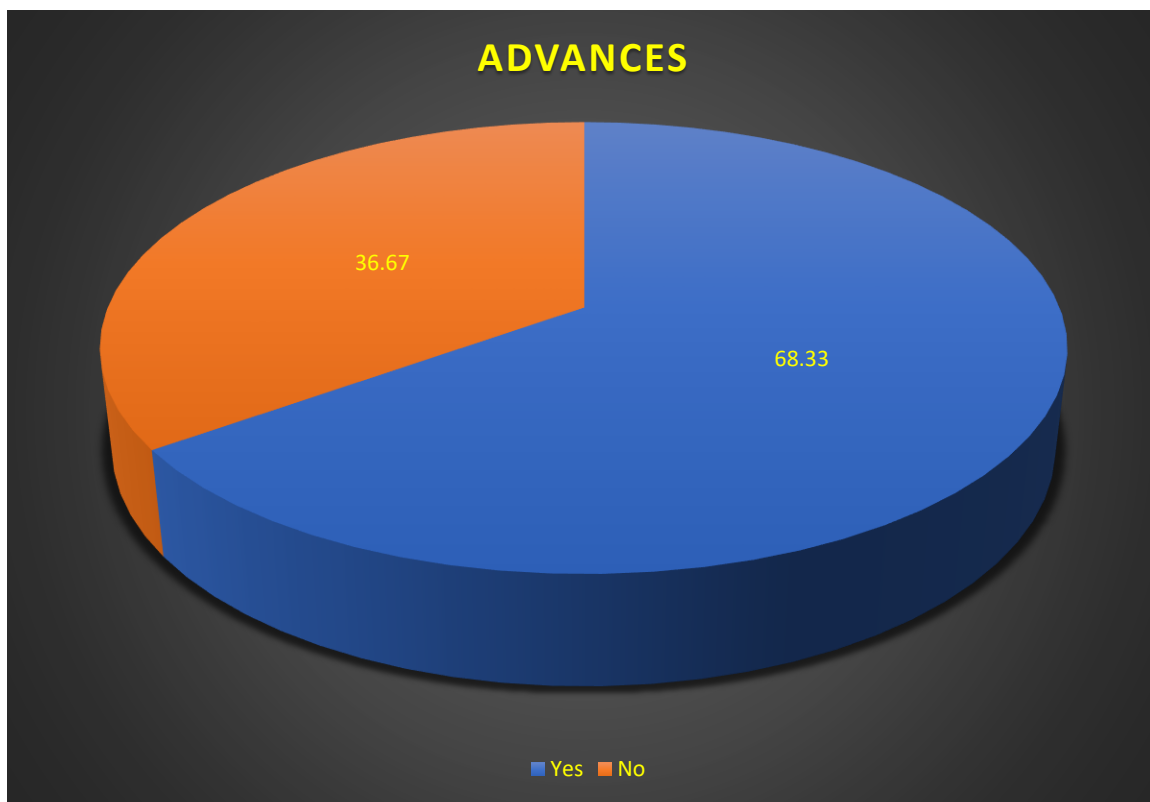


TABLE 4.14
YEARS OF EXPERIENCE IN THE SAME SALT UNITS

Sl. No	Experience in the same salt units	Number of Respondents	Percentage
1.	Below 3 years	4	6.67
2.	Above 3 years and up to 6 years	8	14.33
4.	Above 6 years and up to 9 years	13	21.67
4.	Above 9 years and up to 12 years	19	31.67
5.	Above 12 years and up to 15 years	11	18.33
6.	More than 15 years	5	8.33
	Total	60	100.00

Source: Primary data

It is inferred from Table 4.14 that 4 (6.67%) respondents have work experience in the same units for a period of below 3 years, 8 (14.33%) respondents have work experience for a period of 3 to 6 years in the same units, 13 (21.67 %) respondents have work experience for a period of 6 to 9 years, 19 (31.67%) respondents have work experience of 9 to 12 years, 11 (18.33 %) respondents have work experience for a period of 12 to 15 years and the rest 5 (8.33 %) respondents have work experience for more than 15 years.

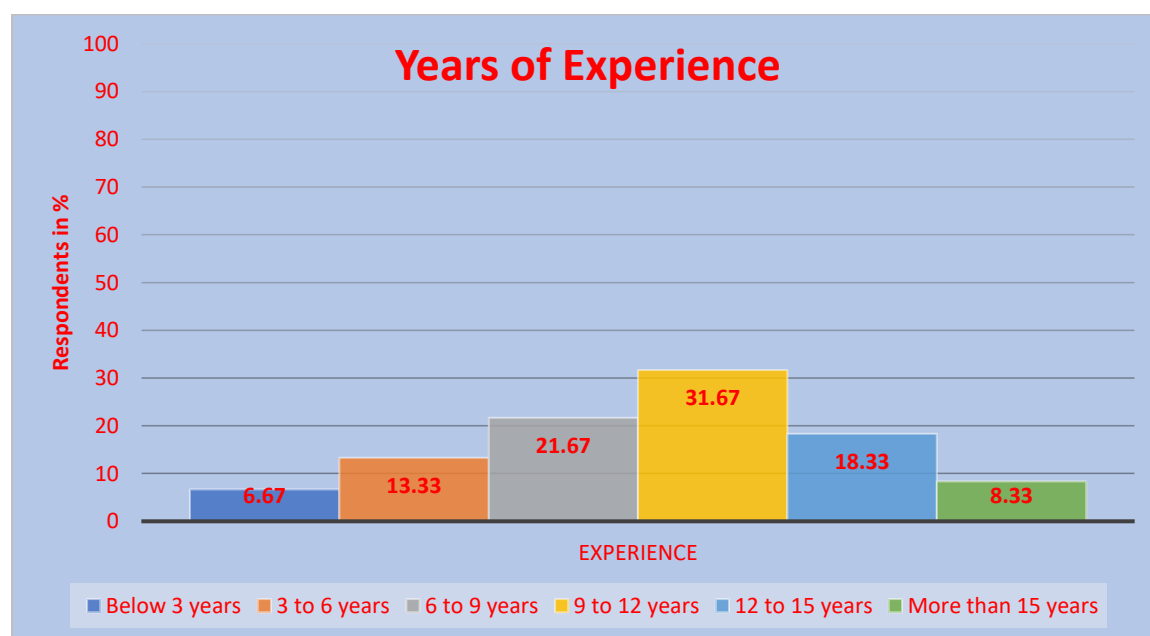


TABLE 4.15
REASONS FOR GOING TO JOB IN SALT INDUSTRIES

Sl. No	Reasons for going to job in salt units	Number of Respondents	Percentage
1.	To earn an income	18	30.00
2.	To meet the family expenditure	16	26.67
4.	To supplement the family income	14	24.33
4.	To provide education for their children	12	20.00
	Total	60	100.00

Source: Primary data

It is understood from Table 4.15 that 18 (30.00 %) respondents have chosen the job in salt works to earn an income to meet their family expenditure, 16 (26.67 %) respondents have chosen the job in salt works units to meet the family expenditure, 14 (24.33%) respondents have chosen job in salt units for the supplement the family income, and the rest 12 (20.00 %) respondents have chosen job in salt units to provide education to their children.

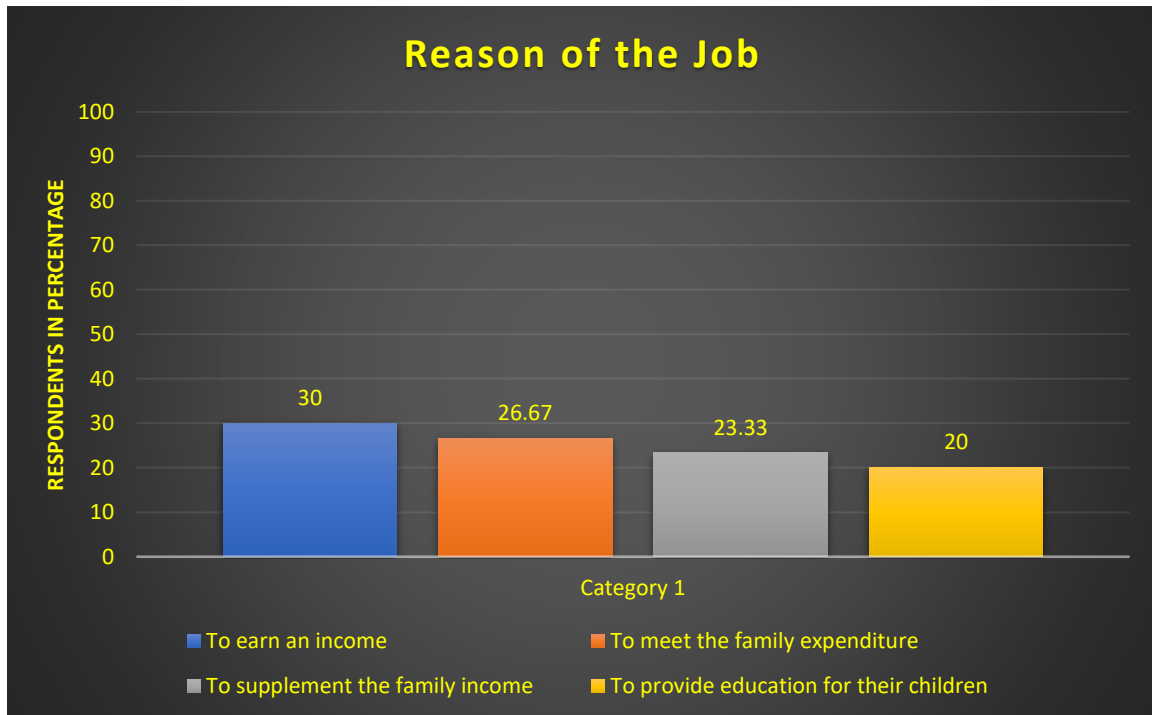


TABLE 4.16
CATEGORY OF SALT WORKERS

Sl. No	Category of Salt Workers	Number of Respondents	Percentage
1	Watering	6	10.00
2	Scraping	11	18.33
3	Removing	13	21.67
4	Grinding & drying	7	11.67
5	Packing	10	16.67
6	Stitching	5	8.33
7	Helpers	5	8.33
8	Clerks	3	5.00
	Total	60	100.00

Source: Primary data

It is inferred from Table 4.16 those 6 (10.00%) respondents are occupied watering, 11 (18.33%) respondents are engaged in scraping, 21.67% of the workers working in removing, 11.67% of the workers working in grinding & drying sections, 16.67% of the workers working in packing, 8.33 of the workers working in both stitching and helper and the rest 18 (30.00 %) respondents are employed as clerks.

TABLE 4.17
DISTANCE OF FACTORY FROM THE RESIDENCE

Sl. No	Distance of workplace	Number of Respondents	Percentage
1.	1 km. away from the residence	2	3.33
2.	2 km away from the residence	10	16.67
3.	3 km away from the residence	19	31.67
4.	4 km away from the residence	14	24.33
5.	5 km away from the residence	6	10.00
6.	6 km away from the residence	5	8.33
7.	More than 6 km from the residence	4	6.67
	Total	60	100.00

Source: Primary data

Table 4.17 reveals that 2 (3.33%) respondents' factory is located one km away from their residence, for 10 (16.67 %) respondents, it is two km away from their residence, for 19 (31.67 %) respondents, it is located three km away from their residence, for 14 (24.33 %) respondents the workplace is located four km away from their residence, for 6 (10 %) respondents the workplace is located 5 km away from their residence, 5 (8.33 %) respondents workplace is located 6 km away from their residence. For the rest of the 4 (6.67%) respondents, the workplace is more than km away from their residence.

TABLE 4.18
PROVISION OF TRAVELING ALLOWANCE

Sl. No.	Provision	Number of Respondents	Percentage
1.	Yes	12	20.00
2.	No	48	80.00
	Total	60	100.00

Source: Primary data

It is evident from Table 4.18 that those 48 (80 %) respondents are not provided with a travelling allowance, and the rest 12 (20 %) respondents are given a travelling allowance.

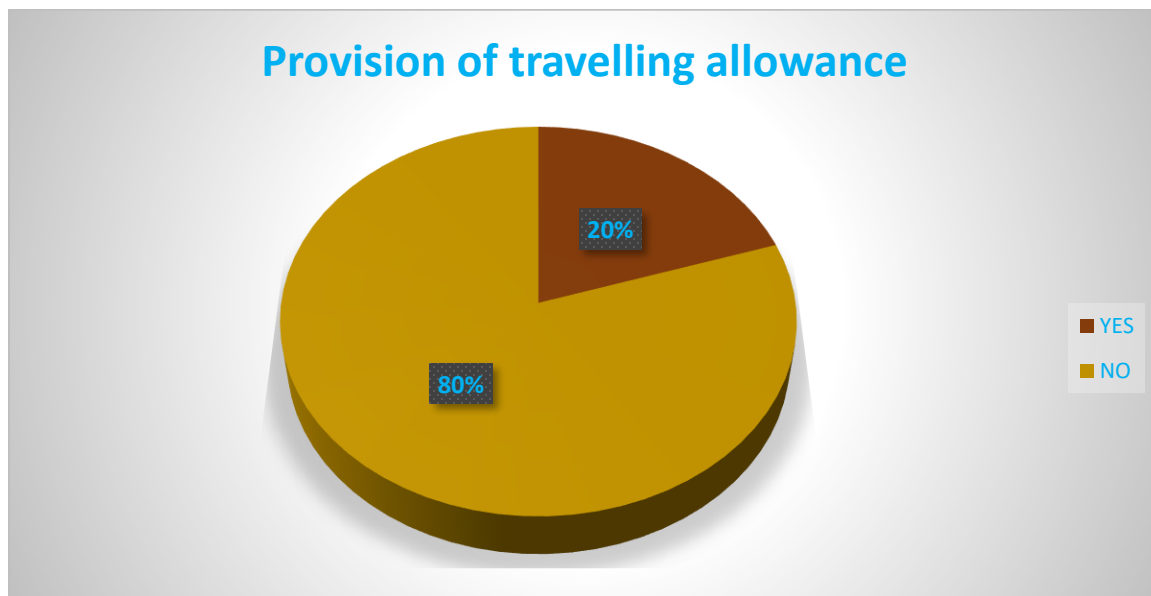


TABLE 4.19
TOTAL WORKING HOURS PER DAY

Sl. No	Total working hours	Number of Respondents	Percentage
1.	Below 8 hours	7	11.67
2.	More than 8 hours	53	88.33
	Total	60	100.00

Source: Primary data

It could be seen from Table 4.19 those 53 (88.33 %) respondents are working for more than 8 hours per day, and the rest 7 (11.67 %) respondents are working below 8 hours per day.

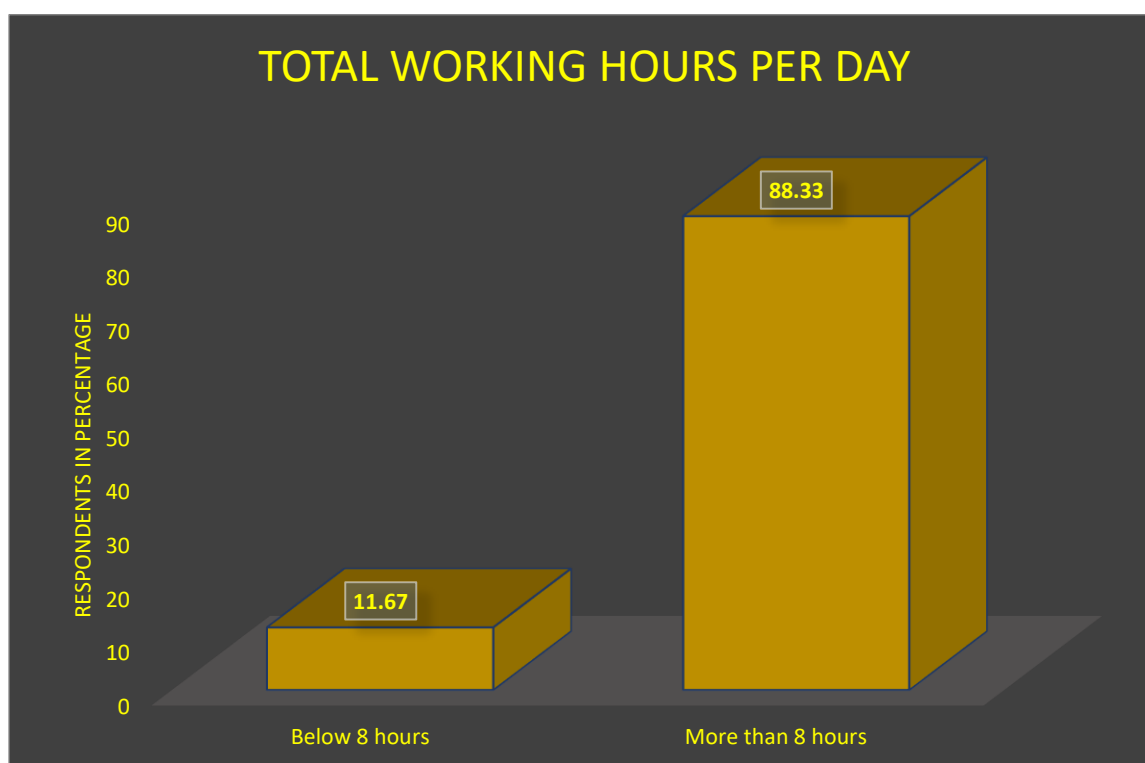


TABLE 4.20
MODE PAYMENT GIVEN TO THE EMPLOYEES

Sl. No	Mode of payment	Number of Respondents	Percentage
1.	Piece rate	19	31.67
2.	Time rate	11	18.33
3.	Salary	30	50
	Total	60	100.00

Source: Primary data

It is concluded from Table 4.20 those 19 (31.67%) respondents are paid by the number of pieces they have finished, 11 (18.33%) respondents are paid by the total number of hours they have worked, and the rest, 50.00% of the respondents, are paid by salary.

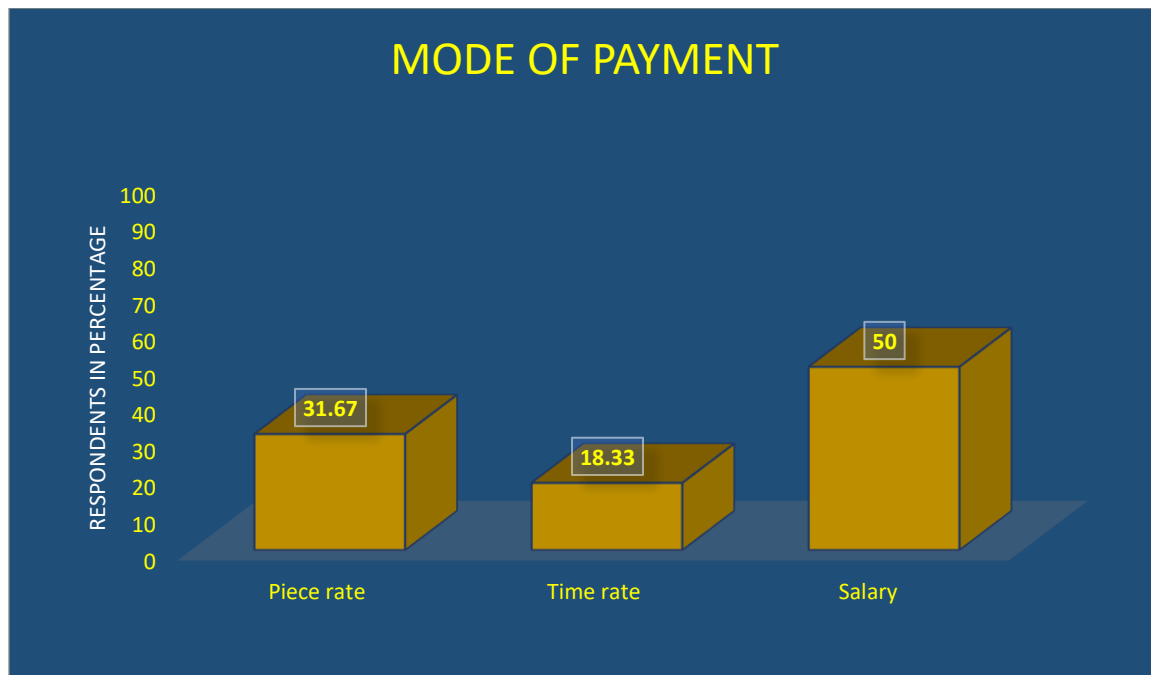


TABLE 4.21
PERIODICITY OF PAYMENT

SL. NO	Periodicity of payment	Number of Respondents	Percentage
1.	Weekly	48	80.00
2.	Monthly	12	20.00
	Total	60	100.00

Source: Primary data

It is inferred from Table 4.21 those 48 (80%) respondents are paid weekly wages, and the remaining 12(20 %) respondents are paid wages once a month.

TABLE 4.22
OPINION OF THE RESPONDENTS ON WAGES

SL. NO	Wage payment	Number of Respondents	Percentage
1.	Satisfied	26	44.33
2.	Not satisfied	34	56.67
	Total	60	100.00

Source: Primary data

It could be seen from Table 4.22 those 34 (56.67 %) respondents are not satisfied with the payment of wages; 26 (44.33 %) respondents are satisfied with the payment of wages they earn at present.

TABLE 4.23
NATURE OF OCCUPATIONAL DISEASES

SL. NO	Occupational Diseases	Number of Respondents	Percentage
1	Skin	13	21.67
2	Eye	11	18.33
3	Back Pain	9	15.00
4	Skin and Eye	9	15.00
5	Stomach diseases	6	10.00
6	Breathing problems	4	6.67
7	Itch sores	8	14.33
	Total	60	100.00

Source: Primary data

Among the sixty workers suffering from an occupational disease, 21.67 per cent are affected by skin disease, and 18.33 per cent have eye defects. 15.00 percent feel back pain and skin and eye problems, 10.00 percent and 6.67 percent feel stomach diseases and breathing problems, and 14.33 percent face itch problems. Thus, it can be inferred that occupational diseases attacking salt workers are found to be chronic.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSION AND SUGGESTIONS

5.1 SUMMARY OF FINDINGS

Salt is one of God's most essential gifts to mankind, as it is useful to animals and plants as well as the human body. In this section, the study's most important findings are summarised and presented.

It could be observed that out of the total respondents, 71.67 per cent are male, whereas the remaining 28.33 per cent are females. Hence most of the respondents are male in the selected salt industries in Muthiahpuram area of Thoothukudi district.

It could be inferred that the important age groups of the respondents are 51-60 years and 41-50 years. They constitute 25.00 and 35.00 per cent of the total, respectively. It is followed by 31 – 40 years, below 30 years, and above 60 years which constitute 21.67 per cent, 10.00 per cent and 8.33 per cent, respectively. It is concluded that most of the respondents fall under the age group of below 41-50 years in the study area. The mean age of salt workers worked out to be 45.5 years.

It could be evident that most of the respondents are married. They constitute 88.33 per cent of the total. It was followed by unmarried, which constituted 11.67 per cent.

It is found from that most of the respondents are Hindus, which constitutes 71.67 per cent. It was followed by Christians and Muslims, which constitute 20.00 per cent and 8.37 per cent, respectively. It is concluded that among the 60 respondents selected under study, 43 are Hindus, 12 are Christians, and only 5 are Muslims in the Muthiahpuram area of Thoothukudi district.

It could be seen that out of 60 respondents, 24 (40.00 per cent) are Backward

Class, and it was followed by Scheduled Caste/Scheduled Tribes, Most Backward Class and Forward Class, which constitute 28.33 per cent, 21.67 per cent and 10.00 per cent respectively. It is concluded that most of the respondents come under the category of Backward Class.

It demonstrates the level of education among the respondents. The important level of education among them is illiterate, which constitutes 38.33 per cent of the total. The number of respondents with primary, secondary school, higher secondary, and collegiate education constitute 25.00, 16.67 per cent, 11.67 and 8.33 per cent of the total, respectively. It is concluded that most respondents have illiterates in the study area.

It could be identified that a maximum of 76.67 per cent of the total respondents belong to the nuclear family system, whereas the remaining 23.33 per cent of the respondents belong to the joint family system. It is concluded that most of the respondents belong to the nuclear family in the study area.

It could be exemplified that the important family sizes among the respondents are three to four members and four to five members per family, which constitute 41.67 and 28.33 per cent of the total, respectively. The number of respondents who have a family size of fewer than three members and above five members in their family constitutes 16.67 cents and 13.33 per cent, respectively. The analysis reveals that the important family size among the respondents is three to four members in the study area.

It is inferred that those 19 (31.67%) respondents earn a monthly income between Rs. 3,501 and Rs. 4,000, 16 (26.67 %) respondents earn a monthly income between Rs. 4,001 and Rs. 4,500, 12(20.00%) respondents earn a monthly income between Rs. 3,001 and Rs. 3,500, 8 (13.33%) respondents earn a monthly income below Rs. 3,000 and the rest 5 (8.33%) respondents earn a monthly income of and

above. The mean monthly family income of the households works out to be Rs. 3,733.83.

It is concluded that 31 (51.67 %) respondents live in roof concrete houses, 21 (35.00 %) respondents live in tiled houses and the rest 8 (13.33 %) respondents live in thatched houses.

It is inferred that those 18 (30.00 %) respondents do not have savings at all, 27 (45.00 %) respondents save below Rs. Five hundred per month, and the rest 15 (25.00 %) respondents save between Rs. 501 and Rs. 1,000 per month.

The study shows that 9 (15.00 %) respondents are not in any debt, 30 (50.00 %) respondents have borrowed from the money lenders, and the rest 21 (35.00 %) respondents have borrowed from their employers.

It could be seen that 68.33 % of respondents get advances from their employers.

It is inferred that 4 (6.67%) respondents have work experience in the same units for a period of below 3 years, 8 (13.33%) respondents have work experience for a period of 3 to 6 years in the same units, 13 (21.67 %) respondents have work experience for a period of 6 to 9 years, 19 (31.67%) respondents have work experience of 9 to 12 years, 11 (18.33 %) respondents have work experience for a period of 12 to 15 years and the rest 5 (8.33 %) respondents have work experience for more than 15 years.

It is understood that 18 (30.00 %) respondents have chosen the job in salt works to earn an income to meet their family expenditure, 16 (26.67 %) respondents have chosen the job in salt works units to meet the family expenditure, 14 (23.33%) respondents have chosen job in salt units for the supplement the family income, and the rest 12 (20.00 %) respondents have chosen job in salt units to provide education to their children.

It is inferred that those 6 (10.00%) respondents are occupied watering, 11 (18.33%) respondents are engaged in scraping, 21.67% of the workers working in removing, 11.67% of the workers working in grinding & drying sections, 16.67% of the workers working in packing, 8.33 of the workers working in both stitching and helper and the rest 18 (30.00 %) respondents are employed as clerks.

It reveals that 2 (3.33%) respondents' factory is located one km away from their residence, for 10 (16.67 %) respondents, it is two km away from their residence, for 19 (31.67 %) respondents, it is located three km away from their residence, for 14 (23.33 %) respondents the workplace is located four km away from their residence, for 6 (10 %) respondents the workplace is located 5 km away from their residence, 5 (8.33 %) respondents workplace is located 6 km away from their residence. For the rest of the 4 (6.67%) respondents, the workplace is more than km away from their residence.

It is evident that those 48 (80 %) respondents are not provided with a travelling allowance, and the rest 12 (20 %) respondents are given a travelling allowance.

It could be seen that those 53 (88.33 %) respondents are working for more than 8 hours per day, and the rest 7 (11.67 %) respondents are working below 8 hours per day.

It is concluded that those 19 (31.67%) respondents are paid by the number of pieces they have finished, 11 (18.33%) respondents are paid by the total number of hours they have worked, and the rest, 50.00% of the respondents, are paid by salary.

It is inferred that those 48 (80%) respondents are paid weekly wages, and the remaining 12(20 %) respondents are paid wages once a month.

It could be seen that those 34 (56.67 %) respondents are not satisfied with

the payment of wages; 26 (43.33 %) respondents are satisfied with the payment of wages they earn at present.

Among the sixty workers suffering from an occupational disease, 21.67 per cent are affected by skin disease, and 18.33 per cent have eye defects. 15.00 percent feel back pain and skin and eye problems, 10.00 percent and 6.67 percent feel stomach diseases and breathing problems, and 13.33 percent face itch problems. Thus, it can be inferred that occupational diseases attacking salt workers are found to be chronic.

5.2 CONCLUSION

Almost all countries' salt production has increased. In comparison to other countries, India's salt production is increasing at a rapid pace. Natural factors such as rainfall, air humidity, climatic conditions, temperature, and other factors have a significant impact on Thoothukudi's production figures.

Co-operative groups in Thoothukudi produce very little salt. Despite the fact that the area is Tamil Nadu's largest producer of salt, salt producers face a number of challenges, including fierce rivalry from Gujarat, inclement weather and rain, labour issues, and so on. Their profit margin is lower and fluctuates since their production costs are higher than in Gujarat. Regardless of the foregoing, salt producers have worked together for years. As a result, they've established a romantic tie to salt production and selling in Thoothukudi.

5.3 SUGGESTIONS

Built on the findings of the study, the following constructive and practical suggestions are provided to encourage and motivate the salt workers in the study area:

- The salt industry in Thoothukudi is up against stiff competition from the salt industry in Gujarat. Gujarat has lower production costs as a result of government incentives such as subsidised electricity and reduced production costs. Thoothukudi's industry, on the other hand, is experiencing a power deficit and a high tariff rate. As a result, efforts will be made to enhance the availability of power and the cost of power.
- Gujarati salt manufacturers employ cutting-edge technologies to create their product. However, in Thoothukudi, the majority of salt producers are small-scale, and the salt units are essentially labor-intensive. As a result, labour costs are excessive. As a result, salt producers could benefit from information and encouragement about current production methods.
- According to the research, a tighter and greater expansion and control of the market is required to improve the operation of the Salt Industry in the interests of producers, workers, and other Salt Industry actors.
- The registration process for the Salt Industry's Unorganized Sector is lengthy and tedious, and it necessitates the submission of additional paperwork. As a result, efforts will be made to simplify and decrease it.
- Because the return on investment in the salt industry is highly variable, salt manufacturers consider it a high-risk venture. As a result, efforts must be made to educate producers in order to alleviate their fear of danger.
- Instead of looking for white collar jobs, the younger generation of salt pan owners should be adequately motivated to use their young blood and spirit in our country's old and traditional enterprise, which will make them self-sufficient.

REFERENCES

1. Amirthalingam, S., “A Study on Environmental and Living Factors of Salt Workers in Tamil Nadu”, Journal of Applied Economics, Vol.7, 2002, pp.17-23.
2. Balram, V., “A Study on Cost Techniques of Solar Salt Production and Marketing in Tamilnadu”, Journal of Agricultural and Applied Economics, Vol-6, 1990.
3. Chris Kresser, “Shaking up the Salt Myth: The Human Need for Salt”, The Hindu, April 13, 2012, p.6.
4. Dr.D. Amutha, Migration of Unorganised Workers in Tuticorin City-An Analysis, Integral Review: A Journal of Management, 2015.
5. G. Grahadurai and A.R.A.S. Dhanabalan, "Salt Production Yet to Take Off in Thoothukudi", The Hindu, February 1, 2015, p. 6.
6. G. R. Arumugasamy and Sam Renu, et.al., “Problems and Prospects of Salt Industry in Kanyakumari District”, Indian Journal of Marketing, Vol-35, 2013.
7. J. Jeyaranjan “Salt Production and Trading in South India”, Published Research Article, Submitted to Institute of Development Alternatives, Thiruvannamipur, Chennai, 2011.
8. J. Jeyaranjan, “Increasing the Quality and Quantity of Edible Salt Produced by Salt Co-operatives in Tamil Nadu and Andhra Pradesh” Published Research Article, Submitted to The Global Alliance for Improved Nutrition (GAIN), Institute of Development Alternatives, Chennai, 2014.
9. Laxmi, V.V. and Selva Mathan, T.P.S., “Dip in Salt Export from Thoothukudi”, The Hindu, January 2, 2013, p.6.

- 10.M. Krishnamurthi, "Welfare Board Sought for Thoothukudi Salt Workers", The Hindu, September 9, 2013, p 9.
- 11.Natarajan, M., "A Study on Economic Activities of Unorganized Sector with Special Reference to Saltpan Workers in Southern Tamil Nadu", Unpublished Research Article, Department of Commerce, M K University, Madurai, 2009.
- 12.Petchimuthu, S., "Salt Production up in Thoothukudi" Times of India, July 13, 2015, p.7.
- 13.Prabakaran John, B. and Jegadis Chandrabose, M.M., "Fall in Salt Export from Thoothukudi", The Hindu, April 11, 2015, p.7.
- 14.R. Banumathi. and S Nadarajan, "Marketing Strategies and Practices with Reference to Salt Industries in Tamil Nadu India" International Journal Of Management (IJM), Dept. of Management Studies, Anna University, Tirunelveli, Volume 6, Issue 3, March 2015, pp.34-37.
- 15.Ramakrishnaraj, P., "Income and Expenditure Pattern of Salt Workers in Sahupuram of Arumuganeri" Unpublished Research Article, Department of Economics, Bharathidhasan University, Tiruchirappalli, 2009.
- 16.S. Dhemia and K. Varma, "Salt Intake in India – An Alarming Situation" International Journal of Food, Agriculture and Veterinary Sciences ISSN: 2277-209X (Online) An Open Access, Online International Journal Available at <http://www.cibtech.org/jfav.htm> 2015 Vol. 5 (1) January-April, pp. 1-10.
- 17.Sailesh Mohan, S. and Prabhakaran, D., "Review of Salt and Health: Situation in South East Asia Region" Published Technical paper of World Health Organisation, the Regional Office of South East Asia, Bangkok, Technical Working Group Meeting on Regional Action Plan, Thailand, 11-13 June 2013.
- 18.Salt Annual Report of 2010, Salt Department of Tamil Nadu.
- 19.Salt Annual Report of 2013, Salt Department, Thoothukudi.

20.saltcomindia.com

- 21.Satyavani, T. and Ranjan, T., et.al., “A Study on the Status of Child Labourers in the Saltpans of Little Rann of Kutch”, Global Journal of Commerce and Economics, Vol.3, 2006, pp.17-23.
- 22.Sivarama Krishnan, V., “A Report on the Status of Salt Industry in Thoothukudi District”, Unpublished Research Article Submitted to Bharathiyar University,2002.
- 23.Sivarama Krishnan, V., “A Report on the Status of Salt Industry in Thoothukudi District”, Unpublished Research Article Submitted to Bharathiyar University,2002.
- 24.Subburaj, N., “Investigation of Salt Workers in Arumuganeri Area of Thoothukudi” Asia Pacific Journal of Research, Vol-8, Issue No-4, 2011.
- 25.W. Akzo Nobel, “World Salt 2015” Published Research Article of Freedonia Group, Online Journal, Volume 5, Issue-3, February 2012, pp.17-23.

QUESTIONNAIRE

A STUDY ON LIVING CONDITIONS OF SALT WORKERS WITH SPECIAL REFERENCE TO MUTHIAHPURAM AREA OF THOOTHUKUDI DISTRICT

1. Name of the respondent :
2. Address :
3. Sex :
4. Age :
5. Level of education :
6. Community :
7. Religion :
8. Size of family :
9. Marital status :
10. Family Type :
11. Housing Type :
12. Earning members per family of the households :
13. Occupational background :
15. Material possession :
16. Monthly personal income :
17. Family income of the households :
18. Monthly family expenditure of the households :
19. Monthly savings of the households :
20. Debt details :
21. Number of respondents getting advances :

- 22. Years of experience in the same salt units :
- 23. Reasons for going to job in salt industries :
- 24. Category of salt workers :
- 25. Distance of factory from the residence :
- 26. Provision of traveling allowance :
- 27. Total working hours per day :
- 28. Mode payment given to the employees :
- 29. Periodicity of payment :
- 30. Wage payment :
- 31. Occupational Diseases :
- 32. Any other information :
- 33. Any help from Government? :
- 34. Any Suggestions :

AN ECONOMIC ANALYSIS OF GOLD SMITHS

IN THOOTHUKUDI AREA

Project Report submitted to

ST. MARY'S COLLEGE (Autonomous), THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Tirunelveli

In Partial fulfilment for the award of the Degree of

Bachelor of Arts in Economics

By

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May 2022

CERTIFICATE

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**"AN ECONOMIC ANALYSIS OF GOLD SMITHS IN
THOOTHUKUDI AREA"** is submitted to St. Mary's College
(Autonomous), Thoothukudi in partial fulfilment for the award of
degree of Bachelor of Arts in Economics and is a record of work
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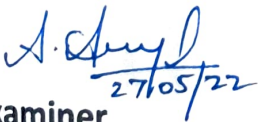


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CHAPTER 1

1.1 INTRODUCTION

India is a country which has the largest market for gold jewellery in the world. Gold has become an inseparable part of the Indian society and is fused into the psyche of the Indian. Gold has acted as the common medium of exchange or the store of value across different dynasties in India spanning thousands of years and countless wars. Thus, it has been proven that wealth could be preserved in spite of wars and political turbulence.

The Indian Gems and jewellery Industry has been witnessing a drastic change due to the huge consumption by the Indians in the form of gold Jewellery. In the current economic trend, the consumption is curbed by raising the import duty and prohibiting the import of gold coins, because of the drastic demand for gold in the country.

Gold jewellery is the most preferred form of jewellery in great demand in India as it is considered auspicious to purchase gold on major occasions like festivals, marriage, birthday, etc. The buying behaviour of the consumers is drastically changing because of the growth of organized retailers. Increasing youth population has paved the way for new players.

Marketing trends have also led to more awareness about the purity of the metal, the importance of hallmarking and guarantee of quality among consumers and others. The organized retailers thus give a wakeup call to the industry and the unorganized sector has started thinking towards organized sector fast. To be successful players in the industry, the consumer buying behaviour is to be analyzed to identify their needs and satisfy them.

1.2 IMPORTANCE OF GOLD JEWELLERY

From time immemorial, gold and silver have constituted important media for investment both from the capital appreciation point of view and the liquidity point of view¹. Traditionally, gold jewellery has been a sign of social rank and symbol, often of luck or good fortune². Gold imports were boosted by heavy seasonal buying during marriages and other festivals³.

Gold is not only used in jewellery and as a store of value but has assumed enormous importance derived from a combination of properties⁴. Gold plays an important part in almost every ritual, festival or special occasion⁵. Gold is considered still a good investment and therefore traditional and heavy designs continue to attract buyers especially during marriages and festival seasons. However, the accent today is shifting to lightweight jewellery with stylish designs.

The youth want the jewellery designs to complement their designer clothes. In exports Indian gems and jewellery have been the highest revenue earner⁶. Gold has been deemed precious and auspicious through history for more reasons than one⁷. In

¹ V.K Bhalla, Investment Management – Security Analysis and Portfolio Management, 11th Edition, S. Chand and Company, Limited, New Delhi. 2004.

² Britannica Micropedia, Encyclopedia Britannica Inc. William Benton, Chicago. Vol.6, p.545.

³ “India’s Gold Demand Rises” Indian Economic Diary, Weekly Digest of Indian Economic Events Vol.XXXII. No. 41. October 8-14, 2001, p.17173.

⁴ I. Sathya Sundaram, “The Glittering Realities”, Industrial Economist, June 15-29, 1999, p.49.

⁵ Sandhya Sridhar, “Auspicious and Pure”, The Hindu, 05-05-2008.

⁶ I. SatyaSundaram “Gems and Jewellery Save the Shine”, Management Accountant, August 1999.

⁷ Vijayalakshmi Sreedhar, “Go for Gold”, The Hindu, Dated 05-05-2008.

India, gold is valued as a savings and investment vehicle and is the second preferred investment next to bank deposits. India is the world's largest consumer of gold in jewellery, much of which is purchased as investment.

In India, the possession of gold is a status symbol among all cadres and gives the possessor social and economic security. Gold can be bought in desirable quantities and denominations according to the affordability of the buyer. So, people of any economic class can purchase it, according to their convenience. Moreover, it can be bought at any time of their choice.

Gold, in India, is associated with the life of all people, rich or poor, labourers, farmers, and especially women. It has been associated with every aspect of the society. It is considered as a symbol of prestige and status of the family as well as in social life. Gold is purchased in all parts of the country, irrespective of the seasons. India has always been importing gold for local consumption. It is estimated that the stock of gold with the people of India is around 7000 tonnes with an annual addition coming in to this country illegally. In India gold is considered as a symbol of prestige and status of the family as well as in social life⁸. Organized retailing is projected to grow at the rate of 25 percent to 30 percent per annum⁹.

India is the world's largest gold market, with 864.2 tonnes worth \$46491 million in consumer demand by the end of 2012, compared to 986.3 tonnes worth \$48,973 million in 2011¹⁰. Indian households own 18,000 tonnes of gold, accounting for 11%

⁸ Shanthilal, N. Sonawala, The Role of Gold, Silver and NRIs in Indian Economy, Forum of Free Enterprise, 14.9.1992, p.12.

⁹ India retail report 2005.

¹⁰ World Gold Council (2013b), "Gold Demand Trends Full year 2012". Retrieved March from https://www.gold.org/investment/research/regular_reports/gold_demand_trends/

of the global stock and valued at over \$950 billion¹¹. In 2011, India had 18,000 tonnes of gold in private hands¹².

Once an American visited the city of Ahmedabad and in Ahmedabad where he saw a family with a wooden cart driven on one side by a male and the other side by women for carrying goods from one place to another.

They may be earning a meagre labour out of this work. But what the American saw was a "Mangalasutra in Gold" on the body of the women, and he was surprised with the fact, that, even the people in the lowest strata of society wear gold ornaments. A team from National Geographic, America came down to India for recording on Video facts on usage of gold in India, they were amazed to see that even the fisher women were wearing gold ornament from tip to toe. This is how gold is being used in this country.

Gold is purchased in all parts of the country irrespective of the seasons though not in uniform scale. Barring 1930 to 1939, India has always been importing Gold for local consumption inspite of the fact that there was total ban on import of gold since 1948 and it is estimated that the stock of gold with the people of India is around 7000 tonnes with an annual addition coming to this country illegally.

In the year 1990-91, 200 tonnes of gold valued at international price of Rs.5500 crores and at internal price of Rs.7500 crores were smuggled into this country. One wondered when Foreign Exchange position is so precarious and also there is shortfall in balance of payments position, how the foreign exchange is available to the people,

¹¹ Macquarie (2011), "Indian Households Hold over \$950 billion of Gold: Macquarie", 2011-12-04 <http://economictimes.indiatimes.com/markets/commodities/indian-households-hold-over950-billion-of-gold-macquarie/articleshow/10978409.cms>.

¹² Kumarasamy, Umanath (2012a), "Gold: A Glittering Investment Alternative?" Facts for You, 32 (7), April, p. 9.

who are bringing in gold to the tune of Rs.5500 crores, and more pertinently who supplied this foreign exchange.

The recent focus on gold is because the Government of India for the first time officially swapped or mortgaged gold, out of their treasury. Initially they wrapped 21 tonnes of gold, with the provision of bringing it back within six months and pledged gold to arrange for short term facility for foreign exchange.

Subsequently, the Government pledged around 46 tonnes of gold and kept it out of India to raise foreign exchange facility for urgent and immediate payment against foreign exchange deficit. The first sale of gold through State Bank of India was out of the Gold seized by the Customs Authorities arising out of smuggling.

It is estimated that the Government has seized around 85 tonnes of gold, this way, out of which 13 tonnes was sold by auction and out of remaining 72 tonnes, 18 tonnes are earmarked for replenishing Gold against exports of gold jewellery and kept with State Bank of India. Against this, only 10 to 11 tonnes are being utilised and still some gold is left with them in this way.

Other 20 tonnes are swapped by the State Bank of India to raise Foreign Exchange, 7.5 tonnes were used for export of gold jewellery before State Bank of India scheme became operative. Thus, still about 25 tonnes gold should have been in balance stock.

However, recently the Government has announced that no further stock of gold is available. The gold which was subsequently pledged by the Government i.e., 46 tonnes came out of the quantity held in the issue Department of Reserve Bank of India as an Asset against liabilities. Reserve Banks all over the world keep some part of their assets in the form of gold.

When India got Independence, the British Government handed over to Reserve Bank of India such gold. After the division of India and Pakistan, share of India came to

about 216 tonnes. To these 216 tonnes, further 116 tonnes of gold was added which was returned back from International Monetary Fund. Thus, the total gold with Reserve Bank of India in the beginning of 1991 was 332 tonnes. When the Reserve Bank of India agreed that 15 per cent of gold can be kept outside India for raising Foreign Exchange funds, the Government of India transferred 46 tonnes of this gold to London. There was nothing wrong in doing this transfer as the gold is got back within a reasonable period.

India has been known to possess large stock of gold and studies show that they are mostly accumulation from centuries of trading rather than result of production. Gold, in India, is always related to the demand, supply and is linked to Government policies. Though the demand for gold has no authentic estimates, the demand for 22 carat purity gold is of about 80 per cent for jewellery fabrication, 15 per cent is for investor demand for specific occasions and only 5 per cent demand for industrial users.

The demand for gold jewellery is rooted in the societal preferences for a variety of reasons like religious, ritualistic, a preference form of wealth for women and as a hedge against inflation. It is difficult to prioritize them, but it may be reasonable to conclude that it is a combined effect, and to treat any major part as exclusively a store of value or hedging instrument. The trade on gold depends on various factors to economy, style of life, religion, economic conditions and other social and regional factors.

The domestic production of gold is very limited, around 2 tonnes per year. The supply from fabricated old gold scraps is estimated at around 62 tonnes per year. The market situation changed drastically during the nineties since the proportion of smuggled gold in India's total supplies has gone down substantially.

Now, there are some efforts to promote gold mining domestically, especially involving private sector, but there are no indications that domestic supply would increase in any perceptible manner in the near future. The current policy debates show that the management of gold demand and supply has become an important policy for fiscal and exchange rate management and in the recent times, use of gold as a financial instrument, especially, mobilisation of domestic gold has attracted attention.

1.3 FEATURES OF INDIA'S GOLD ECONOMY

It is of contemporary interest, however, relate to the demand, supply and price-movements and their link with policy. Some broad generalizations on these aspects would be appropriate to review the policy and identify the issues. First, on the demand side, while, there are no authentic estimates, the available indications are that about 80 per cent is for jeweller fabrication (mainly of over 22 carat purity) for domestic demand, 15 per cent is for investor-demand and barely 5 per cent is for industrial uses.

The demand for gold jewellery is rooted in the societal preference for a variety of reasons viz., religious ritualistic, a preferred form of wealth for women and as a hedge against inflation. It will be difficult to prioritize them but it may be reasonable to conclude that it is a combined effect, and to treat any major part as exclusively a store of value or hedging instrument would be unrealistic. Nor would it be realistic to assume that it is only the affluent who create demand for gold.

There is reason to believe that a part of investment demand for gold assets is out of black money. The annual consumption of gold which was estimated at 65 tonnes in 1982 has increased to 505 tonnes in 1995. Although it is likely that with prosperity and enlightenment, there may be deceleration in demand, one area, it would be made

good by growing demand on account of prosperity in other areas. In the near future, therefore, the annual demand may continue to be high at around 400 to 500 tonnes. As the domestic production of gold is very limited, around 2 tonnes per year, and supply from fabricated old gold scraps estimated at around 62 tonnes per year being not adequate, the rising demand has to be sourced from outside the country. In the face of a virtual ban on official import of gold for domestic consumption till 1990, the rising demand was met by illegal imports.

During the period 1968-1995, smuggled gold into India varied in the wide range of 10 to 217 tonnes per year with the sole exception of 1980¹³ when 9 metric tonnes were reported to have been smuggled out of the country to take advantage of the soaring gold prices in the international market.

However, the situation changed drastically during the nineties since the proportion of smuggled gold in total supplies has gone down substantially. While currently there are some efforts to promote gold mining domestically, especially involving private sector, there are no indications that domestic supply would increase in any perceptible manner.

The strong domestic demand for gold and the restrictive policy stance are also reflected in the higher price of gold in the domestic market compared to that in the international market at the available exchange rate. During the 19-year period from 1977-78 to 1995-96, the average spread between Mumbai and London market prices (Mumbai price less London price in rupee terms) of gold has been positive except for a brief period during 1980-81.

¹³ Pandey, T.N., Bombay Bullion Association, Bonds-Boom for dishonest, Economic Times, March 12, 1995, p.8.

When the international gold price zoomed briefly, following the oil crisis, the persistent weakening of the US dollar resulting in flight of foliar resources into gold and accelerating world-wide inflationary trends. In the absence of open import, the domestic gold prices relative to international prices appear to have been governed by two factors:

- (i) the spread between the official and market exchange rate of the rupee and
- (ii) the customs duty, transportation cost, storage cost, risk premia etc.

The value of gold imports through official channels increased recently. Viewed from any angle, gold import has emerged, in terms of importance in India's foreign trade, only second to that of oil. As the policy-debates would show, the management of demand and supply of gold has important policy implications for fiscal policy and exchange rate management, and in the recent times, use of gold as a financial instrument, especially mobilisation of domestic gold has attracted attention.

Further, gold is a sacred asset and is being used only on emergency by the family members. There is nothing wrong in utilising gold to tide over the difficult situation in the foreign exchange position. Continuously, India is being faced by short fall in foreign exchange. In Indian's regular trade, in 1989-90, the country has exports to the tune of Rs.32,527 crores while the imports are as much as Rs.43000 crores¹⁴.

This situation was rather alarming. On top of this are accumulating foreign exchange deficit. Government of India has sized up this situation, undertook many corrective measures - firstly devaluation and secondly stopping drain of foreign exchange by linking exports to imports and only 30 per cent entitled to license against exports realisation.

¹⁴ " Tandon, Indian Economy, Sultan Chand & Sons, New Delhi, 1997, p.190.

The total exports earnings are Rs.32527 crores and our import bill are around Rs.43000 crores. As against this Rs.43000 crores, bill for core imports like crude oil fertilizers, edible oil and other essential items amounts to Rs.25000 crores, leaving a gap of Rs.18000 crores. Out of this Rs.18000 crores, the Government has permitted 30 per cent entitlement against exports i.e., 30 per cent of Rs.32527 crores, comes to about Rs.10000 crores leaving a balance of 8000 crores uncovered. Here is the problem. If Rs.8000 crores is uncovered, the industry will have to cut down their imports.

India has the gold which is coming illegally to the tune of Rs.5500 crores for which some way or other, foreign exchange is being supplied and this is not accounted for in official balance of payment position. When Indian Foreign Exchange Position and the Balance of payments position is so precarious, how is Rs.5 500 crores of free foreign exchange being made available for the smuggling activity, this state of affairs has been going on for the last many years.

The regret is that such unauthorised expenditure of Foreign Exchange pool of the country and is being kept out of official dealings. It may be interesting to mention here that the Dollar - Rupee hawala reached Rs.33 per as against the official rate of Rs.27 during 1990. Mopping of this free Foreign Exchange for Forex Bonds would have an effect on the supply of free Foreign Exchange funds and would therefore, make unofficial gold imports more expensive.

The effect of this measure is being watched but if ultimately it reduces free supply of foreign exchange funds it would make unofficial gold imports more expensive and would reduce supply of smuggled Gold in local market, the price of Gold in India would touch new record levels leaving a substantial margin to smugglers. However, the regulatory effect of this action by the Government may lead to healthy

competition among buyers of foreign exchange and that would have an effective check on the leakages.

How far this step would be successful in channelising foreign exchange to legalised channel - only a loner will show the final results. Further, various schemes of Non-Resident Indian (NRI) bringing gold etc., if at all implemented, it may increase supply. Major portion of Indian foreign exchange is received through Non-Resident Indian (NRI) funds.

This NRI funds are in two ways - one is Repatriable. It is believed that when NRI bring the funds, on a repatriable basis they are entitled to take it back. Such liability is remaining with the Government of India to provide them with the dollar funds.

In order to encourage the Non-Resident Indians (NRIs) to bring in more funds without creating further liabilities on the Government a scheme is suggested that NRIs may be allowed to bring in gold - a portion of the total remittance, say 25 per cent of the total remittance on gold.

A modus operandi can be found out by allowing NRIs to deposit foreign exchange reserve with the State Bank of India who will issue them the value equivalent to 25 per cent of the total remittance in terms of permission of bringing gold to the country at the international price and on payment of import duty, payable also in foreign exchange.

Also, NRIs may be allowed to sell this gold in India and create Rupee funds, non-repatriable for 3 to 5 years. The sale of Gold in India makes a profit of 22 to 25 per cent and also after paying duty, is no repatriable and thus the Rupee funds can be made available for investments in Housing Bonds, etc.

This scheme had been advocated by Bombay Bullion Association as far back as in 1988 when the Rangarajan Commission was appointed to look into the gold situation. This scheme could have resulted in a salutatory effect as an incentive for

NRIs to bring in funds to India and make some profits, at the same time the Government would have also earned foreign exchange on duty collection on such imports of gold.

This could also compete with the supply of smuggled gold thereby help to curb the price level and discourage the activities of smugglers. Another important aspect of gold trade is their export potentialities. Global Annual fabrication demand for Jewellery in 1990 reached 1,985 tonnes - out of which India made carat jewellery of 239.6 tonnes. Total studded and plain gold jewellery exports from India is Rs.280 crores using about 10 tonnes of gold only.

However, recently, by some lapse replenishment of gold was stopped for some time disturbing the export of jewellery to a great extent. Silver exports have a large export potential also and need encouragement and incentive. The main problem is reimbursement of the manufacturing loss. The new export incentive scheme linking exports to imports, is not applicable to gold export schemes. Hence, sin spite of the target set for the same to Rs.1,000 crores there is no initiative to encourage this trade which employs more than one million people.

1.4 MATERIALS USED IN GOLD JEWELLERY MAKING

1.4.1 Diamonds

Of the world polished diamond market, 11 out of 12 diamonds set in jewellery, worldwide, are cut and polished in India. India is the largest cutting center in the world with one million strong workforce accounting for more than 90% of the total workforce, worldwide. Indian Diamantaries are capable of cutting diamonds of all sizes and shapes-92% in terms of pieces, 85% in terms of volume and 60% in terms of value.

India was the world's only source of diamonds for more than 2,000 years until they were discovered in Brazil in 1729. This means that every diamond used in Europe and America prior to 1729 originated in India. The most famous and productive area was the Gloconda mine in Hyderabad, which was known for extremely fine white diamonds. These were associated with volcanic activity in the Deccan Plateau, but they have not produced diamonds for more than a century.

Diamonds exported from India have been traced to the 4th century BC. The most famous Indian diamond from the Gloconda mine is the Koh-I-Nur diamond weighing 186 cts. It is believed to have been owned by the first Mughal emperor, Akbar. It is also known to have been worn by Shah Jahan. In 1849, the diamond was sent to England and was recut into a 105 ct stone with more European proportions.

1.4.2 Gemstones

A gemstone or gem also called a precious or semi-precious stone is a piece of mineral, which is in cut and polished form. Gems are used to make jewellery adornments. Most gemstones were natural and enhanced by cutting and polishing, are hard, but some soft minerals are used in jewellery because of their luster or other physical properties that have aesthetic value.

Navaratna is a Sanskrit word meaning "nine gems" which includes: A ruby (representing the Sun) is always in the center, surrounded by a diamond, a natural pearl, red coral, hessonite, a blue sapphire, cat's eye, a yellow sapphire, and an emerald. This arrangement represents the nine planets or Navagrahas. If these gems are selected carefully and worn it is believed that they provide luck and prosperity. These gems can also be worn individually as per the zodiac signs. Today gems are available in multiple colours to fit in as per the jewellery requirement.

1.4.3 Pearls

A large, flawless pearl was extremely rare, and to make a necklace of matched flawless pearls could take generations. Pearls were extremely rare and far more valuable during the time of the Maharajas before they were first cultured by Mikimoto in 1916. Pearls are perhaps the first gemstone that ancient people enjoyed by polishing or shaping.

They are delightful straight out of the shell. The primary pearl sources were off the islands near Bahrain in the Persian Gulf, and off the west coast of Sri Lanka. Oysters were harvested by the millions, but only a few contained the prize of a natural pearl. Today Pearls are artificially cultivated with various fabricating techniques and are available in multiple colors, size and quality. In India Hyderabad, the capital of Andrapradesh is famous for pearls.

1.4 5 Kundan

A fillet of 24 karat pure gold foil is forced between the sides of the stones in kundan work. A thin overlapping layer of gold traps the stones along the edges. Kundan style jewellery is ideal for setting irregular diamonds. A trained goldsmith applies the foil and applies pressure with a burnisher such that a molecular bond is achieved as the layers of foil are applied to each other to create the desired thickness or strength. This is done at room temperature.

The high temperatures necessary for soldering or enameling are not required for this ancient process. Additionally, a silver reflective foil is placed behind the stone to assist with the reflection of light and to give the diamond or gemstone more fire. There is no other place in the world where Kundan setting is more widely practiced than it is in India.

1.4.6 Enamel

The Minakari style of jewellery is famous from the Eastern India. Many of these pieces have delicate, colorful enamel backs, as well as accents on the front. This

style of enamel is typically referred to as *champlevé*. In most cases, a sharp graver or chisel is used to remove a tiny bit of gold, leaving a depression that is filled with glass powder.

The artists typically work in geometric or floral motifs, or a combination thereof. Different hues of enamel powder are delicately placed in these depressions and fired to a temperature above 1500 degrees Fahrenheit. Additionally, the tools, methods and procedures have changed little over the centuries.

1.5 VARIETIES AND TYPES OF JEWELLERY

1.5.1 Varieties of jewellery

Varieties of jewellery are used as functional or to adorn body parts. They are:

Hair Ornaments – Hairpins, Brooches, Tikkas

Head Ornaments - Earrings, Nose Studs, Crowns

Neck Ornaments - Necklace, Chains, Pendants

Arms Ornaments – Armlets, Bracelets, Cuff Links, Bangles

Hand Ornaments – Bracelets, Finger Rings, Watch

Body – Waist band, Costume Jewellery

Legs and Feet Ornaments - Anklets, Toe Rings, Sandals

Other - Amulets, Japa Malas, Vow Rings, Membership pins, Emblems, Locketts, Medallions.

1.5.2 Types of Gold Jewellery

Apart from the normal jewellery like earrings, fingerings, chains and bracelets below are the special jewellery worn by women from different parts of India.

- **Tikka:** In India married women are supposed to put vermillion in their head, or wear a delicate piece of jewellery called the maang teeka, as a symbol of their married status.
- Naath / Nath or nose ring or stud is worn by brides of some regions of India.
- Jhommar/ Jhumka is the earring hangings in different designs.
- Mangalsutra / Thaali is an auspicious thread which the groom ties around the neck of his wife at the wedding ceremony.
- Mangalsutra is the symbol of being married and is worn by Hindu ladies in the greater part of Western and southern India.
- Baju Bandh / Armlet is the armlet worn on arms especially during weddings.
- Chudis / Kadas are Thin or thick Bangles/bracelets which are a symbol of Indian worldwide and are worn by girls and married women alike.
- Payals / Bichua are jewellery meant to be worn on the feet. It is a chain which comes in a pair and is worn on both the ankles. These could come in silver too.
- Hasli / Haar is quite a simple necklace having Rajasthani arty flair while gold Kasu Malai, which is necklace of coins very popular with the woman from south India.

1.6 BRANDED GOLD JEWELLERY

The growth of branded jewellery segment is fuelled by the 'retail revolution'. Huge diversity is visible among jewellers. It consists of:

a. Family-Based Jewellers

The traditional market of family-based jewellers were majorly the goldsmiths who passed this as a profession from one generation to other. Later few considered gold jewellery making and selling with their own brand names. They can sustain inflation

and international pricing by standardizing their processes and technology. They may have branches at local, regional and overseas and have mostly corporatized their business.

b. Branded Dealers

The latest and lateral entrants trying to create value by ‘adding esteem to possession’ are the Branded gold jewellery dealers with their unique selling proposition. They focus on premium pricing with ‘latest design of best brands’. They belong to the established Indian business houses and are more an extension of the brands in the jewellery sector. They use the latest technology and are in a growth phase. They involve in promotions and international branding.

c. Stand-Alone Dealers

These jewellers are small time players having limited investments. They either belong to jewellery making families or communities or are interested in catering to lowmiddle income group. Their designs are old and are not trend based. They do not offer credit facilities and use cheaper gemstones and do not adhere to carat standards. Their motto is ‘selling cheaper’. They even rotate old jewellery and take the customers for a ride.

1.7 JEWELLERY MANUFACTURING PROCESS

The jewellery manufacturing process consists of the following stages:

Stage1- Designing:

Designers develop and create new designs for jewellery products in consultation with merchandisers to cater to latest trends and meet specific customer requirements.

Stage2- Model making and mould making:

Designs are sent to the model-making section where the model for the jewellery is fabricated in other metal or rubber mould and sent for approval.

Stage3- Waxing and wax setting:

Wax is injected into the rubber mould to produce wax jewellery pieces. These wax jewellery pieces are provided finishing touches and precious stones are then studded onto these wax pieces, and the wax tree produced is forwarded to the casting department.

Stage4- Casting:

Investment is done in this department for the wax tree in the casting flask. The flask after drying is placed in the burnout furnace to melt and/or vaporize the wax to create a cavity in the investment flask. Thereafter, the cavity is filled with the relevant metal in which the jewellery is required to be manufactured.

Stage5- Sprue grinding:

The metal jewellery pieces are separated from the tree. Any sprue remaining after such separation is ground at this stage.

Stage6- Filling:

At this stage of the manufacturing process, the excess metal in the grooves and channels in the jewellery pieces are removed. Thereafter the jewellery pieces are cleaned for casting dust and the removal of any scratches.

Stage7- Polishing:

Following these procedures, the jewellery is then polished to develop the final surface finish.

Stage8- Metal setting:

The relevant diamond and other precious stones are studded on to the jewellery at this stage.

Stage9 -Rhodium polish:

Following the studding of the jewellery and polishing of the jewellery, the jewellery is provided with rhodium treatment. The jewellery pieces then undergo final quality checks and are then forwarded to the packing division.

1.8 SIGNIFICANCE OF GOLDSMITHS

Goldsmiths is identical in character. They are significant in social, economic and cultural dimensions of the society. Gold jewellery industry is a macro unit which extended its arms in mining, processing, manufacturing and marketing activity. These units are providing employment opportunity to the people of micro and macro section of the society.

They create huge employment opportunity which eradicate unemployment and poverty problem. Thus, their presence is significant in equating the social aspects of the society. The Indian gold jewellery acquired worldwide market style and texture of the ornament directing economy towards development. Major portion of the jewellery is manufactured by the simple handmade technique of goldsmiths.

The superior qualities of handmade ornament are earning millions for economic stability. Though most of the Multi-National Corporations are entering into this field, greater share of the jewellery production is handled by unorganized goldsmiths. Multi-National Corporations are hiring them and best utilizing their productivity to generate income. India is exporting an average gold jewellery worth of 10,000 million US \$, per year.

Goldsmiths are the major contributor to the export performance of nation. Thus, they are considered as an important partner of economic development. They are spreading the Indian culture through unique jewellery production method. Hence, they are considered as a soul of Indian tradition.

1.9 FEATURES OF GOLDSMITHS

The hands of goldsmiths create magic. They have some features; those are as follows:

- **Hereditary Profession:**

Goldsmith is a hereditary profession; the techniques and manufacturing methods are transferred from father to son and to the next generation.

- **Age composition:**

There is no age limit in the gold smithy. A large number of male and very few females of different age group engage in the production of gold jewellery.

- **Education:**

The literacy level of goldsmiths is usually low. Lack of income backed by other problems made them illiterate.

- **Informal in nature:**

They are unregistered, unprotected and unrecognized in the society. They operate in the informal or unorganized sector. They work outside the system of benefits, facilities and regulations of the government.

- **Small size of operations:**

They work in the small sized workshops. They usually set all the required tools and materials in the limited space provided to them. Lack of ventilation and sanitation facility made them to suffer from occupational disease.

- **Struggle for survival:**

They work for piece wage. Under this system amount of wage is co- related to the quantity of work done. Stakeholders pay making and wastage charges to goldsmiths.

- **Technology:**

They use simple tools and equipment in the production process.

- **Dominance of third party:**

Unorganized goldsmiths are exploited by the dominance of organized players. They utilize the labour, hire them but not ready to give handful of reward for their valuable services, so actual contributors of the jewellery industry are struggling hard for their survival by the dominance of third party.

- **Hidden in the broad category:**

Goldsmiths are clubbed under the broad category of artisans. Thus, they are not able to get any direct benefits.

- **One sided law:**

The goldsmiths are recognized as a backward and considered in the official list of backward class. To compare with other backward class, goldsmith's identity in political, social and economic activity is insignificant. The government is not extending the hands for the upliftment of goldsmiths and promotes the valuable skills of goldsmiths.

1.10 GOLDSMITHS AS A PART OF ECONOMIC ACTIVITY

Goldsmiths are considered as efficient workers; they have special place in the economy. They are interlinked with various sectors and units of economic activity.

- **Goldsmiths as Artisans:**

Goldsmiths are recognized as artisan class. They involve in the manufacturing of gold jewellery. Though they are clubbed under the broad category of artisans; they are identical in their craft, skill and job involvement. They are considered as specialized group as they work with precious metal called gold.

- **Goldsmiths as a Manufacturer of Gem and Jewellery:**

Goldsmiths are considered as major supplier of jewellery. Both machines and man power, manufacture the ornament of similar design. But goldsmiths are always a

head in providing finest cut and finish to ornament. All over the world goldsmiths have never lost demand.

- **Goldsmiths involve in Handicraft Activity:**

Goldsmiths have very basic and fundamental features of handicraft sector. They work with simple tools, equipments and employee their family members. Majority of them work in the extended part of their house. Limited requirements and lack of facilities made them to recognize as belong to handicraft sector.

- **Goldsmiths have the basic characteristics of Informal Sector:**

Goldsmiths are informal in nature. They don't have any work security. Unorganized and non-recognition hampering their growth. Informal nature of goldsmiths separated them from benefits.

- **Goldsmiths and Nonfarm Sector:**

They are exactly not belonged to farm category but also not identified in the industrial and service sector. Though they come under the small-scale industrial sector; they are not recognized under perfect industrial category. They render service but not considered as original service provider. To solve this complexity, they are considered as members of nonfarm unit.

- **Goldsmiths as a Service Provider:**

Goldsmiths are significant by their service. They render service and earn. Their wonderful craft manufacturing skill and service are best utilized by formal players of jewellery sector. They hardly give reasonable rate of reward to their service. They only consider goldsmiths as service providers.

1.11 STATEMENT OF THE PROBLEM

Gold is a sacred asset and is being used usually on emergency by the family members. They feel that there is nothing wrong in utilising gold to tide over the

difficult situation in the financial crises. The same has become the fate of the people as well as the Government. The phenomenal growth for gold demand has led to the exploration of various economical marketing channels.

The market should be expanded in such a way that the production should meet the demand. It is interesting to note that a majority of rural population has high religious taboo in utilising gold ornaments. Now there is a need to create infrastructure facilities for processing and preservation of gold. Attention is also needed to find out the ways of producing or fabricating gold ornaments at economical cost with minimum wastage.

Availability of quality gold should also be ensued. A study on the gold demand, production, utilisation and the socio-economic conditions of the workers involved in gold trade will help to take appropriate investment decisions and to find out reliable estimates of the cost of conversions and marketing of gold ornaments. This may also help to frame a suitable price policy and avoid the influence of other prejudicial factors.

From the employment point of view, it may be a blessing in disguise, for those, who are underemployed or unemployed hitherto in rural and urban areas. The issue at present also relates to the status of gold as an accessible, acceptable and affordable purchase for jewellery, investment or industrial buyers.

1.12 OBJECTIVES OF THE STUDY

The objectives of the present study are:

- 1) To analyse the growth performance of gold jewellery industry in India and the world.
- 2) To study the socio-economic structure of goldsmith in Thoothukudi city.

- 3) To analyse years of experience of the sample goldsmith and the amount of capital invested.
- 4) To find out types and number of workers employed in the sample gold shops.
- 5) To identify income, expenditure and saving of the goldsmith
- 6) To explore the problems faced by goldsmith.
- 7) To suggest the appropriate measures to improve the efficiency of goldsmith in Thoothukudi city.

1.13 METHODOLOGY

The present study is an empirical one based on survey method. First hand data were collected from the field through questionnaire and observation. The schedule structured was extensively pre-tested. Primary data required for this study were collected from selected sample goldsmith through personal interview method. The data was collected at gold jewellery in Thoothukudi area. Fifty respondents were chosen from the list, using systematic random sampling method for in depth study. The study was conducted over three months, starting from January 2022 to March 2022.

Secondary data were collected from publications of labour departments, websites, libraries, standard text books of related topic, leading journal and published documents, records and reports, agent manuals etc. Class interval technique was used to analysis the age, income, saving and expenditure. The collected data were analysed by using the statistical tools like percentage, mean, standard deviation and coefficient of variation technique.

1.14 LIMITATIONS OF THE STUDY

1. The information on goldsmith was collected by survey method through a personal interview with the sample goldsmith, confined to a particular area.
2. Goldsmith, in general, were not maintaining detailed accounts on income and expenditure elicited from their memory and their experience.
3. The study is limited to three months.

1.15 CHAPTER SCHEME

The present study “An Economic Analysis of Goldsmiths in Thoothukudi area” is organised into four chapters.

Chapter I introduce the importance of gold jewellery, features of India’s gold economy, materials used in gold jewellery making, varieties and types of jewellery, branded gold jewellery, jewellery manufacturing process, significance of goldsmiths, features of goldsmiths, goldsmiths as a part of economic activity, statement of the problems, objectives of the study, methodology, limitations and scheme of work.

Chapter II presents gold jewellery industry in India and the world.

Chapter III is the review of literature and profile of the study area.

Chapter IV discusses the profile of the sample goldsmith respondents

Chapter V presents the summary of findings, conclusion and suggestions.

CHAPTER II

GOLD JEWELLERY INDUSTRY IN INDIA AND THE WORLD

2.1 GLOBAL GOLD JEWELLERY MARKET

Jewellery accounts for the largest proportion of gold fabrication and consumption demand. A total of 1,74,100 tonnes of gold have been mined since the beginning of civilisation¹⁵. The employment supported by gold mines is an alternative measure of economic contribution in gold mining countries.

Three countries stand out: South Africa has an estimated 1,45,600 gold mining employees, Russia 1,34,000 and China is estimated to have 98,000 employees. Total direct employment in gold mining across the 15 largest gold mining countries is estimated to be 5,27,900 in 2012. Gold Demand as of 2012 was 4361 tonnes whereas supply was 4408 tonnes including the recycled gold. Since the 1880s, South Africa has been the source for a large proportion of the world's gold supply, with about 50% of all gold ever produced having come from South Africa.

Production in 1970 accounted for 79% of the world supply, producing about 1,480 tonnes. The United States and China are the two largest exporters although extensive gold trading inflates the volume of gold exports. Global Jewellery industry has the potential to grow to USD 280 billion by 2015, with approximately 10 million marriages happening in a country like India every year¹⁶. In some countries, gold was either exempted from taxation altogether or progress was made towards bringing in new legislation to correct unfair treatment of gold¹⁷.

¹⁵ Gold Fields Mineral Services as of 2012.

¹⁶ The Global Gems and Jewellery: Vision 2015: Transforming for Growth, KPMG Report.

¹⁷ World Gold Council, Rue de la Rôtisserie, 1204 Geneva, Switzerland Publications, 1994, p.12.

TABLE 2.1
TOP 10 GOLD MINERS

Rank	Company	Production (tonnes)
1	Barrick	210.4
2	Newmont	141.1
3	AngloGold Ashanti	111.81
4	Goldcorp	67.93
5	Kinross	65.14
6	Newcrest	58.77
7	Gold Fields	92.25
8	Polyus Gold	47.57
9	Yamana	33.71
10	Eldorado Gold	18.69

Source : Lawrence Williams company announcements, 2012.

China is the world's largest producer of gold for the sixth straight year even as it remained the second largest consumer of the yellow metal after India. Major demand for gold comes from jewellery sector. The past year saw global demand for jewellery at 1895 tonnes of gold. India's Gem and Jewellery Exports have reached US\$ 11986.63 million (Rs. 54919 crores) during the year 2011.

TABLE 2.2
GOLD SUPPLY AND DEMAND

Particulars	2010	2011	2012
Supply			
Total Mine Supply	2,633	2,849	2,817
Recycled Gold	1,711	1,649	1,591

Total Supply	4,344	4,498	4,408
Demand			
Jewellery fabrication	2,020	1,975	1,895
Technology	465	452	407
Total bar & coin demand	1,208	1,513	1,247
ETFs & similar	382	185	279
Official sector purchases	77	457	533
Gold Demand	4,152	4,582	4,361

Source: LBMA, Thomson Reuters GFMS, World Gold Council

Much of this demand takes place in the wedding season, which falls between October and January, and April and May, though a good many purchases will be made well in advance of the wedding. There is a huge mismatch between demand and primary supply in India, the balance is being made up by imports.

The story of gold accumulation in India is as old as history itself. This is certainly not something unique to India - many of the ancient civilizations exhibit this feature. The only major gold mine currently in production is the Hutti mine, owned by state owned Hutti Gold Mines Company Limited, Kolar, Karnataka with 2 tonnes per annum.

It is Asia's oldest and deepest mines. Since the last ten years though its production capacity has decreased it is still able to make profits due to rising gold prices. It produced the highest 3507.61 kilograms during the year 2004-2005. Profits for the year 2011-12 was highest with 188 crore rupees by mining 2181 kilograms of gold. Hindustan Copper also produces some gold as a by-product, but its output is small, at just 0.2 tonnes a year.

Still, there is scope for some catch up in the future, as the geological terrain of India is very similar to other major gold producing countries, like South Africa and

Australia, and as the government has now opened the mining sector to foreign direct investment.

MARKET STRUCTURE

The major demand for gold jewellery comes from emerging markets like India, China, Latin America, Middle East and South East Asia. These regions are expected to develop as the largest consuming markets for both traditional as well as branded jewellery and overtake the United States in gems and jewellery consumption by next decade. In 2012 China has overtaken countries which were in the top gold producing list.

2.2 WORLD GOLD RESERVES

Gold has gained a lot of attention in the global market recently, and the price of gold is on the rise. In order for mining companies to protect themselves from risk and uncertainty associated with fluctuating gold prices, they should hedge, make future investment decisions, and depend on forecasting future price trends. A central bank's gold reserves are a major source of global gold supply.

In this table, you can see countries where the central bank stores more than half of its country's gold reserve for decades on end. US central bank holdings of gold outnumber all other countries by a large margin. A point that needs to be mentioned is that during the US crisis in the 1970s, the US reduced its gold bank reserves by more than 60%. Countries other than Germany, France, and Italy have gold bank reserves which are held around the same level as the IMF's, which is about 3000 tonnes.

The amount of gold held in reserve by central banks has remained constant over the last half century, though the level of reserves has fluctuated across different countries. According to the World Gold Council (WGC, 2009), over the years gold has been mined at a rate of approximately 160,000 metric tonnes.

World official gold reserves in selected countries from 1950 to 2008 is given in Table 2.3.

TABLE 2.3
WORLD OFFICIAL GOLD RESERVES (tonnes)

No.	Countries/ organization	1950	1960	1970	1980	1990	2000	2008
1	United States	20,279	15,822	9839	8221	8146	8137	8133
2	Germany	0	2640	3537	2960	2960	3701	3417
3	France	588	1458	3139	2546	2546	3184	2562
4	Italy	227	1958	2565	2074	2074	2593	2451
5	Switzerland	1306	1942	2427	2590	2,590	2,590	1,100
6	China	—	—	—	398	395	395	600
7	South Africa	175	158	592	378	127	124	124
8	Australia	79	131	212	247	247	80	80
9	World Total (rounded)	31,100	35,900	36,600	35,800	35,600	33,500	30,000

Source of data WGC (2008).

Gold reserves of 30,000 tonnes are devoted to industrial and dental uses (roughly 30,000 tonnes) and 100,000 tonnes are for jewellery (roughly 100,000 tonnes). To put it another way, the average person on Earth is estimated to have 15 grammes of gold in their possession.

In 2008, the total value of the gold in jewellery, at banks, and in industrial usage was \$2.9 trillion, while \$0.9 trillion was the total value of the gold stored in jewellery, in commercial banks, and in industrial usage¹⁸.

The world's total official gold reserves (excluding Johannesburg) increased from 34071.43 tonnes in 1950 to 2607.49 tonnes in 2008 with a standard deviation of 2804.07 tonnes. The coefficient of variation in the studied sample was 7.65 tonnes.

¹⁸ Dr. Amutha. D, Supply and Demand Trends of World Gold Reserves (September 6, 2021). Available at SSRN: <https://ssrn.com/abstract=3918424> or <http://dx.doi.org/10.2139/ssrn.3918424>

The world reserves of gold are provided in Table 2.4.

TABLE 2.4
G-20 COUNTRIES CENTRAL BANK GOLD STOCK DETAILS

S. No.	Countries	Gold Stock (tonnes)
1.	America	8133.5
2	German	3390.6
3	International Monetary Fund	2814.0
4	Italy	2451.8
5	France	2435.4
6	China	1054.1
7	Switzerland	1040.1
8	Russia	996.4
9	Japan	765.2
10	Netherland	612.5
11	India	557.7
12	Europe Central Bank	502.1
13	Turkey	441.5
14	Taiwan	423.6
15	Portugal	382.5
16	Venezuela	365.8
17	Saudi Arabia	322.9
18	England	310.3
19	Lebanon	286.8
20	Spain	281.6

Source: Daily Thanthi, 2013 August 30, P.5.

At the time, estimates had pegged the world's metal reserves to be approximately 54,000 tonnes of gold. Australia, Russia, South Africa, Indonesia, the United States,

Peru, and Brazil are all major gold-reserve countries. In decreasing order of gold production, the 12-leading gold-producing countries are China, Australia, Russia, the United States, Canada, Peru, South Africa, Mexico, Uzbekistan, Indonesia, and Sudan.

Over 70% of global production was produced by these countries together. Almost 20% of global gold production is produced by the next 12 leading gold-producing countries. The world's total mean gold reserves, with a standard deviation of 1852.97 tonnes, were at 1378.42 tonnes.

Gold Jewelry Consumption

Below are the top 10 countries with the highest gold jewelry consumption for the fourth quarter of 2019.

TABLE 2.5
GOLD JEWELRY CONSUMPTION IN 2019

Rank	Country	Tonnes
1	India	136.6
2	China	132.1
3	U.S.	34.8
4	UAE	11.5
5	Indonesia	10.7
6	United Kingdom	10.3
7	Russia	9.1
8	South Korea	8.8
9	Iran	8.2
10	Italy	8.1

Source: GFMS Gold Survey 2019 H2 Update & Outlook

On a yearly basis, India used around 136.6 metric tonnes of resources in the fourth quarter of 2019. According to figures published in the latest Thomson Reuters GFMS Gold Survey report, India and China retain the top two spots when it comes to buying gold jewellery.

A market development organisation backed by the gold industry publishes a similar ranking (World Gold Council, 2020). Indian and Chinese consumers were responsible for nearly half of the world's gold jewellery demand in the fourth quarter of 2019. There is more than a third of global demand for jewellery sourced from China. A total of 37.02 tonnes of mean world gold jewellery was consumed. The coefficient of variation (140.25 tonnes) was an important figure.

2.3 GOLD SUPPLY AND DEMAND

For the most part, India's gold demand is met by importing it. Over the last decade, India has been a leading importer of gold. India imported gold worth over two trillion Indian rupees in fiscal year 2019. A significant cause of the country's trade deficit was the import of gold. The Modi government changed India's gold import policy in order to curb imports.

To enable imports, the Reserve Bank of India and the Directorate General of Foreign Trade published notification lists of the nominated agencies to allow importations only. A small percentage of the country's gold needs were met by local mining. India's gold production amounted to less than two metric tonnes, but some gold was also recovered through gold recycling.

Global demand outpaced supply of gold is shown in Table 2.6.

TABLE 2.6
GLOBAL DEMAND-SUPPLY OF GOLD

	2005	2008	Percentage Change
Total Demand	3892	4155	7
Jewellery	2736	2186	(20)
Investment (bars, coins, ETF's)	599	1183	97
Industrial	419	436	4
Miner de-hedging	138	350	154
Total Supply	3998	3862	(3)
Mining	2494	2414	(3)

Central Bank Sales	663	236	(64)
Scrap Recycling	841	1212	44

Source: Investment World Vol: 16, No. 261, The Hindu Business Line, Dated: 20-09-2009.

The supply-demand equation provided by the World Gold Council predicts that global demand for gold has grown by 7% over the three-year period from 2005-2008, but the supply of gold has decreased by 4% during that time. In total, Asia had the highest level of fabrication for three years running.

Though the growth in ETF (Exchange Traded Fund) inventory was small, ETFs added to their overall stock holdings for a second year in 2018. In total, 59 tonnes of gold were added to ETFs, a 3% growth compared to the previous year. This represents a 14% decrease from the 2,700 tonnes inventory level that was seen in 2016, the previous all-time high.

2.4 INDIAN JEWELLERY INDUSTRY

In the design and workmanship of Indian jewellery, the country stands alone. India and jewellery are intrinsically linked. Wearing simple gold ornaments like rings, bracelets, and chains doesn't indicate a preference for masculinity. Today's customers are looking for designs that are original and current.

Today, a woman will not buy jewellery for investment or for the status it confers alone; she will also use it to display her individuality. The country is well-known for hand-crafted and machine-made jewellery of traditional and modern styles.

Jewellery has proven to be one of the fastest-growing industries in the country. India's economy benefits greatly from it, and it is the country's leading foreign exchange earner. Jewellery has two main segments. They are made of real gold and jewelled with gemstones [real diamonds and jewelled with gemstones]. For 80% of

the Indian jewellery market, gold jewellery is present. The rest is fabricated studded jewellery.

As has always been the case, the Indian jewellery retail sector is dominated by unorganised jewellers. 2.5 million jewellery shops in India, and the vast majority of them are owned and operated by families (Moses Daniel.R, 2014). The growing focus on quality and fashion consciousness among Indian consumers is helping the Indian jewellery sector, which includes giants like Tata, Thangamayil, Kalayan, and Malabar, to emerge even stronger.

In the past, jewels were produced by skilled artisans that were already well known to the family. A few retail shops were also located on the same street. However, currently, the manufacturing and marketing of gold ornaments has been absorbed by the industrial houses. After globalisation, many customers' perception of gold jewellery has shifted as well.

Most of the buyers are concerned with the quality of the merchandise. The fact that private retail outlets charge more for gold ornaments has no more of an impact on their sales than on those of general retailers. As is widely believed, gold is generally considered to be a highly standardised product.

Regardless of whether a retail outlet or a wholesale outlet exists, the price of the product is well-fixed. A wide variety of channels can be used to sell gold jewellery, whether one organises the sales or does so on an unorganised basis. In terms of jewellery stores, there are small-sized, medium-sized, and large-scale businesses. They design and sell the ornaments. They act as agents when the transaction is made on behalf of a large trader and is then fulfilled by the market. They use a number of different strategies to bring customers in.

Buyer behaviour is influenced to a great extent by the techniques and strategies followed by the sellers of any product. Since business firms have entered the market,

creating a fierce competition, a large proportion of the population has now learned of the inherent purity of gold. Gold ornament traders do not only sell gold ornaments; they also trade gold ornaments. Their inventory also includes old and out-of-date ornaments.

Jewellery contributes 6-7% of India's GDP. One of the fastest growing sectors, it is extremely export oriented and labour intensive. The government of India has declared the Gems and Jewelry sector as a focus area for promoting exports because of its potential for growth and value addition.

The government has recently taken a number of measures to help firms and individuals grow their businesses and train their workers so that India can better position itself as a "Brand India" in the global market.

Since jewellery manufacturing is comparatively cheap in India, as well as plentiful in skilled labour, it is seen as the centre of the global jewellery market. India is the world's leading diamond cutting and polishing centre, thanks to government policies supporting the industry.

2.5 CONSUMER DEMAND FOR GOLD IN INDIA

The demand for gold is fueled by four key applications: jewellery making, industrial applications, government and central bank bullion, and private investor investment. As a result, between 2009-10 and 2011-12, India's gold consumption surged at a rate of 39% each year, compared to 24% globally.

The table 2.7 shows the allocation of total consumer demand in each sector. It is measured in tonnes against rupee per ounce. The data used in the analysis is for the period 2000 to 2016.

TABLE 2.7

TOTAL CONSUMER DEMAND CATEGORIES FOR GOLD IN INDIA (In tonnes)

Year	Jewelry	Coins	Bars	Total Consumer Demand
2000	752.4	32.9	69.9	855.2
2001	769.5	28.4	57.3	855.2
2002	732.1	21.2	43.7	797
2003	478.7	20.7	65.6	565
2004	562	24.3	76.2	662.5
2005	588.1	32.8	102.8	723.7
2006	495.5	55.8	139.8	691.1
2007	557	68	148.6	773.6
2008	456.8	63.5	159.9	680.2
2009	407.5	53.5	117.5	578.5
2010	651.6	82.6	228.9	963.1
2011	618.3	80	235.1	933.4
2012	552	106.3	205.9	864.2
2013	612.7	96.3	265.8	974.8
2014	662.1	70.8	109.8	842.7
2015	658.1	66.6	124.2	848.9
2016	543.7	48.8	83.1	675.6
Mean	594.01	56.03	131.42	781.45
Std. Deviation	103.47	26.60	67.66	126.23
C.V	17.42	1.78	51.48	16.15

Source: World Gold Council

From Table 2.7, it could see that the total consumer demand in India is categorized under the jewelry demand, and bars and coins (investment demand).

Indian Jewellery demand was 752.4 tonnes in the year 2000 and it was increased to 543.7 tonnes in the year 2016. Overall gold consumer demand including jewellery, bars and coins witnessed to 855.2 tonnes in 2000 and it was more severely affected with volumes falling by 781.45 tonnes in the year 2016.

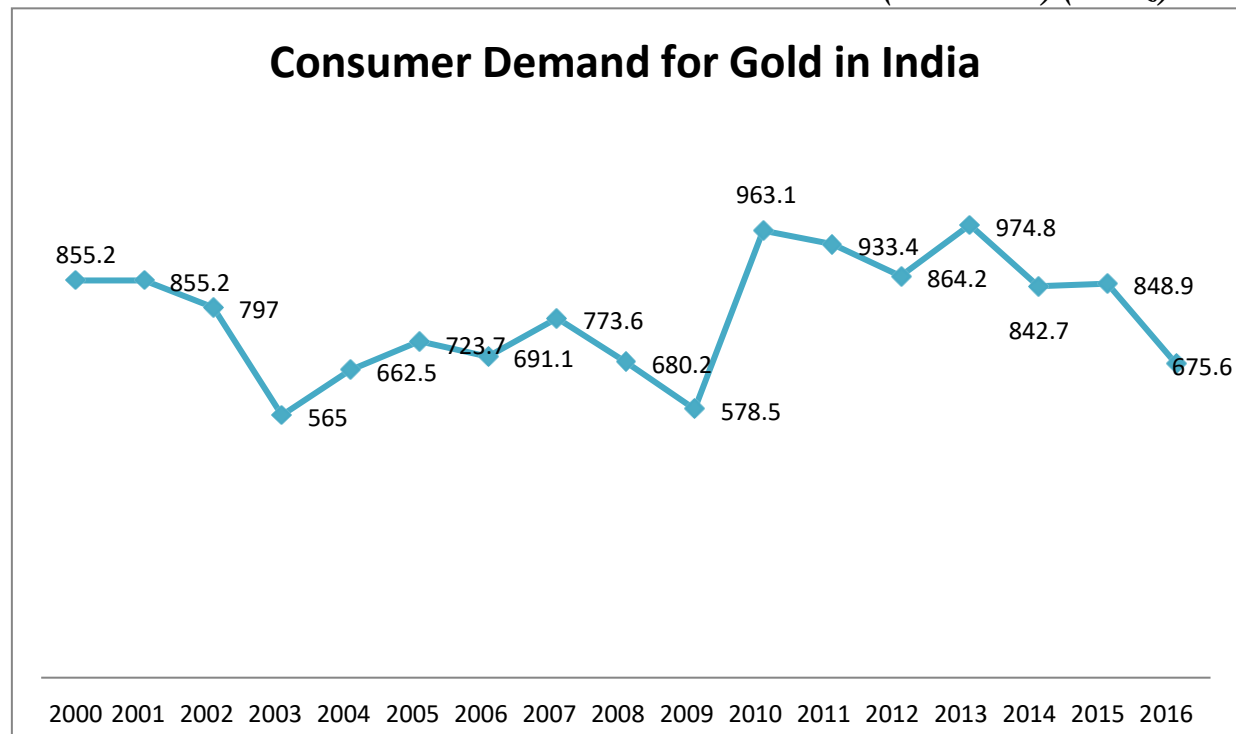
The mean consumer demand for gold jewelry in India for the 17 years was 594.01 tonnes with standard deviation of 103.47 tonnes. The mean consumer demand for gold coins in India for the 17 years was 56.03 tonnes with standard deviation of 26.60 tonnes.

The mean consumer demand for gold bars in India for the 17 years was 131.42 tonnes with standard deviation of 67.66 tonnes. The value of the coefficient of variation specifies that the gold bars performance was relatively stable over 17 years compared to the jewelry demand and coins in India.

The consumer demand trends in India during 2000 to 2016 are given in figure 2.1.

FIGURE 2.1

CONSUMER DEMAND FOR GOLD IN INDIA (*In tonnes*) (*Rs/oz*)



Source: World gold Council, Gold demand trends, 2000 to 2016 reports.

From figure 2.1, it could be seen that Despite a decrease in the number of marriages, an unpredicted monsoon, and a rise in local gold prices, India remained the world's greatest consumer with 855.2 tonnes in 2000. Wearing light-weight and fake jewellery was also popular among youthful customers.

In 2001, the value of 855.2 tonnes remained unchanged. The demand for gold, which was 797 tonnes in 2002. In the year 2003, 565 tonnes of gold were consumed by consumers. In comparison to the previous year, demand was down by 29%.

Consumer demand increased to 662.5 tonnes in 2004. In 2005, consumer demand in India climbed by 8% to 723.7 tonnes, compared to 2004. The upward trend that began in 2004 continued in 2005. In 2006, Indian consumers purchased 691.1 tonnes of gold. It was lower than it had been in 2005.

As a result of price volatility restraints, this happened. The demand for gold in 2007 was 10% greater in tonnage than in 2006, with 773.6 tonnes. In 2007, the free-floating stock markets aided in the acquisition of gold. During this time, the economy was on the upswing.

In 2008, gold price volatility remained at an all-time high. Extreme global financial and economic conditions counteract the negative influence of the gold price. The total number of tonnes requested in 2008 was 680.2 tonnes. The total demand in 2009 was 578.5 tonnes, down from 680.2 tonnes in 2008.

Despite this, India has reclaimed its status as the world's largest gold consumer. In 2010, the Indian market saw a massive surge in demand of 963.1 tonnes. India was the primary source of growth in the jewellery industry. The demand for gold in India was at an all-time high in 2010.

Gold's rising price triggered a vicious pricing cycle in the economy. India's overall consumer consumption was 933.4 tonnes in 2011. In India, rising food prices pushed

up inflation. The government implemented a number of monetary policies that resulted in a decrease in domestic prices.

The volatile rise and fall of the rupee resulted in gold price oscillations, which had a significant impact on gold demand. In 2012, the demand for gold was 864.2 tonnes. Due to high import taxes, consumers were negatively impacted in the first half of 2012. The price of gold in the United States was skyrocketing.

The greatest yearly volume of consumer demand was 974.8 tonnes in 2013. This was in addition to the government's efforts to lower demand through different means. The government's announcement of an 80:20 import strategy in 2014 startled the gold market. Total demand decreased to 842.7 tonnes. Imports were halted as a result of the government's actions. In 2015, demand increased slightly, reaching 848.9 tonnes. 2016 was a year that threw every calculation into disarray.

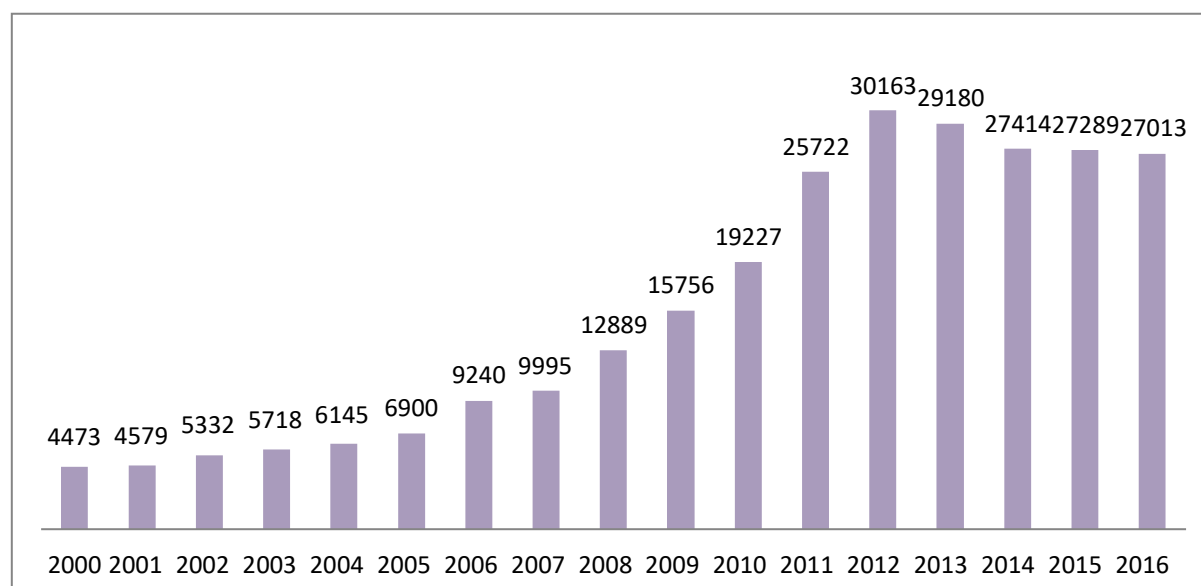
Annual jewellery demand fell to a seven-year low of 2,041.6 tonnes due to high gold prices. The two largest markets, India and China, accounted for over 80% of the 347 tonnes reduction in yearly demand. Indian demand was over 148.3 tonnes lower in 2016 than in 2015, the largest yearly fall in the data series' history. Jewelry, bars, and coins accounted for 675.6 tonnes of total consumer demand. Circumstances in India throughout 2016 made collecting precise statistics on gold demand extremely difficult.

2.6 GOLD PRICE IN INDIA

The following figure represents the 17 years from 2000-01 to 2016-17 gold price per 10 grams.

GOLD PRICE IN INDIA

Figure 2.2



(Rs/10gm)

Source: Reserve bank of India

The figure 2.2 represents the 17 years from 2000-01 to 2016-17 gold price per 10 grams, exchange rate and crude oil prices.

TABLE 2.8

INDIA'S GOLD PRICE, EXCHANGE RATE, AND CRUDE OIL PRICE

Year	Gold Prices (in rupees per 10 gms)	Exchange Rate (₹ per U.S. dollar)	Crude Oil Prices (in hundred rupees per barrel)
2000-01	4473	45.684	12.835
2001-02	4579	47.692	10.984
2002-03	5332	48.395	13.313
2003-04	5718	45.952	13.357
2004-05	6145	44.932	18.531
2005-06	6900	44.274	25.282
2006-07	9240	45.250	28.698

2007-08	9995	40.261	32.397
2008-09	12889	45.993	37.572
2009-10	15756	47.443	33.108
2010-11	19227	45.563	38.544
2011-12	25722	47.923	51.344
2012-13	30163	54.410	56.046
2013-14	29180	60.502	62.834
2014-15	27414	61.144	50.653
2015-16	27289	65.469	29.979
2016-17	27013	67.072	32.115

Source: Bombay Bullion Association, Press Trust of India and RBI

The data shows the average price of gold per gramme from 2000-01 to 2016-17. In 2012-13, the highest price was Rs 30163, while the lowest price was Rs 4473 in 2000-01. The average price of gold in 2004-05 was about Rs. 6145 per 10 grammes, and it now averages Rs 30163 in 2012-13, Rs. 29180 in 2013-14, and Rs 27013 in 2016-17.

It is much rice for the average gold price. Investing in gold will almost certainly not disappoint. Looking at the graphs of gold price trends below, it is clear that gold began to offer very sharp returns only after 2004-05. Since then, it has generated an annualised return of more than 20%. Gold's worst time was from 2000-01 to 2002-03, when prices remained essentially unchanged.

This table also shows that gold returns are not always positive, as most people believe. Market dynamics, currency equations, and the economy all play a role. Prices have been steadily the since 2007, except 2015-16. Every year has brought about some transition.

As shown, the price of gold is determined by a variety of factors other than demand. The exchange rate of gold was about 45.684 US dollars in 2000-01, and it now averaged 67.072 in 2016-17. Similarly, the crude oil price of gold was around Rs. 12.835 in 2000-01, and it is now around Rs. 32.115 in 2016-17.

CHAPTER III

REVIEW OF PREVIOUS STUDIES AND PROFILE OF THE STUDY AREA

3.1 REVIEW OF PREVIOUS STUDIES

Research works usually analyse the review of previous works done and the improvements of the present study over the past ones. There is paucity of studies on the economics of goldsmith. We mention below some relevant studies.

The findings of Krishnan and Nandhini (2017)¹⁹ found that while an advertisement targeted toward purity and quality produced more word-of-mouth publicity, an advertisement targeted towards celebrity and name recognition increased the brand name and drew in additional buyers to gold jewellery. Furthermore, according to the results, investment was the primary motivator for acquiring gold jewellery by working women.

Gold has been traditionally valued in India as a valuable metal, as reported by Gomathy and Devi (2015)²⁰. This is an important aspect of our way of life and an essential belief. Based on the results of the survey, most of the consumers are female because women wear jewellery. In addition, a large percentage of consumers acquire gold jewellery for investment purposes and during emergencies.

¹⁹ Krishnan and Nandhini, “A Study on the Factors leading Customers to Purchase Gold Jewellery with Special Reference to Working women”, International Journal of Mechanical Engineering and Technology, Vol. 8, Issue. 12, 2017, pp.1020– 1029.

²⁰ Gomathy C., and Yesodha Devi N., “Consumer Behaviour in Purchase of Gold Jewellery – An Analytical Study”, International Journal of Multidisciplinary Research and Development, Vol.2, Issue. 7, 2015, pp.103-106.

The impact of gold demand on inflation was examined by Dr. Nandkishorsoni and Ajay Parashar (2015)²¹. It has been concluded that gold demand does not have a significant long-term relationship with stock market return. Granger Causality test infers that demand for gold does not have an impact on the price of gold, and the other way around. Gold has consistently been found to be an important factor in the predictions of developed inflation-targeting countries.

Asha, K. and Edmund Christopher, S. (2014)²² in their research article stated that gold is considered as a glamorous metal and as a symbol of status among people. This study seeks which factors that determinant the behaviour of consumers towards branded and non-branded jewellery products. There seen larger brands witnessing an upward activity mainly due to factors such as increasing consumer false belief, decreasing investment compulsive purchases, fascinating retail channels and competition from other expensiveness products. The analyses showed that consumers are reasonably aware of the branded players who have forayed into the jewellery market.

Ahamed Raza Bilal and colleagues (2013)²³ conducted a study that compared gold prices in Karachi and Bombay with the Karachi stock exchange and the Bombay

²¹ Nand Kishor Soni and Ajay parashar, 2015. "Gold Demand increase and Its impact on Inflation", Journal of Research in Humanities and Social Science, Vol 3. Issue 2.

²² Asha, K. and S. Edmund Christopher. "A Study on Buying Behaviour of Customers towards Branded and Non-Branded Gold Jewellery with reference to Kanyakumari District". International Journal of Management, Vol. 5, Issue 10, October 2014, pp.105-114.

²³ Ahmad Raza Bilal, Noraini Bt. Abu Talib, InamUlHaq, Mohd Noor Azli Ali Khan and Muhammad Naveed,"How Gold Prices Correspond to Stock Index: A Comparative Analysis of Karachi Stock Exchange and Bombay Stock Exchange", World Applied Sciences Journal, Vol 21 (4), April 2013.

stock exchange. The findings show that the KSE stock indices have no long-term relationship with gold price, but the gold price does have a long-term relationship with BSE stock indices. The Granger causality of the study found that gold price, BSE stock indices, and KSE stock indices have no causal relationship.

Dr. Sindhu (2013)²⁴ investigated the impact of oil price, inflation rate, Forex, and Repo rates on the results of an impact study. With respect to the exchange rate and gold price, the inverse holds true. The price of gold and the interest rates on repos are tied together. The relationship between gold prices and inflation rates is positive and dependent.

Deepa, S. and Natarajan, M. (2013)²⁵ pointed out that people use gold for coins, jewellery, ornaments and many industrial purposes. Women are passionate about jewellery as it represented a symbol of femininity and even social status. This research paper analyzes about the customer's attitude and behaviour on jewellery purchase.

Jain (2012)²⁶ in a study analyzed the performance and growth rate of Gems and Jewellery Industry in India for the period from 2006 to 2011.

Gold price and NSE stock indices have been empirically connected by Dr. Amalendu Bhuniya and Amit Das (2012)²⁷. Supporting the causality between the selected

²⁴ Dr. Sindhu, "A study on impact of select factors on the price of Gold", IOSR Journal of Business and Management, Vol 8, No 4, Apr. 2013.

²⁵ Deepa, S. and Natarajan, M. "A Study of Customers' Attitude and Behaviour on Jewellery Purchase in Salem", International Journal of Research in Commerce and Management, Vol.4, Issue 2, February 2013, pp.137-142.

²⁶ Jain. "A Trend Analysis of Export Performance of Gems & Jewellery Industry in India. IJESM, Vol.2, Issue 2, April-June:2012, pp.170-174.

²⁷ Amalendu Bhunia and Amit Das, 2012. "Association Between Gold Prices And Stock Market Returns: Empirical Evidence from NSE", Journal of Exclusive Management Science, Vol 1 Issue 2.

variables and finding that stock market returns are determined by the movement of gold prices and gold prices as well are able to impact stock market returns has been demonstrated.

Alok Kala (2010)²⁸ pointed out that gems and jewellery are in great demand in India and worldwide. Jaipur exports a wide collection of gold, platinum and studded jewellery. It also has an Export Promotion Industrial Park (EPIP) at Sitapura. Johari Bazar, M.I. Road is the famous Jewellery Markets of Jaipur, for buying Jewellery. He opines those various new ventures like Gold Souk, 200 expected jewellery factories in Special Economic Zone and 50 jewellery plants coming up at Export Promotion Industrial Park have consolidated trade in a more organized form. He said that the jewellery market in Sitapur alone accounts for turnover of Rs 450 crore, which includes Rs 300 crore of the exports.

Z. Ismail et al. (2009)²⁹ used multiple regression models to predict the gold price. To better simulate market conditions, the study employed a proprietary research firm's future index, foreign exchange rate, inflation rate, money supply, New York Stock Exchange index, and S&P 500. According to the analysis, these six factors have the greatest impact on the gold price: CRB, inflation rate, exchange rate, and money supply.

²⁸ Alok Kala. "Gem Stones and Jewellery in Jaipur". Diamond world, Vol. 38, No.4, 2010, pp. 12-14.

²⁹ Ismail, Yahya, Z. and Shabri, A. 2009. "Forecasting Gold Prices Using Multiple Linear Regression Method", American Journal of Applied Sciences, Vol. 6 Issue 8.

Mishra (2007)³⁰, during Diwali and Akshaya Tritiya, 85% of sales take place. While 70% of the global jewellery market is purchased for investment purposes, as claimed by Shivani Mishra (2007), around 90% of customers make their jewellery purchases from their traditional jeweller, while 5-6% of merchandise is branded jewellery. The traditional family jewellers are further stating that independent jewellers are selling jewellery under their brand names. However, they only carry brands that account for 5 to 6 percent of the market.

According to Shanoo Bijlani, Regan Luis, and Michelle Pinto (2007)³¹, design distinguishes one jewellery designer. According to Indian shoppers, design is critical in influencing their purchase decisions. Most people today choose jewellery that can be worn and does not lock up. New and used retail outlets discover that their clients have become increasingly demanding, especially in smaller town locations, where new and used jewellery stores must keep one-of-a-kind pieces on hand. As a result, the manufacturer population is delighted, as the population of customers is expanding.

Rajkumar, R. (2006)³² in his unpublished thesis analyses the level of brand awareness, brand preference and brand loyalty towards perishable, non-perishable

³⁰ Shivani Mishra, "Jewellery Design" Journal of Gem and Jewellery Industry, Journal House, Jaipur, June-2007 Pg.no: 23

³¹ Shanoo Bijilani "Festive Season for Jewellery kicks off with IIJS", Solitaire International, The Indian Gem and Jewellery magazine, Spenta Multimedia, Mumbai, October-November 2007, Pg.No. 10.

³² Rajkumar, R. Consumer Behaviour in Rural Markets with special reference to Perishables, Non-perishables and Durable Goods in Coimbatore District. Unpublished Ph.D. Thesis Submitted to Bharathiar University, Coimbatore, 2006.

and durable goods. It also exhibits the various consumer behaviour pattern and expectations among the respondents.

PROFILE OF THE STUDY AREA

3.2 THOOTHUKUDI DISTRICT AT A GLANCE

The district started functioning as the twentieth District in Tamil Nadu with effect from October 20, 1986 with Thoothukudi as its headquarters. This district is located between $8^{\circ}-05'$ and $9^{\circ}-30'$ of northern latitude and $77^{\circ}-05'$ and $78^{\circ}-25'$ of the eastern longitude.

This district is bound by Virudhunagar and Ramanathapuram districts in the north, Kanyakumari district in the south, the Gulf of Mannar in the east and Tirunelveli district in the west. It is spread over an area of 4621 sq.kms.

Administrative Regions

The district now consists of eight Taluks namely Thoothukudi, Tiruchendhur, Sathankulam, Srivaikundam, Kovilpatti, Ottapidaram, Ettayapuram and Vilathikulam. It comprises two revenue divisions, seven revenue Taluks and 12 development blocks. The administrative set up of the district is as follows:

The district has 20 town panchayats, 2 municipalities and 465 revenue villages. The district is industrially advanced with the majority of the industries located in and around Thoothukudi.

TABLE 3.1
POPULATION AND NUMBER OF WORKERS IN THOOTHUKUDI
DISTRICT (2012-13)

S.No.	Category	Number	Percentage
1.	Population	1565743	
	Male	764087	48.80
	Female	801656	51.20
	Total	15655743	100.00
2.	Cultivators	71315	4.55
3.	Agricultural Labourers	167387	10.69
4.	Marginal Workers	88944	5.68
5.	Other Workers	346036	22.10
6.	Non-Workers	892061	56.98
Total Population		1565743	100.00

Source: Assistant Director of Statistics, Thoothukudi.

Land-Use Pattern

Agro-climatic conditions of any region namely soil, irrigation, rainfall and the like, besides the ownership pattern of land, determine their use. The Thoothukudi district extends over a geographical area of 4, 59,054 hectares, of which net sown area accounts for 41.02 per cent. The pattern of land utilisation that 2.40 per cent of the total geographical area is under forest and 4.28 per cent is barren and uncultivable land. Land put to non-agricultural uses is 15.63 per cent and cultivable waste is 4.31 per cent. Current fallows and other fallows form 13.33 per cent and 10.12 per cent of geographical area respectively.

TABLE 3.2
LAND USE PATTERN IN THE THOOTHUKUDI DISTRICT
(2012-13)

S.No.	Classification	Areas (in Hectares)	Percentage
1.	Forests	11012	2.40
2.	Barren Uncultivable lands	19662	4.28
3.	Land put to non-agricultural uses	71772	15.63
4.	Cultivable waste	19779	4.31
5.	Permanent pastures and other grazing lands	5132	1.12
6.	Land under miscellaneous tree crops	35771	7.79
7.	Current fallows	61189	13.33
8.	Other fallows	46441	10.12
9.	Net area sown	188296	41.02
10.	Total geographical area	459054	100.00

Source: Assistant Director of Statistics, Thoothukudi District, 2012-13

Operational Holdings

The average size of land holdings of the district is 1.54 hectares as compared to 1.08 hectares in the state. Sixty-four per cent of the holdings are below 1 hectare and holdings with less than 2 hectares account for 83.50 per cent of the total number of holdings. Nearly 12 per cent of the holdings are between two and five hectares. Holdings with more than five hectares constitute 3.79 per cent of the total number.

TABLE 3.3
SIZE-WISE DISTRIBUTION OF AGRICULTURAL HOLDINGS IN
THOOTHUKUDI DISTRICT (2012-13)

Size of Holdings (in Ha.)	Number of Operational Holdings	Percentage to Total Number of Holdings	Area under the Holdings (in Ha.)	Percentage to Total Area
0 – 0.5	92118	41.11	22889.83	8.06
0.5 – 1.0	53040	23.67	37642.50	13.26
1.0 – 2.0	41956	18.72	59406.95	20.92
2.0 – 3.0	16101	7.18	39358.40	13.86
3.0 – 4.0	7940	3.54	27493.61	9.68
4.0 – 5.0	4460	1.99	19902.81	7.01
5.0 – 7.5	4595	2.05	27836.45	9.81
7.5 – 10.0	2035	0.91	17229.31	6.07
10.0 – 20.0	1524	0.68	20173.95	7.11
20.0 and above	333	0.15	11982.95	4.22
Total	224102	100.00	283916.76	100.00

Source: Assistant Director of Statistics, Thoothukudi District, 2012-13.

On the whole the majority of the holdings in the district are medium and small size holdings. The average size of holdings range from 0.91 hectares in Srivaikundam taluk to 2.03 hectares in Vilathikulam taluk. The percentage of holdings ranging from 0.1 to 2.0 hectares to total holdings in each taluk is 72 per cent, 76 per cent, 72 per cent, 92 per cent, 88 per cent and 86 per cent in Kovilpatti, Ottapidaram, Vilathikulam, Sathankulam, Srivaikuntam, Tiruchendhur and Thoothukudi Taluks respectively.

Irrigation

The main sources of irrigation in the district is through canals, tanks and wells accounting for 3,873 hectares, 18,040 hectares and 20,527 hectares of net area irrigated respectively during 2009-10. The gross area irrigated by canals has decreased from 12.09 per cent in 2009-10. The gross area irrigated by canals has decreased from 12.09 per cent in 1998-99 to 10.70 per cent in 2009-10. The gross area irrigated by tanks also has decreased from 44.10 per cent in 1998-99 to 44.17 per cent in 2009-10. The gross irrigated by well has increased from 38.82 per cent in 1998-99 to 45.12 per cent in 2009-10.

TABLE 3.4
AREA IRRIGATED BY DIFFERENT SOURCES IN THOOTHUKUDI DISTRICT

Year	Net Area Irrigated			Total Gross Irrigated Area		
	Canals	Tanks	Wells	Canals	Tanks	Wells
1998-99	4873 (9.98)	22145 (45.34)	21825 (44.68)	7218 (12.09)	29323 (44.10)	23183 (38.82)
1999-2000	4346 (14.00)	16471 (53.07)	10219 (32.93)	6708 (13.60)	21611 (43.82)	21001 (42.58)
2007-08	3834 (9.35)	15899 (38.74)	21290 (51.90)	4785 (11.12)	16524 (38.41)	21717 (50.47)
2008-09	3945 (0.74)	19687 (43.61)	21508 (47.65)	4468 (9.52)	20505 (43.91)	21722 (46.52)
2009-10	3873 (8.13)	18040 (42.51)	20527 (48.37)	5354 (10.70)	22095 (44.17)	22570 (45.12)

Source: Assistant Director of Statistics, Thoothukudi District, 2012-13.

Note: Figures in brackets represent the percentage to total irrigated area.

Srivaikundam and Tiruchendhur Taluks have the benefit of canal irrigation besides tank and well irrigation systems. Irrigation by tanks is widely prevalent in Thoothukudi and Tiruchendhur Taluks. Sathankulam and Kovilpatti Taluks are irrigated mainly by wells.

Industrial Development in Thoothukudi District

The district constitutes 70 percent of the total salt production of the state and meets 30 percent obligation of our nation. In this district two Industrial Estates are available one at Kovilpatti with 11 parts and the other at Thoothukudi with 20 items. The prior is accomplished by SIDCO and the latter by SIPCOT. There are 2,200 and above Small Scale Industries registered in the district and about 12 major industries. They are engaged in the production of cotton and staple yarn, caustic soda, PVC resin, fertilizers, soda-ash, carbon dioxide gas in liquid form etc., Some of the major trades are SPIC, TAC, Dharangadhara Chemical Works, Loyal Textiles Ltd., Madura Coats Ltd., Sterlite Copper Industries, Kilburn Chemicals, Ramesh Flowers, Nila seafoods, Deva and Co., and Transworld Granite Industries.

Tata steel recently announced plans to set up a Titanium dioxide project in Thoothukudi. Four national brand products are made in Thoothukudi they are VVD Coconut Oil, Agsar Paints, BIO Food Ltd. Hip Tea & Genkii Tea (Herbal Tea) and Venus Water Heaters. The essential public sector undertakings in this district are the Thoothukudi Thermal Power Station unit of the Tamil Nadu Electricity Board, Heavy Water Plant (HWP) and Port Trust. The Central Government is considering the construction of Titanium and Zirconium Sponge Plant, which comes under the control of Department of Atomic Energy at Palayakayal village of Srivaikundam Taluk. The District Industries Centre and the Tamil Nadu Industrial Investment Corporation are catering to the needs of the small- and large-scale industries in this district.

CHAPTER IV

ANALYSIS AND INTERPRETATION

The socio-economic profile of the sample respondents such as age, gender, religion, caste, marital status, educational level, type and size of family, earning members per family, occupation, ownership of the house, housing condition, income, expenditure, material possession, savings, type of the shop, the longevity of the shop, number of workers employed, capital invested, problems faced, and the like are analysed in this chapter.

Age-wise Classification

An important factor in knowing how the defendants feel about the situation is their age, and a significant age shows a person's maturity because it becomes more important to study their answers.

TABLE 4.1

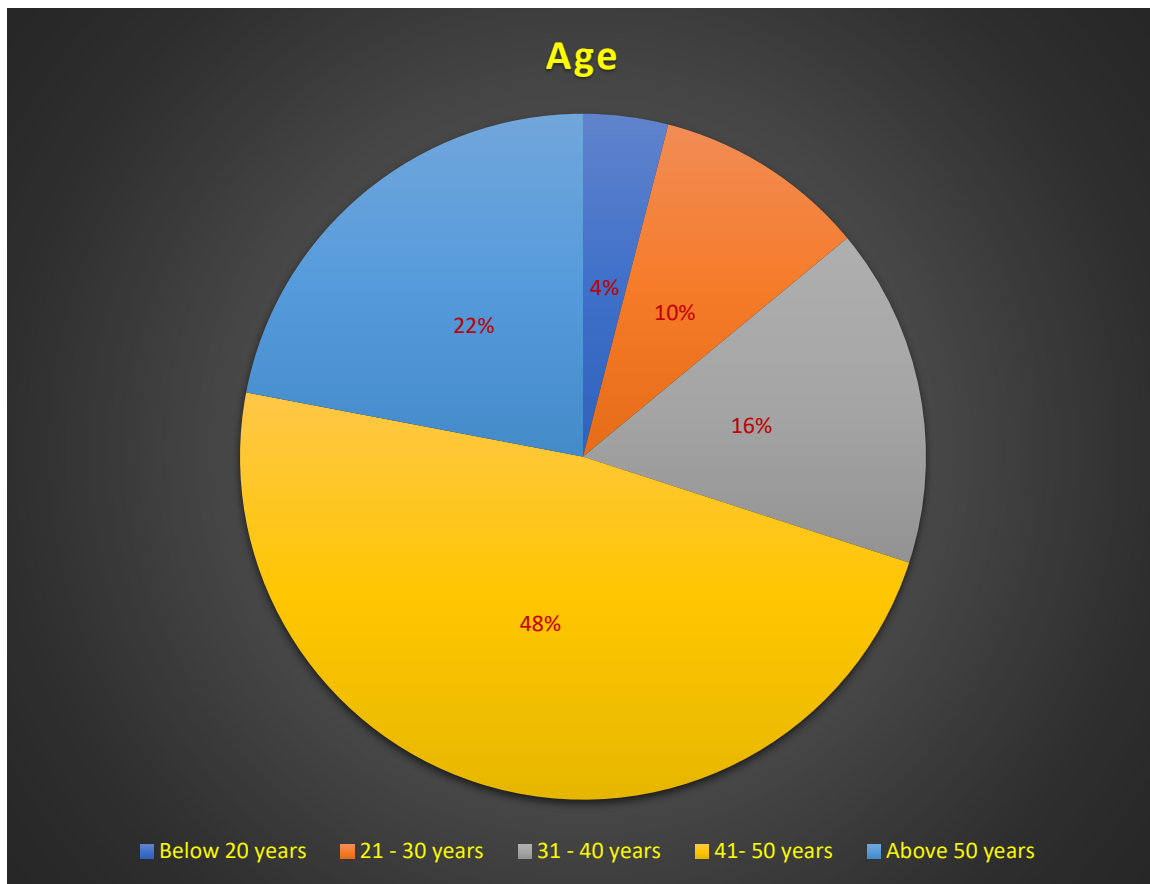
AGE-WISE CLASSIFICATION OF THE RESPONDENTS

Sl.No	Age	Respondents	Percentage
1	Below 20 years	2	4.00
2	21 - 30 years	5	10.00
3	31 - 40 years	8	16.00
4	41- 50 years	24	48.00
5	Above 50 years	11	22.00
	Total	50	100

Source: Primary data

The above table 4.1 displays that out of 50 respondents, 48.00 percent of the defendants are below the age group of 41 – 50 years. 22.00 percent of the

respondents are under the age group of above 50 years, 16.00 of the respondents are under the age group of 31 – 40 years. 10.00 percent of the respondents are under the age group of 21 – 30 years, and 4.00 percent are below 20 years. The mean age of respondents worked out to be 42.9 years.



Gender Wise Classification

Data correlated to the gender of the respondents is presented in table 4.2.

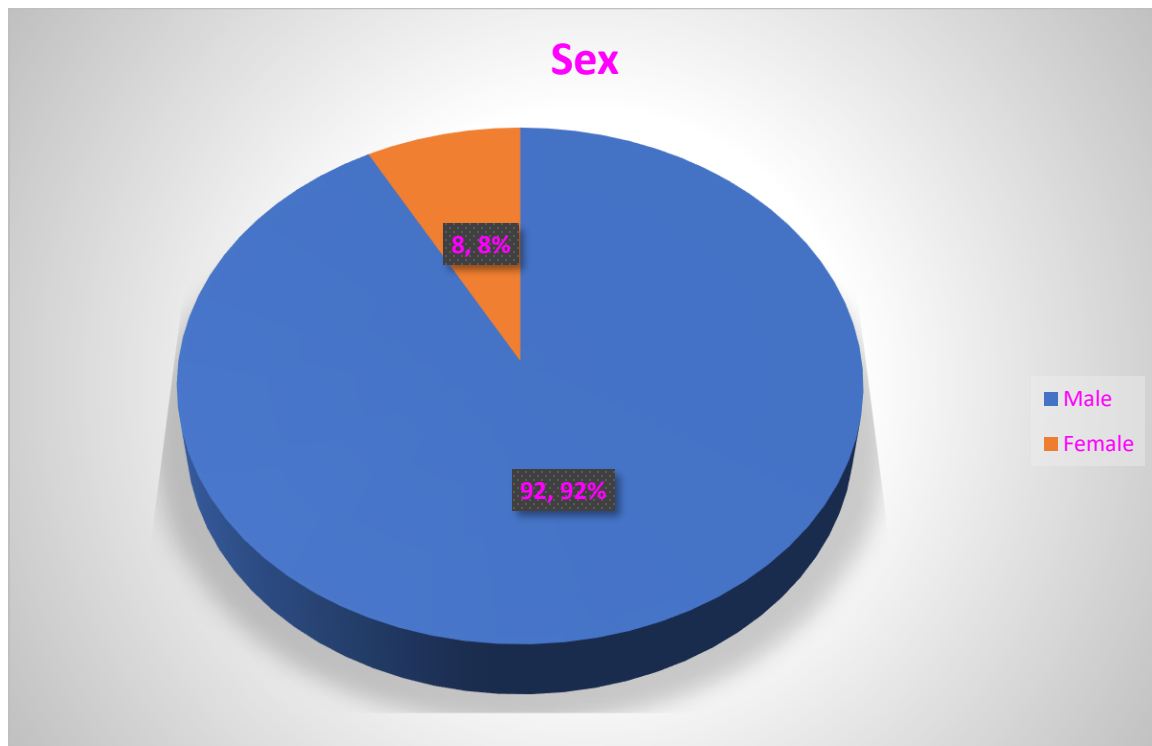
Table 4.2

GENDER WISE CLASSIFICATION OF THE RESPONDENTS

Sl.No	Sex	Respondents	Percentage
1	Male	46	92.00
2	Female	4	8.00
	Total	50	100

Source: Primary data

The above table 4.2 shows that out of 50 respondents, 92.00 percent of the respondents are male, and 8.00 percent are female.



Religion-wise Distribution

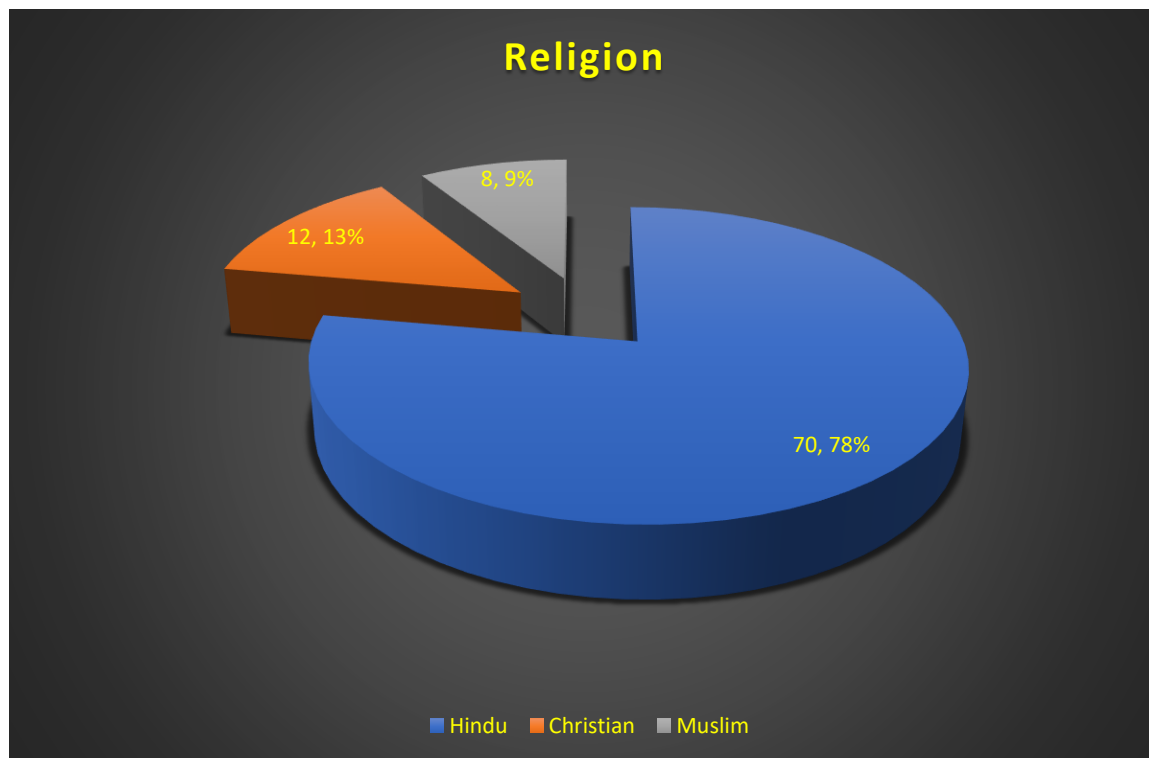
Table 4.3 shows the religion-wise distribution of the sample respondents.

TABLE 4.3
RELIGION OF THE RESPONDENTS

Sl.No	Religion	Respondents	Percentage
1	Hindu	35	70.00
2	Christian	6	12.00
3	Muslim	9	18.00
	Total	50	100

Source: Primary data

The above table 4.3 shows that out of 50 respondents, 70.00 percent of the respondents are Hindu, 12.00 percent of the respondents are Christian, and the remaining 18.00 percent of the respondents are Muslim.



Caste Wise Classification

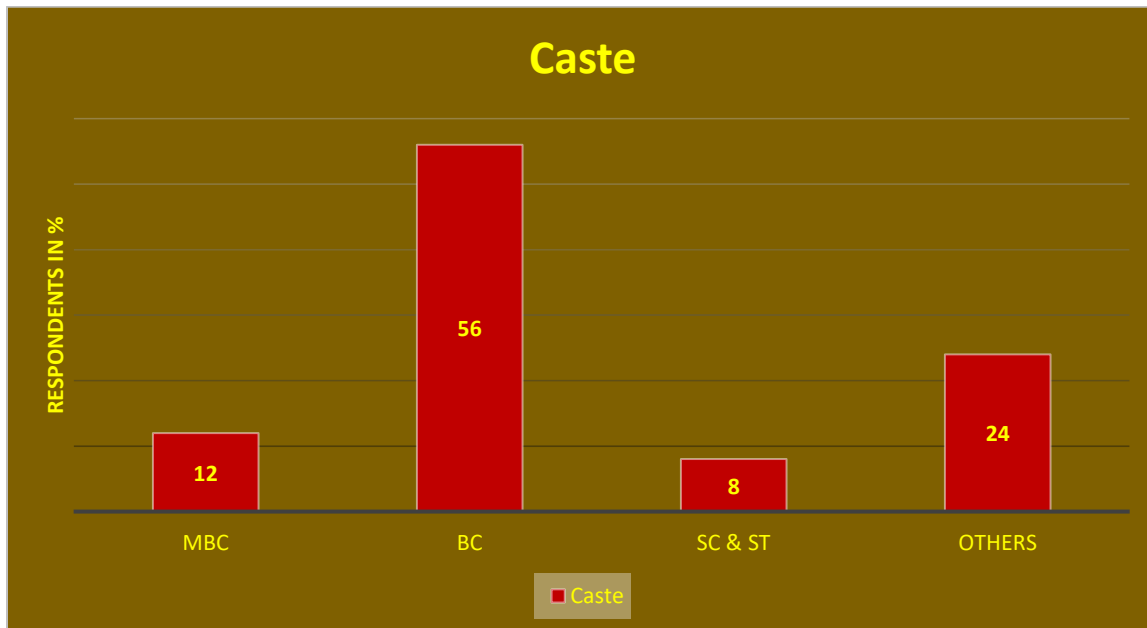
The caste-wise analysis of the sample respondents is given in Table 4.4.

TABLE 4.4
CASTE - WISE CATEGORY OF THE RESPONDENTS

Sl.No	Caste	No. of Respondents	Percentage
1	MBC	6	12.00
2	BC	28	56.00
3	SC & ST	4	8.00
4	Others	12	24.00
	Total	50	100

Source: Primary data

The above table 4.4 shows that the caste wise category of the respondents out of 50 respondents, 56.00 percent of the respondent is under the category of BC, 12.00 percent of the respondents are under the category of MBC, 8.00 percent of the respondents are under the category of SC & ST and remaining 24.00 percent of the respondents are under the category of others.



Education Wise Classification

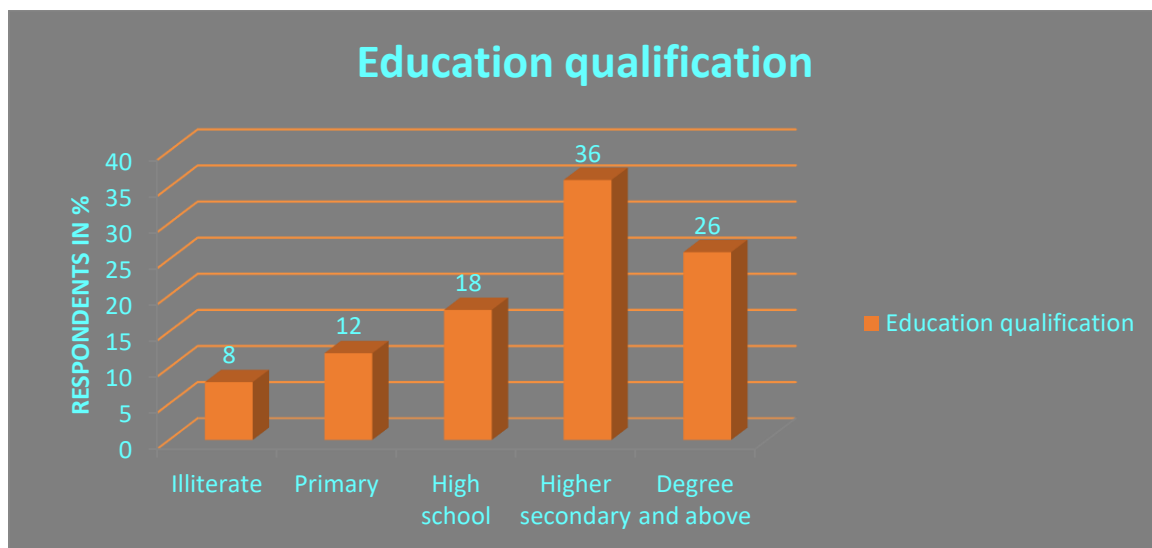
The data about education is presented below:

TABLE 4.5
EDUCATION QUALIFICATION OF THE RESPONDENTS

Sl.No	Education qualification	No. of Respondents	Percentage
1	Illiterate	4	8.00
2	Primary	6	12.00
3	High school	9	18.00
4	Higher secondary	18	36.00
5	Degree and above	13	26.00
	Total	50	100

Source: Primary data

The above table 4.5 shows that the education qualification of the respondents out of 50 respondents, 26.00 percent of the respondents are qualified in degree, 36.00 percent of the respondents are qualified in higher secondary, 18.00 percent of the respondents are qualified in high school, 12.00 percent of the respondents are qualified in primary level and remaining 8.00 percent of the respondents are qualified in illiterate level.



Marital Position

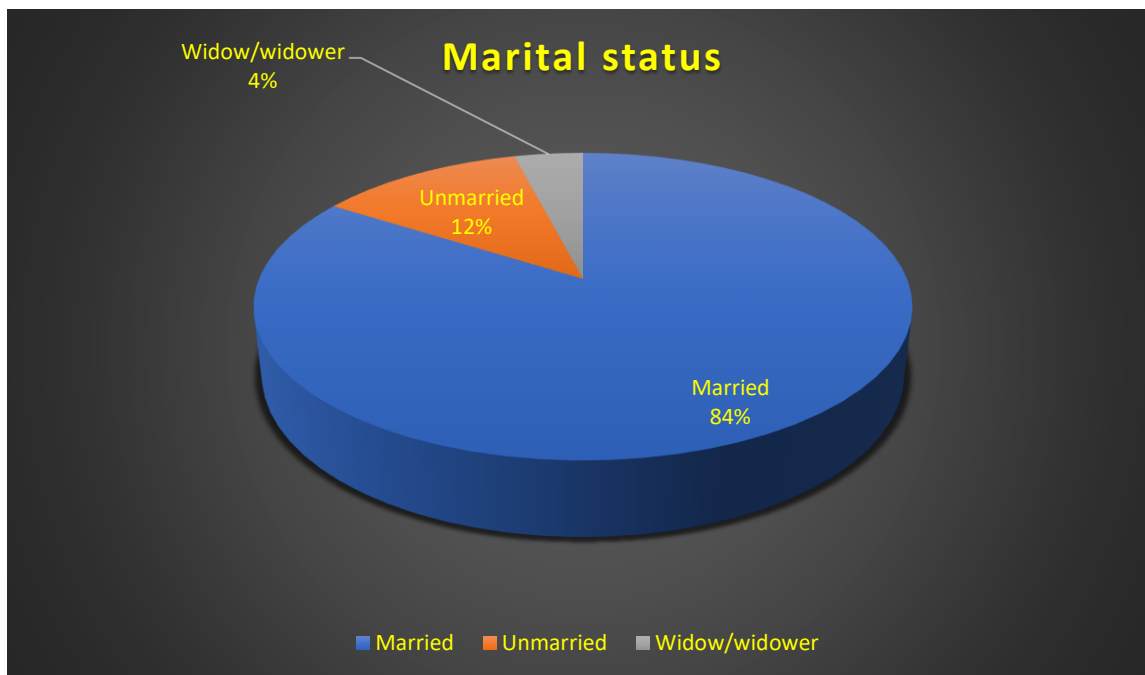
Marriage is one of the essential communal institutions. The marital status of the respondents is given below.

TABLE 4.6
MARITAL STATUS OF THE RESPONDENTS

Sl.N	Marital status	No. of respondents	Percentage
1	Married	40	80.00
2	Unmarried	6	12.00
3	Widow/widower	4	8.00
	Total	50	100

Source: Primary data

The above table 4.6 shows the marital status of the respondents. Out of 50 respondents, 80.00 percent of the respondents are married, 12.00 percent of the respondents are unmarried, and the remaining 8.00 percent of the respondents are widow/widowers.



Type of Family

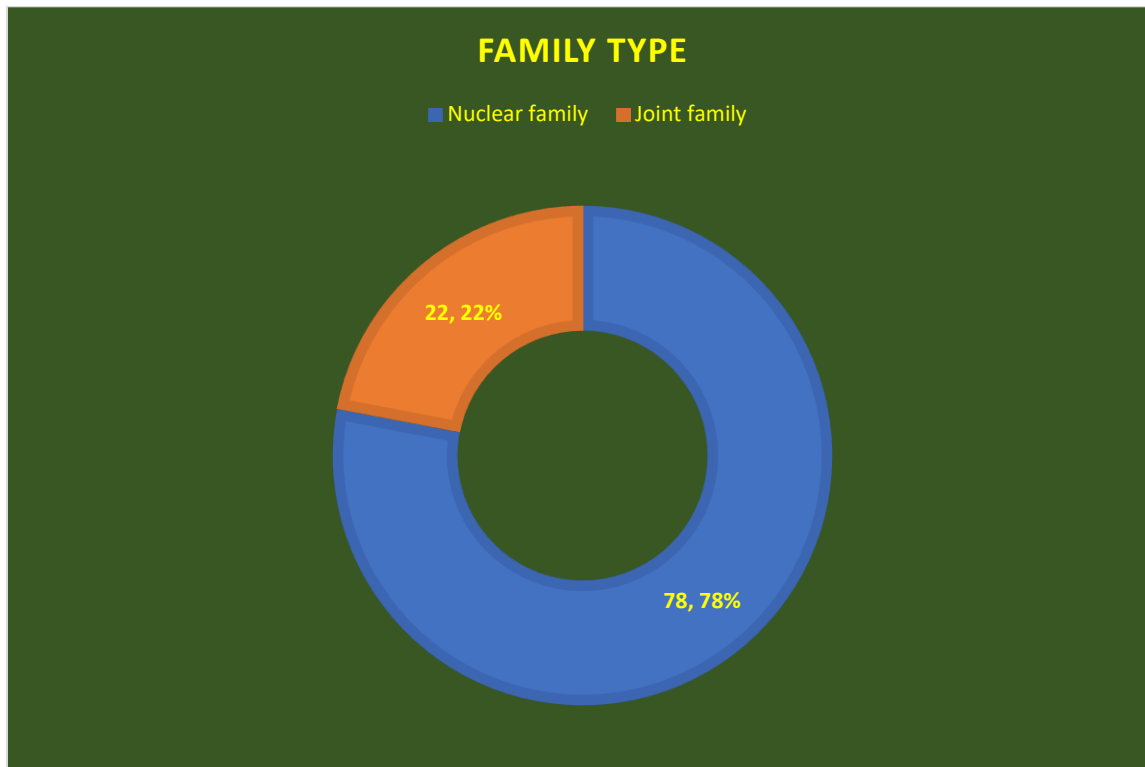
The family type plays its role in giving the response of individuals, and therefore, it was thought essential to understand the family type of the respondents.

TABLE 4.7
FAMILY TYPE OF RESPONDENTS

Sl.No	Family Type	No. of Respondents	Percentage
1	Nuclear family	39	78.00
2	Joint family	11	22.00
	Total	50	100.0

Source: Primary data

Table 4.7 shows the type of families of the respondents. Out of 50 respondents, 78.00 percent live in a nuclear family, and the remaining 22.00 percent of the respondents live in a joint family.



Family Size

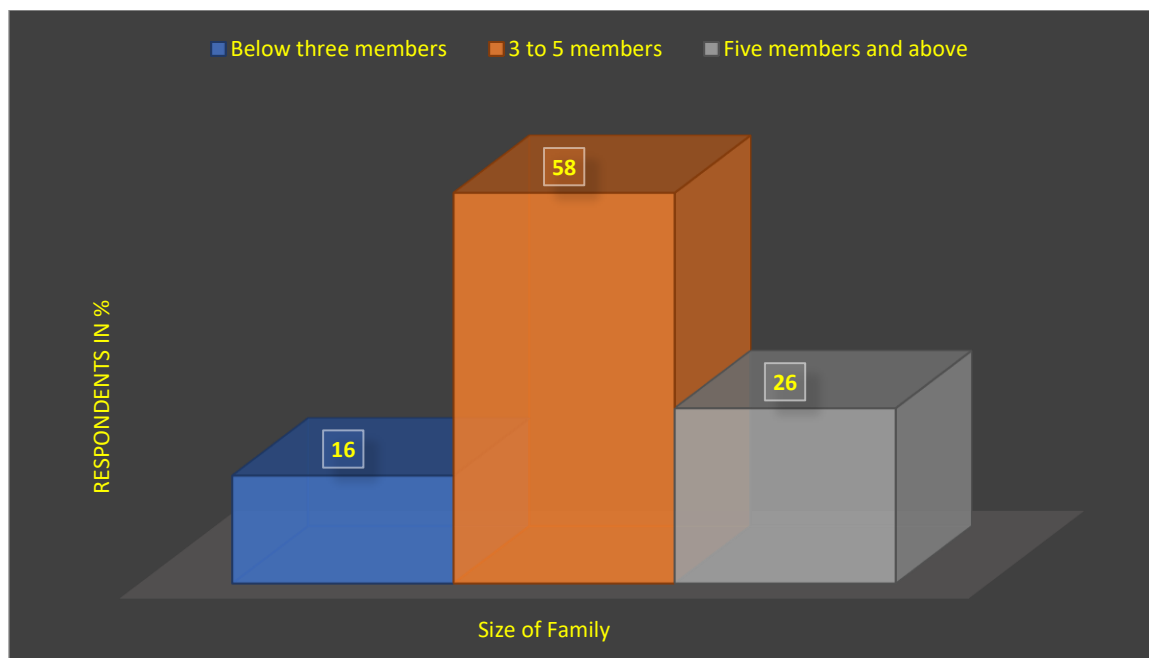
Table 4.8 depicts the family size of the respondents.

TABLE 4.8
SIZE OF FAMILY OF THE RESPONDENTS

Sl.N	Size of Family	No. of respondents	Percentage
1	Below three members	8	16.00
2	3 to 5 members	29	58.00
3	Five members and	13	26.00
	Total	50	100.0

Source: Primary data

Table 4.8 shows the members of the family. Out of 50 respondents, 16.00 percent have a family member of below 3, 58.00 percent of the respondents have a family member of three to five, and the remaining 26.00 percent have family members above five.



Earning Members per Family

Table 4.9 shows the earning members per family of the respondents.

TABLE 4.9

EARNING MEMBERS IN THE FAMILY

Sl.No	Earning Members	No of Respondents	Percentage
1	One member	19	38.00
2	Two members	26	52.00
3	Three members	5	10.00
	Total	50	100.0

Source: Primary data

The above table 4.9 shows that earning members in the family. Out of 50 respondents, 38.00 percent say that earning one member in the family, 52.00 percent of the respondents say that two members are earning in the family, and the remaining 10.00 percent of the respondents say that three members are earning in the family.



Ownership of the House

Ownership of the house of the respondents is furnished in Table 4.10.

TABLE 4.10
OWNERSHIP OF THE HOUSE

Sl.No	House Condition	No of Respondents	Percentage
1	Owned	36	72.00
2	Leased	6	12.00
3	Rented	8	16.00
	Total	50	100.0

Source: Primary data

The above table 4.10 shows the ownership of the house of the respondents. Out of 50 respondents, 72.00 percent live in an owned house, 12.00 percent live in a leased house, and the remaining 16.00 percent of the respondents live in a rented house.

Type of Housing

The different forms of housing details are shown in Table 4.11.

TABLE 4.11
TYPE OF LIVING HOUSE

Sl.No	Type of Housing	No. of Respondents	Percentage
1	Terraced	42	84.00
2	Tiled	8	16.00
	Total	50	100.0

Source: Primary data

The above table 4.11 shows the type of living house of the respondents. Out of 50 respondents, 84.00 percent of the respondents live in terraced houses, and 16.00 percent live in tiled houses.

Family Income

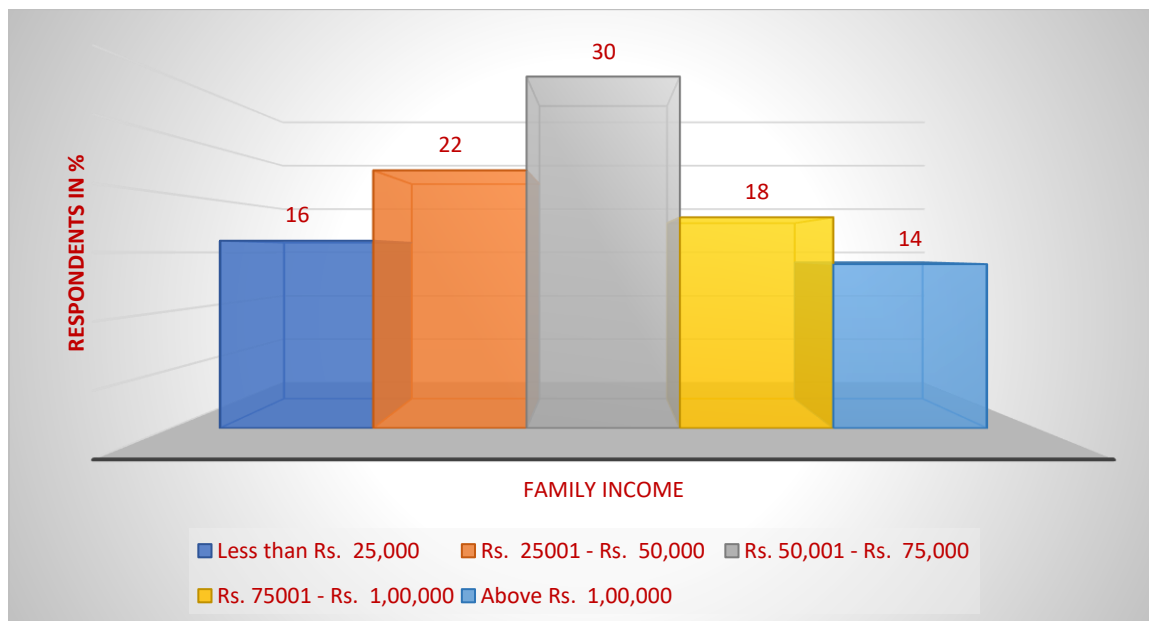
According to their family income, the distribution of respondents is shown in Table 4.12.

TABLE 4.12
FAMILY INCOME PER MONTH

Sl.No	Family Income	No. of Respondents	Percentage
1	Less than Rs. 25,000	8	16.00
2	Rs. 25001 - Rs. 50,000	11	22.00
3	Rs. 50,001 - Rs. 75,000	15	30.00
4	Rs. 75001 - Rs. 1,00,000	9	18.00
5	Above Rs. 1,00,000	7	14.00
	Total	50	100.0

Source: Primary data

The above table 4.12 shows the family income of the respondents. Out of 50 respondents, 16.00 percent are earning less than Rs. 25,000, 22.00 percent of the respondents are earning Rs. 25,001 to Rs. 50,000, 30.00 percent of the respondents are earning Rs. 50,001 to Rs. 75,000, 18.00 percent of the respondents are earning Rs. 75,001 to Rs. 1,00,000, and the remaining 14.00 percent of the respondents earn above Rs. 1,00,000. The mean monthly family income of the households works out to be Rs.60500.50.



Expenditure

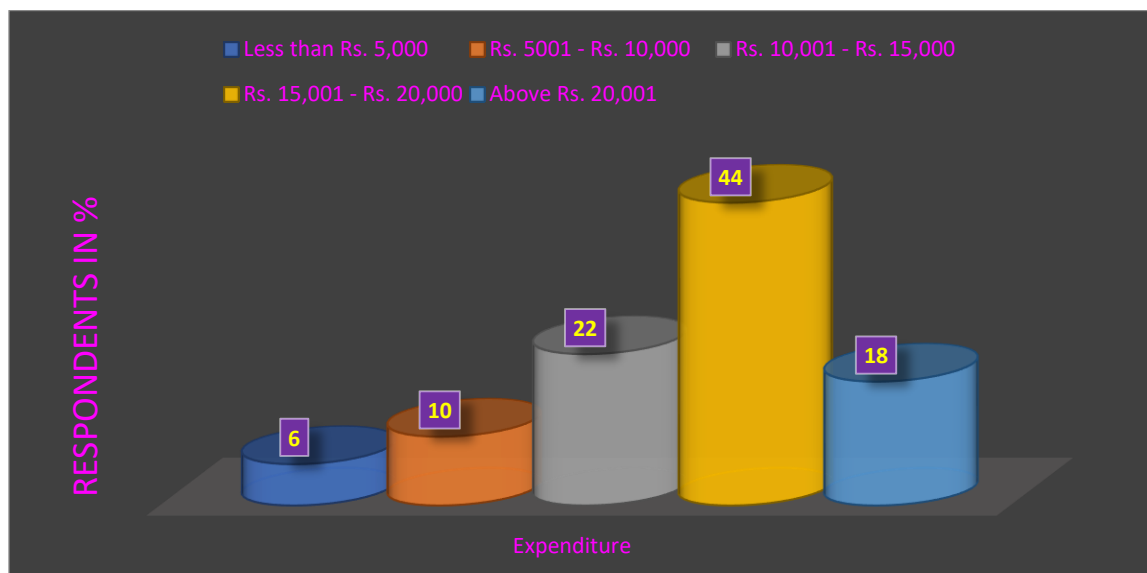
According to their family expenditure, the dissemination of respondents is shown in Table 4.13.

TABLE 4.13
FAMILY EXPENDITURE PER MONTH

Sl.No	Expenditure	No of Respondents	Percentage
1	Less than Rs. 5,000	3	6.00
2	Rs. 5001 - Rs. 10,000	5	10.00
3	Rs. 10,001 - Rs. 15,000	11	22.00
4	Rs. 15,001 - Rs. 20,000	22	44.00
5	Above Rs. 20,001	9	18.00
	Total	50	100.0

Source: Primary data

The above table 4.13 shows the family expenditure of the respondents. Out of 50 respondents, 6.00 per cent of the respondents are spending below Rs. Five thousand per month, 10.00 percent of the respondents are spending Rs. 5,001 to Rs. Ten thousand per month, 22.00 percent of the respondents are spending Rs. 10,001 to Rs. 15 000 per month, 44.00 percent of the respondents spend Rs. 15,001 to Rs. Twenty thousand per month, and the remaining 18.00 percent of the respondents are above Rs. 20,001 per month. The mean monthly family expenditure of the households works out to be Rs. 14410.5.



Savings

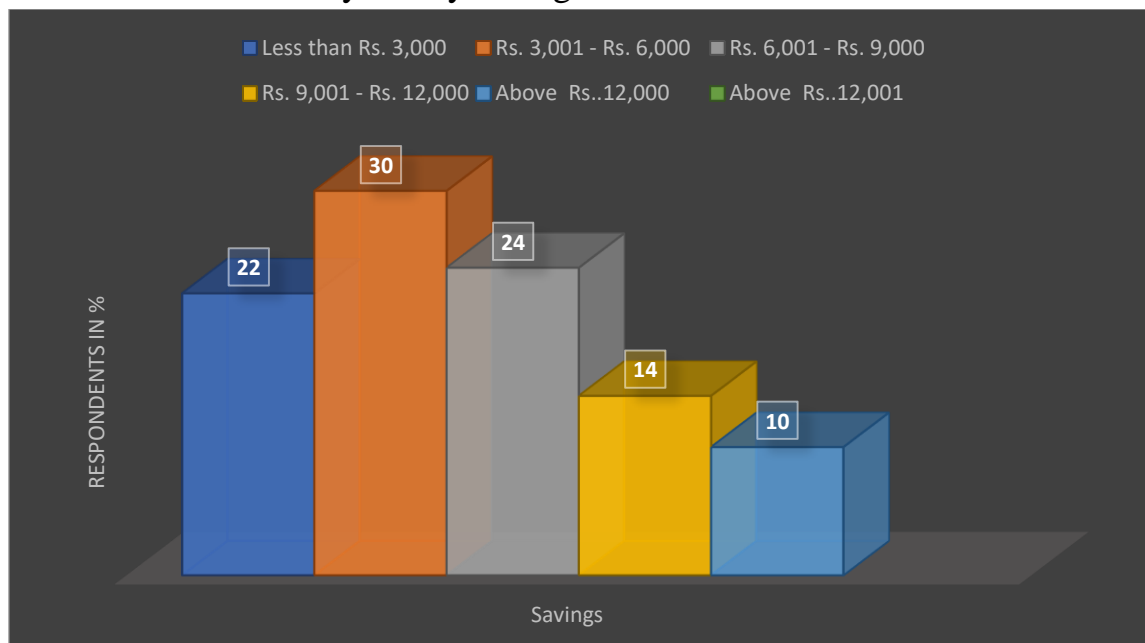
Table 4.14 shows the details of the saving-wise classification of the respondents.

TABLE 4.14
SAVINGS PER MONTH

Sl.No	Savings	No of Respondents	Percentage
1	Less than Rs. 3,000	11	22.00
2	Rs. 3,001 - Rs. 6,000	15	30.00
3	Rs. 6,001 - Rs. 9,000	12	24.00
4	Rs. 9,001 - Rs. 12,000	7	14.00
5	Above Rs.12,001	5	10.00
	Total	50	100.0

Source: Primary data

The above table 4.14 shows the savings per month. Out of 50 respondents, 22.00 percent of the respondents have less than rupee three thousand, 30.00 percent of the respondents are saving three thousand, and one to six thousand, 24.00 percent of the respondents save between rupees 6 thousand and one to 9 thousand 14.00 percent of the respondents are save between rupees 9 thousand and one to 12 thousand and remaining 10.00 percent of the respondents are saving above rupees 12 thousand and one. The mean monthly family saving of the households works out to be Rs.6,300.5.



Material Possession

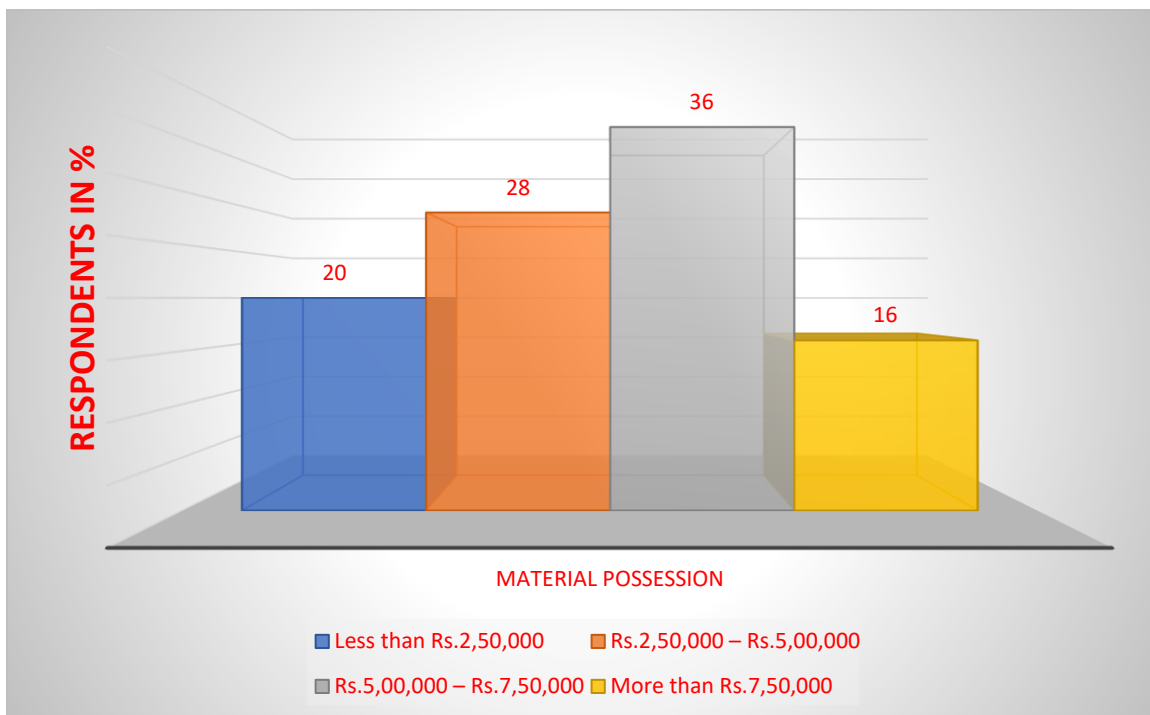
Table 4.15 displays the material possession of the respondents.

TABLE 4.15
MATERIAL POSSESSION AMONG THE RESPONDENTS

Sl. No.	Material Possession	Number of Respondents	Percentage
1.	Less than Rs.2,50,000	10	20.00
2.	Rs.2,50,000 –	14	28.00
3.	Rs.5,00,000 –	18	36.00
4.	More than Rs.7,50,000	8	16.00
Total		50	100.00

Source: Primary data.

It has been inferred from Table 4.15 that out of 50 respondents, the maximum of 36.00 percent has a material possession worth rupees 5 to 7.5 lakhs, followed by 14 (28.00 percent) having Rs.2.5 lakhs – Rs.5 lakhs, 10 (20.00 percent) have a material possession worth less than Rs 2,50,000 and 8 (16.00 percent) have material possession worth more than 7.5 lakhs.



Types of Shops

The sample respondent shop owners are asked about the type of shop they are running.

TABLE 4.16
TYPE OF SHOP

Sl. No.	Type of Shop	Number of Respondents	Percentage
1.	Sole trader	29	58.00
2.	Hindu Undivided Family	11	22.00
3.	Partnership	10	20.00
Total		50	100.00

Source: Survey data.

Table 4.16 shows that 53 per cent are sole trader owned, 22 per cent are Hindu Undivided Family organisations, and 20 per cent are partnership organisations.

Longevity

The data on the longevity of shops of the sample respondents are collected in Table 4.17 for analytical purposes.

TABLE 4.17
HOW LONG HAS THE SHOP IS EXISTING

Sl. No.	Longevity of the shop	Number of	Percentage
1.	Less than 5 years	7	14.00
2.	5-10 years	11	22.00
3.	10 - 15 years	18	36.00
4.	15 - 20 years	9	18.00
5.	20 Years & above	5	10.00
Total		50	100.00

Source: Survey data.

Table 4.17 shows the years of doing business by the shop owners in the sample area. In the study area, it is seen that 14 per cent of shops are doing this business for less than 5 years; 22 per cent are engaged in this business for the period between 5 years and 10 years; 36 per cent for a period between 10 years and 15 years, 18 per cent for a period between 15 years and 20 years; 10 per cent for 20 years and above.

Number of employees working

The shops employ many workers, either skilled or unskilled. The numbers may vary from shop to shop according to their need and viability. The number of employees ranges from one to 9 and more in the sample shops. The data collected are classified and shown in Table 4.18 for analytical purposes.

TABLE 4.18
NUMBER OF EMPLOYEES WORKING

Sl. No.	Number of Employees Working	Number of Respondents	Percentage
1.	up to 2	11	22.00
2.	3 to 4	19	38.00
3.	5 to 6	9	18.00
4.	7 to 8	7	14.00
4.	9 and above	4	8.00
Total		50	100.00

Source: Survey data.

Table 4.18 shows the number of employees in the sample shops of respondents. It is seen that 22 per cent of shops have up to 2 workers; 38 per cent have 3 to 4 workers; 18 per cent have 5 to 6 workers; 14 per cent have 7 to 8 workers, and 8 per cent have 9 workers above.

Capital

The data relating to the amount of capital invested by the sample respondents are collected in table 4.19.

TABLE 4.19
CAPITAL INVESTED

Sl. No.	Capital Invested	Number of Respondents	Percentage
1.	Up to Rs.5 lakhs	9	18.00
2.	5 to 10 lakhs	14	28.00
3.	10 to 15 lakhs	12	24.00
4.	15 to 20 lakhs	8	16.00
4.	20 lakh & above	7	14.00
Total		50	100.00

Source: Survey data.

Table 4.19 shows the amount of capital invested by the sample respondents. It is seen that 18 per cent have invested less than Rs.5 lakhs as capital; 28 per cent have invested between Rs.5 lakhs and Rs.10 lakhs; 24 per cent between Rs.10 lakhs and Rs.15 lakhs, 16 per cent between Rs.15 lakhs and Rs.20 lakhs and 14 per cent have invested Rs.20 lakhs and above.

Jewellery Making

The respondents are asked about their majority part way of procuring jewellery. The data collected are shown in Table 4.20.

TABLE 4.20
METHOD OF PROCURING JEWELLERY

Sl.	Method of Procuring	Number of Respondents	Percentage
1.	Production cum skilled	26	52.00
2.	Purchase from outside	14	28.00
3.	Order placing	10	20.00
Total		50	100.00

Source: Survey data.

Table 4.20 shows that among shopkeeper respondents, 52 per cent appoint their skilled workers to do jewellery; 28 per cent purchase directly from the market and 20 per cent place orders for their required designs.

Problems faced by Administration

Any business aims to earn a profit, and pursuance of profit always involves risk. The higher the risk, the higher will be the profit. The traders in the jewellery industry face lesser risk as the product is not perishable, nor will never go absolute. They always have a market, and it is easily marketable. However, the traders may face risks from certain administrative officials.

TABLE 4.21
FACING PROBLEMS FROM ADMINISTRATION

Sl.	Problems	Number	of	Percentage
1.	Sales tax officials	15		30.00
2.	Police Officials	7		14.00
3.	Labour Officials	9		18.00
4.	Income Tax Officials	14		28.00
5.	Customs Officials	2		4.00
6.	Anti-social elements	3		6.00
Total		50		100.00

Source: Survey data.

The respondents are asked whether they have faced any problems from some officials. The problems faced by the traders from Sales tax officials, Police Officials, Labour Officials, Income Tax Officials, Customs Officials and Anti-social elements are, the percentage is 30 per cent, 14 per cent, 18 per cent, 28 per cent, 4 per cent, 6 per cent respectively.

CHAPTER V

The Gems and Jewellery sector especially the gold industry plays a significant role in the Indian economy. India is deemed to be the hub of the global jewellery market because of its low costs and availability of high skilled labours. A goldsmith is a metalworker who specializes in working with gold and other precious metals. Goldsmiths must be skilled in forming metal through ling, soldering, sawing, forging, casting, and polishing metal. The trade has very often included jewellery-making skills, as well as the very similar skills of the silversmith. This chapter gives a brief summary of the study results, suggestions and conclusion.

5.1 FINDINGS

The mean age of respondents worked out to be 42.9 years.

It discloses that out of 50 respondents, 92.00 percent of the respondents are male, and 8.00 percent are female.

The study displays that out of 50 respondents, 70.00 percent of the respondents are Hindu, 12.00 percent of the respondents are Christian, and the remaining 18.00 percent of the respondents are Muslim.

The data demonstrates that the caste wise category of the respondents out of 50 respondents, 56.00 percent of the respondent is under the category of BC, 12.00 percent of the respondents are under the category of MBC, 8.00 percent of the respondents are under the category of SC & ST and remaining 24.00 percent of the respondents are under the category of others.

The study shows that the education qualification of the respondents out of 50 respondents, 26.00 percent of the respondents are qualified in degree, 36.00 percent of the respondents are qualified in higher secondary, 18.00 percent of the respondents are qualified in high school, 12.00 percent of the respondents are

qualified in primary level and remaining 8.00 percent of the respondents are qualified in illiterate level.

It determines the marital status of the respondents. Out of 50 respondents, 80.00 percent of the respondents are married, 12.00 percent of the respondents are unmarried, and the remaining 8.00 percent of the respondents are window/widowers.

The data shows the type of families of the respondents. Out of 50 respondents, 78.00 percent live in a nuclear family, and the remaining 22.00 percent of the respondents live in a joint family.

It reveals the members of the family. Out of 50 respondents, 16.00 percent have a family member of below 3, 58.00 percent of the respondents have a family member of three to five, and the remaining 26.00 percent have family members above five.

It validates that earning members in the family. Out of 50 respondents, 38.00 percent say that earning one member in the family, 52.00 percent of the respondents say that two members are earning in the family, and the remaining 10.00 percent of the respondents say that three members are earning in the family.

It determines the ownership of the house of the respondents. Out of 50 respondents, 72.00 percent live in an owned house, 12.00 percent live in a leased house, and the remaining 16.00 percent of the respondents live in a rented house.

It establishes the type of living house of the respondents. Out of 50 respondents, 84.00 percent of the respondents live in terraced houses, and 16.00 percent live in tiled houses.

The study shows the family income of the respondents. Out of 50 respondents, 16.00 percent are earning less than Rs. 25,000, 22.00 percent of the respondents are earning Rs. 25,001 to Rs. 50,000, 30.00 percent of the respondents are earning Rs. 50,001 to Rs. 75,000, 18.00 percent of the respondents are earning Rs. 75,001 to Rs.

1,00,000, and the remaining 11.00 percent of the respondents earn above Rs. 1,00,000. The mean monthly family income of the households works out to be Rs.60500.50.

It determines the family expenditure of the respondents. Out of 50 respondents, 6.00 per cent of the respondents are spending below Rs. Five thousand per month, 10.00 percent of the respondents are spending Rs. 5,001 to Rs. Ten thousand per month, 22.00 percent of the respondents are spending Rs. 10,001 to Rs. 15 000 per month, 44.00 percent of the respondents spend Rs. 15,001 to Rs. Twenty thousand per month, and the remaining 18.00 percent of the respondents are above Rs. 20,001 per month. The mean monthly family expenditure of the households works out to be Rs. 14410.5.

It reveals the savings per month. Out of 50 respondents, 22.00 percent of the respondents have less than rupee three thousand, 30.00 percent of the respondents are saving three thousand, and one to six thousand, 24.00 percent of the respondents save between rupees 6 thousand and one to 9 thousand 14.00 percent of the respondents are save between rupees 9 thousand and one to 12 thousand and remaining 10.00 percent of the respondents are saving above rupees 12 thousand and one. The mean monthly family saving of the households works out to be Rs.6,300.5.

It has been inferred that out of 50 respondents, the maximum of 36.00 percent has a material possession worth rupees 5 to 7.5 lakhs, followed by 14 (28.00 percent) having Rs.2.5 lakhs – Rs.5 lakhs, 10 (20.00 percent) have a material possession worth less than Rs 2,50,000 and 8 (16.00 percent) have material possession worth more than 7.5 lakhs.

It proves that 53 per cent are sole trader owned, 22 per cent are Hindu Undivided Family organisations, and 20 per cent are partnership organisations.

It demonstrates the years of doing business by the shop owners in the sample area. In the study area, it is seen that 14 per cent of shops are doing this business for less than 5 years; 22 per cent are engaged in this business for the period between 5 years and 10 years; 36 per cent for a period between 10 years and 15 years, 18 per cent for a period between 15 years and 20 years; 10 per cent for 20 years and above.

It displays the number of employees in the sample shops of respondents. It is seen that 22 per cent of shops have up to 2 workers; 38 per cent have 3 to 4 workers; 18 per cent have 5 to 6 workers; 14 per cent have 7 to 8 workers, and 8 per cent have 9 workers above.

The study shows the amount of capital invested by the sample respondents. It is seen that 18 per cent have invested less than Rs.5 lakhs as capital; 28 per cent have invested between Rs.5 lakhs and Rs.10 lakhs; 24 per cent between Rs.10 lakhs and Rs.15 lakhs, 16 per cent between Rs.15 lakhs and Rs.20 lakhs and 14 per cent have invested Rs.20 lakhs and above.

It shows that among shopkeeper respondents, 52 per cent appoint their skilled workers to do jewellery; 28 per cent purchase directly from the market and 20 per cent place orders for their required designs.

The respondents are asked whether they have faced any problems from some officials. The problems faced by the traders from Sales tax officials, Police Officials, Labour Officials, Income Tax Officials, Customs Officials and Anti-social elements are, the percentage is 30 per cent, 14 per cent, 18 per cent, 28 per cent, 4 per cent, 6 per cent respectively.

5.2 SUGGESTIONS

Based on the analysis and findings of this study, some of the suggestions are given below:

1. The fascination towards processing gold is directly proportional to rising prices and value. Thus, we can predict that the increase in gold has been more in terms of value than in terms of consumption.
2. In Thoothukudi, generally the small-scale gold manufacturing industries are seen because of the prevailing competition with the nearby big cities like Tirunelveli, Madurai and Kanyakumari. So, there is need for expansion of gold market.
3. Online trading affects significantly the small-scale gold manufacturing industries. So, to enlarge the standard of these industries in Thoothukudi area, advanced technology should be used.
4. Traditional method of gold ornaments manufacturing should be transformed into the modern methods of manufacturing.
5. The goldsmiths are not aware of the changing market trends, fashions and designs in Thoothukudi area. So, there is a need to produce modern types of jewellery which meet the needs of recent urban trends.
6. Suitable steps must be taken by local and state governments, NGOs in terms of availability of finance, raw materials, promotion and marketing for the development of the gold ornaments manufacturing industries of the study area.
7. Gold pricing and product pricing should in such a way that gold jewellery is more affordable, more accessible and more attractive.
8. Action is to be taken to upgrade product quality of gold jewellery and to introduce new designs with modern technology.
9. Special boards may be set up to look after the welfare of the workers engaged in the gold industry.

10. Government may advice officials relating to gold industry in conducting searches, seizure etc. to act in an impartial manner and special squads may be set up to monitor their activities.

5.3 CONCLUSION

From the overall analysis, it can be comprehended that the gold industry in Thoothukudi town, being a part of the gems and jewellery industry of India can play a significant role in the regional economy. At present, it is facing a lot of problems. Appropriate measures should be taken by the govt. to safeguard the interest of the gold traders and the goldsmith workers of the area. As this industry has a vivid historical tradition, it is our responsibility to preserve it so that it can bloom in future. For the sake of development, the various problems of the industry must be solved through the holistic approach of integrating socio-economic and infrastructural development.

REFERENCES

1. Ahmad Raza Bilal, Noraini Bt. Abu Talib, InamUIHaq, Mohd Noor Azli Ali Khan and Muhammad Naveed, "How Gold Prices Correspond to Stock Index: A Comparative Analysis of Karachi Stock Exchange and Bombay Stock Exchange", World Applied Sciences Journal, Vol 21 (4), April 2013.
2. Alok Kala. "Gem Stones and Jewellery in Jaipur". Diamond world, Vol. 38, No.4, 2010, pp. 12-14.
3. Amalendu Bhunia and Amit Das, 2012. "Association Between Gold Prices And Stock Market Returns: Empirical Evidence from NSE", Journal of Exclusive Management Science, Vol 1 Issue 2.
4. Asha, K. and S. Edmund Christopher. "A Study on Buying Behaviour of Customers towards Branded and Non-Branded Gold Jewellery with reference to Kanyakumari District". International Journal of Management, Vol. 5, Issue 10, October 2014, pp.105-114.
5. Britannica Micropedia, Encyclopedia Britannica Inc. William Benton, Chicago. Vol.6, p.545.
6. Deepa, S. and Natarajan, M. "A Study of Customers' Attitude and Behaviour on Jewellery Purchase in Salem", International Journal of Research in Commerce and Management, Vol.4, Issue 2, February 2013, pp.137-142.
7. Dr. Amutha. D, Supply and Demand Trends of World Gold Reserves (September 6, 2021). Available at SSRN: <https://ssrn.com/abstract=3918424> or <http://dx.doi.org/10.2139/ssrn.3918424>
8. Dr. Sindhu, "A study on impact of select factors on the price of Gold", IOSR Journal of Business and Management, Vol 8, No 4, Apr. 2013.
9. Gold Fields Mineral Services as of 2012.

10. Gomathy C., and Yesodha Devi N., “Consumer Behaviour in Purchase of Gold Jewellery – An Analytical Study”, *International Journal of Multidisciplinary Research and Development*, Vol.2, Issue. 7, 2015, pp.103-106.
11. Indian Economic Diary, Weekly Digest of Indian Economic Events “India’s Gold Demand Rises” Vol.XXXII. No. 41.October 8-14, 2001, p.17173.
12. India retail report 2005.
13. Ismail, Yahya, Z. and Shabri, A. 2009. “Forecasting Gold Prices Using Multiple Linear Regression Method”, *American Journal of Applied Sciences*, Vol. 6 Issue 8.
14. Jain. “A Trend Analysis of Export Performance of Gems & Jewellery Industry in India. *IJESM*, Vol.2, Issue 2, April-June:2012, pp.170-174.
15. Krishnan and Nandhini, “A Study on the Factors leading Customers to Purchase Gold Jewellery with Special Reference to Working women”, *International Journal of Mechanical Engineering and Technology*, Vol. 8, Issue. 12, 2017, pp.1020– 1029.
16. Kumarasamy, Umanath (2012a), "Gold: A Glittering Investment Alternative?" *Facts for You*, 32 (7), April, p. 9.
17. Macquarie (2011), "Indian Households Hold over \$950 billion of Gold: Macquarie", 2011-12-04
<http://economictimes.indiatimes.com/markets/commodities/indianhouseholds-hold-over950-billion-of-goldmacquarie/articleshow/10978409.cms>.
18. Nand Kishor Soni and Ajay parashar, 2015. "Gold Demand increase and Its impact on Inflation", *Journal of Research in Humanities and Social Science*, Vol 3. Issue 2.

19. Pandey, T.N., Bombay Bullion Association, Bonds-Boom for dishonest, Economic Times, March 12, 1995, p.8.
20. Rajkumar, R. Consumer Behaviour in Rural Markets with special reference to Perishables, Non-perishables and Durable Goods in Coimbatore District. Unpublished Ph.D. Thesis Submitted to Bharathiar University, Coimbatore, 2006.
21. Sandhya Sridhar, "Auspicious and Pure", The Hindu, 05-05-2008.
22. Sathya Sundaram, "The Glittering Realities", Industrial Economist, June 15-29, 1999, p.49.
23. Satya Sundaram "Gems and Jewellery Save the Shine", Management Accountant, August 1999.
24. Shanoo Bijilani "Festive Season for Jewellery kicks off with IIJS", Solitaire International, The Indian Gem and Jewellery magazine, Spenta Multimedia, Mumbai, October-November 2007, Pg.No. 10.
25. Shanthilal, N. Sonawala, The Role of Gold, Silver and NRIs in Indian Economy, Forum of Free Enterprise, 14.9.1992, p.12.
26. Shivani Mishra, "Jewellery Design" Journal of Gem and Jewellery Industry, Journal House, Jaipur, June-2007 Pg.no: 23
27. Tandon, Indian Economy, Sultan Chand & Sons, New Delhi, 1997, p.190.
28. The Global Gems and Jewellery: Vision 2015: Transforming for Growth, KPMG Report.
29. V.K Bhalla, Investment Management – Security Analysis and Portfolio Management, 11th Edition, S. Chand and Company, Limited, New Delhi. 2004.
30. Vijayalakshmi Sreedhar, "Go for Gold", The Hindu, Dated 05-05-2008.

31. World Gold Council (2013b), "Gold Demand Trends Full year 2012". Retrieved March from https://www.gold.org/investment/research/regular_reports/gold_demand_trends/
32. World Gold Council, Rue de la Rôtisserie, 1204 Geneva, Switzerland Publications, 1994, p.12.

QUESTIONNAIRE

AN ECONOMIC ANALYSIS OF GOLDSMITHS IN THOOTHUKUDI AREA

1. Name of the respondent :
2. Address :
3. Sex :
4. Age :
5. Level of education :
6. Community :
7. Religion :
8. Size of family :
9. Marital status :
10. Family Type :
11. Housing Type :
12. Earning members per family of the households :
13. Occupational background :
15. Material possession :
16. Monthly personal income :
17. Family income of the households :
18. Monthly family expenditure of the households :
19. Monthly savings of the households :
20. Material possession among the respondents :
21. Types of shops :
- 22 How long has the shop is existing :

- 23 Number of employees working :
- 24. Capital invested :
- 25. Method of Procuring Jewellery :
- 26. Facing problems from administration :
- 27. Any help from Government? :
- 28. Any Suggestions :

A STUDY OF PROBLEMS AND PROSPECTS OF DRY FISH VENDORS IN THERESPURAM AREA OF THOOTHUKUDI DISTRICT

Project report submitted to the

DEPARTMENT OF ECONOMICS

ST.MARY'S COLLEGE (Autonomous), THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Tirunelveli

In partial fulfillment of the requirement for the award of the degree of

Bachelor of Arts in Economics

By

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CERTIFICATE

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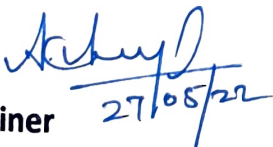


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CHAPTER I

1.1 INTRODUCTION

The fishery is a composite material goods resource. The fishery is apprehensive with economic utilisation of marine production. It is a natural resource which is possessed in shared, and there is a complete absence of exclusive property rights. The primary sources of supply are the coastal limits of the seas, river-estuaries, back-waters for sea and estuarine fish, waterways for irrigation and other animals, ponds, flooded tracts, etc., for fresh-water fish¹.

Fishing has developed universally throughout the world through centuries until today². India, with a long maritime history of exploitation of living resources from the sea, occupies the third position in the world for the total annual catch of fish³. Fisheries were necessarily the source of livelihood for different sections of fish workers⁴.

1.2 ECONOMIC IMPORTANCE OF FISHERIES SECTOR

The total fisher folk population of the nation is 3.52 million, having 0.72 million energetic fishermen⁵. Millions of fishers and several industries depend

¹ Gopalakumar, K., Fishery Technological Research and Extension the Central Institute of Fisheries Technology, Indian Farming, Vol.47, 1997, p.16.

² Srivastava, U.K. Indepth Case Studies of Tuna Fishing Companies in India, Centre for Management in Agriculture Indian Institute of management, Ahmedabad, 1989. P . p.84.

³ Kalita, K., and Bhagabati, S.K., Fisheries Education in the State of Assam, Fishing Chimes, 26(10): 2007, pp.108-110.

⁴ P. Ibrahim, Fisheries Development in India, Classical Publication, New Delhi, 1992, pp. 15-44.

⁵ CMFRI 2011. Annual Report 2010-11. Central Marine Fisheries Research Institute, Cochin, 163 pp.

on this source⁶. Out of the 5.4 million energetic fishers in India, 3.8 million (70.37%) are fishers, and 1.6 million (29.63%) are fisherwomen⁷. Many populaces, more those in developing countries than developed ones depend on fish as part of their daily diet⁸. Cheap fish protein is obtained through labour-intensive (small vessels or boats with a large crew)⁹.

The fishery sector is the only sector which offers cheap and good animal protein to people, mainly to the economically pathetic sections of society and thereby it is in an advantageous position to ensure national food security¹⁰. Fish is known for its high quality readily digested animal protein¹¹. Adequate food consumption is a necessary pre-requisite to resist communicable diseases¹².

The fishery sector is essential to Indian economy as it employs 95 lakhs fishers, an average annual per capita supply of 3.5kg of animal protein food, and about 4 per cent of the nation's total export earnings¹³. The fishery sector has registered an impressive growth rate of over 6 per cent in the last decade¹⁴.

⁶ FAO Fisheries Department, Circular No.920 FIRM, C920, pp.17-21.

⁷ Narayanakumar, R., Ravichand, Y., and Suryaprakasa Rao, V., Fisherwomen's Knowledge, Aptitude and Practice (KAP) – Alternate Income Generating Activities: A Case Study in A.P, Fishing Chimes, 25(4):2005, pp.43-44.

⁸ FAO, opcit, p.82.

⁹ Frederic, W. Belt, Food from the Sea; The Economics and politics of Ocean Fisheries, West views Press, Boulder, Colorado, 1978, P. 176.

¹⁰ Srivastava. U.K. Fishery Sectors of India, Oxford and IBH publishing company private Ltd., New Delhi, 1991. p.1.

¹¹ George Kent (1987): Fish and Nutrition in India, Food Policy, Vol 12, No. 2, pp 161-171.

¹² Zurbrigg, Sheila (1984): Rakku's Story: Structures of health and the Sources of Change, Centre for Social Change. Bangalore.

¹³ Mahesh and Joshi, Economics of Fisheries, APH.Publishing Corporation, Dharaganj, New Delhi, 1996, p.44.

The annual average growth rate of the fisheries sector from 1984-1985 to 1995-1996 is 5.4 per cent¹⁵. The contribution of fisheries (both marine and inland) to India's Gross Domestic Product (GDP), increased from 0.7% in 1980-81 to 1.07% in 2003-04¹⁶.

In 2002-03, marine product exports increased to an all-time high in volume as value, with actual export of 4,67,297 metric tons valued at Rs. 68,810 million or US\$ 1.43 billion¹⁷. India and South-East Asia accounted only for 11% of the total global consumption¹⁸. India stands third in the world regarding productions of fish, after China with a production of 9.01 mn tones in 2015¹⁹.

1.3 MARINE FISH PRODUCTION IN THE WORLD

Fish and fishery foods are among the most traded food merchandises worldwide. Capture fisheries and aquaculture provided the world with about 148 million tonnes of fish in 2010 valued at the US \$ 217.5 billion²⁰. Fish are a vital source in countries like Japan, Norway, Sweden, Iceland and Germany²¹.

¹⁴ Marine Products Export Review, MPEDA, Ministry of Commerce Government of India, Cochin, Annual Reports 1990 - 2000.

¹⁵ Market Survey, Fish - A Source of Cheap and Nutritious Food", Facts for You, Vol.28, 1997, p.47.

¹⁶ Government of India (2005): Op Cit p 146.

¹⁷ Kulkarni Parashar (2005): The Marine Seafood Export Supply Chain in India, International Institute for Sustainable Development, Manitoba, Canada p4.

¹⁸ Ibid.,

¹⁹ Fishstat, FAO, 2015.

²⁰ www.fao.org/news/story/en/item/150839/icode/dt.13.9.13.

²¹ Sivakami, S. and Somy Kuriakose 2009. "An appraisal of the marine fisheries of Orissa India". Asian Fisheries Science., 22 (2): 691-705.

The projected fishery resources, both inland and marine are accomplished of yielding 10 million tonnes of fish per year²².

An analysis shows that eight developing countries, Bangladesh, India, Indonesia, Malaysia, the Philippines, Thailand, Sri Lanka and Vietnam account for 60% of marine capture fisheries (23 million tonnes of fish)²³. The European Union remains the primary export market, now accounting for 35 per cent of the total value²⁴. The US emerged as the largest market for Indian marine products and Japan as the second²⁵. Japan is the top importer of marine foods from India²⁶.

While developed countries still have the highest fish consumption rate, emerging economies like China has got an increasing fish consumption trend accounting for 36 per cent of global consumption in 1997²⁷. Total world fish production increased from 19.3 million tonnes in 1950 to more than 100 million tonnes in 1989 and 134 million tonnes in 2002²⁸.

Table 1.1 shows the precise condition of marine fish production of inland and marine capture in the World from 2005 to 2015.

²² National Income Statistics, 2009.

²³ Stobutzki I.C. et al. (2006): 'Key Issues in Coastal Fisheries in South and South East Asia, outcomes of a regional initiative', Fisheries Research, 78, pp I09- I18.

²⁴ The Hindu 2008.

²⁵ Ibid, p5.

²⁶ Rama Prasad, M.V., Facts for You, Vol.18, 1998, p.16.

²⁷ International Food Policy Research Institute and World Fish (2003): The Future of Fish-Issues and Trends to 2020 Washington, p2.

²⁸ FAO (2005): Review of the State of World Marine Fishery Resources. FAO Fisheries Technical Paper 457, p2, FAO, Rome.

TABLE 1.1
WORLD MARINE FISH PRODUCTION

Year	Inland capture (in Million Tonnes)	Marine capture (in Million Tonnes)	Total
2005	9.4	83	92.4
2006	9.8	80.4	90.2
2007	10	80.7	90.7
2008	10.2	79.9	90.1
2009	10.4	79.7	90.1
2010	11.2	77.8	89
2011	11	82.5	93.5
2012	11.6	79.7	91.3
2013	11.7	80.9	92.6
2014	11.8	81.5	93.3
2015	11.9	81.4	93.3

Source: Various Fisheries and Aquaculture statistics reports, FAO.

Comparative total fish production in inland capture and marine capture of World is presented in Table 1.1. In marine capture, the total fish production was 83 million tonnes in 2005 and from which it decreased to 81.4 million tonnes in 2015. The declining trend in marine fish production is due to monsoon conditions. However, in 2005 the marine fish production reached a peak level of 83 million tonnes. On the other hand, the inland capture fish production for the World showed an increasing trend for 9.4 million tonnes in 2005 to 11.9 million tonnes in 2015.

1.4 CONTRIBUTION TO INDIAN ECONOMY

The Fisheries Development Mission aims at increasing the production of inland fish through innovative measures by adopting scientific methods such as fisheries development in reservoirs, tanks and ponds, besides attending to the socio-economic welfare of the artisan and small-scale fisher-folk in the State²⁹.

²⁹ Government of Tamil Nadu, Policy Note on Fishery-2004-05.

Around 3.70 lakh metric tonnes of fish are trapped in Coramandal Coast, Palk Bay, Gulf of Mannar Coast throughout the year³⁰. In the world coastal line, India has only 0.17 per cent³¹.

India has a coastline of about 8118 kilometres, with an Exclusive Economic Zone (EEZ) of 2.02 million square kilometres, comprising 0.86 million square kilometres to the west coast, 0.56 million square kilometres on the east coast, 0.60 million square kilometres around the Andaman and Nicobar Islands³².

The marine fishery resources include of 1.9 lakh sq.km of Exclusive Economic Zone (EEZ) and a mainland shelf of about 41,412sq.kms³³. The islands of Gulf of Mannar are classified into four major groups; they are Mandapam, Keezhakkarai, Vembar and Tuticorin group³⁴.

India is the third-largest producer of fish, preceded by China and Peru. India is the second-largest producer of freshwater fish preceded by China, seventh-largest producer of capture fish in the world and harbour a large percentage of the world's fishermen³⁵. In 1998 India was the 20th largest

³⁰ www.sipcot.com

³¹ Food and Agriculture Organization (FAO) fisheries – the state of world fisheries and aquaculture, 2008, p-11.

³² <http://www.un.org/depts>

³³ Balaji, S. 2000. “Environmental issues in coastal zone management of Tamil Nadu, (India)”, Management of problems in coastal area ocean engineering center. 105--113 p.

³⁴ Patterson, J.K., 2005. “Rapid assessment of status of corals in the Gulf of Mannar after Tsunami assessment report”, SDMRI, Tuticorin.

³⁵ Bavinck, M.R., Chuenpagdee, H. Diallo, Heijden Prander, J.Kooiman, R. Mohan and S.Williams, 2008, “Fishery Governance A guide to better practice”, Delft. Eborn Academic Publishers.

exporter of fish and fish products³⁶. India's total fishery production is about 8.88 million tonnes from both capture and aquaculture³⁷. The actual annual average of marine fish production in India is 1.73 million tonnes³⁸.

Table 1.2 shows the total contribution of the fisheries sector production in India from 2005 to 2015.

TABLE 1.2
FISH PRODUCTION IN INDIA

Year	Marine (in Million Tonnes)	Inland (in Million Tonnes)	Total
2005	2.9	3.7	6.7
2006	3.2	3.9	7.0
2007	3.1	3.9	6.9
2008	3.4	4.6	7.9
2009	3.3	4.6	7.8
2010	3.1	4.9	7.9
2011	3.8	4.9	8.2
2012	3.9	5.6	8.9
2013	3.8	5.2	9.0
2014	3.6	6.1	9.6
2015	3.4	6.5	10.0

Source: Fisheries Statistics, 2012, FAO Handbook on Fisheries Statistics, 2016, GoI, 2012, and CMFRI, various annual reports.

Comparative total fish production of inland and marine capture in India is presented in Table 1.2. In India, the total marine fish production was 6.7 million tonnes in 2005 and from which it increased to 10 million tonnes in 2015. The

³⁶ Trollvik Trine (2002): The Impact of World Trade Organisation Agreements on Fish Trade, FAO Fisheries Circular No. 977, FAO, Rome p 13.

³⁷FAO, The State of Food and Agriculture, FAO Agricultural Series, NO.37, FAO, Rome (2006), 183 pp. MPEDA, Seafood export earning ascend to a new record in 2012-13, MPEDA Newsletter, (2013), 1 (4):5-9.

³⁸ Srivastava, U.K. and Dholakia B.F-1, Fishery Sector of India, Oxford ai IBH publishing company private Ltd. New Delhi,. 1991, p 320.

declining trend the marine fish production in the years 2007 and 2009 is due to monsoon conditions.

However, in 2015 the marine fish production reached a peak level of 10 million tonnes. On the other hand, the marine capture fish production showed an increasing trend for 2.9 million tonnes in 2005 to 3.4 million tonnes in 2015, and the inland capture fish production showed an increasing trend for 3.7 million tonnes in 2005 to 6.5 million tonnes in 2015.

CRAFT-WISE MARINE FISH PRODUCTION IN INDIA

Table 1.3 reveals that the fishing crafts functioning in the coastal state and union territories in India for the year 2009-2010.

TABLE.1.3

CRAFT-WISE MARINE FISH PRODUCTION IN INDIA (in tonnes)

Sl. No.	State / Union Territory	Non-Mechanised	Motorised crafts	Mechanised boats	Total
1	Andhra Pradesh	53,853	4,164	8,642	66,659
2	Goa	1,094	1,100	1,092	3,286
3	Gujarat	9,222	5,391	11,372	25,985
4	Karnataka	19,292	3,452	2,866	25,610
5	Kerala	28,456	17,352	4,206	50,014
6	Maharashtra	10,256	286	8,899	19,441
7	Orissa	10,993	26,490	1,276	38,759
8	Tamil Nadu	33,945	8,592	9,896	52,433
9	West Bengal	4,650	270	3,362	8,282
10	Andaman and	1,180	160	230	1,570
11	Daman and Du	252	350	805	1,407
12	Lakshadweep	894	306	478	1,678
13	Pondicherry	7,297	505	560	8,362
	Total	181,234	44,578	53,684	279,496

Source: Handbook on Fisheries Statistics, 2010

Table 1.3 portrays the craft-wise marine fish production in India for the year 2009-2010. The total marine fish production during the year is 279,496 tonnes. Among the states of India, Andhra Pradesh occupied the first place in marine fish production with 66,659 tonnes.

Tamil Nadu occupied second place in marine fish production with 52,433 tonnes. In mechanised also, Gujarat marked a high level of 11,372 tonnes followed by Tamil Nadu with 9,896 tonnes. In Tamil Nadu and Andhra Pradesh, non-mechanised fish production was more than mechanised and other types of crafts.

1.5 EXPORTS OF A VARIETY OF MARINE PRODUCTS IN INDIA

The booming market of India's seafood tolerates and support the entire fisheries sector of the annual 25,000 crore Indian Fisheries segment of which 7000 crores is exported. It is the value realised from exports that give our fishing communities a supportable stable income.

The variety of marine products exports from India is shown in table 1.4.

TABLE 1.4
EXPORTS OF VARIETY OF MARINE PRODUCTS IN INDIA

Item	Quantity/ Value	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Fr. Shrimp	Quantity in ton	11874	127709	134815	129768	138085	145180	137397	136223	126039	130553	151465	189125	228620	301435	357505	373866	434486	565980
	Value in Crore	4481.5	4139.9	4608.3	4013.1	4220.7	4271.51	4506.08	3941.62	3779.8	4182.4	5718.13	8175.26	9706.36	19368.3	22468.1	20045.5	24711.3	30868.17
	US \$ Million	985	871.03	953.44	876.64	938.41	970.43	997.64	980.62	839.28	883.03	1261.81	1741.2	1803.26	3210.94	3709.76	3096.68	3726.38	4848.19
Fr. Fish	Quantity in ton	212903	174976	196322	138023	159689	182344	270751	220200	238544	260979	312358	347118	343876	324359	309434	228749	296762	353192
	Value in Cro	874.68	713.11	841.65	620.73	759.27	998.7	1452.88	1303.41	1722.34	2032.3	2623.89	3284.15	3296.86	4294.81	3778.5	3462.25	4460.9	4674.03

	re																		
	US \$ Million	192.25	150.04	174.63	135.82	168.69	225.94	321.95	326.29	375.24	430.94	583.48	683.5	617.59	708.63	619.66	529.85	672.47	733.17
Fr.Cuttle fish	Quantity in ton	33677	30568	41381	39610	44239	49651	55701	45955	50750	63504	59159	54671	63296	68577	82353	65596	63320	69183
	Value in Crore	288.99	280.07	417.09	435.17	474.01	549.15	797.37	744.13	761.05	923.83	1104.57	1346.72	1354.28	1386.98	1833.21	1636.11	1944.5	2356.46
	US \$ Million	63.52	58.93	86.37	94.91	104.89	124.48	175.75	185.66	168.27	195.69	244.62	282.72	251.54	228.13	300.69	250.31	292.73	369.88
Fr. Squid	Quantity in ton	37628	39790	37838	37832	48124	52352	47252	34172	57125	61445	87579	77373	75387	87437	69569	81769	99348	100845
	Value in Crore	324.43	329.67	384.37	372.92	477.26	575.52	568.32	408.42	632.35	622.63	1010.57	1228.19	1378.08	1731.97	1275.25	1615.21	2575.29	2451.87
	US \$ Million	71.31	69.36	79.83	81	106.63	130.49	126.25	101.29	142.87	132.24	223.67	262.72	256.9	284.6	209.84	247.53	388.64	385.01
Dried items	Quantity in ton	7532	8307	8178	12574	9692	14167	24293	22414	31688	47053	79059	53721	72953	67901	70544	43320	61071	88997
	Value in Crore	70.22	67.96	84.23	145.68	121.01	132.56	183.16	258.88	420.75	981.11	954.94	562.65	819.9	998	1010.16	725.58	871.74	1042.37
	US \$ Million	15.43	14.3	17.46	31.69	27.09	30.03	40.75	64.72	92.51	208.72	212.22	117.66	152.81	167.89	165.52	111.57	199.77	163.53
Live items	Quantity in ton	1844	1628	2115	2341	2262	2568	2478	2498	3434	5492	5208	4199	4373	5080	5488	5493	6703	7034
	Value in Crore	39.88	40.57	53.66	51.1	50.75	61.71	64.06	69.07	99	139.14	142.15	154.61	197.89	281.85	301.51	308.81	403.75	286.11
	US \$ Million	8.77	8.54	11.12	11.15	11.31	13.99	14.22	17.21	21.82	29.52	31.46	32.46	36.82	46.7	49.62	47.77	61.05	45.41
Chilled items	Quantity in ton	3820	3284	3350	3779	3988	5060	7200	6541	21453	28817	21118	21278	26868	19755	31404	33150	31815	19501
	Value in Crore	71.63	63.66	59.14	64.03	68.14	81.56	117.3	118.11	217.34	264.49	257.54	357.42	537.11	527.84	635.93	809.5	769.81	647.41

	US \$ Million	15.7 4	13.3 9	12.2 7	14	15.1 6	18.4	26.63	29.62	48.39	55.87	56.93	74.03	99.87	88.48	104.71	124.51	116.02	101.78
Others	Quantity in ton	31195	38209	43299	48090	55250	60841	67571	73698	73801	80592	97145	114538	112841	109212	124947	113949	141442	172512
	Value in Crore	292.54	322.09	432.88	389.23	475.58	574.58	674.35	777.29	975.33	902.64	1089.67	1488.24	1565.78	1623.5	2138.94	1817.87	2133.59	2780.48
	US \$ Million	64.3	67.77	89.79	85.54	106.29	130.46	149.72	193.68	220.24	196.84	242.72	314.16	292.86	272.34	351.31	279.71	320.54	434.58
Total	Quantity in ton	440473	424470	467297	412017	461329	512164	612641	541701	602835	678436	813091	862021	928215	983756	1051243	945892	1134948	1377244
	Value in Crore	6443.9	5957.1	6881.3	6092	6646.7	7245.3	8363.53	7620.92	8607.94	1004.9	12901.5	16597.2	18856.3	30213.3	33441.6	30420.8	37870.9	45106.89
	US \$ Million	1416.3	1253.4	1424.9	1330.8	1478.5	1644.21	1852.93	1899.09	1908.63	2132.8	2856.92	3508.45	3511.67	5007.7	5511.12	4687.94	5777.61	7081.55

Source: www.mpeda.gov.in, 2018

It is seen from the Table 1.4 that, Frozen Shrimp, Frozen fish, Frozen Cuttlefish, Frozen Squid, Frozen Squid, Dried Item, Live Items, Chilled Items formed the major export items of fish to India during the year 2000-01 to 2017-18.

1.6 FISHERY SECTOR IN TAMIL NADU

Tamil Nadu is endowed with a long coastal length extending from Chennai to Kanyakumari, with 359 landing centres located on the coastline of eight marine districts alleged with several fish landing centre³⁹. Tamil Nadu has the third-longest coastline among the maritime states of India⁴⁰. Tamil

³⁹ Perumalsamy, Economic Development of Tamil Nadu, S.Chand and Co.Ltd., New Delhi, 1996, p.102.

⁴⁰ Madras Institute of Development Studies, Tamil Nadu Economy – Performance and Issues, Madras 1988, p.162.

Nadu is situated in the south-eastern coast of the Indian peninsula with a coastal line of 1076 km (13 % of the country's coastline)⁴¹.

Tamil Nadu enjoys marine fishery resources from a continental shelf area of 41,412 sq-km out of India's total of 5,39,000 sq-km of varying depths⁴². However, the Eastern Indian Ocean and the Western Indian Ocean have their fish potential up to the year 2037 and 2051, respectively⁴³.

In marine fishing one of the distinctive aspects of Tamil Nadu is that the total catch consists of a much broader spread of species⁴⁴. Some famous pelagic varieties available in Tamil Nadu are oil sardines, seerfish, tunnies, mugil, caranx, ribbonfish and anchovies. The demersal varieties are pomfrets, perches, red mullets, catfishes, eels sharks, rays, prawn, lobsters and crabs⁴⁵.

The lower Tamil Nadu Coast, especially the coastline of the districts of Tuticorin, Tirunelveli, Kanyakumari and Ramnad is essential for the production of fishes with high unit value, and this part of the coastline contributes to around 60 per cent of the total catches from the state with export value⁴⁶.

The primary objective of pooling the resources of individual fish farmers under one roof the Fish Farmers Development Agencies were established in

⁴¹ Tamil Nadu State Fisheries Department (TNFD) (2016). „Marine Fisheries Development“, Pp. 1. Retrieved Janu-ary 9, 2017 from <http://www.fisheries.tn.gov.in/marine-main.html>

⁴² A.G.Leonard S.J. Tamil Nadu Economy, Macmillar India Ltd., New Delhi,2006. p.166.

⁴³ FAO Fisheries Department, Circular No.920 FIRM, C920.

⁴⁴ Government of India, Ministry of Information and Broad Casting, India 2000 – A Reference Annual, Publications Division, New Delhi, p.415.

⁴⁵ Department of Fisheries, Government of Tamil Nadu, Endeavour and Achievements, 2002-2003, Chennai, p.39.

⁴⁶ Endeavour and Achievement, Fisheries Statistics, Directorate of Tan Nadu State Fisheries, Government of Tamil Nadu, Madras, 1997.

1976-77, organised at the district level. Thirteen such Agencies were functioning in 1991-92⁴⁷.

The production and export performance of marine fish and fish products in Tamil Nadu during the year 2000-01 and 2017-18 is portrayed in table.1.5.

TABLE.1.5

EXPORT OF MARINE FISH AND FISH PRODUCTS IN TAMIL NADU

S No.	Year	Production (in Tonnes)	Quantity (in Tonnes)	Value (in Lakhs)
1	2000-2001	372402	53005	192264.00
2	2001-2002	373861	58482	201640.00
3	2002-2003	379214	70147	250787.00
4	2003-2004	381148	68462	207116.00
5	2004-2005	307693	70809	206804.00
6	2005-2006	389713.07	72418	199572.00
7	2006-2007	392191.32	72883	206805.00
8	2007-2008	393266.22	72644	181314.00
9	2008-2009	392117.22	68397	177220.00
10	2009-2010	401128.00	73327	198207.47
11	2010-2011	424823.85	76181	286019.00
12	2011-2012	426735.44	76538	298461.25
13	2012-2013	429641.24	79507	314675.04
14	2013-2014	453979.00	81094	364287.49
15	2014-2015	460029.8	83647	395704.57
16	2015-2016	466604.032	85063	418400.06
17	2016-2017	472004.34	79336	391400.39
18	2017-2018	497836.00	114337	540769.08
	CGR	1.72%	4.63%	6.27%
	Average	411910.42	75348.72	279524.79
	SD	46269.39	12613.81	104547.28

Source: Tamil Nadu State Fisheries Department (TNFD), various issues.

Table 1.5 presents the production and export trend of fish and fish

⁴⁷ S.Perumalsamy ,Economic Development of Tamil Nadu, S.Chand and Co.Ltd., New Delhi, 1996, p.104.

products in Tamil Nadu. The growth of fish production is 372402 tonnes during the year 2000-01. Tamil Nadu has recorded the utmost amount of growth in the marine fish production, during the year 2017-18. The growth of fish production is 497836 tonnes during the same year. During the years 2004-05 and 2008-09, the growth of fish production was negative.

Export of fish and fish products augmented from 53005 tonnes during the year 2000- 01 to 114337 tonnes during the year 2017-18. In value terms, the export of fish and fish products has increased from 192264 lakhs to 540769.08 lakhs during the same period. The export of marine products does not show an increasing trend, but it serves as an excellent foreign exchange earner when compared to the other agricultural products.

The Compound Growth Rate for the growth of fish production during the year 2000-01 and 2017-18 of Tamilnadu was 1.72. Average and Standard Deviation values were 411910.42 and 46269.39, respectively in that particular period. The Compound Growth Rate for the export quantity of fish during the year 2000-01 and 2017-18 of Tamilnadu was 4.63%. Average and Standard Deviation values were 75348.72 and 12613.81, respectively in that particular period.

The Compound Growth Rate for an export value of fish during the year 2000-01 and 2017-18 of Tamilnadu was 6.27%. Average and Standard Deviation values were 279524.79 and 104547.28, respectively in that particular period. It reveals that there is positive and stable growth of production and export performance of marine fish and fish products in Tamil Nadu during the year 2000-01 and 2017-18.

1.7 CRAFT WISE MARINE FISH PRODUCTION BY DISTRICTS OF TAMIL NADU

Table 1.6 portrays the craft-wise marine fish production in Tamil Nadu for the year 2010-2011.

TABLE 1.6
CRAFT WISE MARINE FISH PRODUCTION BY DISTRICTS OF
TAMIL NADU (Quantity in Tonnes)

Sl. No.	District	Mechanised	Motorised	Non-Motorised	Shore seine	Total
1	Chennai	21564.071	7573.137	5145.902	0.000	34283.110
2	Thiruvallur	0.000	5786.298	3857.532	0.000	9643.830
3	Kancheepuram	354.478	9281.083	6187.388	0.000	15822.949
4	Villupuram	561.257	11613.678	7742.452	539.633	20457.020
5	Cuddalore	16059.458	5333.355	3358.900	780.017	25531.730
6	Nagapattinam	44277.272	15549.840	10566.007	0.000	70393.120
7	Thanjavur	8283.660	2909.158	1976.752	0.000	13169.570
8	Pudukkottai	27523.046	9665.884	6567.900	0.000	43756.830
9	Ramanathapuram	54378.409	18872.507	12864.081	337.163	86452.160
10	Thoothukudi	33454.950	11749.123	7983.447	0.000	53187.520
11	Tirunelveli	0.000	5760.468	3840.312	0.000	9600.780
12	Kanyakumari	26748.376	9393.826	6383.039	0.000	42525.240
13	Total	233204.977	113488.356	76476.713	1656.813	424823.850

Source: Government of Tamil Nadu, Department of Economics and Statistics, Statistical Hand Book of Tamil Nadu, 2012. p.132.

From Table 1.6, it is understood that the total marine fish production during the year is 424823.850 tonnes. Among the districts of Tamil Nadu, Ramanathapuram District occupied the first place in marine fish production with 86452.160 tonnes followed by Nagapattinam and Tuticorin district during the year 2010-2011.

In mechanised and non-mechanised also, Ramanathapuram District

marked a high level of 54378.409 tonnes and 12864.081 tonnes. Tirunelveli district has recorded the lowest fish production. In Tamil Nadu, mechanised fish production was more than non-mechanised and other types of crafts. The southern districts of Tamilnadu, Rarnanathapuram, Tirunelveli, Thoothukudi and Kanyakumari together contributed 64.2 per cent of the total catch⁴⁸.

1.8 TYPES OF FISH VENDORS

Fish vendors can be broadly classified under the following categories:

1. Stationary Vendors who vend on regular basis at Specific Locations

Many vendors sell in designated wholesale or retail markets. They often transport the fish from the landing centre to these markets in trucks or mini-vans, which they hire. Some buy from wholesale markets and sell at retail markets, while some others are wholesale suppliers themselves.

Vendors may also procure fish from the landing sites for sale at roadside markets ('natural markets'), where they have been traditionally congregating and vending fish for years. Many fish vendors sell fish at the landing sites themselves at harbours and beaches. There is thus a considerable variation in the scale of operations of stationary vendors – ranging from petty sellers who barter fish in exchange for edible items such as sweet corn, sweets and fruits (or vice versa), to those who are large wholesales.

2. Peripatetic vendors who walk from place to place to Sell their Fish

These are usually women fish vendors who purchase fish directly at auctions that take place at the village / wholesale markets/landing centres, and sell fish door-to door, travelling on foot, and carrying their fish in bamboo baskets or aluminium vessels. They are the major source of fish

⁴⁸ R. Jeyaraman, "Tamil Nadu Newsletters", Fishing Chimes, April, 1998 P. 90.

supply to consumers within, and close to coastal areas.

3. Mobile Vendors who move around on Bicycles or Motorized vehicles

This type of fish vending, which is very common in other States such as Orissa, primarily involves men. These vendors arrive at the landing centres from different villages and purchase fish at auctions at the village/wholesale markets/landing centres, for sale back in their villages. They also sell fish door-to door.

Apart from this, many fish vendors use other means to sell their fish. In Goa, for example, where tourism is the backbone of the local economy, vendors have arrangements with hotels and restaurants to sell fish to them directly. This ensures daily sales and an assured income.

1.9 PRE-HARVESTING ACTIVITY

Net Making / Mending

Net making is a male dominant industry. It is a leisure time activity. Fishermen engage themselves in hand braiding of fishing nets. Normally a period of one month is required to complete the job. But the situation has become different now. The manufacture of nets is no longer an important cottage industry that it was until 5-10 years ago when nylon yarn and net making machines were introduced in Tamil Nadu.

However, some people still make their own nets. A few men also make nets for other families who supply them with yarn, which is easily available in the market. Mending of nets is almost exclusively is carried by men and boys. Men very rarely assist in this activity because it is carried out immediately after the men return from fishing. At this time, men may be engaged in cooking or with marketing of fish.

Harvesting Activity

In fisheries sector, division of labour is gender specific. Generally, men are engaged in production and men in distribution. Since, the primary and exclusive responsibility of fishermen is marketing, it does not mean that fishermen are not involved in production. Fishing in the canals, shallow water and impounded water areas for prawns and fish are the important activities of men in harvesting. They also help the menfolk in cast netting and shore seine operations.

Post-Harvesting Activities

The entire post- harvesting activities of sorting, grading, on the spot auctioning, gutting and salting, drying, carrying fresh fish/ dried fish to the market etc., are the exclusive responsibilities of the fishermen. Post harvesting activities are generally divided into two namely (i) Processing (ii) Marketing.

Processing

There are three different forms of fish processing namely; drying, freezing and canning. Road connections and transportation facilities at the landing centres are comparatively better now and hence fish in fresh condition is sent not only to nearby places but also to far off places. Rest of the catch is utilised for curing either for human consumption or for the preparation of fishmeal, manure etc.

The chief methods of curing fish followed in India are (i) sun-dried without salt (ii) dry salted and (iii) wet salted. Similarly for prawns also there are two methods of processing viz., (a) simple sun drying and (b) cooking and drying.

Fish curing is typically men's activity and it is done in the same old way as was done decades ago. For sun drying, the fish is spread out simply on the sand or on bamboo or coir mats. The drying place – either a small yard or road-side is close to the house of the fishermen.

Quick freezing of shrimp was started in early fifties in India. Since then, many freezing plants have developed. Besides shrimps, lobsters, cuttlefish, squids are also included in the production line. Similarly canning plants are engaged in canning of marine products. The entire freezing and canning industry are virtually dependent on the men force. They are involved in peeling of prawns

and others, washing, cleaning the raw material for the freezing plants, icing, freezing and packing.

Marketing of Fish

In earlier days, men fish traders were of two types namely, those handling the catches of their husband only and those buying and selling fish just like any other trader in the market. But now-a-days the business has become far more changed. Fishermen obtain their merchandise through auctioning or group purchase.

When the fisherman sells to an outside dealer, payment will be made immediately though he is paid only ex-beach price. But when it is sold through his wife, he will have to wait for the evening for the money though it may bring a higher price.

Marine fish marketing in Tamil Nadu is multi-dimensional involving lot of concentration and dispersion activities interlinked with distribution channels, which play a vital role in the context of anticipated demand and uncertain supply of fish. Four types of market generally exist both in producing and consuming centres.

They are fresh fish wholesale, fresh fish retail, dry fish wholesale and dry fish retail. Every fish-landing centre is a market by itself and fish marketing is carried by a group of agents, retailers, vendors, wholesalers, transporters etc. Marketing and procurement channels vary considerably depending upon the product, form of product and landing centres.

Marketing in Urban Landing Centres

There are several types of fish marketing men in a large landing centre like Madras fish harbour.

Auction Men

Auctioning is a highly profitable business and many fishermen involved in auctioning during peak hours are the highest earners. Majority of the auctioning men give loans to boat owners to get the auctioning rights. They do not go for

selling the fish. Income and profit are high in big landing centres because of the volume of transactions.

Fish Retailers

Fishermen are mostly retailers. They depend mainly on the catch of the mechanised boats but in some areas, they buy fish from traditional crafts also.

Trash Fish Merchants

Many trawlers operating at the Chennai harbour catches large quantities of trash fish. Many men make a living as trash fish vendors. Unsold fish is dried and sold.

Fish Wholesalers

A few men acting as wholesalers; supply fish to hotels, restaurants, small markets and distant areas operate with a small level of investment.

Export Marketing

In the export sector, which is in the hands of men, a few enterprising men, have been able to make their way into the market and tap its opportunities. Their mode of operation varies. Some are actively engaged in large scale, some act as sub dealers, some other men buy and sell squids, crabs, prawns etc.

1.10 PROBLEMS FACED BY FISH VENDORS

The nature of the product handled by fish vendors causes a certain stigma that fishermen themselves do not generally face. Unlike men, whose labour is largely confined to the sea, river or lake, fish vendors have to travel with their product to market places. They have to interact with the public and the law. In the process, they are often forced to deal with inbred prejudices and problems of various kinds. The following are some of the key problems they face:

a. Distance and lack of basic Facilities at Harbours and Landing Centres

With greater mechanization and motorization, harbours and fish landing centres have become more centralized. vendors thus have to travel long distance to access fish. This may even mean staying overnight at harbours and landing

centres, in order to be present for the early morning fish landing and auctions. Transportation to landing sites/harbours is sometimes unreliable, and basic facilities (toilets, storage, lights, waiting areas, night shelters) are absent. Under these circumstances, often find themselves vulnerable to sexual abuse and harassment.

b. Poor access to Credit, Exorbitant Interest Rates

Technology-induced changes to the nature of fishing operations have also meant larger catches. Women, with poor access to credit and capital, are rarely able to compete with large-scale trader commissioners and export agents. To be able to access fish even in small quantities, they have to procure credit from middlemen and moneylenders, often at exorbitant rates of interest.

c. Lack of Public Transport to Markets

While a few sell the fish at the landing centre or harbour itself, for the rest, the next major challenge after procurement is to transport the fish to the market place. As the distance involved may be considerable, need to use some form of transport. In many situations, vendors are usually denied access to public transport, given the nature of the product they are dealing with. This means hiring autorickshaws, or other forms of transport, which is a significant expense in itself. Male fish vendors, with access to their own transport, are at a comparative advantage.

d. Lack of Ice and Proper Storage Facilities

Fish is a highly perishable commodity, and if vendors are to prevent spoilage and get a better price, they need to preserve the fish. They need access to ice and iceboxes. During the peak season, when ice is in short supply, it is often monopolized by large traders and intermediaries.

e. Problems at Market Place

At the market too, vendors face other kinds of problems. Fish vending spaces are either not recognized or just do not exist. Vendors are often harassed into paying ‘informal taxes’ in order to continue vending fish at a particular spot.

With the absence of legitimate vending zones, those vending fish on city pavements and other areas are perceived as encroachers on public spaces. They are constantly harassed and threatened with eviction by the police and civic authorities.

f. Poor Market Infrastructure

Where there are existing markets, basic facilities for storing, processing, and selling fish; clean toilets; access to potable running water; and adequate waste disposal measures are usually not available. Such facilities are essential for the hygienic handling of fish, for the health and wellbeing of vendors, for consumer health, and for enabling to engage in their occupation in a dignified manner. Given the important role and contribution of fish vendors, it is indeed unfortunate that the majority of them continue to struggle with such problems on a daily basis.

1.11 STATEMENT OF THE PROBLEM

Fishing has been a traditional occupation for a large section of the people inhabiting the seacoast all over the world. It is estimated that there are 5.4 million people fully engaged in fisheries activities. Fishermen are actively involved in the economic activities such as making and mending of nets, fish processing, dry fish preparation, marketing of fresh fish, dry fish and fish handling such as sorting, weighting, gutting, icing etc.

A number of socio-economic contrite limit their work productivity and role in employment and income generating activities. They have the potential to play an active and sometimes dominant role in fishing related activities. In Thoothukudi district, one of the important maritime districts of Tamil Nadu, the fish vendors are busily engaged in all the shore-based activities like sorting, weighing, salting, drying, marketing, etc.

However, their economic activities often go unnoticed. Here, there is no scientific and extensive study on the economic activities of fish vendors. Hence,

research is required inevitably to weed out the exploitation of the weaker section with total illiteracy living along the coastal line. It will throw light on their real contribution for economic development. This will also pave the way for proper compensation for their activities through suitable policy measures. The present research aims at studying the dry fish vendors in Thoothukudi district in Tamil Nadu.

1.12 OBJECTIVES OF THE STUDY

The exact objectives of the present study are:

1. To study the socio-economic status of the sample dry fish vendors in the study area.
2. To know the working and living conditions of the dry fish vendors.
3. To understand the tools/equipment/materials utilized in fish drying activity.
4. To examine the reasons for going to dry fish selling in Therespuram Area.
5. To analyse the monthly income, expenditure and saving of the dry fish vendors.
6. To find out the causes for spoilage of dry fish and constraints rendered by the fish curers.
7. To offer suitable suggestions from the findings of the study.

1.13 LIMITATIONS OF THE STUDY

The present study is subjected to the following limitations.

1. Most of the respondents are from coastal rural areas and due to their illiteracy and sensitive nature; it was tough for the researcher to get answers for sensitive questions.
2. The study does not cover the NGO's and Government officials for data collection.

3. There was a bias in answering some questions of schedule on the part of the respondents.
4. Due to the time and budget limitation, the researcher has studied only from dry fish vendors in Therespuram area of Thoothukudi district.
5. The respondents have provided the data from their memory. Hence the data may suffer from recall bias.

1.14 SCHEME OF WORK

The present study on “*A study of Problems and Prospects of Dry Fish Vendors in Therespuram Area of Thoothukudi district*” has been divided into five chapters.

The chapter I is an introductory chapter which discusses the economic importance of fisheries sector, marine fish production in the world, fish production in India, craft-wise marine fish production in India, exports of a variety of marine products in India, fishery sector in Tamilnadu, export of marine fish and fish products in Tamilnadu, craft wise marine fish production by districts of Tamilnadu, statement of the problem, objectives of the study, limitations and scheme of work.

Chapter II elucidates the methodology adopted for the present study, and review of the past work done in this field.

Chapter III discusses the profile of the study area. Further, it examines production and export of marine fisheries in Thoothukudi district.

Chapter IV deals with the socio-economic status of the sample dry fish vendors.

Chapter V presents the summary of findings, suggestions and conclusion and the scope for further research.

CHAPTER II

METHODOLOGY AND REVIEW OF LITERATURE

2.1 METHODOLOGY

Designing a suitable methodology and selection of analytical tools are essential for a meaningful analysis of any research problem. In this segment, an effort is complete to prepare a methodology of the present study. It includes collection of data, period of the study and tools of analysis.

2.1.1 Collection of Data

The study is grounded in both primary and secondary data. It is both descriptive and analytical. The primary data collected from 50 dry fish vendors in Therespuram area of Thoothukudi district by using interview schedules. The data collected from these sample respondents were carefully processed, edited and tabulated for analytical purposes. The primary data comprises socio-economic conditions. The final structure of the interview schedule framed after the pre-test and pilot study.

Secondary data have collected from books, journals, magazines, newspapers, periodicals, reports, internet, unpublished Ph.D thesis, District Collector Office, Department of Fishery of the Government of Tamil Nadu and Policy Note of the Government of Tamil Nadu, Department of Fisheries and Village Administrative Offices unpublished records of District Industries Centre (DIC), Thoothukudi and District Statistics Office, Thoothukudi.

2.1.2 Period of the Study

The field survey has been carried out from February 2022 to April 2022. The data collection pertains to 3 months.

2.1.3 Tools of Analysis

The collected data were analysed by using the statistical tools like percentage, mean, standard deviation and compound growth rate technique.

2.2 REVIEW OF LITERATURE

Babaji (1984)⁴⁹ in a research project had analysed the production, marketing and consumption characteristics of marine fishery sector in Visakhapatnam. He had deliberated the economy of fisheries sector concerning the socio-economic profile of traditional fishers as well as mechanised boat owners. He had also examined the fish consumption pattern of people in Vishakapatnam.

Librero (1985)⁵⁰ investigated the economics of small-scale fisheries notably, total catch, costs and returns, employment and revenue for the different types of crafts and gears in the Philippine Municipal fishing.

Bhavani (1986)⁵¹ points out that very little information is available on the health and nutritional status of small-scale fisherfolk of India's east coast. A few micro-level studies and baseline surveys in Tamil Nadu, Andhra Pradesh and West Bengal give a basic idea. In Andhra Pradesh, for example, it is stated that the dietary habits of fishers' families seem to be far from satisfactory.

Selvaraj (1988),⁵² in his study, has recognised the fishing seasons for important species of fish groups and estimated the economics of different craft categories in the selected coastal fishing villages of Kanyakumari District of Tamilnadu. He formulated suitable strategies for the development of the fisheries sector for the betterment of fisherfolk in the district.

⁴⁹ Babaji, Indian Institute of Management, Marine Fish Marketing in India, Vol.VI, Ahamadabad, 1984, pp.176 -179.

⁵⁰ Librero, Mechanisation: Its Impact on Productivity, Cost structure of Profitability of the Philippine Municipal Fishery, Proceedings of the Small-scale Fisheries in Asia SocioEconomic Analysis and Policy, IDRC, Canada, 1985, pp.151-162.

⁵¹ Bhavani, V., (BOBP/INF/9), Food and Nutrition Status of Small-Scale Fisherfolk in India's East Coast, April, 1986, pp.1-19.

⁵² Selvaraj.P., Status of Marine Fisheries of Kanyakumari District, Fishing Chimes 8(1): 1988, pp.72-79.

Chidambaram et al. (1990)⁵³ had analysed the marine fish supplies and studied the various marketing problems of the fishers. In their analysis, they had originated that the fishers played only a minor' role in the actual distribution of fish. These fishers were at the mercy of the middlemen. The co-operative marketing union had remained dormant. The authors had suggested that fishers should be educated about the benefits of society.

Senthilathiban and Selvaraj (1990)⁵⁴ have conducted a study in Chidambaranar district to estimate the credit requirements, credit availability and repayment performance of the fishermen. Their study reveals that the sufficiently higher positive net worth for the traditional, motorised and mechanised craft categories showed financial soundness of marine fishing.

Murickan (1991)⁵⁵ has analysed the existing power structure and credit system in two marine fishing communities in Kerala. His study reveals that there is inter-village variation in the availability of credit. The access of institutional credit depends crucially on the ownership position of the willing borrower. The study reveals that the boat owners were comparatively in a better position.

Ibrahim (1992)⁵⁶ examined the economic allegations of the rise and growth of capitalism in Kerala fisheries entirely depending on secondary data.

⁵³ Chidambaram, K., and Soundrarajan, A., Marine Fish Marketing in Tiruchendur Area in Tamilnadu, *Fishing Chimes*, 1(12): 1990, pp.43-55.

⁵⁴ Senthilathiban, R and Selvaraj P (1990) "Demand for and supply of marine fisheries finance in Chidambaranar District of Tamil Nadu", *Financing Agriculture*, Oct – Dec, pp. 16-19.

⁵⁵ Murickan, S.C.J (1991) "Power Structure and Credit System in two marine fishing communities in Kerala", *ICSSR Research Abstract Quarterly*, Vol.XX, No.3 & 4, July – December, pp. 161-171.

⁵⁶ Ibrahim, P, (1992), *Fisheries Development in India*, Classical Publishing Company, New Delhi.

This study observed at fisheries development of the state from a dialectical outlook which attributed all the significant problems experienced by the fishery sector such as decreasing fish production, resource depletion, worsening of traditional fishery, battles between traditional fishermen and mechanised boatman, declining per capita availability of fish and skyrocketing fish prices, to the growth of capitalist pattern of fishing.

Narayana Kumar, R (1998)⁵⁷ analysed the socio-economic condition of the marine fishermen and their attitude towards development schemes. The central marine fisheries research institute has been uninterruptedly monitoring the socio-economic conditions of the traditional fishermen and directed several studies along the coastal belt to assess the existing socio-economic status using the parameters such as family size, age structure, educational and professional pattern, customs, opinions and the standard of living of the coastal fishermen family have been analysed. The changes that have been brought about by the mechanisation of the fishing industry in term of income and employment compeers and investment on family equipment have been discussed.

Girija et al. (1998)⁵⁸ stated that in India, the development plans for marine fisheries emphasise improving a lot of marginal fishers. A concerted effort to coordinate fishing would improve the subsidiary activities of fisher's household, by tapping the fishers to process and market a substantial portion of the fish landed and also would go a long way in refining the socio-economic conditions of this sector. The post-harvest technology for handling fish can be

⁵⁷ Narayana Kumar, R 1998, "Socio-economic analysis of Marine Fishermen in India", *Journal of Marine Fishermen Research and Management*, Vol.7, No.3, pp.895-906.

⁵⁸ Nair, M.K.R. Girija, S., *Application of Low-Cost Technologies in Fish Processing and Its Prospects as a Vocation for Fisherwomen of Kerala*, In Hameed, M.S., Kurup, B.M., (Eds.) *Technological Advancement in Fisheries*, Publ. No.1, School of Industrial Fishing, Cochin, 1998, pp.478-484.

easily transferred to these recipients. Infrastructural support by way of cold storages, processing space, transportation network and sales outlets are to be created.

Rajan (2000)⁵⁹ had studied to what extent fishers depended on credit for investment in fishing units and also the association between the magnitude of investment and borrowings. He had analysed the capital structure, debt-equity ratio and solvency ratio. He had also examined the correlation between investment and debt. He had found that the investment in small scale fisheries are heterogeneous, and the loans provided by the organised sector are insufficient.

Sam Benet, P and Arumugam, G (2001)⁶⁰ found that changes have taken place during recent years in the fishing sector by traditional crafts and gear at Tuticorin. This study refers to the changes taken place due to the introduction of mechanisation of traditional fishing crafts. The fishermen are profited by increased catch per unit as well as the increased price for the catch by arriving earlier. Encouraged by the Government, many fishers took mechanisation of craft. However, this has benefited only a few people who could operate large fishing boats while the small and indigenous fishermen were left in the same old state with their traditional methods.

Krishnan, C.K. (2003)⁶¹ has examined the recent trends in the mechanisation of Malabar fishery sector. He has studied the working cost of trawlers fitted with in-board engines using diesel as fuel and outboard engines

⁵⁹ Rajan, J.B (2000), "Credit and Capital Structure of Small-Scale Fishing units in Kerala", *Fishing Chimes*, Vol.7, No.45, pp.9-11.

⁶⁰ Sam Benet P and Arumugam, G (2001) "New Trends in the Traditional Fisheries at Tuticorin", *CMFRI Bulletin*, Vol.58, No.3, pp.155-158.

⁶¹ Krishnan, C.K., (2003), "recent trends in mechanization of Malabar fishery sector - An overview", *Marine Fisheries. Information Service T&E Service.*, No.175.

using kerosene for ring-seiners.

Ganesh Kumar et al., (2008)⁶² this study has been leading in all the major coastal states and some selected inland states to know the domestic marketing of fish in India. The fisherman's share in buyer's rupee has shown differences across species, marketing channels and markets. The infrastructure amenities at most of the surveyed landing centres, fishing harbours and wholesale and retail markets have been found grossly derisory and poorly maintained. The study has emphasised the need for formulating a uniform market policy for fishes for smooth operation and guideline, so that the country's fish production is professionally managed and delivered to the consuming population, confirming at the same time remunerative prices to the fishers.

Jese Verebalavu1 (2009)⁶³ in her paper even yet artisanal fisherwomen have not ever been learned about essential business management, they have educated a lot about it first hand over the years by selling at the markets. They have also grown knowledge about the importance of keeping their resources as clean and hygienic as possible for the market. Revenue generated from artisanal fisherwomen, small business owners, and female employees of the two fishing companies has a multiplier result on their families and communities. The involvement of women in industrial fisheries has a massive impact on individual fishing companies and the nation as a whole. This research has noted that women's participation in fisheries in Fiji, although underreported, is having a significant socio-economic contribution towards their households, community and nation as a whole.

⁶² Ganesh Kumar, B., Dattaa, K.K., Joshia, P.K., Katihab, P.K., Sureshc, R., Ravisankard, T., Ravindranathe, K., and Muktha Menona, Domestic Fish Marketing in India-Changing.

⁶³ Jese Verebalavu1, SPC Women in Fisheries Information Bulletin, Vol 20, November 2009, pp.18-22.

Md. Istiaque Hossain (2009),⁶⁴ in their study, has classified the fishermen into two social groups, namely land owner fishers and landless fishers. It was found out that the majorities of the landless were illiterate, lived below the poverty line, healthy, per capital income less, while landowners were educated, healthy, and per capita income more. Seasonally flooded ecosystem played a vital role in the livelihoods of the inhabitants. Water productivity-enhancing measures like alternative rice-fish culture could provide additional food and income for the socio-economic development of the stakeholders.

Shyam, Salim, et al., (2010)⁶⁵ has analysed the impact of the ban on monsoon trawling in employment pattern, poverty and income distribution. According to him, unemployment existed at a considerable level, which forced them to avail credit from moneylenders or financial institutions. However, most of the experienced labour in the field has given positive opinion towards a ban, which shows their concern towards the conservation of resources. He has also stressed that implementation of separate fishing, based on scientific principle, highlighting the needs of the ordinary fisher folk is the need of the hour.

Ganesh Kumar et al., (2010)⁶⁶ their study has been conducted with the detached of understanding the process of pioneering marketing models in the

⁶⁴ Istiaque Hossain Md. (2009), "Socio-economic condition of fishermen in seasonal floodplain Beals in Rajshahi District, Bangladesh", Research Journal of Social Science, pp.74-81.

⁶⁵ Shyam.S.Salim, Hena Vijayan and Santhya, KM (2010), "Trade-off between Monsoon Trawl ban and the livelihood of trawl labours in Maharastra", Indian Journal of Marine Fisheries, 57 (2). Pp.67-71.

⁶⁶ Ganesh Kumar, B., Ravisankarb, T., Sureshc, R., Ramachandra Bhattad , Deboral Vimalab, D., Kumaranb, M., Mahalakshmib, P., and Sivasakthi Devia, T., Lessons from Innovative Institutions in the Marketing of Fish and Fishery Products in India, Agricultural Economics Research Review, Vol. 23 (Conference Number), 2010, pp 495-504.

fisheries sector and to draw lessons from the success stories to upscale and duplicate in a similar socio-politico-economic scenario in other parts of the country. It has been led to deliver a better sympathetic of fish marketing by self-help groups (SHGs), maker associations, fisheries development corporations, fisherman cooperatives and private organisations in the southern states of India, namely Tamil Nadu, Kerala, Andhra Pradesh and Karnataka with the theory that the institutional preparations in the marketing of fish and fishery products decrease the operation cost and improve the market access and its efficiency.

The study has reported the primary activities of those institutions in the efficient fish marketing, such as inbound logistics, processes, outbound logistics, marketing and sales promotion and support activities like infrastructural facilities, technological backstopping, price information and procurement. Through these advantages, the fishers have been found to achieve economies of scale, technological inventions, capacity development, linkage among activities, degree of vertical integration, the timing of market entry, product differentiation, market access, credit access, etc. The study has suggested the promoting institutions like SHGs, producer/fishers' associations, cooperatives, etc. and allowing the entry of private agencies with an appropriate regulatory mechanism to improve the efficiency of fish marketing in the country.

Sathiadhas.R. et al., (2010)⁶⁷ has analysed the economic losses in marine fisheries resulting from poor management, inefficiency and overfishing. According to him, the marine fish production from near shore waters had reached almost a plateau and, the only marginal increase is predicted from this zone.

⁶⁷ Sathiadhas.R, Ramachandran.C, and Aswathy.N., (2010), "Conservation of fisheries resources in India – Economic and livelihoods issues", CMFRI Bulletin, 63, pp1-8.

CHAPTER III

PROFILE OF THE STUDY AREA

3.1 THOOTHUKUDI DISTRICT AT A GLANCE

The district started functioning as the twentieth District in Tamil Nadu with effect from October 20, 1986 with Thoothukudi as its headquarters. This district is located between 8°-05' and 9°-30' of northern latitude and 77°-05' and 78°-25' of the eastern longitude.

This district is bound by Virudhunagar and Ramanathapuram districts in the north, Kanyakumari district in the south, the Gulf of Mannar in the east and Tirunelveli district in the west. It is spread over an area of 4621 sq.kms.

Administrative Regions

The district now consists of eight Taluks namely Thoothukudi, Tiruchendhur, Sathankulam, Srivaikundam, Kovilpatti, Ottapidaram, Ettayapuram and Vilathikulam. It comprises two revenue divisions, seven revenue Taluks and 12 development blocks. The administrative set up of the district is as follows:

The district has 20 town panchayats, 2 municipalities and 465 revenue villages. The district is industrially advanced with the majority of the industries located in and around Thoothukudi.

TABLE 3.1
POPULATION AND NUMBER OF WORKERS IN THOOTHUKUDI
DISTRICT (2012-13)

S.No.	Category	Number	Percentage
1.	Population	1565743	
	Male	764087	48.80
	Female	801656	51.20
	Total	1565743	100.00

2.	Cultivators	71315	4.55
3.	Agricultural Labourers	167387	10.69
4.	Marginal Workers	88944	5.68
5.	Other Workers	346036	22.10
6.	Non-Workers	892061	56.98
Total Population		1565743	100.00

Source: Assistant Director of Statistics, Thoothukudi.

Land-Use Pattern

Agro-climatic conditions of any region namely soil, irrigation, rainfall and the like, besides the ownership pattern of land, determine their use. The Thoothukudi district extends over a geographical area of 4, 59,054 hectares, of which net sown area accounts for 41.02 per cent. The pattern of land utilisation that 2.40 per cent of the total geographical area is under forest and 4.28 per cent is barren and uncultivable land. Land put to non-agricultural uses is 15.63 per cent and cultivable waste is 4.31 per cent. Current fallows and other fallows form 13.33 per cent and 10.12 per cent of geographical area respectively.

TABLE 3.2
LAND USE PATTERN IN THE THOOTHUKUDI DISTRICT
(2012-13)

S.No.	Classification	Areas (in Hectares)	Percentage
1.	Forests	11012	2.40
2.	Barren Uncultivable lands	19662	4.28
3.	Land put to non-agricultural uses	71772	15.63
4.	Cultivable waste	19779	4.31
5.	Permanent pastures and other grazing lands	5132	1.12
6.	Land under miscellaneous tree crops	35771	7.79
7.	Current fallows	61189	13.33
8.	Other fallows	46441	10.12

9.	Net area sown	188296	41.02
10.	Total geographical area	459054	100.00

Source: Assistant Director of Statistics, Thoothukudi District, 2012-13

Operational Holdings

The average size of land holdings of the district is 1.54 hectares as compared to 1.08 hectares in the state. Sixty-four per cent of the holdings are below 1 hectare and holdings with less than 2 hectares account for 83.50 per cent of the total number of holdings. Nearly 12 per cent of the holdings are between two and five hectares. Holdings with more than five hectares constitute 3.79 per cent of the total number.

TABLE 3.3
SIZE-WISE DISTRIBUTION OF AGRICULTURAL HOLDINGS IN
THOOTHUKUDI DISTRICT (2012-13)

Size of Holdings (in Ha.)	Number of Operational Holdings	Percentage to Total Number of Holdings	Area under the Holdings (in Ha.)	Percentage to Total Area
0 – 0.5	92118	41.11	22889.83	8.06
0.5 – 1.0	53040	23.67	37642.50	13.26
1.0 – 2.0	41956	18.72	59406.95	20.92
2.0 – 3.0	16101	7.18	39358.40	13.86
3.0 – 4.0	7940	3.54	27493.61	9.68
4.0 – 5.0	4460	1.99	19902.81	7.01
5.0 – 7.5	4595	2.05	27836.45	9.81
7.5 – 10.0	2035	0.91	17229.31	6.07
10.0 – 20.0	1524	0.68	20173.95	7.11
20.0 and above	333	0.15	11982.95	4.22
Total	224102	100.00	283916.76	100.00

Source: Assistant Director of Statistics, Thoothukudi District, 2012-13.

On the whole the majority of the holdings in the district are medium and small size holdings. The average size of holdings range from 0.91 hectares in Srivaikundam taluk to 2.03 hectares in Vilathikulam taluk. The percentage of holdings ranging from 0.1 to 2.0 hectares to total holdings in each taluk is 72 per cent, 76 per cent, 72 per cent, 92 per cent, 88 per cent and 86 per cent in Kovilpatti, Ottapidaram, Vilathikulam, Sathankulam, Srivaikuntam, Tiruchendhur and Thoothukudi Taluks respectively.

Irrigation

The main sources of irrigation in the district is through canals, tanks and wells accounting for 3,873 hectares, 18,040 hectares and 20,527 hectares of net area irrigated respectively during 2009-10. The gross area irrigated by canals has decreased from 12.09 per cent in 2009-10. The gross area irrigated by canals has decreased from 12.09 per cent in 1998-99 to 10.70 per cent in 2009-10. The gross area irrigated by tanks also has decreased from 44.10 per cent in 1998-99 to 44.17 per cent in 2009-10. The gross irrigated by well has increased from 38.82 per cent in 1998-99 to 45.12 per cent in 2009-10.

TABLE 3.4

AREA IRRIGATED BY DIFFERENT SOURCES IN THOOTHUKUDI DISTRICT

Year	Net Area Irrigated			Total Gross Irrigated Area		
	Canals	Tanks	Wells	Canals	Tanks	Wells
1998-99	4873 (9.98)	22145 (45.34)	21825 (44.68)	7218 (12.09)	29323 (44.10)	23183 (38.82)
1999-2000	4346 (14.00)	16471 (53.07)	10219 (32.93)	6708 (13.60)	21611 (43.82)	21001 (42.58)
2007-08	3834 (9.35)	15899 (38.74)	21290 (51.90)	4785 (11.12)	16524 (38.41)	21717 (50.47)
2008-09	3945	19687	21508	4468	20505	21722

	(0.74)	(43.61)	(47.65)	(9.52)	(43.91)	(46.52)
2009-10	3873 (8.13)	18040 (42.51)	20527 (48.37)	5354 (10.70)	22095 (44.17)	22570 (45.12)

Source: Assistant Director of Statistics, Thoothukudi District, 2012-13.

Note: Figures in brackets represent the percentage to total irrigated area.

Srivaikundam and Tiruchendhur Taluks have the benefit of canal irrigation besides tank and well irrigation systems. Irrigation by tanks is widely prevalent in Thoothukudi and Tiruchendhur Taluks. Sathankulam and Kovilpatti Taluks are irrigated mainly by wells.

Industrial Development in Thoothukudi District

The district constitutes 70 percent of the total salt production of the state and meets 30 percent obligation of our nation. In this district two Industrial Estates are available one at Kovilpatti with 11 parts and the other at Thoothukudi with 20 items. The prior is accomplished by SIDCO and the latter by SIPCOT. There are 2,200 and above Small Scale Industries registered in the district and about 12 major industries. They are engaged in the production of cotton and staple yarn, caustic soda, PVC resin, fertilizers, soda-ash, carbon dioxide gas in liquid form etc., Some of the major trades are SPIC, TAC, Dharangadhara Chemical Works, Loyal Textiles Ltd., Madura Coats Ltd., Sterlite Copper Industries, Kilburn Chemicals, Ramesh Flowers, Nila seafoods, Deva and Co., and Transworld Granite Industries.

Tata steel recently announced plans to set up a Titanium dioxide project in Thoothukudi. Four national brand products are made in Thoothukudi they are VVD Coconut Oil, Agsar Paints, BIO Food Ltd. Hip Tea & Genkii Tea (Herbal Tea) and Venus Water Heaters. The essential public sector undertakings in this district are the Thoothukudi Thermal Power Station unit of the Tamil Nadu Electricity Board, Heavy Water Plant (HWP) and Port Trust. The Central Government is considering the construction of Titanium and Zirconium Sponge

Plant, which comes under the control of Department of Atomic Energy at Palayakayal village of Srivaikundam Taluk. The District Industries Centre and the Tamil Nadu Industrial Investment Corporation are catering to the needs of the small- and large-scale industries in this district.

3.2 FISHERIES IN THOOTHUKUDI DISTRICT

Thoothukudi is blessed with a wide variety of flora and fauna inhabiting the fragile ecosystems of coral reef and mangroves. Marine fishing, Pearl and Chunk fishing are famous in this district from the time immemorial. Thoothukudi is the main centre for deep-sea fishing.

The other varieties of fishes are caught and powdered and packed and it is called as 'MASI'. The MASI is even exported to all parts of the country and foreign countries, particularly to Srilanka and other Indian Ocean countries. The fish cakes produced here are used for feed for prawns and other fishes. There are 23 marine fishing villages in Thoothukudi district.

There is one Joint Director of fisheries and Assistant Director of Fisheries in charge of Pearl Chunk fishing, Fishermen Training Institute and for technical guidance. There is a fish seed farm at Kadamba. Service Centre / Base workshop is situated at Tuticorin. There is a fish curing centre at Punnakayal. During the year 2010-11, the total inland fish production is 3137 tonnes.

Marine fishing in Thoothukudi District

Thoothukudi District is in Southern Tamil Nadu, in the Gulf of Mannar region, which is situated between India and Srilanka. The principal varieties that are exploited here include Mackerel, Tuna, Pomfret, Sharks, Cods, Flatfish, Ocean Perch, Catfish, Shrimps, Prawn, Lobster and Crab. The decline of these during the 1960s is mainly attributed to the anthropogenic and natural factors⁶⁸.

⁶⁸ Ragupathy Venkatachalam, "Community Management of Fisheries, Is This A Panacea". Research Internship Papers, 2004, Centre For Civil Society, New Delhi, 2004, p.2.

Gears and Vessels used

Empathetic the local management systems that are in repetition would primarily necessitate knowledge of the present gears and vessels that are castoff for fishing in this area. The boats that are used are Catamarans, Vallams, mechanised boats which are of two types, in general, subject to the size.

The gears used by these vessels are gillnets, fish traps, hook and line, boat seines and trawl nets etc. Out of these, trawling nets are the only active gears, and the rest are the passive gears. The motorised Vallams, however, has not been included in the category of mechanised boats.

Marine fisheries of Thoothukudi district

The details of marine fisheries of Thoothukudi district for the year 2016-2017 is described in Table 3.5.

TABLE 3.5
DETAILS OF MARINE FISHERIES OF THOOTHUKUDI DISTRICT
FOR THE YEAR 2016-2017

Sl.No.	Particulars	Numbers
1	Marine Fishing villages	23
2	Total Marine Fisherfolk Population	42000
3	Active Marine Fishermen	21107
4	Mechanised Boat	293
5	Fibre Vallam	2094
6	Wooden Vallam	1948
7	Wooden Catamaran	38

Source: AD-fisheries (Marine), Thoothukudi, 2016-17.

From table 3.5, it is clear that there are 23 Marine fishing villages in Thoothukudi district. During the year 2016-17, there were 21107 active marine fishermen in Thoothukudi district. Total marine fisherfolk population was 42000. There were 293 mechanised boats, 2094 fibre vallam, 1948 wooden vallam and 38 wooden catamarans in Thoothukudi district during the year 2016-2017.

Production in marine fish and number of fishermen engaged in Thoothukudi district

There are fishing villages which are located among 24 maritime villages, namely, Vembar, Keela Vaippar, Sippikulam, Pattinamarudur, Tharuvaikulam, Vellapatti, T.Saveriyarpuram, Siluvaipatti, Loorthamalpuram, Thoothukudi North, Thoothukudi South, Ratchanyapuram, Palayakayal, Punnakayal, Kombudhurai (Kayalpattinam), Singidurai (Kayalpattinam), Veerapandianpattinam, Amali Nagar, Aalantalai, Kulasekarapattanam, Manapad, Periyathalai, Periyasampuram and Puthiya Thuraimugam in Thoothukudi district.

The production in marine fish and the number of fishers engaged in fishery activities in Thoothukudi district during the year 2016-2017 is shown in Table 3.6.

TABLE 3.6

PRODUCTION IN MARINE FISH AND NUMBER OF FISHERMEN ENGAGED IN FISHERY ACTIVITIES IN THOOTHUKUDI DISTRICT

Sl.No.	Name of Fishing Centre	Marine fish catch (Production in tonne)	Number of Fisherman engaged
1.	Vembar	3570	791
2.	Keela Vaippar	1010	605
3.	Sippikulam	590	257
4.	Pattinamarudur	90	167
5.	Tharuvaikulam	7149	1849
6.	Vellapatti	840	359
7.	T. Saveriyarpuram	390	533
8.	Siluvaipatti	350	679
9.	Loorthamalpuram	160	835
10.	Thoothukudi North	3580	7365
11.	Ratchanyapuram	150	178
12.	Palayakayal	510	150
13.	Punnakayal	214	1500
14.	kombudhurai (Kayalpattinam)	960	189
15.	Singidurai	1300	401

	(Kayalpattinam)		
16.	Veerapandianpattinam	1010	396
17.	Amali Nagar	1300	624
18.	Aalantalai	1350	782
19.	Kulasekarapattanam	120	313
20.	Manapad	3250	1191
21.	Periyathalai	2570	1380
22.	Periyasampuram	210	329
23.	Puthiya Thuraimugam	13620	234
	Total	46219	21107

Source: Assistant Director of Fisheries, Thoothukudi, Statistical Hand Book of Thoothukudi 2017, Statistical Department, Thoothukudi District, p.30.

Table 3.6 brings out that the number of fishers engaged in fishery activities is highest in Thoothukudi south, whereas the number of fishers engaged in fisheries activities is lowest in Pattinamarudur.

TABLE 3.7

**FISHERY RELATED UNITS FUNCTIONING IN THOOTHUKUDI
DISTRICT DURING THE YEAR 2011-2012**

Sl.No.	Particulars	Numbers
1.	Private Sea Food Processing Unit	15
2.	Chilled Fish Handling Centre	1
3.	Dried Fish Handling Centre	8
4.	Peeling Shed	14
5.	Ice Plant	19
6.	Cold Storage	18
7.	Chilled Storage	2
8.	Dried Fish Storage	3
9.	Fish Curry Storage	1
10.	Fish Meal Storage	1
	Total	82

Source: Assistant Director of Fisheries, Thoothukudi, Statistical Hand Book of Thoothukudi 2012, Thoothukudi District, p.37.

From Table 3.7, it is seen that 82 fishery-related ancillary industries are functioning in Thoothukudi District. These units provide ample employment opportunities to fishermen communities and others.

Marine products exports in Thoothukudi port

Marine products exports in Thoothukudi port are shown in Table 3.8.

TABLE 3.8
MARINE PRODUCTS EXPORTS IN THOOTHUKUDI PORT

Year	Quantity In Tonnes	Value in Crore	US\$ Million
2000-01	17233	498.71	109.61
2001-02	16966	446.27	93.89
2002-03	17270	436.82	90.43
2003-04	21568	565.65	123.28
2004-05	31618	709.89	157.79
2005-06	31216	700.72	159.2
2006-07	30611	735.48	162.16
2007-08	29697	654.64	162.97
2008-09	29354	693.76	153.59
2009-10	27782	686.45	145.22
2010-11	30220	880.41	194.12
2011-12	34532	1180.84	250.58
2012-13	32989	1269.03	235.91
2013-14	39547	2163.18	358.6
2014-15	42203	2328.27	383.92
2015-16	40591	1999.16	308.25
2016-17	42026	2220.52	334.77
2017-18	51684	2654.96	417.09

Source: https://www.mpeda.gov.in/MPEDA/marine_products_exports.php#

Table 3.8 presents the production and export trend of fish and fish products in Thoothukudi District. The growth of fish production is 17233 tonnes during the year 2000-01. Thoothukudi District has recorded the utmost amount of growth in the marine fish production, during the year 2017-18. The growth of fish production is 51684 tonnes during the same year. During the years 2007-08 and 2009-10, the growth of fish production was negative.

Export of fish and fish products augmented from 17233 tonnes during the year 2000- 01 to 51684 tonnes during the year 2017-18. In value terms, the export of fish and fish products has increased from 498.71 crores to 2654.96 crores during the same period 2000-01 to 2017-18.

CHAPTER IV

ANALYSIS AND INTERPRETATION

In the present study, the selected dry fish vendors' socio-economic profile includes age, education, caste, type of family, marital status, family size, number of earning members, professional background, personal income, family income, family expenditure, and savings have been discussed.

TABLE 4.1
AGE-WISE CLASSIFICATION OF DRY FISH VENDORS

Sl. No.	Age (in years)	Number of respondents	Percentage
1.	Less than 30	9	18.00
2.	30 – 40	13	26.00
4.	40 – 50	17	34.00
4.	50 and above	11	22.00
Total		50	100.00

Source: Survey data.

From Table 4.1, it has been revealed that most dry fish vendors are 40–50 years and 30-40 years, which constitute 34.00 and 26.00 per cent, respectively. The number of respondents who are 50 years and above alone constitutes 22.00 per cent. The respondents, who are under the age group of fewer than 30 years, constitute 18.00 per cent to 50. The mean age of dry fish vendors worked out to be 41 years.

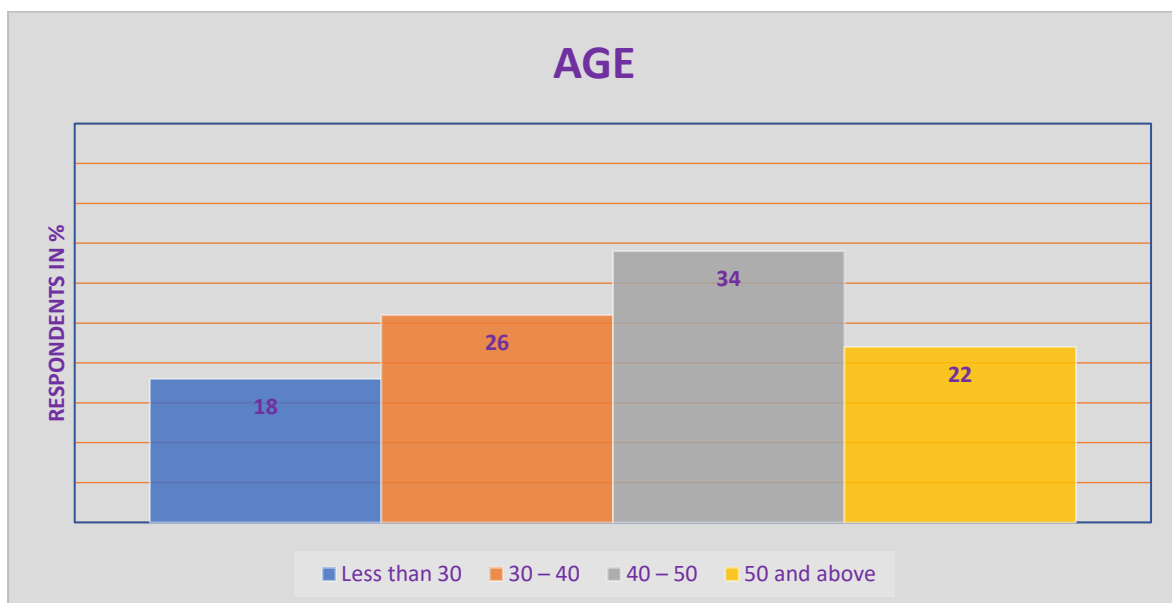


TABLE 4.2
EDUCATIONAL ATTAINMENT OF DRY FISH VENDORS

Sl. No.	Level of Education	Number of respondents	Percentage
1.	Illiterate	19	38.00
2.	School Level	24	48.00
3.	College Level	5	10.00
4.	Technical Level	2	4.00
Total		50	100.00

Source: Survey data.

It has been inferred from Table 4.2 that a maximum of 48 per cent of the dry fish vendors have school-level education, followed by 38.00 per cent of the dry fish vendors who are Illiterate, 10 per cent with college-level education. 4.00 per cent of the dry fish vendors have technical level education.

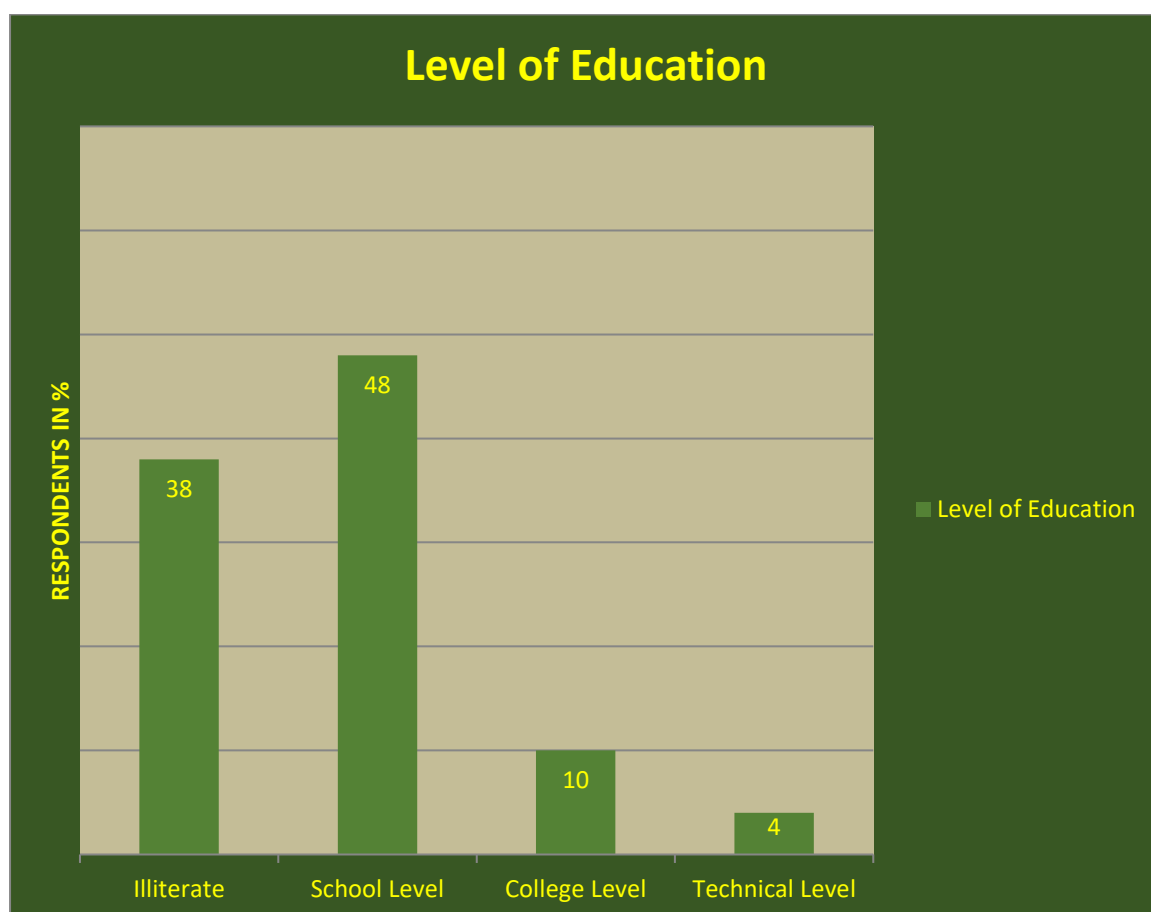


TABLE 4.3
CASTE-WISE DISTRIBUTION OF DRY FISH VENDORS

Sl. No.	Caste	Number of Respondents	Percentage
1.	Forward Community (FC)	2	4.00
2.	Backward Community (BC)	11	22.00
4.	Most Backward Community (MBC)	29	58.00
4.	Scheduled Caste (SC) and Scheduled Tribe (ST)	8	16.00
Total		50	100.00

Source: Survey data.

From Table 4.3, it has been observed that out of 50 sample dry fish vendors, 2 (4.00 per cent) of the dry fish vendors belonged to Forward Community, 11 (22.00 per cent) belonged to Backward Community, 8 (16.00 per cent) are belonging to Scheduled Caste / Scheduled Tribes. However, the majority of 29(58.00 per cent) of the dry fish vendors belonged to Most Backward Community.

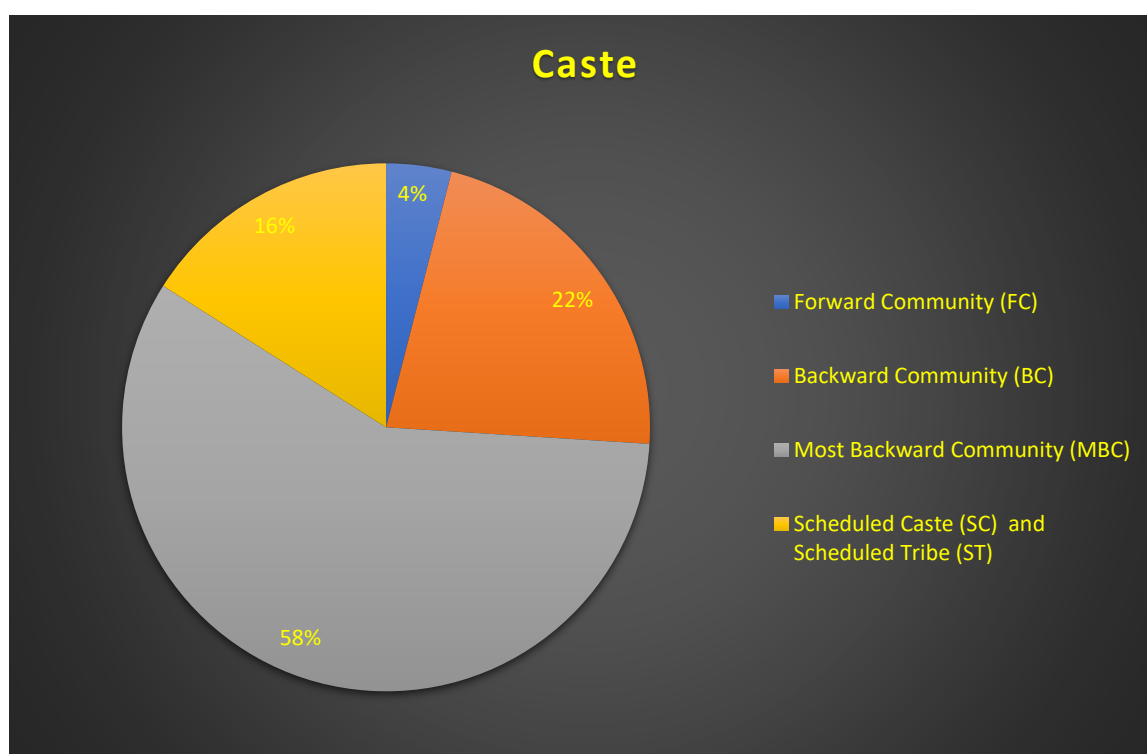


TABLE 4.4
RELIGIONS FOLLOWED BY THE RESPONDENTS

Sl. No	Religion	No. of Respondents	Percentage
1	Christians	32	64.00
2	Hindus	11	22.00
3	Muslims	7	14.00
Total		50	100.00

Source: Survey data.

The study showed that most of them, about 64%, were Christians, about 22% were Hindus, and 14% were Muslims. Generally, the study area is dominated by Christians.

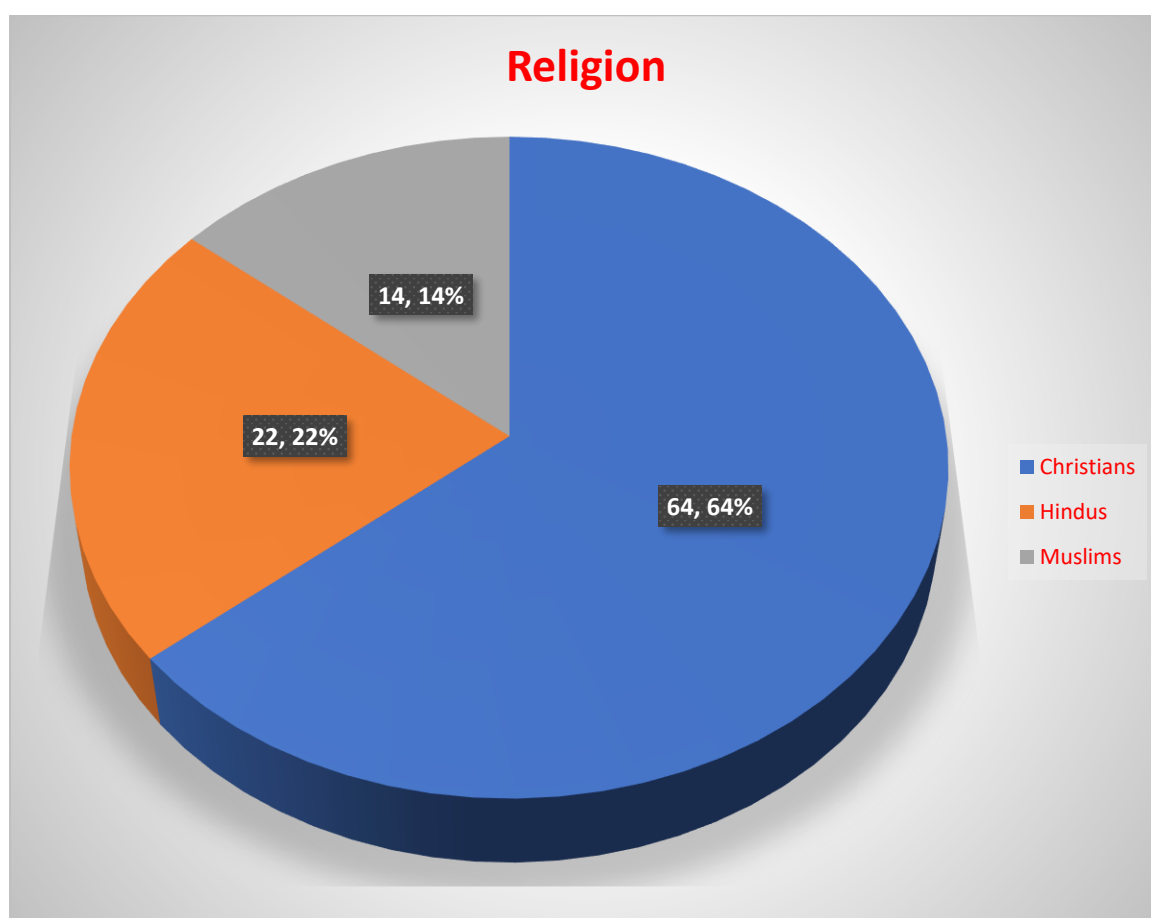


TABLE 4.5
TYPE OF FAMILY OF THE DRY FISH VENDORS

Sl. No.	Nature of Family	Number of Respondents	Percentage
1.	Nuclear Family	41	82.00
2.	Joint Family	9	18.00
Total		50	100.00

Source: Survey data.

It has been inferred from Table 4.5 that out of 50 dry fish vendors, 41 (82.00 per cent) belonged to the nuclear family system and the remaining 9 (18 per cent) belonged to the joint family system. It indicates a constant decline of the joint family system even in the study area.

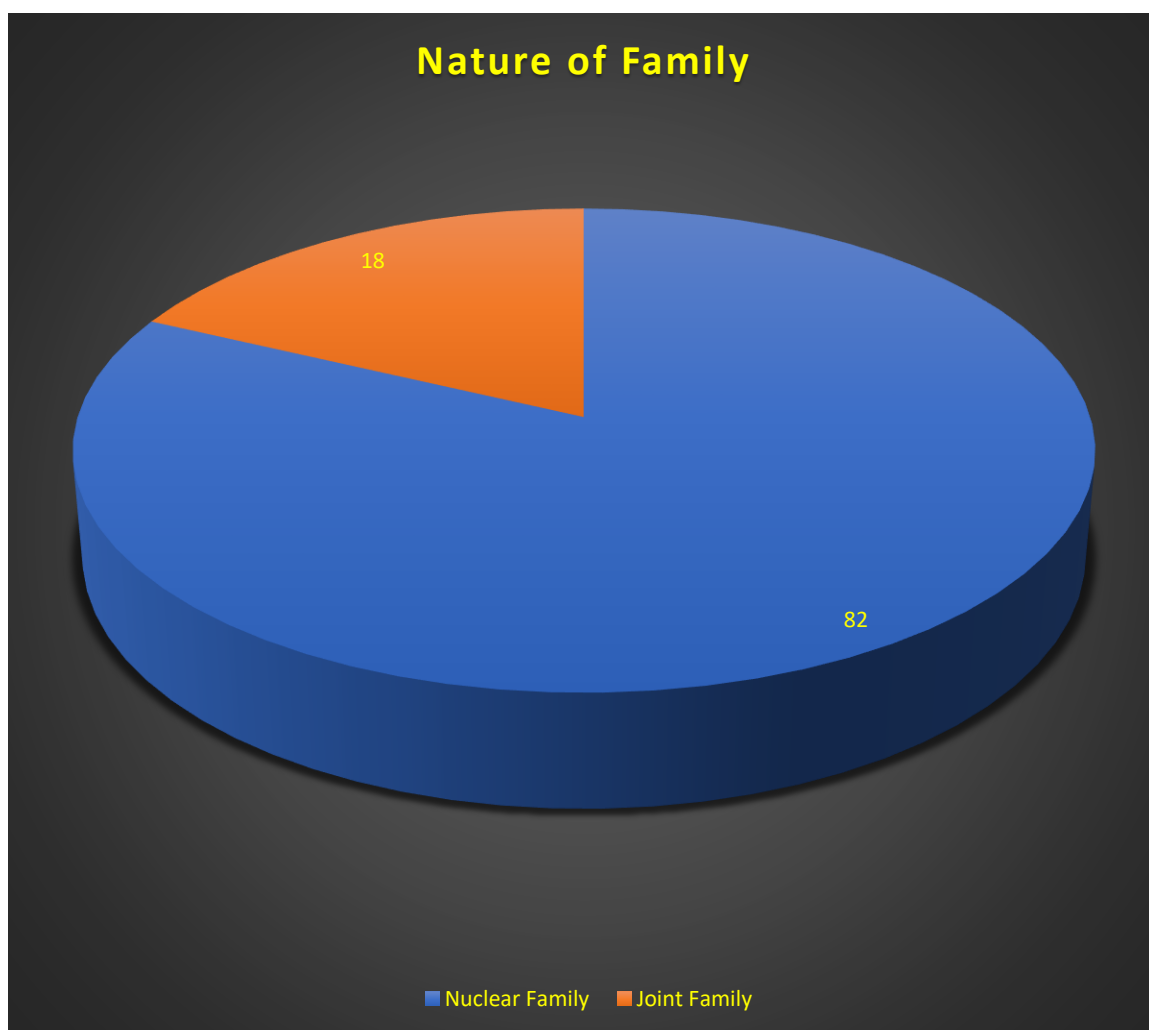


TABLE 4.6
MARITAL STATUS OF DRY FISH VENDORS

Sl. No.	Marital Status	Number of respondents	Percentage
1.	Unmarried	7	14.00
2.	Married	43	86.00
Total		50	100.00

Source: Survey data.

Table 4.6 reveals that out of 50 respondents, a maximum of 43 (86.00 per cent) dry fish vendors are married, while 7 (14.00 per cent) are unmarried.

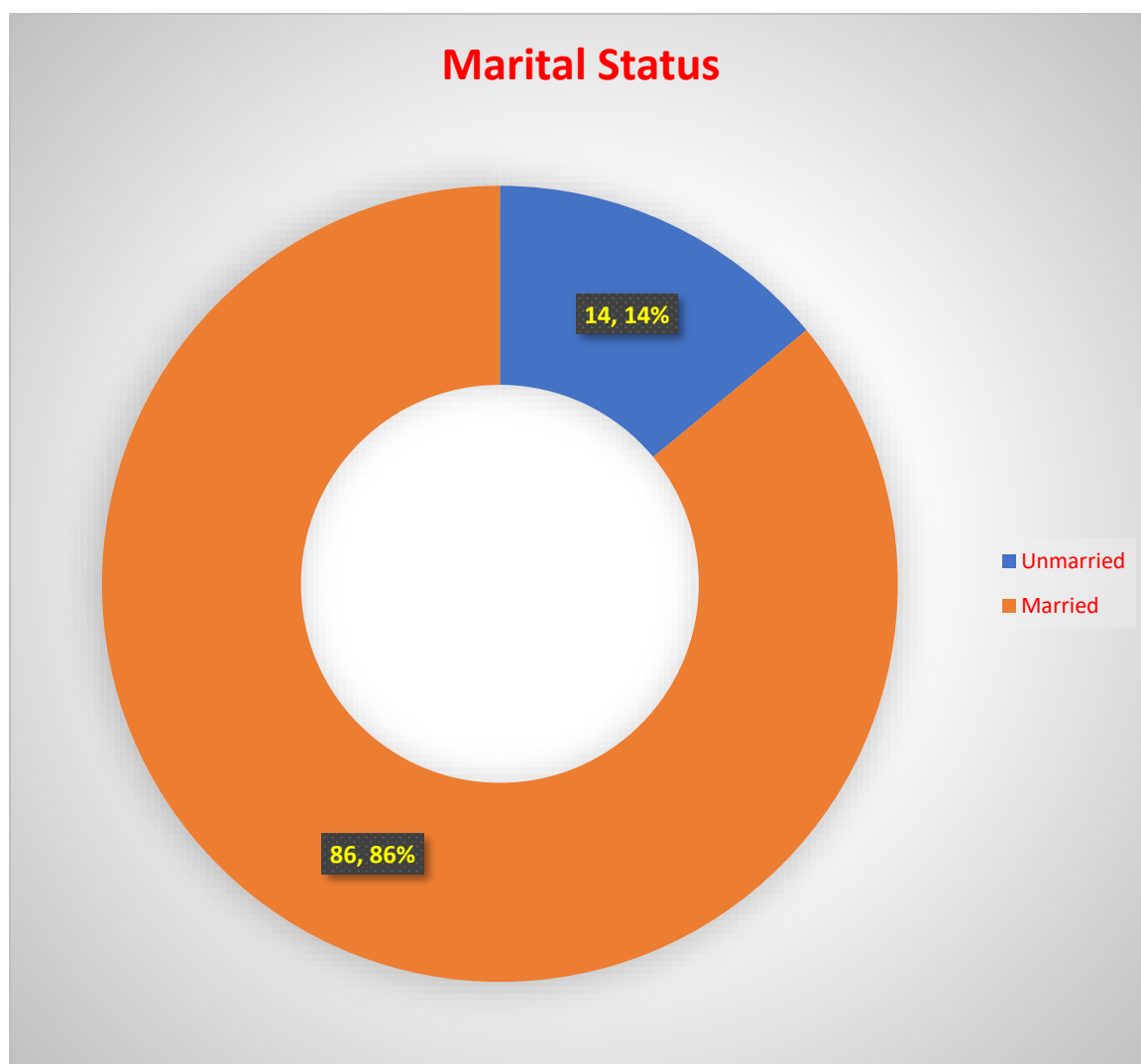


TABLE 4.7
FAMILY SIZE OF DRY FISH VENDORS

Sl. No.	Family Size	Number of respondents	Percentage
1.	Below 3	14	28.00
2.	3 – 5	30	60.00
4.	5 and above	6	12.00
Total		50	100.00

Source: Survey data.

A maximum of 30 (60.00 per cent) of dry fish vendors have a family size of 3 – 5 members, followed by 14 (28.00 per cent) having a family size of below 3, 6 (12.00 per cent) have a family size of 5 and above. It is observed from Table 4.7 that the majority of them have a family size of 3 to 5 members. The average size of the family worked out to be 3.68.

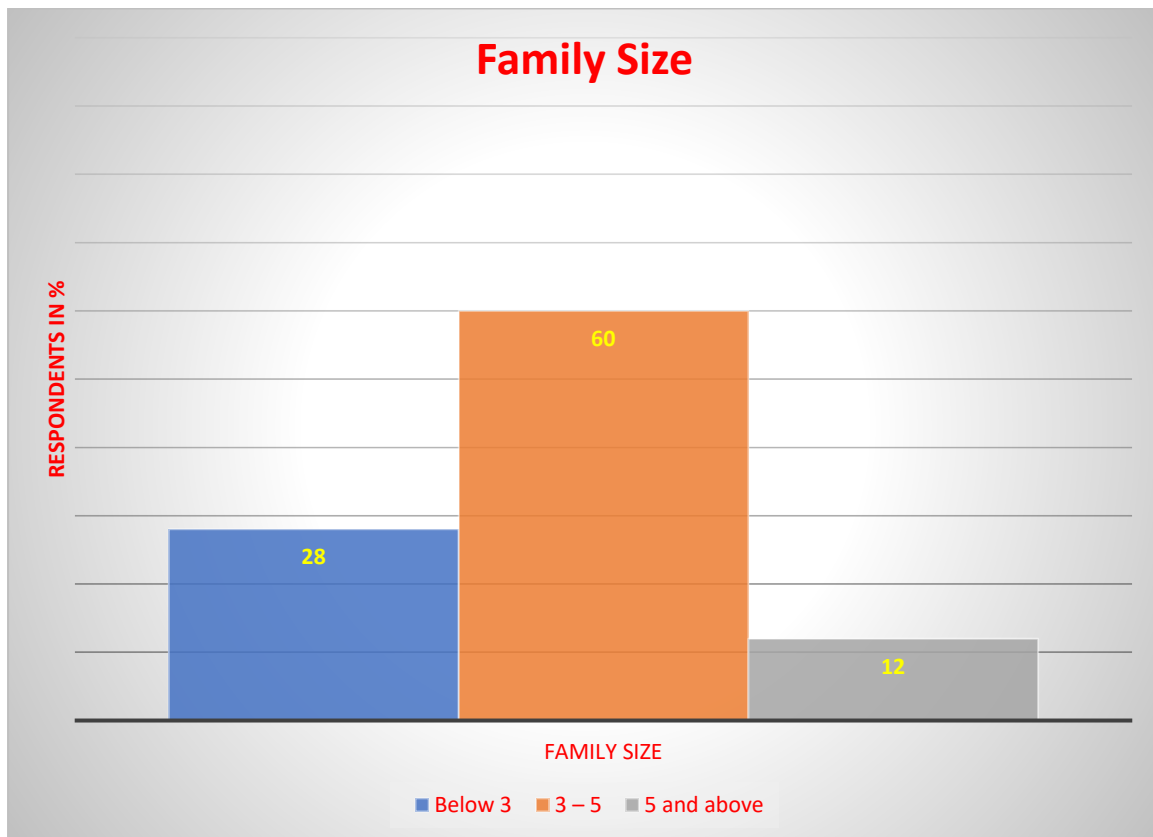


TABLE 4.8
EARNING MEMBERS PER FAMILY OF THE HOUSEHOLDS

Sl. No.	Earning Members	Number of respondents	Percentage
1.	One	13	26.00
2.	Two	22	44.00
4.	Three	7	14.00
4.	Four	5	10.00
5.	More than four	3	6.00
Total		50	100.00

Source: Survey data.

From the Table 4.8, it has been revealed that a majority of 22 (44.00 per cent) of the dry fish vendors have two earning members per family, followed by 13 (26.00 per cent) of the dry fish vendors with only one earning member per family, 7 (14.00 per cent) of the dry fish vendors have three earning members per family and 5 (10.00 per cent) of the dry fish vendors have four earning members per family. Only three (6.00 per cent) of the dry fish vendors have more than four earning members per family. The mean earning members per family of the households worked out to be 1.76.

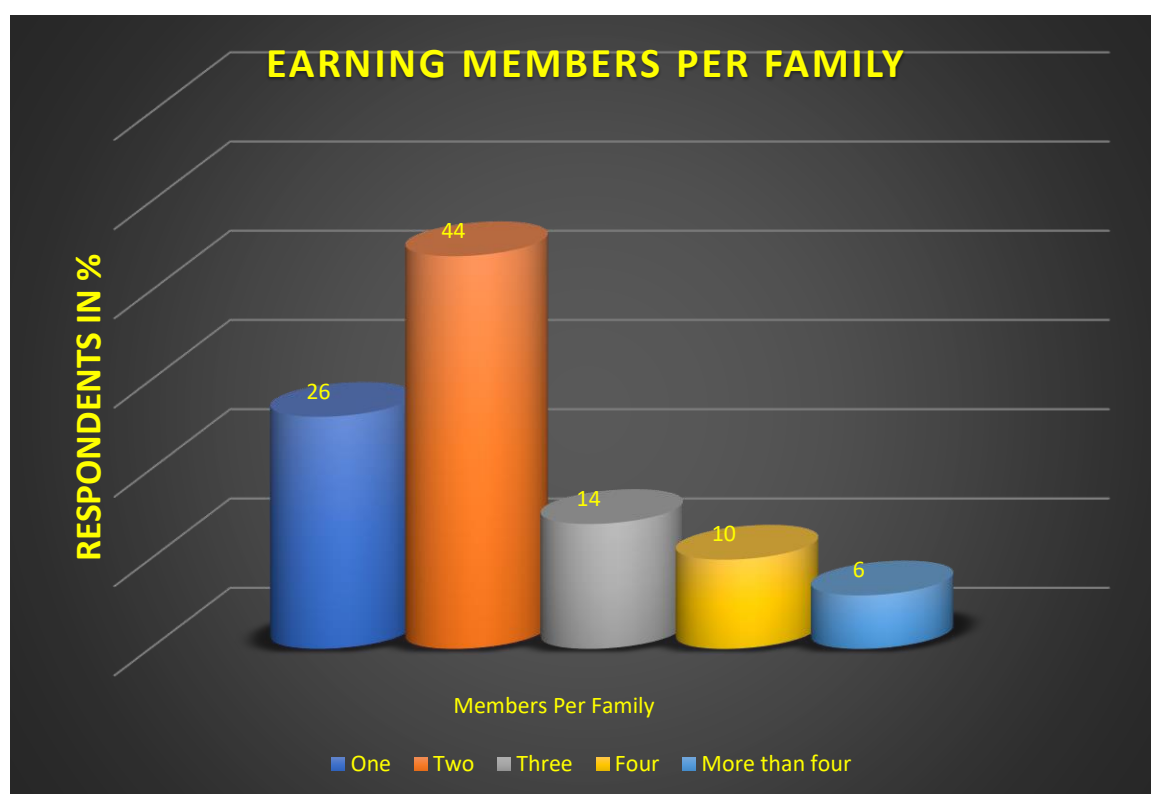


TABLE 4.9
HOUSING OF THE RESPONDENTS

Sl. No.	Housing	Number of respondents	Percentage
1.	Own	36	72.00
2.	Rent	14	28.00
Total		50	100.00

Source: Survey data.

The table revealed that the majority 72% of the sample respondents have their own houses and the remaining 28% of the sample respondents live in rental houses.

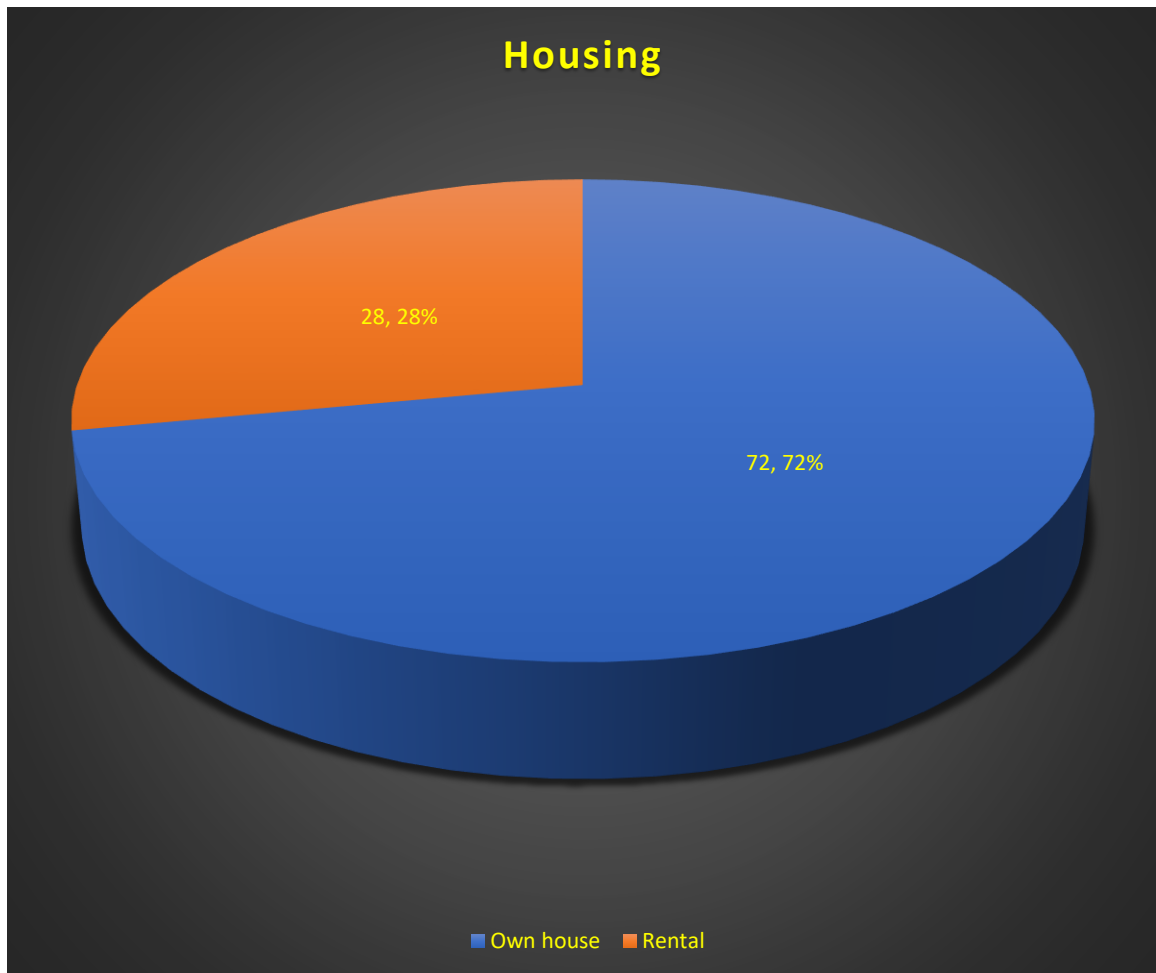


TABLE 4.10**OCCUPATIONAL BACKGROUND OF DRY FISH VENDORS**

Sl. No.	Occupation	Number of respondents	Percentage
1.	Fisher people	26	52.00
2.	Farmer	4	8.00
4.	Agricultural Labourer	7	14.00
4.	Non-agricultural labourer	5	10.00
5.	Micro-entrepreneur	8	16.00
Total		50	100.00

Source: Survey data.

It has been observed from Table 4.10 the occupational background of 50 dry fish vendors. Out of the total, 26 (52.00 per cent) of the dry fish vendors have an important occupational background as Fisher peoples, followed by 8 (16.00 per cent) of the dry fish vendors who have a background as Micro-entrepreneur, 7 (14.00 per cent) of the dry fish vendors are agricultural Labour's. 5 (10.00 per cent) of the dry fish vendors have a background of non-agricultural Labour, and 4 (8.00 per cent) of the dry fish vendors are farmers.

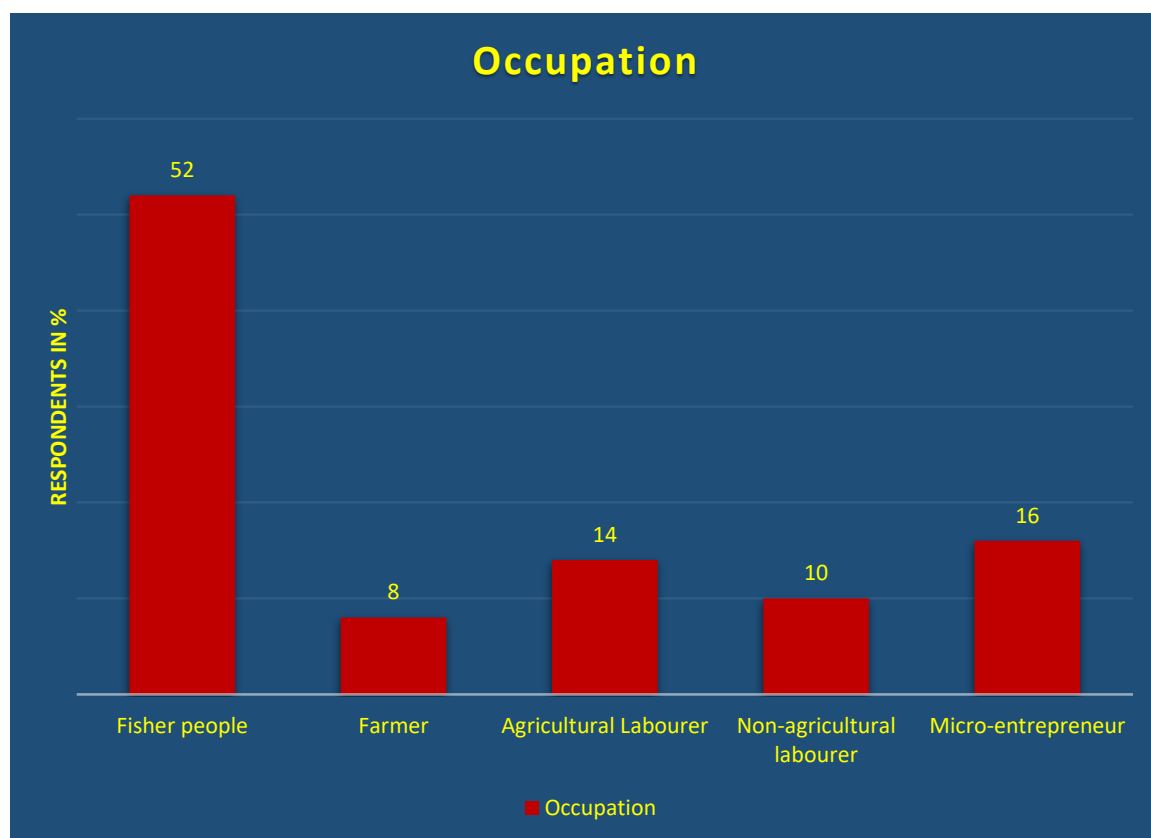


TABLE 4.11
REASONS FOR GOING TO DRY FISH VENDING

Sl. No	Reasons	Number of Respondents	Percentage
1.	To earn an income	24	48.00
2.	To meet the family expenditure	13	26.00
3.	To supplement the family income	5	10.00
4.	To provide education for their children	8	16.00
	Total	50	100.00

Source: Survey data.

It is understood from Table 4.11 those 24 (48%) respondents have chosen dry fish vendors to earn an income, 13 (26 %) respondents have chosen dry fish vendors to meet the family expenditure, 5 (10%) respondents have chosen dry fish vendors for the supplement the family income and the rest 8 (16%) respondents have chosen dry fish vendors to provide education to their children.

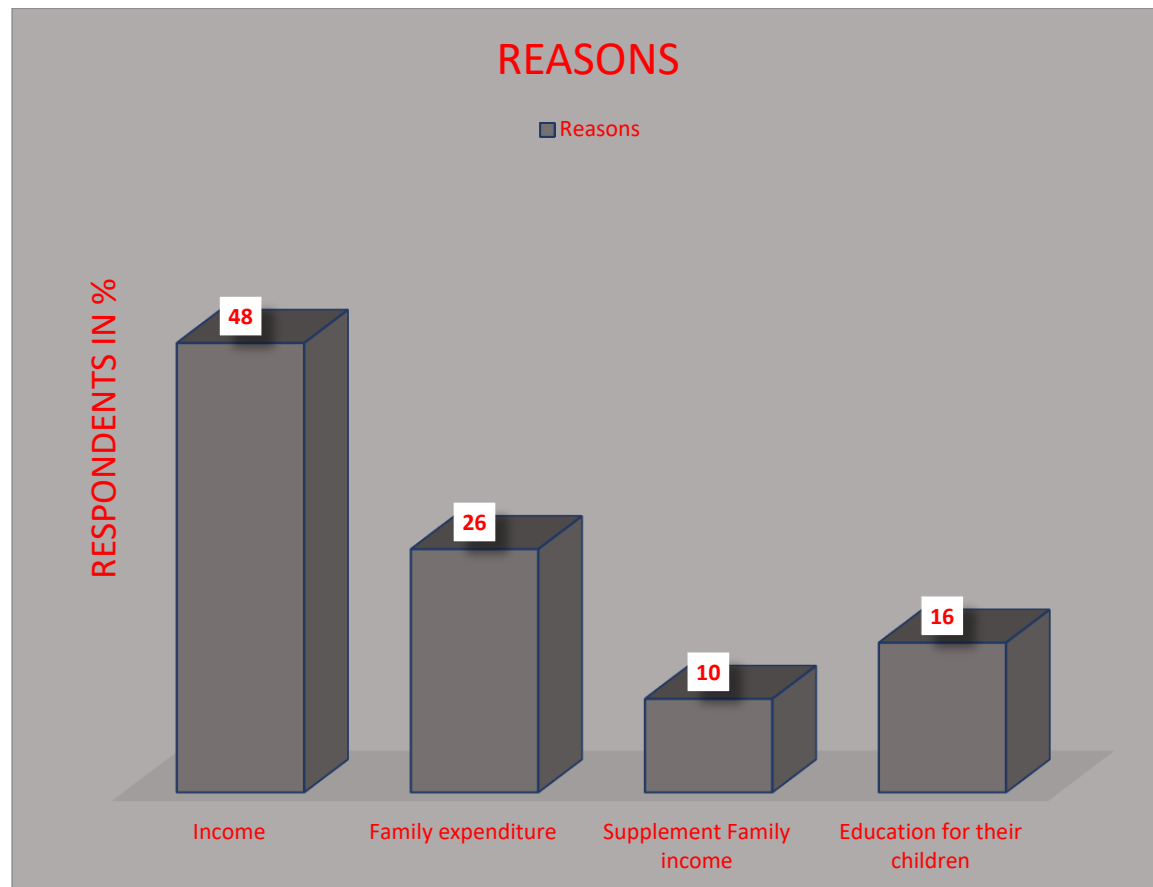


TABLE 4.12
YEARS OF EXPERIENCE

Sl. No	Experience	Number of Respondents	Percentage
1.	Below 3 years	3	6.00
2.	Above 3 years and up to 6 years	5	10.00
3.	Above 6 years and up to 9 years	12	24.00
4.	Above 9 years and up to 12 years	16	32.00
5.	Above 12 years and up to 15 years	9	18.00
6.	More than 15 years	5	10.00
	Total	50	100.00

Source: Survey data.

It is inferred from Table 4.12 those 3(6%) respondents have work experience for a period of below 3 years, 5(10%) respondents have work experience for a period of 3 to 6 years, 12(24%) respondents have work experience for a period of 6 to 9 years, 16(32%) respondents have work experience of 9 to 12 years, 9(18%) respondents have work experience for a period of 12 to 15 years and the rest 5(10%) respondents have work experience for more than 15 years.

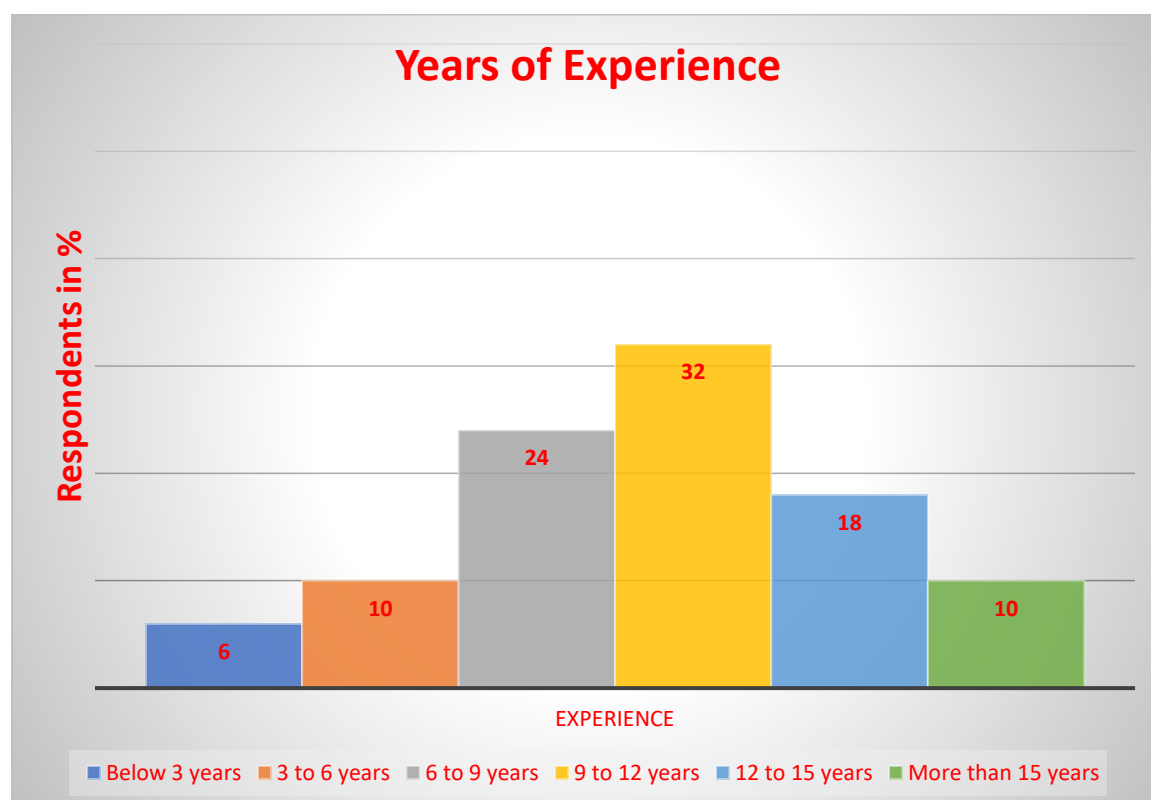


TABLE 4.13
TOTAL WORKING HOURS PER DAY

Sl. No.	Total working hours per day	Number of respondents	Percentage
1.	Below 8 hours	21	42.00
2.	More than 8 hours	29	58.00
Total		50	100.00

Source: Survey data.

It could be seen from Table 4.13 those 21(42%) respondents are working for more than 8 hours per day, and the rest 29 (58%) respondents are working below 8 hours per day.

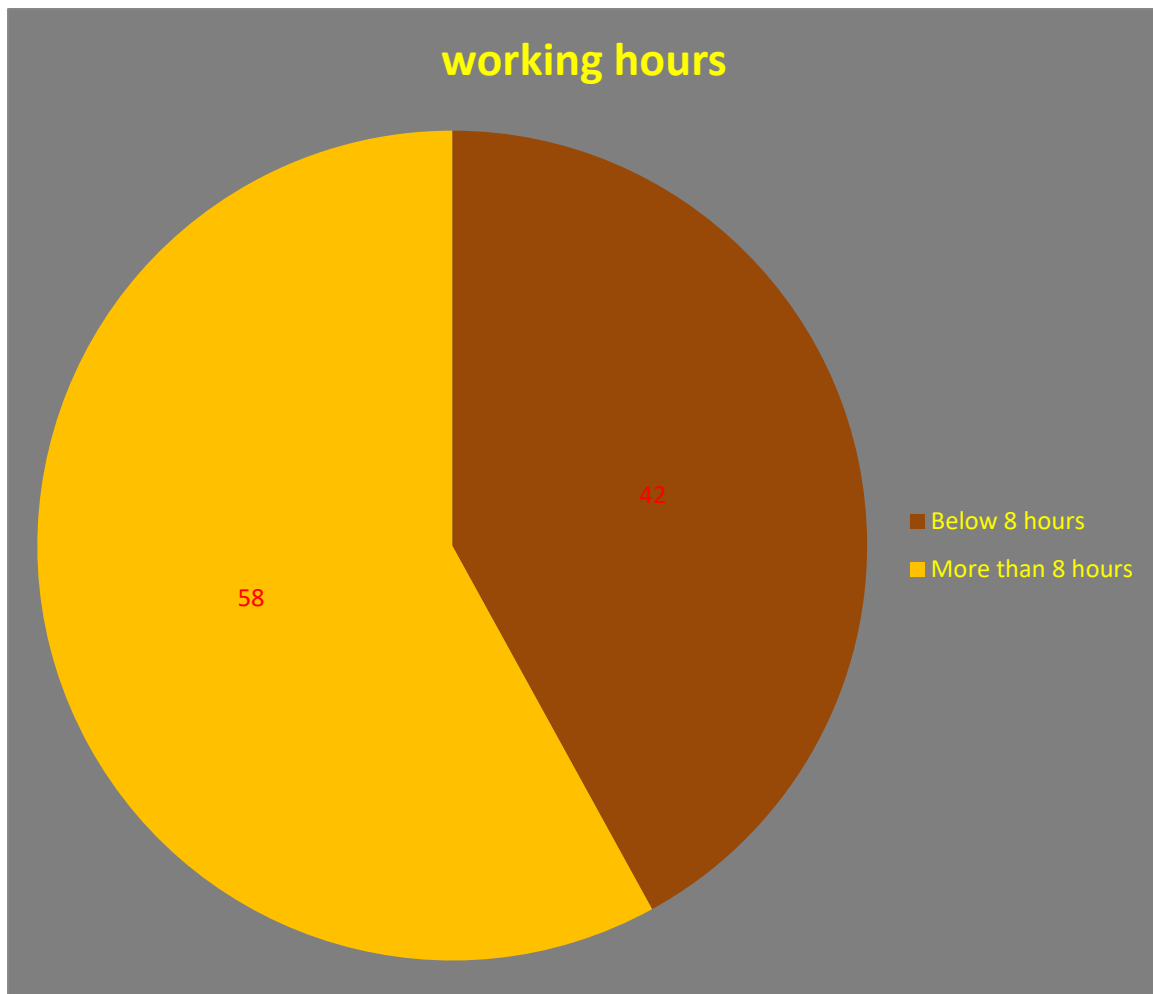


TABLE 4.14
MONTHLY PERSONAL INCOME OF DRY FISH VENDORS

Sl. No.	Personal Income (in Rs.)	Number of respondents	Percentage
1.	Less than Rs.5000	3	6.00
2.	Rs.5,000 – Rs.8,000	6	12.00
4.	Rs.8,000 – Rs.11,000	11	22.00
4.	Rs.11,000 – Rs.14,000	21	42.00
5.	Rs.14,000 and above	9	18.00
Total		50	100.00

Source: Survey data.

Table 4.14 shows that out of 50 dry fish vendors, 21 (42.00 per cent) earn a monthly income of Rs.11 000 to Rs.14, 000 followed by 11 (22.00 per cent) earning Rs.8, 000 to 11,000. 9 (18.00 per cent) of the dry fish vendors earn Rs.14 000 and above, 6(12.00 per cent) earn Rs.5000 to Rs.8 000 and 3 (6.00 per cent) earn a monthly income of less than Rs.5000. The mean monthly personal income worked out to be Rs.11,120.

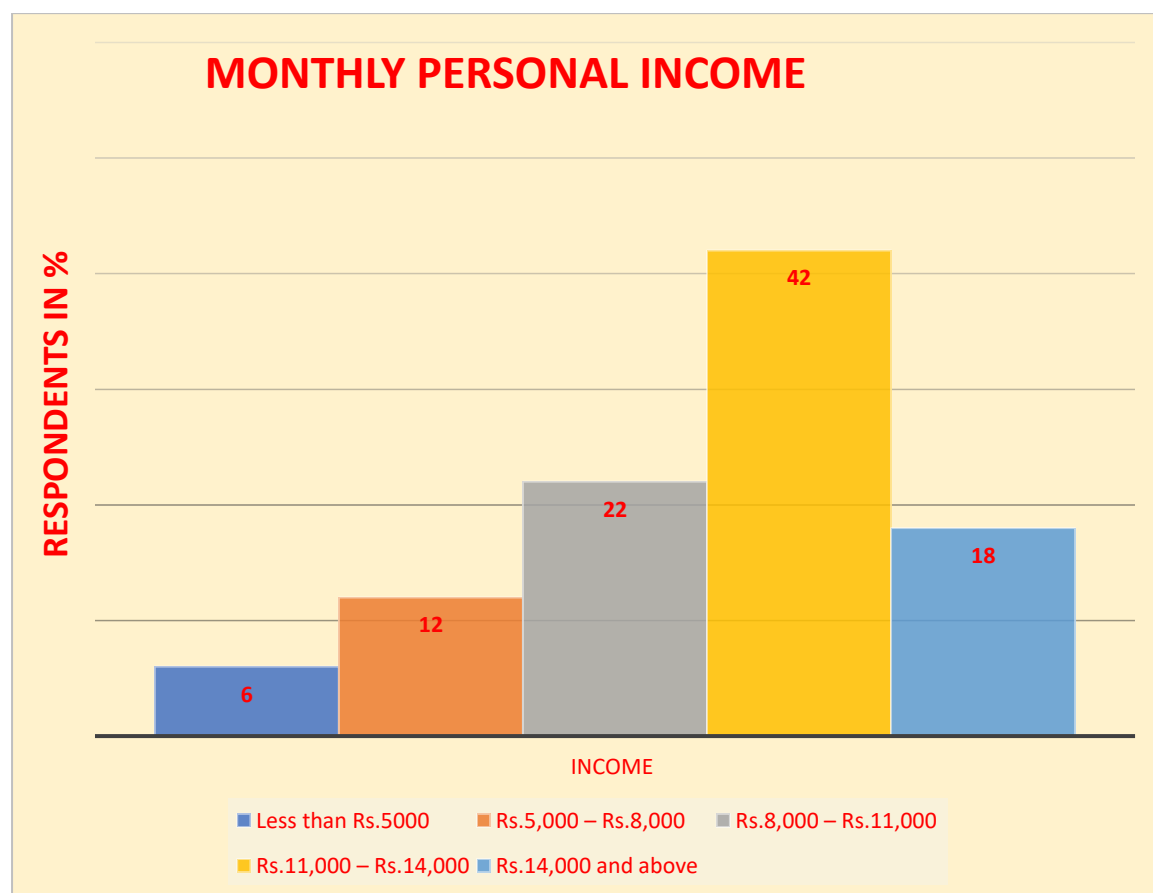


TABLE 4.15
FAMILY INCOME OF THE HOUSEHOLDS

Sl. No.	Monthly Family Income (Rs.)	Number of respondents	Percentage
1.	Less than Rs.10,000	1	2.00
2.	10,000 – 15,000	3	6.00
3.	15,000–20,000	14	28.00
4.	20,000–25,000	22	44.00
5.	25,000 and above	10	20.00
Total		50	100.00

Source: Survey data.

From Table 4.15, out of 50 dry fish vendors, a maximum of 22 (44.00 per cent) have a monthly family income of Rs.20,000–Rs.25000, followed by 14 (28.00 per cent) with a family income of Rs.15000 -20,000. 10(20.00 per cent) of them have a family income of Rs.25 000 and above. 3(6.00 per cent) with a family income of Rs.10000 -15,000, 1(2.00 per cent) of them have a family income of less than Rs.10 000. The mean monthly family income of the households works out to be Rs.21,200.

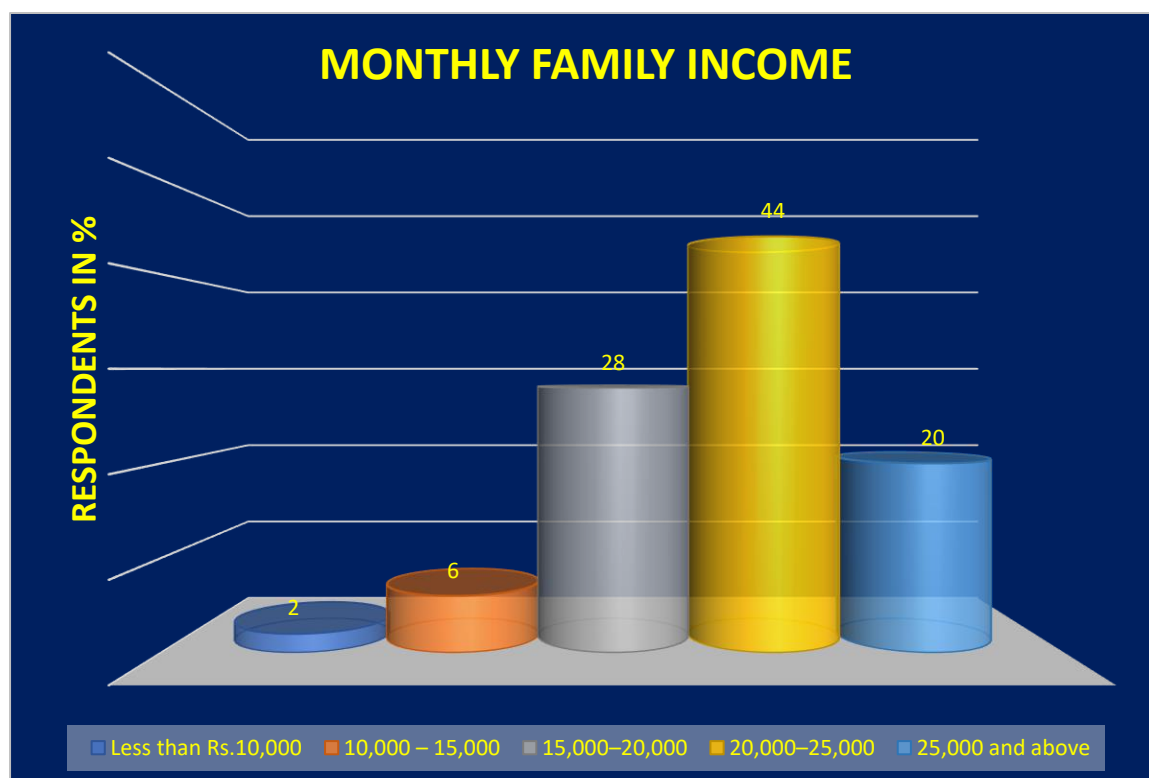


TABLE 4.16
MONTHLY FAMILY EXPENDITURE OF THE HOUSEHOLDS

Sl. No.	Family Expenditure (Rs.)	Number of respondents	Percentage
1.	Less than Rs.5,000	3	6.00
2.	Rs.5,000 – Rs.6,000	5	10.00
4.	Rs.6,000 – Rs.7,000	15	30.00
4.	Rs.7,000 – Rs.8,000	19	38.00
5.	Rs.8,000 and above	8	16.00
Total		50	100.00

Source: Survey data.

It has been inferred from Table 4.16 that the out of 50 dry fish vendors, a maximum of 19 (38.00 per cent) respondents incur a family expenditure of Rs.7000 – Rs.8000 per month, 15 (30.00 per cent) spend Rs.6000-Rs.7000, 8 (16.00 per cent) spend Rs. Eight thousand and above and 5 (10.00 per cent) spend Rs. 5000-Rs.6000. A minimum of 3 (6.00 per cent) of the dry fish vendors incur a family expenditure of less than Rs.5000. The mean monthly expenditure of the households works out to be Rs.6,980.

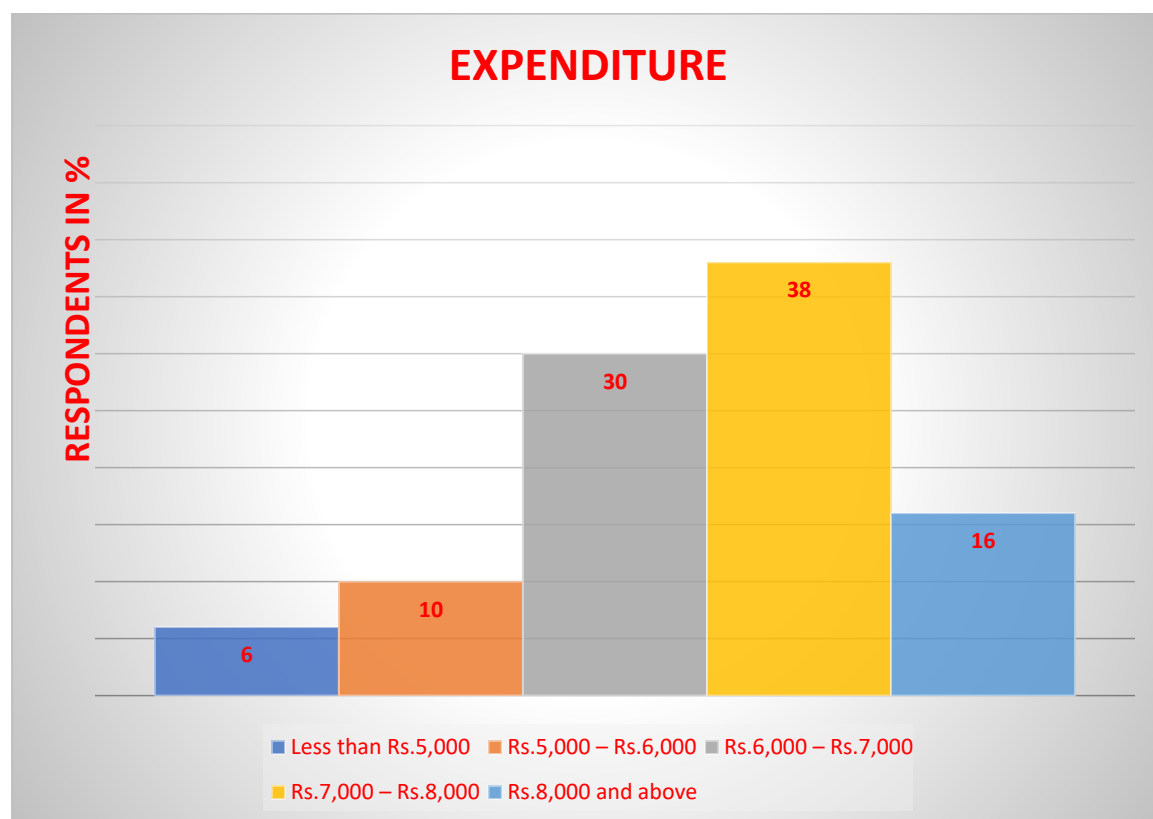


TABLE 4.17
MONTHLY SAVINGS OF THE HOUSEHOLDS

Sl. No.	Monthly Savings	Number of respondents	Percentage
1.	Less than Rs.3,000	7	14.00
2.	3,000 – 4,000	21	42.00
3.	4,000 – 5,000	14	28.00
4.	5,000 and above	8	16.00
Total		50	100.00

Source: Survey data.

Table 4.17 reveals that out of 50 dry fish vendors, a maximum of 42.00 per cent (21) have a saving of Rs. 3,000 – 4,000. 28.00 per cent of dry fish vendors have a saving of Rs. 4,000 – 5,000 per month. Among the dry fish vendors, those who saved above Rs.5000 constitute 16.00 per cent. On the other hand, 14.00 per cent of the respondents have savings of Less than Rs.3,000.

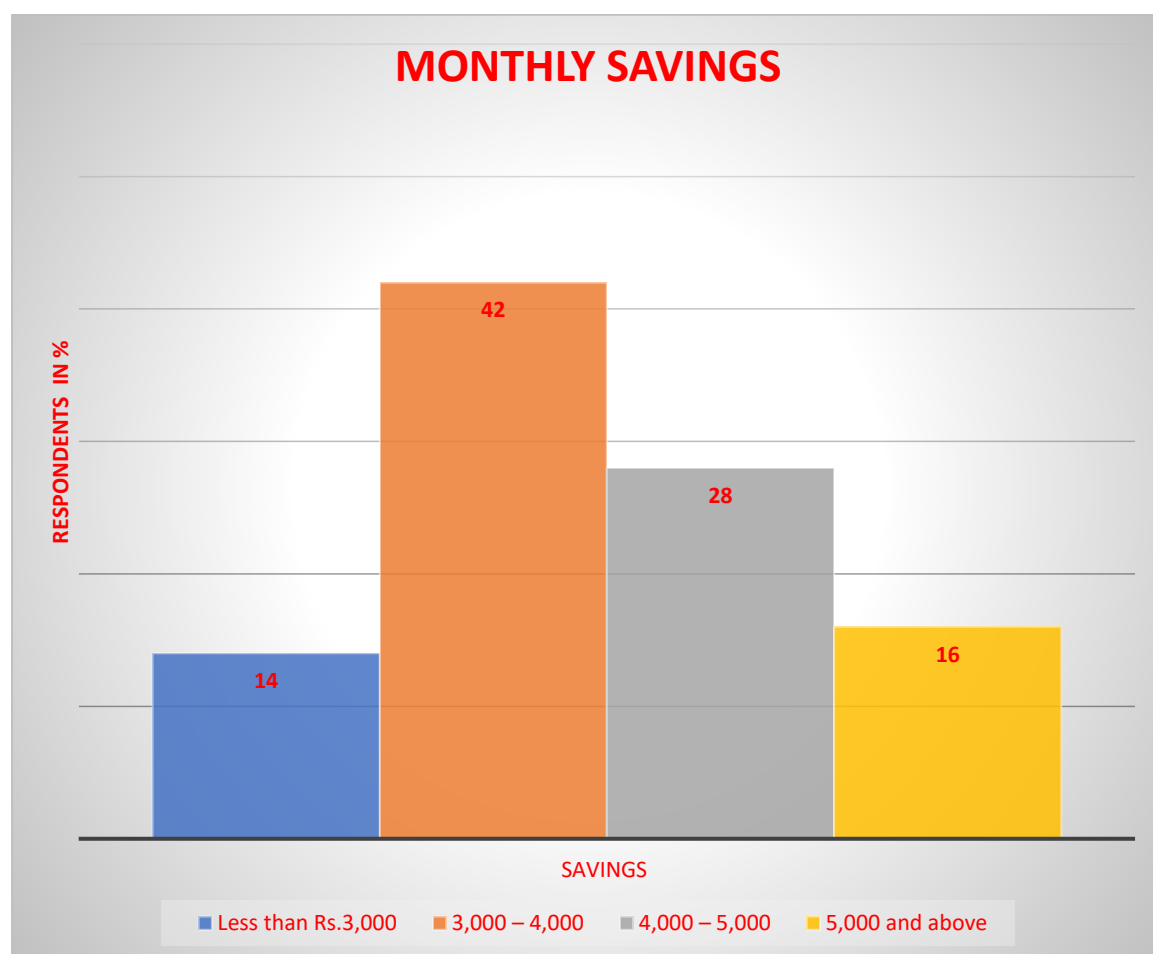


TABLE 4.18
MATERIAL POSSESSION AMONG THE DRY FISH VENDORS

Sl. No.	Material Possession	Number of respondents	Percentage
1.	Less than Rs.50,000	4	8.00
2.	Rs.50,000 – Rs.1,00,000	8	16.00
3.	Rs.1,00,000 – Rs.2,00,000	14	28.00
4.	Rs.2,00,000 – Rs.3,00,000	19	38.00
5.	More than Rs.3,00,000	5	10.00
Total		50	100.00

Source: Survey data.

It has been inferred from Table 4.18 that out of 50 dry fish vendors, the maximum of 19 (38.00 per cent) have a material possession worth rupees two to three lakhs, followed by 14 (28.00 per cent) having one to two lakhs. 8 (16.00 per cent) have property worth Rs.50,000 – Rs.1,00,000. 5(10.00 per cent) have property worth more than Rs. Three lakhs and 4 (8.00 per cent) have material possession worth less than Rs.50,000.

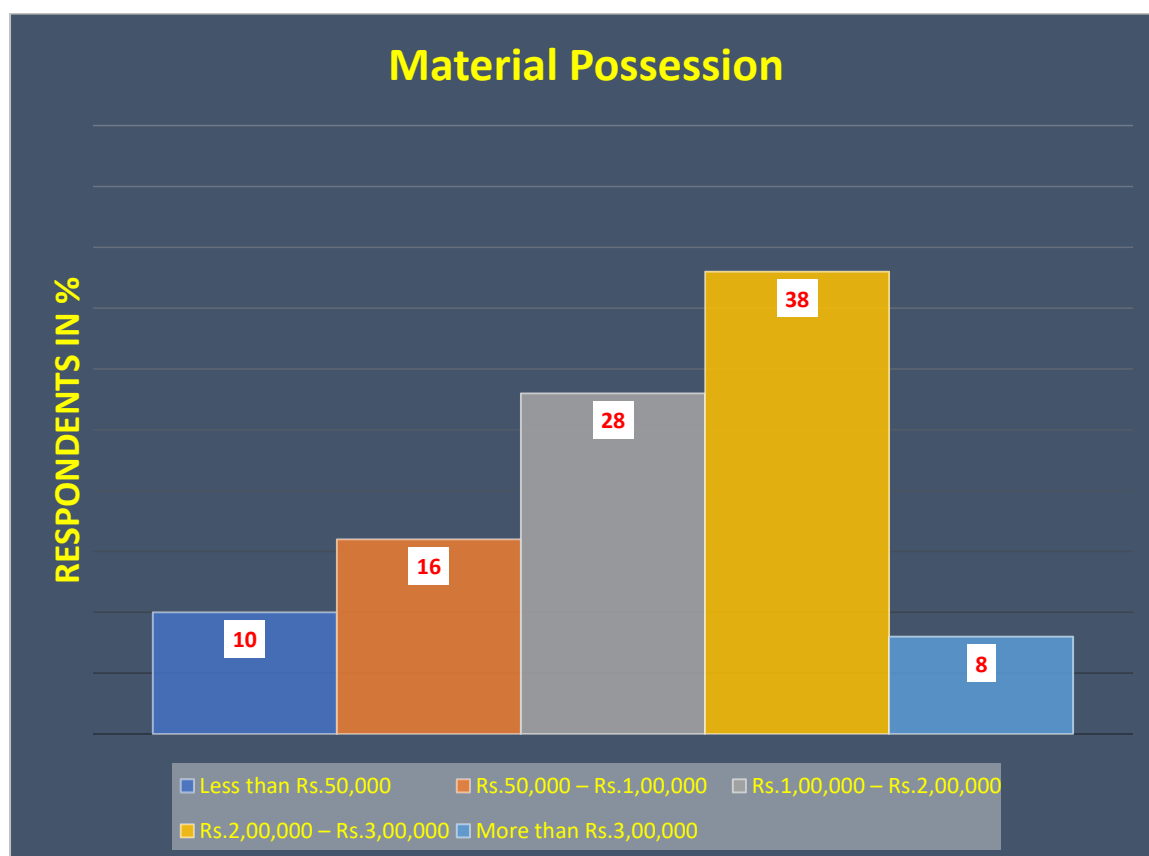


TABLE 4.19
TOOLS/EQUIPMENT/MATERIALS UTILIZED IN FISH DRYING
ACTIVITY

Sl. No.	Materials Utilized in Fish Drying Activity	Number of respondents	Percentage
1.	Bamboo, Ropes & Mats	23	46.00
2.	Bamboo & Ropes	19	38.00
3.	Mats	8	16.00
Total		50	100.00

Source: Survey data.

The perusal of Table 4.19 clearly shows that 50 dry fish vendors (46%) of the sample used bamboo, ropes and mats as the tools for fish drying, followed by 19 fish curers (38%) who used the bamboo & ropes and only 8 fish curers (16%) used only mats (PVC sheets/Palm leaves make) for drying the fish.

TABLE 4.20
DAILY AVERAGE SELL (KG)

Sl. No.	Daily average sell (kg)	Number of respondents	Percentage
1.	1-5	19	38.00
2.	5-10	16	32.00
3.	10-20	9	18.00
4.	More than 20	6	12.00
Total		50	100.00

Source: Survey data.

The study found that 38% of the vendor sells 1-5 kg dried fish daily, 32% sell 5-10 kg daily, 18% sell 10-20 kg daily, and 12% sell more than 20 kg daily.

TABLE 4.21
CAUSES FOR SPOILAGE OF DRY FISH

Sl. No.	Causes for Spoilage	Number of respondents	Percentage
1.	Due to heavy rain during the off-season	47	94.00
2.	Due to heavy moisture in the air	39	78.00
3.	Due to storm	28	56.00
4.	Due to infestation of pests	24	48.00
5.	Due to cloudy weather, drying does not take place properly	19	38.00
Total		50	100.00

Source: Survey data.

*Multiple responses.

Table 4.21's Spoilage has been attributed to "heavy rain during the off-season" by the fish curers, according to the findings of this study (94 percent). For the second time, "Due to heavy moisture in the air (78%)," "Due to storm (56%) and "Due to infestation of pests (rats, insects etc.)" have been cited as the causes of Spoilage in stored dry fish, which is the fourth cause (48 percent). Fishermen have identified "cloudy weather drying" as the fifth cause of the problem (38 percent).

TABLE 4.22
CONSTRAINTS RENDERED BY THE FISH CURERS

Sl. No.	Constraints	Number of respondents	Percentage
1.	Lack of Capital	41	82.00
2.	Lack of proper Infrastructure	38	76.00
3.	Crisis of raw material	35	70.00
4.	Low market price	31	62.00
5.	Transport problem	27	54.00
6.	Interference of middleman	22	44.00
Total		50	100.00

Source: Survey data.

*Multiple responses.

Table 4.22, as viewed by the respondents, reveals that the fish curers of the sample encountered a variety of challenges while completing their professional duties of drying fish. The majority lists restrictions. "Lack of capital" (82.00 percent) and "Lack of proper infrastructure" for fish sun-drying (21.00 percent) were cited as the two main constraints by the respondents (76.00 percent). "Crisis of raw material" has been cited by fish curers as the third most important limitation (70.00 percent).

The fish curers do not make enough money selling their dried fish, so the "Low Market Price" constraint was identified as the fourth (62 percent). "Transport problem" has been the fifth significant constraint since fish curers began their activities in underdeveloped rural coastal areas (54 percent). Because fish curers in the trade are typically underpaid, they must rely on intermediaries. This "middleman's interference" has been identified as the profession's sixth most important constraint (44 percent).

CHAPTER V

The study is confined to the role of dry fish vendors in the small-scale artisanal fisheries. The sphere of this research is also extended to the analysis of socio-economic conditions of men dry fish vendors. This chapter gives a brief summary of the study results, suggestions and conclusion.

5.1 FINDINGS

The mean age of dry fish vendors worked out to be 41 years.

It has been inferred that a maximum of 48 per cent of the dry fish vendors have school-level education, followed by 38.00 per cent of the dry fish vendors who are Illiterate, 10 per cent with college-level education. 4.00 per cent of the dry fish vendors have technical level education.

It has been observed that out of 50 sample dry fish vendors, 2 (4.00 per cent) of the dry fish vendors belonged to Forward Community, 11 (22.00 per cent) belonged to Backward Community, 8 (16.00 per cent) are belonging to Scheduled Caste / Scheduled Tribes. However, the majority of 29 (58.00 per cent) of the dry fish vendors belonged to Most Backward Community.

The study showed that most of them, about 64%, were Christians, about 22% were Hindus, and 14% were Muslims. Generally, the study area is dominated by Christians.

It has been inferred that out of 50 dry fish vendors, 41 (82.00 per cent) belonged to the nuclear family system and the remaining 9 (18 per cent) belonged to the joint family system. It indicates a constant decline of the joint family system even in the study area.

The study reveals that out of 50 respondents, a maximum of 43 (86.00 per cent) dry fish vendors are married, while 7 (14.00 per cent) are unmarried.

A maximum of 30 (60.00 per cent) of dry fish vendors have a family size of 3 – 5 members, followed by 14 (28.00 per cent) having a family size of

below 3, 6 (12.00 per cent) have a family size of 5 and above. It is observed from Table 4.7 that the majority of them have a family size of 3 to 5 members. The average size of the family worked out to be 3.68.

It has been revealed that a majority of 22 (44.00 per cent) of the dry fish vendors have two earning members per family, followed by 13 (26.00 per cent) of the dry fish vendors with only one earning member per family, 7 (14.00 per cent) of the dry fish vendors have three earning members per family and 5 (10.00 per cent) of the dry fish vendors have four earning members per family. Only three (6.00 per cent) of the dry fish vendors have more than four earning members per family. The mean earning members per family of the households worked out to be 1.76.

The data revealed that the majority 72% of the sample respondents have their own houses and the remaining 28% of the sample respondents live in rental houses.

It has been observed the occupational background of 50 dry fish vendors. Out of the total, 26 (32.00 per cent) of the dry fish vendors have an important occupational background as Fisher peoples, followed by 8 (16.00 per cent) of the dry fish vendors who have a background as Micro-entrepreneur, 7 (14.00 per cent) of the dry fish vendors are agricultural Labour's. 5 (10.00 per cent) of the dry fish vendors have a background of non-agricultural Labour, and 4 (8.00 per cent) of the dry fish vendors are farmers.

It is understood that 24 (48%) respondents have chosen dry fish vendors to earn an income, 13 (26 %) respondents have chosen dry fish vendors to meet the family expenditure, 5 (10%) respondents have chosen dry fish vendors for the supplement the family income and the rest 8 (16%) respondents have chosen dry fish vendors to provide education to their children.

It is inferred that 3(6%) respondents have work experience for a period of below 3 years, 5(10%) respondents have work experience for a period of 3 to 6 years, 12(24%) respondents have work experience for a period of 6 to 9

years, 16(32%) respondents have work experience of 9 to 12 years, 9(18%) respondents have work experience for a period of 12 to 15 years and the rest 5(10%) respondents have work experience for more than 15 years.

It could be seen that 21(42%) respondents are working for more than 8 hours per day, and the rest 29 (58%) respondents are working below 8 hours per day.

It shows that out of 50 dry fish vendors, 21 (42.00 per cent) earn a monthly income of Rs.11 000 to Rs.14, 000 followed by 11 (22.00 per cent) earning Rs.8, 000 to 11,000. 9 (18.00 per cent) of the dry fish vendors earn Rs.14 000 and above, 6(12.00 per cent) earn Rs.5000 to Rs.8 000 and 3 (6.00 per cent) earn a monthly income of less than Rs.5000. The mean monthly personal income worked out to be Rs.11,120.

A maximum of 22 (44.00 per cent) have a monthly family income of Rs.20,000–Rs.25000, followed by 14 (28.00 per cent) with a family income of Rs.15000 -20,000. 10(20.00 per cent) of them have a family income of Rs.25 000 and above. 3(6.00 per cent) with a family income of Rs.10000 -15,000, 1(2.00 per cent) of them have a family income of less than Rs.10 000. The mean monthly family income of the households works out to be Rs.21,200.

It has been inferred that the out of 50 dry fish vendors, a maximum of 19 (38.00 per cent) respondents incur a family expenditure of Rs.7000 – Rs.8000 per month, 15 (30.00 per cent) spend Rs.6000-Rs.7000, 8 (16.00 per cent) spend Rs. Eight thousand and above and 5 (10.00 per cent) spend Rs. 5000-Rs.6000. A minimum of 3 (6.00 per cent) of the dry fish vendors incur a family expenditure of less than Rs.5000. The mean monthly expenditure of the households works out to be Rs.6,980.

It reveals that out of 50 dry fish vendors, a maximum of 42.00 per cent (21) have a saving of Rs. 3,000 – 4,000. 28.00 per cent of dry fish vendors have a saving of Rs. 4,000 – 5,000 per month. Among the dry fish vendors, those

who saved above Rs.5000 constitute 16.00 per cent. On the other hand, 14.00 per cent of the respondents have savings of Less than Rs.3,000.

It has been inferred that out of 50 dry fish vendors, the maximum of 19 (38.00 per cent) have a material possession worth rupees two to three lakhs, followed by 14 (28.00 per cent) having one to two lakhs. 8 (16.00 per cent) have property worth Rs.50,000 – Rs.1,00,000. 5(10.00 per cent) have property worth More than Rs. Three lakhs and 4 (8.00 per cent) have material possession worth less than Rs.50,000.

The study clearly shows that 50 dry fish vendors (46%) of the sample used bamboo, ropes and mats as the tools for fish drying, followed by 19 fish curers (38%) who used the bamboo & ropes and only 8 fish curers (16%) used only mats (PVC sheets/Palm leaves make) for drying the fish.

The study found that 38% of the vendor sells 1-5 kg dried fish daily, 32% sell 5-10 kg daily, 18% sell 10-20 kg daily, and 12% sell more than 20 kg daily.

The Spoilage has been attributed to "heavy rain during the off-season" by the fish curers, according to the findings of this study (94 percent). For the second time, "Due to heavy moisture in the air (78%)," "Due to storm (56%) and "Due to infestation of pests (rats, insects etc.)" have been cited as the causes of Spoilage in stored dry fish, which is the fourth cause (48 percent). Fishermen have identified "cloudy weather drying" as the fifth cause of the problem (38 percent).

It reveals that the fish curers of the sample encountered a variety of challenges while completing their professional duties of drying fish. The majority lists restrictions. "Lack of capital" (82.00 percent) and "Lack of proper infrastructure" for fish sun-drying (21.00 percent) were cited as the two main constraints by the respondents (76.00 percent). "Crisis of raw material" has been cited by fish curers as the third most important limitation (70.00 percent). The fish curers do not make enough money selling their dried fish, so the "Low Market Price" constraint was identified as the fourth (62 percent). "Transport

problem" has been the fifth significant constraint since fish curers began their activities in underdeveloped rural coastal areas (54 percent). Because fish curers in the trade are typically underpaid, they must rely on intermediaries. This "middleman's interference" has been identified as the profession's sixth most important constraint (44 percent).

5.2 RECOMMENDATIONS

On the basis of the findings of the present study the following recommendations should be taken:

- The literacy level of dry fish vendors in this district is very low. The fishing villages in the interior part have only primary school and for middle or high school they have to go to the nearby towns either walking or by bus. In many cases it is not possible for the fish vendors to spend on education. This results in dropouts from school and a low literacy level. Nonformal education must be provided in these areas and voluntary social workers can be involved in these programmes.
- Majority of the dry fish vendors of the district in the artisanal sector are living only in thatched houses with no sanitation facilities. The fishing hamlets near the shore are not provided with electricity. This shows that the standard of living of fisher men have not changed. Housing schemes for fishermen, which are now in existence, are not all adequate. Considering the needs of small-scale and poor fishermen, more housing schemes must be implemented. The dry fish vendors household should be provided with proper sanitation, latrines and other essential requirements.
- Fishing being a seasonal occupation with highly fluctuating incomes, the dry fish vendors have little money even to meet their normal food requirements. Hence, fisherman be encouraged in rearing goats, chicken or growing vegetables in their houses, to supplement their family income.

- The seasonal nature of fishing and the risks and uncertainties associated with it, often push the fish vendors into poverty. Alternate employment opportunities are very few and opportunity cost of fisherfolk in general. The most effective step will be generation of employment for fishermen.
- Alternative and supplemented employment opportunities are to be created to overcome the hardship experienced by the fisher people during the ban period.
- Fisher men in this area do save a small amount but mainly through chits. Self-help groups should be encouraged in these villages to tap the saving potentialities of fisherwomen. This will also help them to start any entrepreneurial activity with minimum investment.
- Periodical monitoring of the socio-economic conditions of the marine fisherfolk particularly of fisher men in the area may be undertaken which will help greatly in estimating the success and feasibility of any development programme / scheme drafted for them.
- Fisher men often are suffering from some occupational diseases. For instance, the labourers working in the dry fish preparation are affected with skin problems. Hence, in the primary health centres near the fishing villages, specialist doctors may be appointed which will help the fisher men to get medical help free of cost.
- They should organize themselves an association in an effective manner so that they can maintain their income.
- The price fluctuations affect the dry fish vendors. So, the government should control the price in an effective way.
- The emerging super market culture, increase in fast food hotels and increase in demand for frozen foods is slowly changing the image of fish trade. Proper packing with good advertisement will definitely change the consumer's attitudes towards these products.

- Traditional fishermen and processors should be trained up on improved sun drying, sanitation and public health.
- Fresh fish should be used for drying and rotten fish should be rejected.
- Dried fish should be packaged on the drying racks as soon as the drying is completed.
- Dried fish should be stored in a hygienic cool and dry environment.
- Marketing and related facilities should be improved so that the fishers can get fair prices of their products.
- It is necessary to reduce the no. of intermediaries in supply chain.
- If concerned authority, government takes initiative to help the fishers through developing a direct selling system of dried fish or fish ignoring the all dealers.
- Awareness should be developed and proper training should be ensured for dried fish producers in getting quality dried products.
- It should be completely stopped the use insecticide in fish drying process.
- To shorten the total times. Warehousing time should be reduced, so that finished goods can reach to the ultimate customer as early as possible.
- Improve quickest transportation facilities for fish collection and supporting supply chain.
- A secured place has to be ensured for the producer of dried fish to expand their business like as special zone.
- Government should take necessary steps to expand export of the dried fish to the foreign country.
- Various NGOs provide loan for the helps of fisherman. In the coastal area, NGOs should reduce their interest rate. It will increase the financial solvency of the fisherman as well as the producer.

5.3 CONCLUSION

The dry fish industry in in Therespuram Area of Thoothukudi district does not function in an organised manner. Majority of the fish curers procure raw material from the landing centres where the fishing vessels land every day. The involvement of large number of middlemen and commission agents reduce benefit of the dried fish producers in the study area.

Considering the different observations during the present study area was found to be potential area for fish drying. The result of present study clearly indicates that farmers can make profit from dried fish processing and trading.

A few fish curers earn more profit procuring raw material through fishing in the sea. Some resource poor fish curers make hunt in search of discarded fishes which are often thrown from the trawlers and they collect those to undertake fish drying operation. But they are crippled with many problems especially pecuniary hardship where they come under the grip of middlemen/money lenders. Governments, with their finite resources, cannot solve all these problems.

Local communities will need to take more responsibility for solving local problems. In order to overcome this, however, communities must be empowered and resources provided to make decisions locally and to take actions that meet local opportunities and problems. The assistance and support of government will still be needed to achieve these results, although the role and responsibilities of government will also need to change.

It is also suggested that the schemes like Sethu Samuthuram Canal Project take care of the welfare of the fisher community. This will go a long way to improve not only the socio-economic conditions of the fisher folk but can also give a facelift for the district.

REFERENCES

1. A.G.Leonard S.J. Tamil Nadu Economy, Macmillar India Ltd., New Delhi,2006. p.166.
2. Babaji, Indian Institute of Management, Marine Fish Marketing in India, Vol.VI, Ahamadabad, 1984, pp.176 -179.
3. Balaji, S. 2000. “Environmental issues in coastal zone management of Tamil Nadu, (India)”, Management of problems in coastal area ocean engineering center. 105--113 p.
4. Bavinck, M.R., Chuenpagdee, H. Diallo, Heijden Prander, J.Kooiman, R. Mohan and S.Williams, 2008, “Fishery Governance A guide to better practice”, Delft. Eborn Academic Publishers.
5. Bhavani, V., (BOBP/INF/9), Food and Nutrition Status of Small-Scale Fisherfolk in India’s East Coast, April, 1986, pp.1-19.
6. Chidambaram, K., and Soundrarajan, A., Marine Fish Marketing in Tiruchendur Area in Tamilnadu, Fishing Chimes, 1(12): 1990, pp.43-55.
7. CMFRI 2011. Annual Report 2010-11. Central Marine Fisheries Research Institute, Cochin, 163 pp.
8. Department of Fisheries, Government of Tamil Nadu, Endeavour and Achievements, 2002-2003, Chennai, p.39.
9. Endeavour and Achievement, Fisheries Statistics, Directorate of Tan Nadu State Fisheries, Government of Tamil Nadu, Madras, 1997.
- 10.FAO (2005): Review of the State of World Marine Fishery Resources. FAO Fisheries Technical Paper 457, p2, FAO, Rome.
- 11.FAO Fisheries Department, Circular No.920 FIRM, C920, pp.17-21.
- 12.FAO Fisheries Department, Circular No.920 FIRM, C920, pp.12-14.
- 13.FAO, opcit, p.82.
- 14.FAO, The State of Food and Agriculture, FAO Agricultural Series, NO.37, FAO, Rome (2006), 183 pp. MPEDA, Seafood export earning

- ascend to a new record in 2012-13, MPEDA Newsletter, (2013), 1 (4):5-9.
15. Fishstat, FAO, 2015.
 16. Food and Agriculture Organization (FAO) fisheries – the state of world fisheries and aquaculture, 2008, p-11.
 17. Frederic, W. Belt, Food from the Sea; The Economics and politics of Ocean Fisheries, West views Press, Boulder, Colorado, 1978, P. 176.
 18. Ganesh Kumar, B., Dattaa, K.K., Joshia, P.K., Katihab, P.K., Sureshc, R., Ravisankard, T., Ravindranathe, K., and Muktha Menona, Domestic Fish Marketing in India-Changing.
 19. Ganesh Kumar, B., Ravisankarb, T., Sureshc, R., Ramachandra Bhattad , Deboral Vimalab, D., Kumaranb, M., Mahalakshmib, P., and Sivasakthi Devia, T., Lessons from Innovative Institutions in the Marketing of Fish and Fishery Products in India, Agricultural Economics Research Review, Vol. 23 (Conference Number), 2010, pp 495-504.
 20. George Kent (1987): Fish and Nutrition in India, Food Policy, Vol 12, No. 2, pp 161-171.
 21. Gopalakumar, K., Fishery Technological Research and Extension the Central Institute of Fisheries Technology, Indian Farming, Vol.47, 1997, p.16.
 22. Government of India (2005): Op Cit p 146.
 23. Government of India, Ministry of Information and Broad Casting, India 2000 – A Reference Annual, Publications Division, New Delhi, p.415.
 24. Government of Tamil Nadu, Policy Note on Fishery-2004-05.
 25. <http://www.un.org/depts>
 26. Ibrahim, P, (1992), Fisheries Development in India, Classical Publishing Company, New Delhi.
 27. International Food Policy Research Institute and World Fish (2003): The Future of Fish- Issues and Trends to 2020 Washington, p2.

28. Istiaque Hossain Md. (2009), "Socio-economic condition of fishermen in seasonal floodplain Beals in Rajshahi District, Bangladesh", Research Journal of Social Science, pp.74-81.
29. Jese Verebalavu1, SPC Women in Fisheries Information Bulletin, Vol 20, November 2009, pp.18-22.
30. Kalita, K., and Bhagabati, S.K., Fisheries Education in the State of Assam, Fishing Chimes, 26(10): 2007, pp.108-110.
31. Krishnan, C.K., (2003), "recent trends in mechanization of Malabar fishery sector - An overview", Marine Fisheries. Information Service T&E Service., No.175.
32. Kulkarni Parashar (2005): The Marine Seafood Export Supply Chain in India, International Institute for Sustainable Development, Manitoba, Canada p4.
33. Librero, Mechanisation: Its Impact on Productivity, Cost structure of Profitability of the Philippine Municipal Fishery, Proceedings of the Small-scale Fisheries in Asia SocioEconomic Analysis and Policy, IDRC, Canada, 1985, pp.151-162.
34. Madras Institute of Development Studies, Tamil Nadu Economy – Performance and Issues, Madras 1988, p.162.
35. Mahesh and Joshi, Economics of Fisheries, APH.Publishing Corporation, Dharaganj, New Delhi, 1996, p.44.
36. Marine Products Export Review, MPEDA, Ministry of Commerce Government of India, Cochin, Annual Reports 1990 - 2000.
37. Market Survey, Fish - A Source of Cheap and Nutritious Food", Facts for You, Vol.28, 1997, p.47.
38. Murickan, S.C.J (1991) "Power Structure and Credit System in two marine fishing communities in Kerala", ICSSR Research Abstract Quarterly, Vol.XX, No.3 & 4, July – December, pp. 161-171.

- 39.Nair, M.K.R. Girija, S., Application of Low-Cost Technologies in Fish Processing and Its Prospects as a Vocation for Fisherwomen of Kerala, In Hameed, M.S., Kurup, B.M., (Eds.) Technological Advancement in Fisheries, Publ. No.1, School of Industrial Fishing, Cochin, 1998, pp.478-484.
- 40.Narayana Kumar, R 1998, "Socio-economic analysis of Marine Fishermen in India", Journal of Marine Fishermen Research and Management, Vol.7, No.3, pp.895-906.
- 41.Narayanakumar, R., Ravichand, Y., and Suryaprakasa Rao, V., Fisherwomen's Knowledge, Aptitude and Practice (KAP) – Alternate Income Generating Activities: A Case Study in A.P, Fishing Chimes, 25(4):2005, pp.43-44.
- 42.National Income Statistics, 2009.
- 43.P. Ibrahim, Fisheries Development in India, Classical Publication, New Delhi, 1992, pp. 15-44.
- 44.Patterson, J.K., 2005. "Rapid assessment of status of corals in the Gulf of Mannar after Tsunami assessment report", SDMRI, Tuticorin.
- 45.Perumalsamy, Economic Development of Tamil Nadu, S.Chand and Co.Ltd., New Delhi, 1996, p.102.
- 46.R. Jeyaraman, "Tamil Nadu Newsletters", Fishing Chimes, April, 1998 P. 90.
- 47.Ragupathy Venkatachalam, "Community Management of Fisheries, Is This A Panacea". Research Internship Papers,2004, Centre For Civil Society, New Delhi, 2004, p.2.
- 48.Rajan, J.B (2000), "Credit and Capital Structure of Small-Scale Fishing units in Kerala", Fishing Chimes, Vol.7, No.45, pp.9-11.
- 49.Rama Prasad, M.V., Facts for You, Vol.18, 1998, p.16.
- 50.S.Perumalsamy ,Economic Development of Tamil Nadu, S.Chand and Co.Ltd., New Delhi, 1996, p.104.

- 51.Sam Benet P and Arumugam, G (2001) “New Trends in the Traditional Fisheries at Tuticorin”, CMFRI Bulletin, Vol.58, No.3, pp.155-158.
- 52.Sathiadhas.R, Ramachandran.C, and Aswathy.N., (2010), “Conservation of fisheries resources in India – Economic and livelihoods issues”, CMFRI Bulletin, 63, pp1-8.
- 53.Selvaraj.P., Status of Marine Fisheries of Kanyakumari District, Fishing Chimes 8(1): 1988, pp.72-79.
- 54.Senthilathiban, R and Selvaraj P (1990) “Demand for and supply of marine fisheries finance in Chidambaranar District of Tamil Nadu”, Financing Agriculture, Oct – Dec, pp. 16-19.
- 55.Shyam.S.Salim, Hena Vijayan and Santhya, KM (2010), “Trade-off between Monsoon Trawl ban and the livelihood of trawl labours in Maharastra”, Indian Journal of Marine Fisheries, 57 (2). Pp.67-71.
- 56.Sivakami, S. and Somy Kuriakose 2009. “An appraisal of the marine fisheries of Orissa India”. Asian Fisheries Science., 22 (2): 691-705.
- 57.Srivastava, U.K. and Dholakia B.F-1, Fishery Sector of India, Oxford ai IBH publishing company private Ltd. New Delhi, 1991, p 320.
- 58.Srivastava, U.K. Indepth Case Studies of Tuna Fishing Companies in India, Centre for Management in Agriculture Indian Institute of management, Ahmedabad, 1989. P . p.84.
- 59.Srivastava. U.K. Fishery Sectors of India, Oxford and IBH publishing company private Ltd., New Delhi, 1991. p.1.
- 60.Stobutzki I.C. et al. (2006): 'Key Issues in Coastal Fisheries in South and South East Asia, outcomes of a regional initiative', Fisheries Research, 78, pp I09- I18.
- 61.Tamil Nadu State Fisheries Department (TNFD) (2016). „Marine Fisheries Development“, Pp. 1. Retrieved January 9, 2017 from <http://www.fisheries.tn.gov.in/marine-main.html>
- 62.The Hindu 2008.

63. Trollvik Trine (2002): The Impact of World Trade Organisation Agreements on Fish Trade, FAO Fisheries Circular No. 977, F AO, Rome p 13.
64. www.fao.org/news/story/en/item/150839/icode/dt.13.9.13.
65. www.sipcot.com
66. Zurbrigg, Sheila (1984): Rakku's Story: Structures of health and the Sources of Change, Centre for Social Change. Bangalore.

QUESTIONNAIRE

A STUDY OF PROBLEMS AND PROSPECTS OF DRY FISH VENDORS IN THERESPURAM AREA OF THOOTHUKUDI DISTRICT

1. Name of the respondent :
2. Address :
3. Sex :
4. Age :
5. Level of education :
6. Community :
7. Religion :
8. Size of family :
9. Marital status :
10. Family Type :
11. Housing Type :
12. Earning members per family of the households :
13. Occupational background :
15. Material possession :
16. Monthly personal income :
17. Family income of the households :
18. Monthly family expenditure of the households :
19. Monthly savings of the households :

- 20. Material possession among the respondents :
- 21. Materials Utilized in Fish Drying Activity :
- 22 Daily average sells (kg) :
- 23 Causes for spoilage of dry fish :
- 24. Capital invested :
- 25. Constraints rendered by the fish curers :
- 26. Facing problems during selling :
- 27. Any help from Government? :
- 28. Any Suggestions :

**A STUDY ON PRODUCTION AND WORKERS DETAILS OF BHARATHI
CORRUGATED CARTON INDUSTRY, ARASADI, THOOTHUKUDI DISTRICT**

Project report submitted to

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Thirunelveli

In partial fulfillment for the award of the Degree of

Bachelor of Arts in Economics

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2021-2022

CERTIFICATE


This is to certify that the report of the project entitled 'A STUDY ON PRODUCTION AND WORKERS DETAILS OF BHARATHI CORRUGATED CARTON INDUSTRY, ARASADI, THOOTHUKUDI DISTRICT submitted to ST.MARY'S COLLEGE (AUTONOMOUS), Thoothukudi in partial fulfillment for the award of the Degree of Bachelor of Arts in Economics and is record of work done during the year 2021-2022 by the following students of III B.A. Economics.

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1.1. INTRODUCTION:

India is among the fastest growing economies in the world, sometimes on the cusp of leading the pack that consists of the United States and China. India's export market had for long been a major contributor to its economy, that made it one of the leading exporters worldwide. India's strong diplomatic ties with major countries around the world has allowed for profitable trade over the years. Among the ASEAN countries, Indian exports to Singapore were the largest. The single leading country receiving the largest share of Indian exports, on the other hand, was United States.

India's major exports included petroleum products, gems and jewelry, and drug formulations. Additionally, the value of the various types of machinery India exported was valued at over 29 billion U.S. dollars. Other major exports include spices, tea, coffee, tobacco in agriculture, along with iron and steel. In the IT industry, IT services had the largest export revenue in fiscal year 2019.

The systemic development of infrastructure by successive governments could be one the primary reasons attributed to the progress made by India's economy over the years. Better connectivity directly translates to easier transportation of goods, which in turn makes the task of exporting them simpler. In 2018, India's many airports handled nearly 143 thousand metric tons of freight moving in and out of the country. Despite these developments, India's export market has not been as steady in recent years. Recent months had witnessed a six-year slump in GDP growth with increased unemployment, putting pressure on the ruling government and on the country's economy.

Industrialization, which the industrial revolution has placed at the heart of structural changes, has consistently raised the levels of production and employment, which has led to unprecedented income growth. So promoting the development of the industrial sector can be a key to achieving sustainable development. It is indeed now well established in the growth and development literature that there is as strong relation between the growth of manufacturing output and the growth of GDP.

The impact of industrialization on economic development has been widely studied. All historical examples of success in economic development and catch-up since 1870 have been able to grow and accumulate wealth by investing in their industries. It brings about increased volume and varieties of manufactured goods resulting in increased employment and improved standard of living of the citizens. In the process of economic growth Kaldor (1967) suggested that it is the industrial sector which plays the role of engine of growth, as the potential productivity growth is the highest in this sector. Then industrial sector can power the economy with the right policies, it will transform and sluggish recovery into an economic resurgence.

PACKAGING IN EXPORT:

Many things that are not valued in Brazil, abroad are very important and make a difference between a product standing on the shelf and one that sells. This is the case with packaging. Success in exporting a product depends on the ideal suitability of the packaging. The packaging is like a “business card” of the company and has great relevance in the success of the business. Thus, it is important to know the international consumer, their consumption habits and the legislation of each country, in order to adapt the packaging to the market. An important stage after manufacturing of goods or their procurement is their preparation for shipment which involves packaging and labeling of goods to be exported. Proper packaging and labeling not only makes the final product look attractive but also save a huge amount of money by saving the product from wrong handling the export process.

PACKAGING:

Packaging is the science, art and technology of enclosing or protecting products for distribution, storage, sale, and use. Packaging also refers to the process of designing, evaluating, and producing packages. Packaging can be described as a coordinated system of preparing goods for transport, warehousing, logistics, sale, and end use. Packaging contains, protects, preserves, transports, informs, and sells.

In area terms, corrugated packaging shipments grew by 3% in 2003 to reach 144.4 billion m², rising at an annual rate of 1.8% according to data from the International Corrugated Case Association (ICCA). The ICCA anticipates an acceleration in output growth in the period to 2008, forecasting annual growth of the order of 3.8%

to reach 173.4 billion m², with growth rates rising in all regions with the exception of Oceania.

Asian output of corrugated grew at an annual rate of 5.7% between 2000 and 2003, and expected to accelerate to nearer 6% into the second half of the decade. Much of this growth will be attributable to China. Currently standing at around 13 million tonnes, output is forecast to grow by 7% year on year, driven in part by rising output across a range of consumer products. Elsewhere, Russian corrugated capacity is doubled between 1998 and 2003 to around 1.8 million tonnes, and is set to reach around 2.8 million tonnes by 2007. The industry remains principally in the hands of Russian investors, although a number of western companies have set up shop in the country.

North American corrugated output declined by 1.4% on average between 2000 and 2003. Into 2004, however, there were signs of a recovery in US demand, reported to have grown by around 5% by mid-year, with inventory levels falling back and many plants operating at full capacity.

Table 1.1. Global corrugated production trends and forecasts by region, 2000-08

Million m²	2000	2001	2002	2003	CAGR (%) 2000-2003	2004f	2005f	2008f	CAGR (%) 2003-08
North America	46,974	44,877	45,048	45,067	-1.4	46,548	47,737	50,332	2.2
Europe	37,270	37,514	38,479	39,153	1.7	40,122	41,135	44,419	2.6
Asia	41,220	42,828	45,065	48,638	5.7	52,296	55,702	64,895	5.9
South and Central America	7,493	7,529	7,783	7,438	-0.2	8,086	8,465	9,558	5.1
Africa	1,638	1,644	1,644	1,660	0.4	1,656	1,685	1,776	1.4
Oceania	2,134	2,142	2,225	2,272	2.1	2,318	2,347	2,438	1.4
Total	136,729	135,535	140,244	144,428	1.8	151,026	157,071	173,419	3.8

Source: ICCA

In many countries corrugated packaging is fully integrated into government, business, institutional, industrial, and personal use.

THE PURPOSE OF PACKAGING AND PACKAGE LABELS:

Packaging and package labeling have several objectives

- **Physical protection** – The enclosed in the package may require protection from, among other things, mechanical shock, vibration, electrostatic discharge, compression, temperature etc.
- **Barrier protection** – A barrier to oxygen, water vapor, dust, etc., is often required. Permeation is a critical factor in design. Some packages contain desiccants or oxygen absorbers to help extend shelf life. Modified atmospheres^[20] or controlled atmospheres are also maintained in some food packages. Keeping the contents clean, fresh, sterile^[21] and safe for the duration of the intended shelf life is a primary function. A barrier is also implemented in cases where segregation of two materials prior to end use is required, as in the case of special paints, glues, medical fluids, etc.
- **Containment or agglomeration** – Small objects are typically grouped together in one package for reasons of storage and selling efficiency. For example, a single box of 1000 marbles requires less physical handling than 1000 single marbles. Liquids, powders, and granular materials need containment.
- **Information transmission** – Packages and labels communicate how to use, transport, recycle, or dispose of the package or product. With pharmaceuticals, food, medical, and chemical products, some types of information are required by government legislation. Some packages and labels also are used for track and trace purposes. Most items include their serial and lot numbers on the packaging, and in the case of food products, medicine, and some chemicals the packaging often contains an expiry/best-before date, usually in a shorthand form. Packages may indicate their construction material with a symbol.
- **Marketing** – Packaging and labels can be used by marketers to encourage potential buyers to purchase a product. Package graphic design and

physical design have been important and constantly evolving phenomena for several decades. Marketing communications and graphic design are applied to the surface of the package and often to the point of sale display. Most packaging is designed to reflect the brand's message and identity on the one hand while highlighting the respective product concept on the other hand.

CORRUGATED CARTON:

Corrugated carton is present today in our daily lives. We see it on the market in fruit boxes, in courier delivery trucks, in packages that bring parts or raw materials to industry. Although the omnipresence of this material makes us think that it has existed all our lives, the truth is that it was not invented until the middle of the 19th century and its first use is far from what we know today.

The first corrugated paperboard box was actually somewhat recent, and it was developed in 1817 by a man named Albert Jones in New York city, and he's basically seen as the "father of corrugated board. In the beginning this was used to wrap the bottles and glass chimney lanterns that were used. The original concept behind this was a pleated paper with one singular liner in one sheet. It all began in 1856, in England, when Edward G. Healy and Edward E. Allen patented a process with which they pleated paper, giving it a wavy shape. The objective was to introduce this paper inside the top hats to make them more durable and comfortable to wear. It was not until almost 20 years later that it began to be used more closely to what we know today, the used to protect goods due to its high strength and its ability to absorb shocks. In 1871 Albert L. Jones was the first to use corrugated paper as protective packaging He used it to wrap glass bottles and kerosene lamp chimneys. This material protected them better than fabrics and was much more hygienic and clean than the sawdust with which the boxes were filled to cushion the blows and protect the goods.

By 1874, Oliver Long then used this same concept in order to add another liner sheet, and from there patented the improvements, and this is, of course, the cardboard that's used today. This maintained flexibility and reinforced the paper's damping properties without the waves losing their shape. And, by the early

1900s, the wooden crates and boxes were then replacing the corrugated paper and the shipping cartons that were used too.

The first corrugated boxes were produced in the United states in 1894 by Henry Norris and Robert Thompson. A year later they were sold to well Fargo for shipping purposes. Not only were these cardboard boxes cheaper and lighter than traditional wooden boxes, but they were also easier to store. But despite their countless advantages, these boxes did not win the sympathies of wells Fargo carries who did not trust their strength and robustness.

Finally, experience and their use proved that corrugated cardboard boxes were an ideal packaging due to their characteristics: lightness, versatility, low costs and resistance. Their popularity grew at the beginning of the 20th century and has remained intact to the present day, where they are synonymous with trust and sustainability.

THE HISTORY OF CORRUGATED CARTON:

The term cardboard may refer to a variety of heavy paper like materials including box, corrugated fiberboard, or paperboard mostly used for materials and packaging. These types of boxes don't have a fluted inner later like how corrugated cardboard does. Corrugated shipping containers, however, are a type of cardboard box that uses a per based material; called a flute, with a corrugated medium and one or to of these flat-liner boards. However in today's day and age the corrugated packaging is one of the best solutions for custom packaging materials. In the beginning, this was used for different types of packaging, but nowadays, this is primarily used for retail packaging. The reason behind, is because you can use this for not just packaging, but storing and shipping your products all the way out to warehouses, factories, and the retail stores. They usually can be stacked neatly, so your retailer will have enough stock. It can be used for other types of uses too.

USES OF CORRUGATED CARTON:

There are so many uses for cardboard that it's not even funny. While shipping and packaging is a good way, to begin with this, you can use this to protect

your floor and the ground from paint and other chemicals, for gift packaging by cutting out the tags and then attaching them to the gift with a DIY style to it, displaying different store items in their own way, or through custom printing, and it also is one of the best ways to start a fire. I love to keep cardboard around for my fireplace because it catches easily, and is good when the wood isn't cutting it, or if it's a little bit damp itself. Kids love cardboard too cardboard is a great thing to have for different types of items, including body armor, spaceships, a fort and so much more. This is what's so cool about it, while there are many different uses for cardboard, it can be used for both kids, and adults alike in order to ensure proper playing is happening and you're doing a lot with it.

Cardboard boxes are industrially prefabricated boxes, primarily used for packaging goods and materials and can also be recycled. Specialists in industry seldom use the term cardboard because it does not denote a specific material. The term cardboard may refer to a variety of heavy paper-like materials, including box, corrugated fiberboard or paperboard. The meaning of the term may depend on the locale, contents, construction, and personal choice.

We are currently facing two back-to-back Black Swan events. First, it was the Covid catastrophe. This was followed by the shock of 70% kraft paper hikes. The events have impacted everyone be it big or medium or micro units- in the industry. Corrugated box design is the process of matching design factors for corrugated fiberboard boxes with the functional physical, processing engineers work to meet the performance requirements of a box while controlling total costs throughout the system.

Corrugated board boxes have replaced the wooden and tin containers due to their several advantages for safe transportation of the goods. These are discussed here under:

Food Industry:

In the manufacturing process of corrugated boxes, the glue used to connect the flutes and liners is made from water and starch to avoid contaminating fresh fruits and vegetables. There are many benefits to using corrugated boxes for

shipping food. The most important of the benefits is their safety and resistance to bacterial infection. Various research studies have shown that corrugated boxes keep food fresher longer.

Office Supply and Stationary:

The main concern when shipping or storing office supplies, especially paper, is the possibility of supplies being damaged in transit or while sitting on a shelf. The strength and cushioning of corrugated boxes prevent this from happening and removes the worry of having damaged work materials when they are needed.

E-Commerce:

In the e-commerce industry, boxes serve multiple purposes, the most important of which is an efficient and highly responsive supply chain, a critical part of e-commerce. Corrugated boxes are the backbone of the e-commerce supply chain and have been growing in use over the last two years. A challenge for the e-commerce industry is the shipment of smaller quantities to a growing number of unique and unusual destinations. Corrugated boxes offer the type of security and safety that the e-commerce industry demands.

Textile:

Online shopping has led to a rapid rise in the use of boxes for the shipment of textiles. Billions of dollars are being invested in shipping materials that will guarantee safe, reliable, and damage free delivery. Since customer satisfaction is the key to maintaining and keeping customers, corrugated boxes have become a significant part of the planning for meeting customer demands.

It is estimated that over 50% of customers will return to a company if the textiles they receive are packaged properly. Corrugated boxes make it possible for textile manufacturers to personalize boxes to fit the product and the customer, which ensures repeat customers.

Electronics:

Great care has to be taken when choosing boxes for the shipping of electronics and electronic components. These types of items are fragile and can be damaged easily by not being packed correctly. For this reason, corrugated boxes are used and are supplemented with packing materials for added protection. The

greatest concern is the amount of stress placed on components in the handling of the box. The shock from such stress can damage a circuit or loosen a connection. The cushioning found in a corrugated box alleviates worry and prevents damage ensuring that an electronic product arrives on time in perfect condition.

Healthcare:

Much like the needs of the electronics industry, materials shipped for healthcare needs require the same type of care and concern. Delicate and sensitive medical instruments can be easily damaged by poor packaging and mishandling. In the case of medications, there are several requirements regarding shipping conditions to ensure that they arrive safely. The wide assortment and selection of corrugated boxes makes it possible for pharmaceutical companies to ship their products with confidence knowing that medications are well protected and safe.

Batteries:

Shipping materials for the battery industry have to meet strict guidelines and regulations for safety and legal compliance. The fiberboard used to produce these specially designed boxes follow the established guidelines of the corrugated box industry. Aside from the use of specially produced liners, each battery shipping container has to be clearly marked regarding the contents with appropriate safety guidelines.

Automotive:

The shipping of auto parts requires careful preparation since they come in a wide variety of sizes and shapes. The basic rule is to protect the part to be shipped from harm by providing packing material that is sturdy, able to handle the weight, and cushioned.

The choice of container is highly dependent on the part to be shipped, which can vary from lug nuts to carburetors. Large parts need a box that won't burst or be destroyed by handling. Box manufacturers and part suppliers have charts that offer guidance regarding what type of box to use for certain parts.

Military:

When supplying shipping materials for the military, there are several Mil-Spec regulations that have to be followed. Unlike other industrial applications, the military provides a list of requirements as well as a description of production methods

for producing materials for their use. The first and most obvious requirement for military boxes is that they be sturdy.

Aside from being strong and sturdy, corrugated boxes must be designed to withstand a variety of climatic conditions, which include high humidity, extreme temperature changes, and wet environments. The function of military shipping materials is to offer maximum protection for sensitive and technical instruments as well as meet American Society for Testing and Materials (ASTM) standard D5118.

Publishing:

For publishing companies, the shipping of books, documents, magazines, and other printed material has the major problem of weight since a large amount of printed material can be significantly heavy. Once the problem of weight is resolved, the next concern is moisture, which can severely damage printed matter.

Though the exterior of corrugated boxes is coated with protective finishes, it is important to line the interior of the box with plastic or some form of wrapping material as an extra layer of protection from moisture. The most obvious solution is to use boxes that have a triple thickness of fiberboard.

THE BENEFITS OF USING CORRUGATED CARTON:

After careful study of corrugated carton, it is easy to see how valuable they are as a shipping tool. Their main advantage is their strength and durability even though they are made of molded paper board and glue. Each type of box is designed to perform under a wide variety of conditions from places where it rains constantly to extreme heat. This flexibility is the reason that corrugated boxes are an essential part of world shipping. The benefits of using corrugated carton is given below:

Protection:

The ability of corrugated boxes to keep moisture and bacteria out are part of their protective strength. They serve as a stable cushion and come in sizes that can vary according to the need of the items to be shipped.

Corrugated boxes keep products safe during long-distance transportation, shipping, and handling. The type of corrugated protection can be adjusted for fragile and delicate items using varied thicknesses and sizes.

The wavy fluted medium provides a lightweight layer of protection. Corrugated fiberboard offers excellent protection against the elements as well as the

wear and tear of shipping. The lightweight of corrugated fiberboard makes it a better shipping material than wood or plastic as well as being far less expensive and easier to recycle, which makes it better for the environment and pocketbook.

Customizable:

Though there are standard shapes and sizes of corrugated boxes, they can easily be manufactured to fit any type of circumstances and demands. An additional part of their customization is the ability to have their sides or top and bottom printed with company logos and designs.

Coatings, treatments, and different adhesives can be added as well as flame resistant finishes. Corrugated boxes come in all sizes to be easily folded into different shapes to make a perfect fit.

High-quality custom designs give a product that extra lift to make the product stand out to be recognized. Good quality shipping materials reinforce the values of a company's operation and the power of their brand. By having a well-engineered and creative display on a corrugated box, a company creates a stronger lasting brand identity.

Cost-Effective:

The main reason that corrugated boxes have become so widely used is their cost compared to other forms of containers. Their use does not require increased labor, expensive tooling, or specialized equipment. Once they have met their usefulness, the corrugated fiberboard can be returned for recycling and remanufacturing.

Branding:

Every company is constantly devising methods to make their image and name known. One of the least expensive methods for achieving this goal is by placing your name and brand on a corrugated box, which can have any form, color, design, or configuration. The smallest company can appear to be a major competitor by creating a sophisticated and quality design to put on their shipping boxes. Custom branding impresses customers and presents a professional appearance.

Biodegradable:

The most important feature of corrugated boxes is their ability to be recycled and repurposed. In this age of environmental awareness, every company is striving to

develop a way to protect and sustain the environment. Since over 70% of the material used to produce corrugated boxes is recyclable, corrugated boxes are an essential part of a company's efforts in proving it is environmentally wise. According to governmental regulations, corrugated boxes are assembled using glues and materials that are non-pollutant and ecologically friendly.

Light Weight:

A major factor in any shipping operation is the control of cost, which can be increased by shipping heaving materials in heavy boxes. Since corrugated boxes are lightweight but strong, they are the perfect solution to weight shipping problems. Regardless of their weight, corrugated boxes still have the strength to ensure the safety of any product.

Flexible:

One of the advantages of corrugated fiberboard is its many types that include single, double, and triple walled, which can be produced from a variety of paper types depending on shipping needs. Any product that a manufacturer can produce can be shipped using a corrugated box.

Printing:

Corrugated fiberboard is an inexpensive material for printing company graphics, logos, brand names, and graphics. Included in the production of most fiberboard is a customizable printing process for the application of designs. Custom printing is a vital part of the branding process and is one of the least expensive since it does not require additional advertising cost or an advertising agency. The layer of flute protection and flat surface for printing make corrugated boxes the bridge between marketing and logistics.

The use of corrugated boxes provides companies with the opportunity for creatively developing their professional personalized logistic tool. A well designed and engineered box can be tailored to fit the culture and personality of a business. The extra effort to create a company corrugated box will differentiate a business from its competitors and place a professional image in its market.

Product Safety:

A corrugated box is an insurance policy for products that have to travel long distances through various conditions to make it to market. The flutes and walls

of a corrugated box may be the only defense a product has against the environment and the ill treatment it may receive during shipping. The extra cushioning is protection against shocks, abrasions, vibrations, and being tossed about on a plane, truck, or train.

A side from preventing damage from abuse, corrugated boxes can protect the most fragile products, such as perfume, colon, and chemicals, from exposure to dirt, grim, dust, and bacteria. The fiberboard of a corrugated box serves as a shell casing that ensures the safe delivery of products.

Sustainability:

A major dynamic in modern business is sustainability where you use as much as you need to match what is being resupplied. Corrugated boxes fit easily into the sustainability model since they can be repurposed at the end of their usefulness and be put back into the supply chain. This factor removes the concept of diminishing returns since a company can never run out of corrugated material or boxes.

COVID-19 IMPACT ON THE GLOBAL CORRUGATED CARTON

MARKET:

The COVID-19 pandemic has significantly impacted the aluminum industry worldwide, and it is difficult to ascertain the extent and severity of the impact in the long term. The outbreak of the coronavirus disease resulted in the shutdown of approximately 198,000 active dental hospitals and clinics in the US (data as of August 2020). The packaging industry was adversely impacted due to the recession which prevailed after the outbreak of the pandemic. The unexpected fall and uncertainty in the prices of raw material before and after the COVID-19 pandemic has been a worldwide concern for packaging solution manufacturers. However, there has been a significant increase in e-commerce after the pandemic. E-commerce retail sales are experiencing a significant spike in numbers. The annual growth in e-commerce trade in Europe is expected to be approximately 20%.

GLOBAL RECYCLED STANDARD (GRS):

The GRS is a voluntary international organization that sets standards for third party certification of recycled content as well as social and environmental practices and certain chemical restrictions. The standards from the GRS apply to all aspects of the supply chain and addresses traceability.

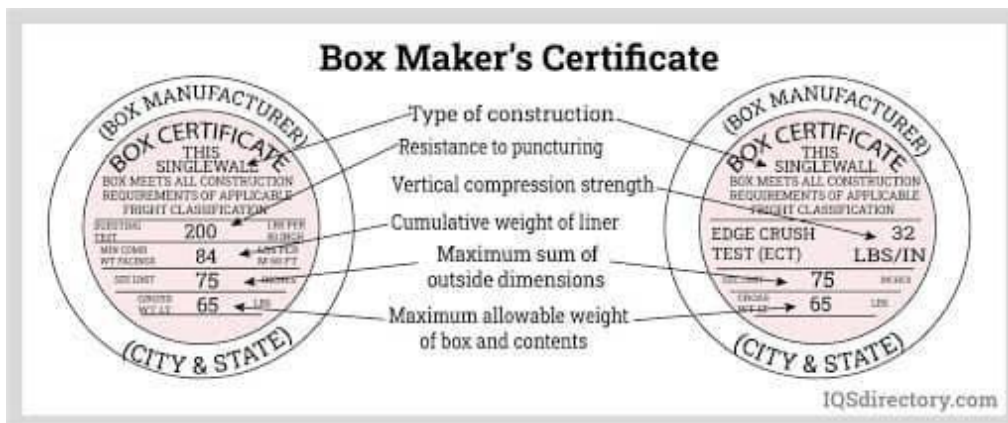
The purpose of the GRS is to help companies verify the recycled content of their products and their social and environmental practices as well as chemical ones regarding their production methods. The goal of the GRS is to clearly define requirements to ensure that content claims are accurate, good working conditions exist, and that harmful conditions and chemical impact is minimized.

CORRUGATED CARTON STANDARDS AND REGULATIONS:

The regulation of box manufacturing falls under the dictates of the Federal Departments of Transportation and Homeland Security. Aside from governmental regulations, the American Society for Testing and Materials (ASTM), the Global Recycle Standards (GRS), and The Joint Commission (TJC) have a set of recommendations regarding corrugated fiberboard. A final aspect of box standards is a box maker's certification.

Box Maker's Certification:

A Box Maker's Certificate is stamped or printed on a box telling the user or freight carrier the requirements that a box meets. It identifies the manufacturer, box specifications, and compliance. The main purpose of the certificate is to indicate the stress a box can endure, which is determined by the types of materials used to make it.



The Box Maker's Certificate identifies the quality and capability of a box and is a good indicator of the ability of the box to protect a product. It includes information about the strength, weight, and box size.

DEPARTMENTS OF TRANSPORTATION AND HOMELAND SECURITY:

The standards for fiberboard boxes is found in 49 CFR § 178.516, which outlines various requirements for corrugated fiberboard.

- Identification code UN 4G, which is an indication of a double walled box designed to ship dangerous materials.
- Construction requirements
- Walls
- Water resistance
- Bending qualities
- Assembly without cracking, breaking of the surface, or unnecessary bending
- Firmly glued

Each of the above factors are further identified with specific descriptions of each.

American Society for Testing and Materials (ASTM):

The purpose of the ASTM is to develop and publish standards for any industry to provide technical guidelines for the development of products. The goal is to ensure proper performance and safety. Listed below are a few of the ASTM standards for corrugated fiberboard from the ASTM website:

D1974 – Standard Practice for Methods of Closing, Sealing and Reinforcing
Fibreboard Boxes

D4727 – Standard Specification for Corrugated and Solid Fibreboard Sheet Stock
(Container Grade) and cut Shapes

D5118 – Standard Practice for Fabrication of Fibreboard Shipping Boxes

D5168 – Standard Practice for Fabrication and Closure of Triple – Wall Corrugated
Fibreboard Containers

D5639 – Standard Practice for Selection of Corrugated Fibreboard Materials and Box
Construction Based on Performance Requirements

D6804 – Standard Guide for Hand Hole Design in Corrugated Boxes

THE JOINT COMMISSION (TJC):

The main focus of the TJC is on health and medical supplies. Part of their mission is the manage cardboard and corrugated boxes and shipping containers using regulations from the Association for the Advancement of Medical Instrumentation. (AAMI). The specific regulation is:

AAMI ST 79 5.2.1 General Considerations:

AAMI ST 79 5.2.1 states that clean and sterile items should be immediately removed from shipping containers once delivered, which is further stipulated in TJC observation IC.02.02.01 EP 4 in regard to the storage of clean and sterile items.

As is indicated, the TJC emphasizes safe, clean and unobstructed handling of medical instruments when they are packaged.

STATEMENT OF THE PROBLEM:

Corrugated Carton industry in India is an agro-based industry which affected by large number of problems in the form of labour, material, machinery and finance. These problems may affect the growth and development of corrugated carton industry. Further it has great opportunities for investment, employment, production, workers, technology, marketing, productivity, profitability and earning more income. Therefore an attempt is made in the study for indicating various problems faced by Bharathi Corrugated Carton Industry in study area of Arasadi and also ample opportunity for future prospects.

OBJECTIVES OF THE STUDY:

The main objective of this research is study of corrugation process for optimum utilization of board. The packaging industry and their customers seek to reduce costs and environmental impact of packaging. The present study objective is thus, focused on

- To trace the origin growth and development of corrugated carton industry at the national and state levels.
- To study about the process of corrugated carton and workers involvement in various stages of corrugated carton process in Arasadi.

- To analyse the investment, output and maintenance details of machinery in Arasadi Corrugated Carton Industry.
- To analyse the socio-economic conditions and income variation of the workers in the corrugated Carton industry.
- To offer suggestion for improving the overall performance of corrugated carton industry based on the finding of the study.

LIMITATIONS:

The researcher was collected first-hand information from the Bharathi Corrugated Carton Industry. The period of study covers five years. 'A study on production performance and workers details of Arasadi Corrugated Carton Industry, Thoothukudi District' from 2015-2016 to 2019-2020. The socio economic conditions of the employees were collected only from 50 employees due to time constraint. The respondents were collected from Bharathi Corrugated Carton Industry in Arasadi.

METHODOLOGY:

The study was undertaken to analyses their Bharathi Corrugated Carton Industry in Arasadi. The analysis purely depends on both primary and secondary data. The primary data was collected from the corrugated box industry employees with the help of specially prepared interview schedule., A sample of 50 employees has been selected on random sampling techniques administered with a pre-designed questionnaire.

The secondary data are collected from the book, journals, magazines, publications, reports, periodicals, articles, research papers, websites and manuals. This collected data classified and analyzed the simple statistical tools like percentage, average and trend line are used in this study.

1.6 CHAPTER SCHEME:

Second chapter deals with the concepts and review of previous studies

CHAPTER- I

The first chapter presents of origin of the Corrugated Carton Industry and given the design of the study. It also consists of introduction, statement of the problem, objective of the study, limitations, methodology and chapter scheme.

CHAPTER – II

Second chapter deals with the concepts and review of previous studies.

CHAPTER –III

The third chapter deals with the profile of the study area of Arasadi, Ottapidaram Block in Thoothukudi district.

CHAPTER – IV

The third chapter deals with the production process of Corrugated Carton Industry in Arasadi.

CHAPTER – V

The fifth chapter analyses the age, work, caste, educational status, working hours, debt details, income and expenditure of the employee, manpower of the industry, various stages of production, investment and units of production of the Corrugated Carton Industry.

CHAPTER – VI

Sixth chapter summarized the findings of the study, suggestions for improving the working of the Bharathi Corrugated Carton Industry and final conclusion of the project.

CHAPTER – II

CONCEPTS

The definitions and explanations of the important terms used for the study are given as under:

Bending: The ability of containerboard or combined board to be folded along scorelines without rupture of the surface fibres to the point of seriously weakening the structure.

Box Manufacturer: An establishment that has equipment to score, slot, print and join corrugated or solid fiberboard sheets into boxes, and that regularly uses that equipment in the production of fibreboard boxes in commercial quantities.

Box Manufacturer's Certificate (BMC): A statement printed in a round or rectangular design on a corrugated box flap that certifies the box conforms to all applicable standards, and identifies its manufacturer. Sometimes referred to as a class stamp or cert stamp.

Box Style: Distinctive configuration of a box design, without regard to size. A name or number identifies styles in common use.

Boxboard: The types of paperboard used to manufacture folding cartons and set up (rigid boxes).

Built-up: Multiple layers of corrugated board glued together to form a pad of desired thickness, normally used for interior packing.

Bulk: Unpackaged goods within a shipping container. Also a large box used to contain a volume of product (eg. "bulk box").

Bundle: A shipping unit of two or more articles or boxes wrapped or fastened together by suitable means.

Cardboard: A thin stiff pasteboard used in the creation of playing cards, signs etc. Terms is often misused to refer to Boxboard (folding cartons) and Containerboard (corrugated boxes).

Case: As used by the packaging industry, a corrugated or solid fibreboard box.

Combined Board: A fabricated sheet assembled from several components such as corrugated or solid fibreboard.

Containerboard: The paperboard components (linerboard, corrugating material and chipboard) used to manufacture corrugated and solid fibreboard. The raw materials used

to make containerboard may be virgin cellulose fibre, recycled fibre or a combination of both.

Corrugated Board, Corrugated Fibreboard: The structure formed by gluing one or more sheets of fluted corrugating medium to one or more flat facings of linerboard.

There are four common types:

- **Single Face:** Combination of one fluted corrugating medium glued to one flat facing of linerboard.
- **Single Well:** Two flat facings of linerboard one glued to each side of a corrugated medium. Also known as Double face.
- **Double Wall:** Three flat facings of linerboard, one glued to each side of two corrugated mediums.
- **Triple Wall:** Four flat facings of linerboard, one glued to each side of three corrugated mediums.

Facings: Sheets of linerboard used as the flat outer members of combined corrugated board. Sometimes called inside and outside liners.

Flaps: Extension of the side wall panels that, when sealed, close the remaining openings of a box. Usually defined by one scoreline and three edges.

Joint: The opposite edges of the blank glued, stapled, wire stitched, or taped together to form a box.

Overlap: A design feature where in the top and or bottom flaps of a box do not butt, but extend one over the other. The amount of overlap is measured from flap edge to flap edge.

Pad: A corrugated or solid fiberboard sheet, or sheet of other authorized material, used for extra protection or for separating tiers or layers of articles when packed for shipment.

Ply: Any of the several layers of linerboard or solid fiberboard.

Set-up Boxes: Boxes that have been squared, with one set of ends flaps sealed, ready to be filled with product. An article that is packed for shipment in a fully assembled or erected form.

Sheet: A rectangle of combined board, untrimmed or trimmed, and sometimes scored across the corrugations when that operation is done on the corrugator. Also, a rectangle of any of the component layers of containerboard, or of paper or a web of paperboard as it is being unwound from the roll.

Slit Scores: Shallow knife cuts made in a box blank to allow its flaps and sides to be floded into a shipping box.

Tube: A sheet of combined boards, scored and folded to a multi-sided form with open ends. It may be an element of a box style or a unit of interior packing that provides protection and compression strength.

Unit: A large group of bundled or unbundled boxes, banded and or stretch flimed together for shipment.

Web: A continuous sheet of paperboard or paper.

Review of Previous Studies:

According to the paper and paperboard packaging market report (2021), the sector of global paper industry was estimated to value USD 199.8 billion and is forecasted to attain USD 254.5 billion by 2026, at a Compound Annual Growth Rate (CAGR) of 5,0% during the term of reference. Such a tremendous growth is driven, among others by a huge demand of paper packaging material in the pharmaceutical, cosmetics, food and beverage industry. Amid the COVID – 19 crisis, consumer habits have changed considerably leading to a strong speedup of e-commerce shipments and other home delivery services, which have impacted the packaging industry by increasing the need for paper and cardboard containers.

Pune, Maharashtra, December 03, 2019 (Wired Release) Prudour Pvt. Ltd. Corrugated Boxes Market Worldwide Industry Analysis 2019 report Manufactures (including global and domestic), Market Suppliers and Vendors, Regions, Corrugated Boxes Product Variants, Product Type, and Application for the forthcoming period. The study offers data on past and current corrugated boxes market trends and development, growth drivers, capacities, technological innovations, and on the changing capital structure. The analysis will help the Corrugated Boxes players to understand the present situation of the market. The Corrugated Boxes market readers will find this report very useful and get a deep understanding of the market. The crucial information regarding the market are gathered from reliable sources such as government websites, yearly reports of the companies various journals, and others and were checked and validated by the Corrugated Boxes industry experts.

Jeremie Viguie Pierren J.J. Dimont Pierre Vacher Isabelle Desloges Evelyne Mauret, (2017), reveals that Corrugated boards with small flutes appear as good alternatives to replace packaging folding boards or plastic materials due their small thickness, possibility of easy recycling and biodegradability. Boxes made up of these materials have to withstand significant compressive loading conditions during transport and storage. In order to evaluate their structural performance the box compression test is the most currently performed experiment.

Przemyslaw Osowski & Tomasz Piatkowski (2017) identified that during packages design the protective properties of cushioning materials have to be known. In a classical design process the cushioning material are described by means of the cushion cures. Allows more accurate dynamic compression curve determination the cushion curve of any quotient h/d and also can improve the design process of packaging, reducing significantly the amount of work put into experimental tests.

Vahid Sohrabpour and Daniel Hellstrom (2011) revealed that total, 18 models and four software programs for corrugated box design are identified in this research. Eight of the models use paper properties for predicting board properties while ten models predict of corrugated box properties. The applicability of the models and software is different for the various supply chain actors. In order to decrease the gap between theory and practice new insights, in the form of propositions toward improving the use and development of models and software for corrugated box design are suggested.

Naganathan and Kirkpatrick (1999) showed that cell air pressure can contribute to the impact response of cardboard. There is a foams. The density of cardboard is typically 5 times higher than the 20 kgm of closed-cell foams which have a comparable compressive strength. Consequently it provides an additional thickness of crushable packaging.

CHAPTER - III

PROFILE OF THE STUDY AREA

3.1 THOOTHUKUDI DISTRICT

Traditionally known as “Pearl City” on account of the prevailing pearl fish in the past in the area. Thoothukudi has a fascinating History. Forming part of the Pandian Kingdom between 7th and 9th Century A.D. Thoothukudi remained in the hands of the Cholas during the period between 9th and 12th Century. Emergence of Thoothukudi as a maritime port attracted travelers, adventures, and eventually colonizers. The Portuguese were the first to arrive in Thoothukudi in 1532 A.D., followed the Dutch in 1658 A.D. The English Captured Thoothukudi from the Dutch in 1782 and the East India Company established their control over Thoothukudi in the same year.

On the 20th October 1986 a new district, carved out of the erstwhile Tirunelveli district was born in Tamil Nadu and named after V.O.Chidambaram great national leader hailing from Ottapidaram who led the Swadeshi Movement in the south. Since 1997 as in the case of other districts of Tamil Nadu, this district has also been named after its headquarters town, Thoothukudi.

Thoothukudi became the citadel of freedom struggle in the early of the 20th century. It was in Thoothukudi that the illustrious patriot, V.O.Chidambaram established the first swadeshi Steam Navigation Company, sailing the first steamer S.S.Gaelia to Thoothukudi on 1st June 1907

The minor port of the Thoothukudi anchorage port with lighter age facilities has had flourished traffic for over a century. The first wooden jetty of this port was commissioned in 1864. This port was begun used for export of salt, cotton yarn, senna leaves, palmyrah stalks, palmyrah fibers, dry, dry fish, country drugs etc. to neighboring countries and for import of coal, cotton, capra, pulses and grains. The minor port of the Thoothukudi holds the distinction of being intermediate port handling the highest traffic tonnage of over 1 million per annum.

The salient features of the district include its lengthy, curvy and scenic seacoast which was and international cynosure in the day of yore for its pearl fishery;

beautiful coastal villages with their sacred temples, churches, and mosques like Tiruchendur, Manappadu, and Kayalpattinam respectively, Adhichanallur, one of the cradles of the ancient civilizations, Korkai, an ancient port of the sangam pandyas, kayal, the confluence of the rivers of Tamilnadu, panchalamkurichi, the capital of veera pandiya kattabomman, an early martyr, for the cause of freedom, ettyapuram, the birth place of the greatest poet Subramanya Bharathi, Ottapidaram the home town of V.O.Chidambaram Pillai, who dared to sail ships as a measure to combat British imperialism; Maniyachi, where Vanchinathan assassinated Ashe, British Collector for this high handedness against the leader during Swadeshi Movement; Kulasekarapattinam and Kurumbur where patriots showed their anger against alien rule, temple towns like Srivaikundam, Meignanapuram, one of the cradles of Christianity, Thoothukudi, besides being a major port, the earliest settlement of the Portuguese and the Dutch, the tall and dense palmyra groves and the bushy Odai trees, the teris and the adjacent coral islands, Idayankudi and Manappadu and the adjacent places which become the headquarters of great missionaries like G.U.Pope, Veeramamunivar, Caldwell and others who, besides their missionary work, contributed a lot for the development of Tamil language and literature and above all the enterprising and hard working people who now constitute a major trading community in the state.

“The Government of Tamilnadu in their G.O.Ms.No.535/Revenue Department date 23.04.1986 have ordered the formation of a new district viz.. Thoothukudi district. Thoothukudi district was inaugurated on 19.10.1986 by the Chief Minister of Tamilnadu started functioning as the 20th district with effect from 20.10.1986 with the headquarters at Tuticorin”. But in 1997, it was changed as the district of Thoothukudi, with Thoothukudi as its centre.

The District covers an extent of 4,621 sq.km in the South-Eastern portion of Tamilnadu and it is rectangular in shape. It is bounded by Virudhunagar and Ramanathapuram districts in the North, Kanyakumari district in South, Gulf of Mannar in the east and Tirunelveli district in the west. The district is roughly triangular in shape between 80-05 and 90-00 of the northern latitude and 77-05 and 78-05 of eastern longitude.

Agriculture:

The main food crop in the district is paddy. Out of the total area of 4,50,954 hectares, 2,11,811 hectares have been brought under the cultivation of different crops,

which work out to 47 per cent of the total area Cumbu, Ragi, Varagu, Samai and commercial crops like cotton, Chilies, Sugarcane, Groundnut and banana.

Irrigation:

The different sources of irrigation are channels, lanks and wells which cover 45,159 hectares in the district. Out of the total area irrigated, well irrigation covers 17,709 hectares, tank irrigation 22,538 hectares and channel irrigation 4,876 hectares for the year 1991-92

Fisheries:

This district is an important coastal district having a vast coastal line of 160km and territorial water covering thousands of hectares Fishing next to agriculture, is an important occupation of the district. Tuticorin is a major fishing center. It is also considered to be the only pearl fishing center in the whole of India. Besides, it is also noted for chunk fishing. Nearly 35000 MT of marine fish are produced per annum.

Mineral Resources:

Gypsum, Ilammanide, Monazide, Hydium, Limestones, Corals from the Islands and phosphate are some of its natural resources.

Forestry:

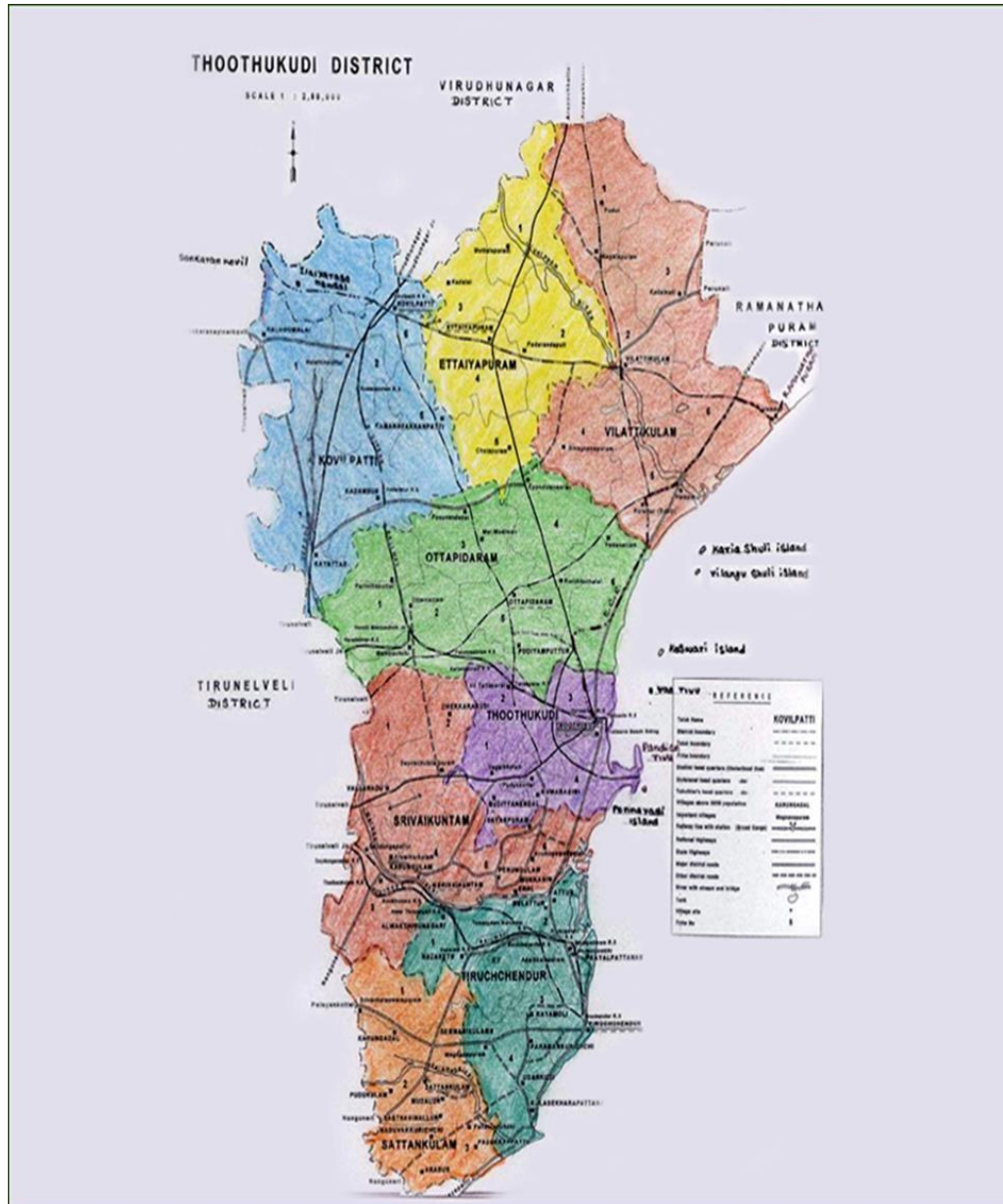
The area under forestry is 12724 hectares which occupies 2.77 per cent of the geographical area.

Industries:

The district constitutes 70 per cent of the total salt production of the state and meets 30 per cent requirement of our country. There are two industrial estates one at Kovilpatti with 11 units and the other at Thoothukudi with 20 units. The former is managed by SIDCO and the latter by SIPCOT. Small scale industries such as match industries, food-based and metal based industries are generally concentrated in Kovilpatti and Thoothukudi taluks. There are 2200 and above small scale industries registered in the district and above 12 major industries. These are engaged in the production of cotton and staple yarn, caustic soda, PVC resin, fertilizers, soda ash, carbon dioxide gas in liquid form etc. The important major industries are SPIC, TAC, Dharangadhara Chemical Works, Loyal Textile Ltd, Madura Coats Ltd., Sterlite Copper Industries, Kilburn Chemicals, Ramesh Flowers, Nila Sea Foods, Deva and Co. and Transworld Granite Industries. The public sector undertakings are the Thoothukudi Thermal Power Station

Unit, Heavy Water Plant (HWP) and Port Trust. The Government is also encouraging unemployed youth and others to start industries by providing financial assistance and technical guidance.

THOOTHUKUDI DISTRICT MAP



PROFILE OF ARASADI VILLAGE

ARASADI POPULATION - THOOTHUKKUDI, TAMIL NADU

Arasadi is a medium size village located in Ottapidaram Taluka of Thoothukudi district, Tamil Nadu with total 485 families residing. The Arasadi village has population of 1841 of which 908 are males while 933 are females as per population census 2011.

In Arasadi village population of children with age 0-6 is 218 which makes up 11.84% of total population of village. Average Sex Ratio of Arasadi village is 1028 which is higher than Tamil Nadu state average of 996. Child Sex Ratio for the Arasadi as per census is 982, higher than Tamil Nadu average of 943.

Arasadi village has lower literacy rate compared to Tamil Nadu. In 2011, literacy rate of Arasadi village was 79.42% compared to 84.94% while female literacy rate was 74.06%.

As per constitution of India and Panchyati Raaj Act, Arasadi village is administrated by Sarpanch (Head of Village) who is elected representative of village.

3.1. POPULATION OF ARASADI

Particulars	Total	Male	Female
Total No. of Houses	485	-	-
Population	1,841	908	933
Child(0-6)	218	110	108
Schedule Caste	790	407	383
Literacy	79.42%	84.96%	74.06%
Total Workers	804	537	267
Main Workers	789	-	-
Marginal	15	6	9

Caste Factor :

In Arasadi village, most of the villagers are from Schedule Caste (SC). Schedule Caste (SC) constitutes 42.91% of total population in Arasadi village. The village Arasadi currently doesn't have any Schedule Tribe (ST) population.

Work Profile:

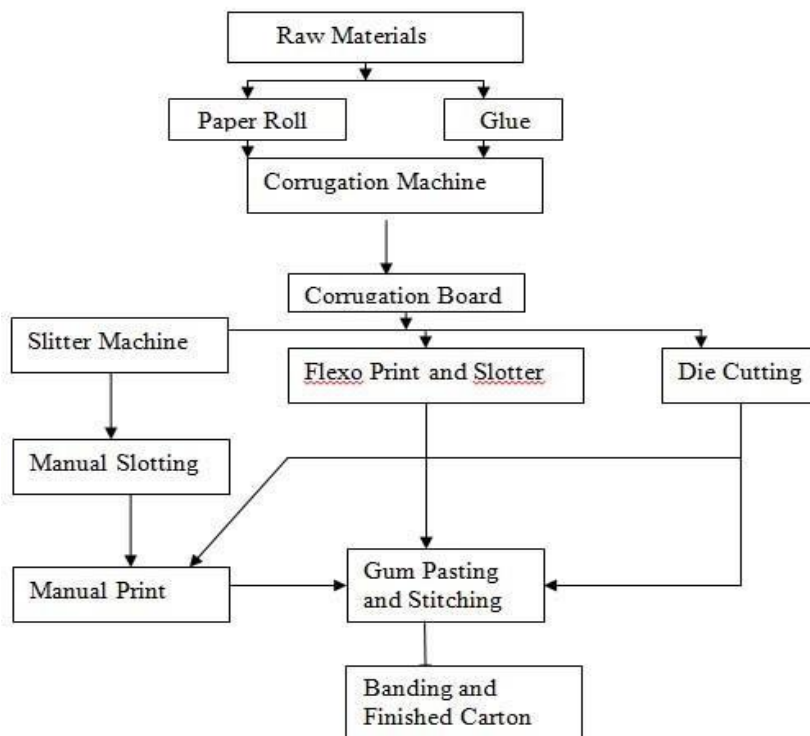
In Arasadi village out of total population, 804 were engaged in work activities. 98.13% of workers describe their work as Main Work (Employment or Earning more than 6 months). 1.87% were involved in Marginal activity providing livelihood for less than 6 months. Of 804 workers engaged in Main Work, 322 were cultivators (owner or co-owner) while 11 were agricultural labourer.

CHAPTER - IV

CORRUGATED CARTON MANUFACTURING PROCESS

Overwhelming demand of the customer forces the manufacturer to manufacture very strong corrugated boxes in order to stand out in the competitive world. The boxes are made up of corrugated paperboard that is different from the rigid paper called as cardboard. The boxes are used to hold things to protect it from damaging and keeping it from leaking. Boxes are printed with important information on them about what is inside or how to carry or move them. It is carefully designed to insert, hold items in place so they won't spill or be damaged. Steps in Box Building Corrugated machine is designed to do continuous process which brings together three, five or seven sheets of paper to form single, double or triple wall corrugated board. Strong boxes can be made from different layers like 3 layers or 5 layers of flutes. The first work is to mix dry corn starch with water and other chemicals and push it into the corrugators to spread on the corrugated medium as the layers of liner are added. A box can be made by the corrugated board on a sequence of connected machines called a corrugating line.

Corrugated Carton Section Flow Chart 1



1. Corrugation:

The corrugators are fed with reels paper as shown in figure. The paper is hardened with heat and steam which is passed between corrugating rolls. This process gives the paper a flute shape (wavy layer) in the single facer. The roll of paper is pulled between a pair of gear like cylinders called corrugating rolls as shown in figure. This forms the paper into a series of particular waves. Glue is applied to the tips of the flutes on one side at the right places and the flute tips are pressed against a flat liner. This creates a corrugated board, i.e., a continuous sheet of flat paper with fluted paper glued to it. The corrugated board is so stiff that it cannot be rolled up; this is cut into flat sheets as per the required size to make the boxes which has been ordered. The corrugated board are then arranged and set aside so the glue can dry properly and after that it is sent to the next process.

2. Printing:

A printing machine is used to print with bright color ink. Use graphic designs for self-supporting display feature like company name, logo, product information etc.

3. Dye- Cutting:

Dye cutting is used to cut or punch out the size and shape of corrugated paper desired.

4. Stitching:

Stitching is used to connect the lap and the end of the sheet of a corrugated container with a metal wire.

5. Gluing:

Gluing is like stitching but resin adhesive is used instead of metal wire. Finally the packed or bundled boxes are ready for dispatch.

Corrugated Box:

A corrugated box is a disposable container whose sides are made up of layers of material that include an inside layer, and outer layer and middle layer. The middle layer, between the outer and inner layers, is fluted which are rigid wave shaped arches that provide cushioning and support for weighted materials placed in a corrugated box.

The common cardboard box has been around for over 200 years. The adding of flutes for corrugation began in the middle of the first industrial revolution. Over the years, since its development, the corrugated box has become the most common form of shipping container and is found in every aspect of material management and transport.

Corrugated Boxes are Made:

Though the construction of a corrugated box may seem to be a simple and easy process, there are various elements that have to be considered prior to beginning manufacturing. As with all manufacturing and shipping equipment, corrugated boxes are designed and engineered to determine what they can hold, how much they can hold, and their strength.

The first steps in box manufacturing is to examine the various elements of the box, which are construction, flute size, burst strength, edge crush strength, flat crush strength, the heaviness of the cardboard sheets, weight of the paper, and types of surface treatments.

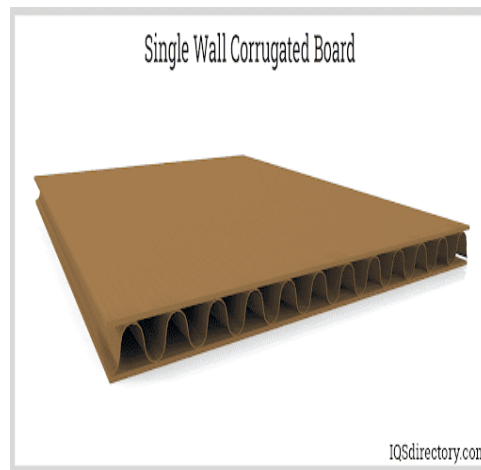
The Important Elements of corrugated Box

Construction

There are three types of walls for a corrugated box, which are single, double or triple walls.

- Single

This is the simplest corrugated wall design and has a single outer layer and inner layer with fluting between the two layers.



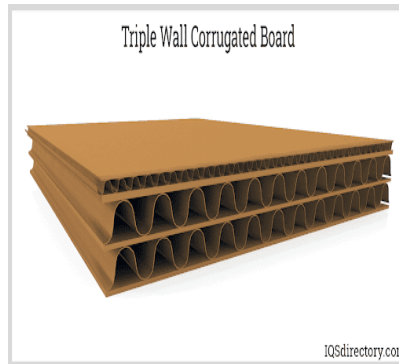
- **Double**

The double wall design adds an additional layer of fluting to produce a box that is capable of handling heavier and larger items.



- **Triple**

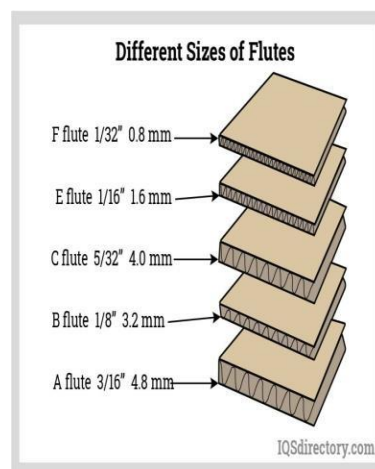
As the name implies, triple wall corrugated boxes have three layers of flutes with each layer having different sized flutes to add stability. The added layers maximize cushioning and compression strength.



Flutes

There are five common types of corrugated flutings, which are A,B,C,E and F. Though these are standard, manufacturers designers can create and construct customized versions, which are combinations of the standard versions or totally unique and unusual designs.

- A- is the original type of flute at 36 flutes per foot and is used for double wall applications and thick corrugated padding.
- B- has the second highest arch size with 49 flutes per foot and has stacking and crush resistance.
- C- most commonly used flute with 41 flutes per foot cushioning, stacking, and printing properties.
- D- Second common flute, environmentally friendly with 90 flutes per foot.
- E- has small, tighter flutes, and is environmentally friendly with 128 flutes per foot.



Aside from the five above flutes styles, there are specialty flutes that are combinations of the above flutes or one, such as D flute, that fall between the regularly used

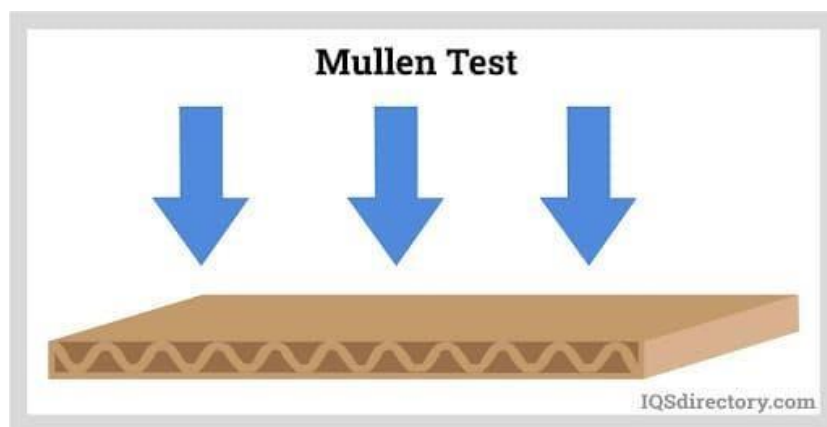
flutes. Other special flutes include EE, EF, and BC, which are used with double wall flute profiles. Flutes such as N and O are rarely used and are extremely small at less than half a millimeter.

Mullen Test (Burst Strength)

The burst strength of a corrugated box refers to the amount of force that is necessary before the material ruptures, cracks, or falls apart. The Mullen Test, which was developed over 130 years ago, applies force to the face of the corrugated material until it bursts. The results of the test are given in pounds with a rating. A box rated at 200# can withstand 200 pounds of force per square inch. The results of the Mullen test offers data regarding the amount of force, per square inch, that is required to burst through the paper on a corrugated box.

The Mullen test is an indicator of how a box will endure its treatment when it is being shipped individually and subjected to the rough handling of assembly operations and mail carriers. As it moves through the multiple distribution channels the contents of the box are more likely to move inside and possibly cause a puncture.

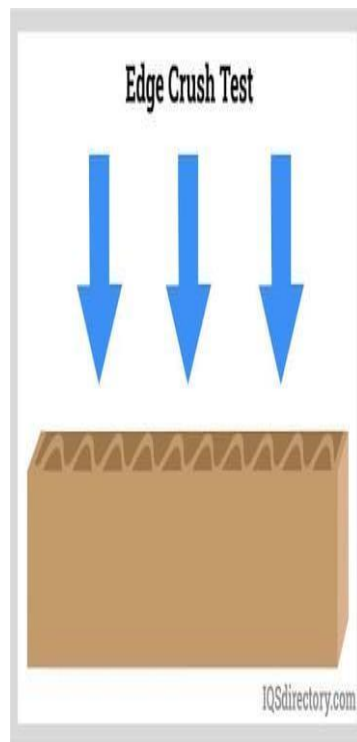
The flaw with the Mullen test is that the fluted medium doesn't add to the bursting strength of the box. This isn't to say the medium isn't important because 50% of the stacking strength of a box comes from the medium. This is where the Edge Crush Test comes in.



Edge Crush Test (ECT)

The ECT test measures the vertical compression strength of a box and serves as an indicator as to how well a box will react to being stacked for shipping or placed on a

pallet. It is a sensible and reliable test to determine how well a box will hold its form during transit and being handled. The ECT test is a “performance-based” property test rather than a “material characteristics” test. The ECT of a box can be influenced by several factors, which include humidity, amount of time a box remains stacked, amount of crush from going through a production machine, and the stacking pattern. A box that tests with an ECT of 55 will be able to withstand 55 lbs of pressure.



Basis Weight

The basis weight is a measurement of the weight of cardboard sheets before being made into boxes and is the weight, in pounds, of a team of paper. Since paper comes in different sizes and widths, the basis weight can vary and must be calculated by measuring and weighing a piece of paper.

Paper Weight

The weight of cardboard is dependent on how thick the cardboard paper is. The weight of the paper to make the sheets of corrugation is measured in pounds, which can vary from 26 lbs. to 42 lbs.

Coatings

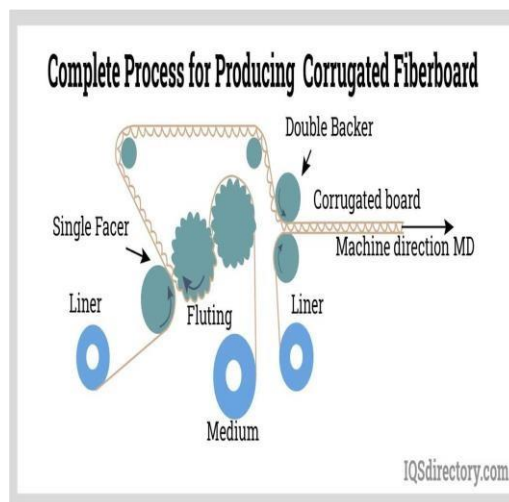
During the production of corrugated boxes, coatings and finishes are applied to protect the stability of the box and give it a certain appearance. There are two basic types of coatings, which are aqueous and UV.

Aqueous

Aqueous is a clear fast drying coating that services as protection for the surface of a box. It can be high gloss or matt and protects against wear and dirt.

Ultraviolet (UV)

Ultraviolet is cured under ultraviolet light and is resistant to scratches and scuffs. It is more expensive than aqueous coating but lasts longer and is sturdier.



The single faced web leaves the single facer and moves on to the \double glue unit and double backer. To produce a double wall corrugated paper, two single face webs are fed into the unit as well as the liner. In the double glue unit, the exposed flute tips have glue applied to connect the outside liner. During the process, the liner and fluted single face web are constantly heated at controlled and monitored temperatures to cure the glue and ensure a secure bond.

After leaving the double backer, the corrugated board is pulled through the dryer, scored, and cut to the required lengths.

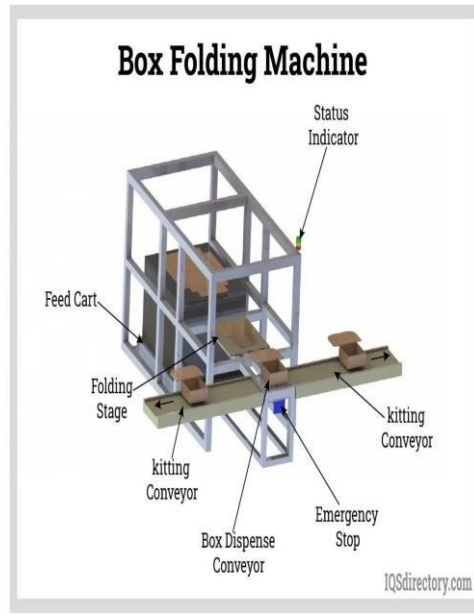


The various lengths of board are stacked to be fed into the box printing and creation equipment. Depending on the types of box, they are printed with logos, designs, and an assortment of colors.

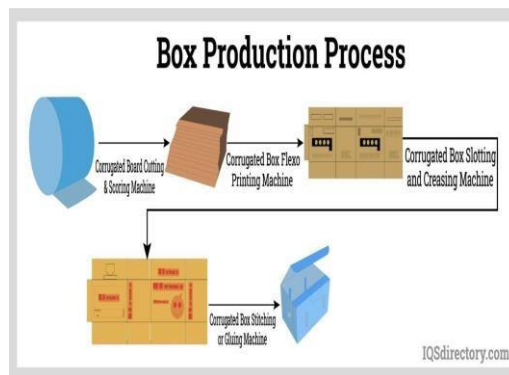
Corrugated Boxes Folding:

The scored, printed, and cut corrugated boards are fed into a trimmer that perforates the boards to create flaps and handles. This process can complete many as 90 boxes per minute.

Once the boxes have been sufficiently formed and trimmed, they are sent on to the folding machine that bends the box along the score lines and applies glue to the sections that will be joined together to complete the forming of the box.



The complete process from the cutting of the corrugated board to the printing, slotting, and shaping of the box can be seen in the diagram below.



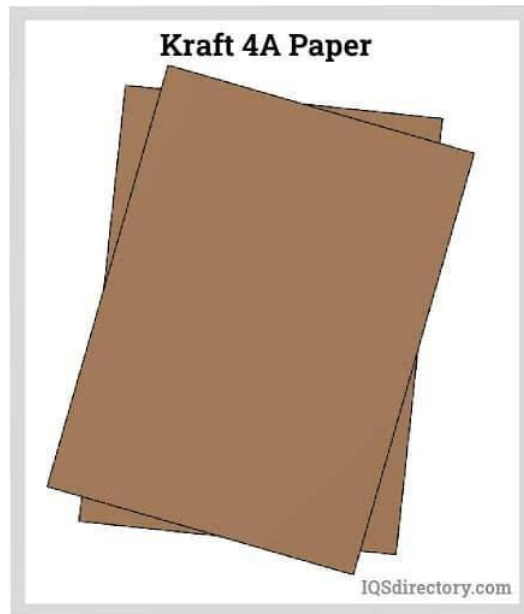
Types of Paper Used to Make Corrugated Fiberboard:

Though the thickness of fiberboard is important in determining its strength, a key defining feature is the type of paper used for lines and flutes. The types of paper used for the liners of corrugated fiberboard are kraft test 2 and 3, chip, bleached white, white top, mottled kraft, oyster, semi chem and waste based.

Kraft Paper

Kraft paper or paperboard is produced using the Kraft process. It has high tear resistance, is very durable, and free of lignin, which is a bonding agent in wood that is dissolved in the kraft process by sodium sulphate. The lack of add to the strength of the

paper. Kraft paper is made from softwood pulp that has long fibres that increases the strength of the paper.



Bleached White Kraft Paper

For the creation of bleached white paper, kraft paper is put through a process that involves the use of bleach and assorted chemicals, which whitens and purifies the natural kraft pulp.

The purpose of the process is to strengthen the paper, which makes it useful for packaging heavier products. Kraft bleached white paper is known for its rigidity, strength and durability.

Test 2 and 3 Paper Liner

Test 2 paper liner is made of partly recycled paper and is very much like Kraft paper with the exception of its burst strength. Since it does not have sufficient burst strength it is normally used as an outside liner where puncture and water resistance are not essential.

Test 3 paper is fully recycled paper. It has a double layer and is referred to as duplex. Since it is not virgin stock, it is not as strong as Kraft paper and is normally used as an inside line.

Test liners are not as strong as Kraft liner because of their high content of recycled materials. It is not possible to have a single description of test liners since they are divided into different classes which change depending on their country of origin.

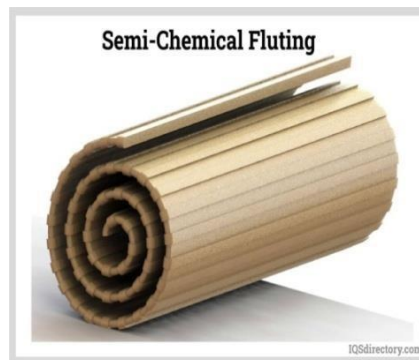
Chip Liner

Chip liners are made of uncontrolled recycled materials, which means they are of lower quality and do not perform as well as other liners.

Semi- Chemical Flute

Semi-Chemical fluting produced from hardwood that has short fibres. The lignin is only slightly removed from this type of paper pulp, which produces very dense and high compression strength paper.

When the semi-chemical paper passes through a corrugators, the heat in the process creates rigid fibres as the material cools making it crush resistant.



Waste Based Flute Medium

Fluting is normally produced using waste based fluting medium due to its enhanced properties. It is made from 100% waste based material, which has been chemically enhanced and reinforced with starch. The starch additive in waste based fluting takes the place of natural lignin found in the pulp from hard and soft woods. Waste based fluting medium grew out of environmental concerns and the need to recycle waste materials. The majority of fluting material used in manufacturing of corrugated fibreboard is waste based.

CHAPTER- V

ANALYSIS OF DATA AND INTERPRETATION

This chapter deals with Production performance of Bhararathi Corrugated Carton Industry in Arasadi, Thoothukudi district. The data collected are analyzed and tabulated for easy understanding and good presentation. Tables, percentage, average, trendline and diagrams assist to analyze the data efficiently.

TABLE 5.1.GENDER DETAILS OF THE WORKERS

Sex	No. of workers	Percentage
Male	10	20
Female	40	80
Total	50	100

Source: Primary Data

The above table reveals that 80% of the workers are female and remaining 20% of the sample workers are male.

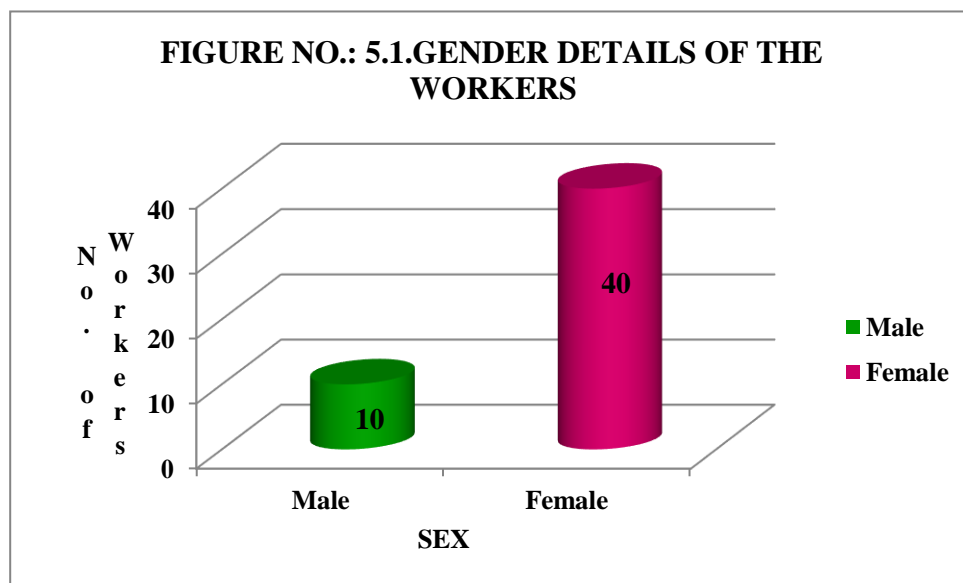


TABLE: 5.2.AGEWISE CLASSIFICATION OF THE WORKERS

S.No	Age group of workers	No of workers	Percentage
1	10 - 20	02	04
2	20 - 30	09	18
3	30 - 40	19	38
4	40 - 50	14	28
5	50 - 60	06	12
Total		50	100

Source: Primary Data

Table 5.2 indicates that 38% of the workers are belongs to the age group 30 – 40 years. Among the workers 28% were in the age group of 40 – 50. 18% of workers are belongs to the age group of 20 – 30. 12% of the workers are 50 – 60 age group and remaining 04 % of workers are in the age group of 10 – 20.

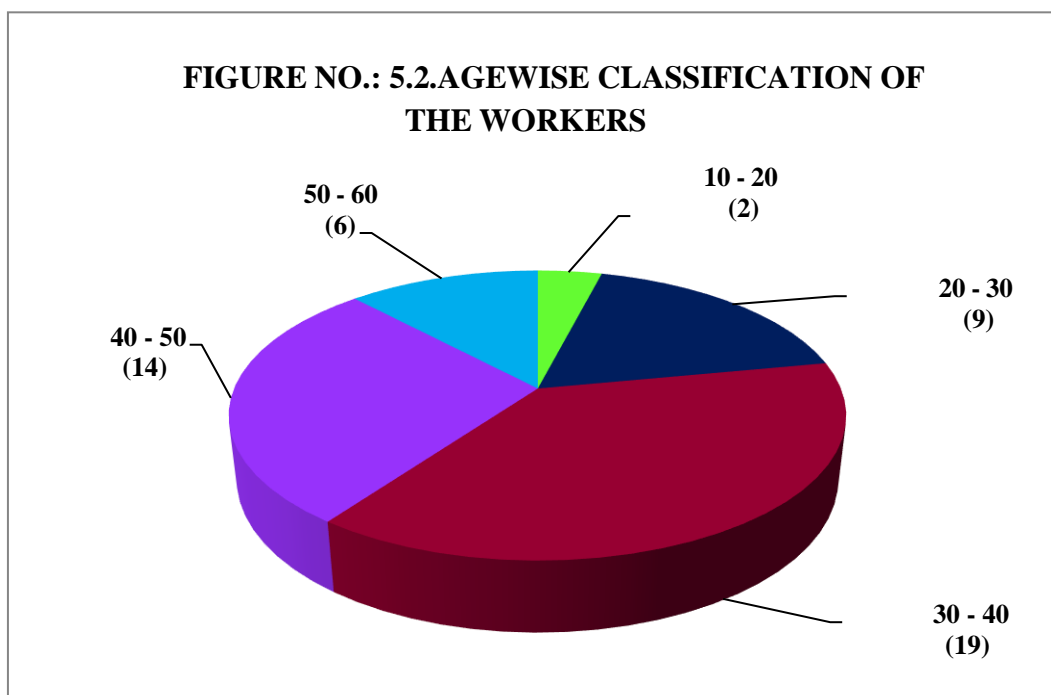


TABLE: 5.3.CASTE-WISE DISTRIBUTION OF THE WORKERS

S.No	Caste	No. of Worker	Percentage
1	B.C	21	42
2	S.C	22	44
3	M.B.C	05	10
4	S.T	02	04
Total		50	100

Source: Primary Data

The above table 5.3 shows that 44% of the workers are schedule caste. 42% of them are belonging to backward. 10% of the workers are most backward class and remaining 04% of the workers are schedule caste.

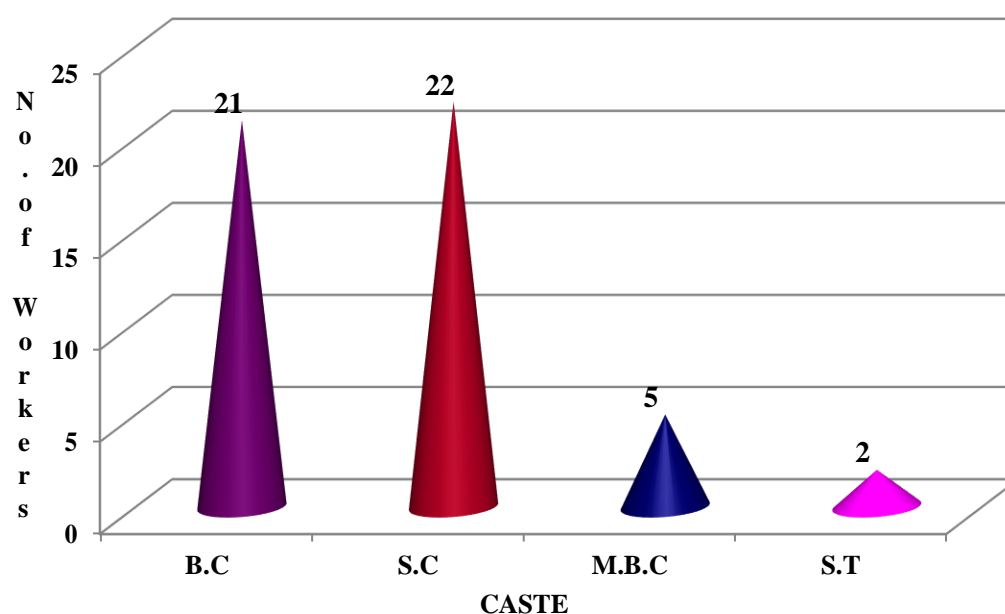
FIGURE NO.; 5.3. CASTE-WISE DISTRIBUTION OF THE WORKERS

TABLE 5.4 RELIGION-WISE DISTRIBUTION OF THE WORKERS

S.No	Religion	No of workers	Percentage
1	Hindu	41	82
2	Christian	08	16
3	Muslim	01	02
Total		50	100

Source: Primary Data

From the above table 5.4 it is inferred that 82% of the workers are Hindus. 16% of the workers are Christians and remaining 2% of the workers are Muslim, which shows that majority of the sample respondents are Hindus.

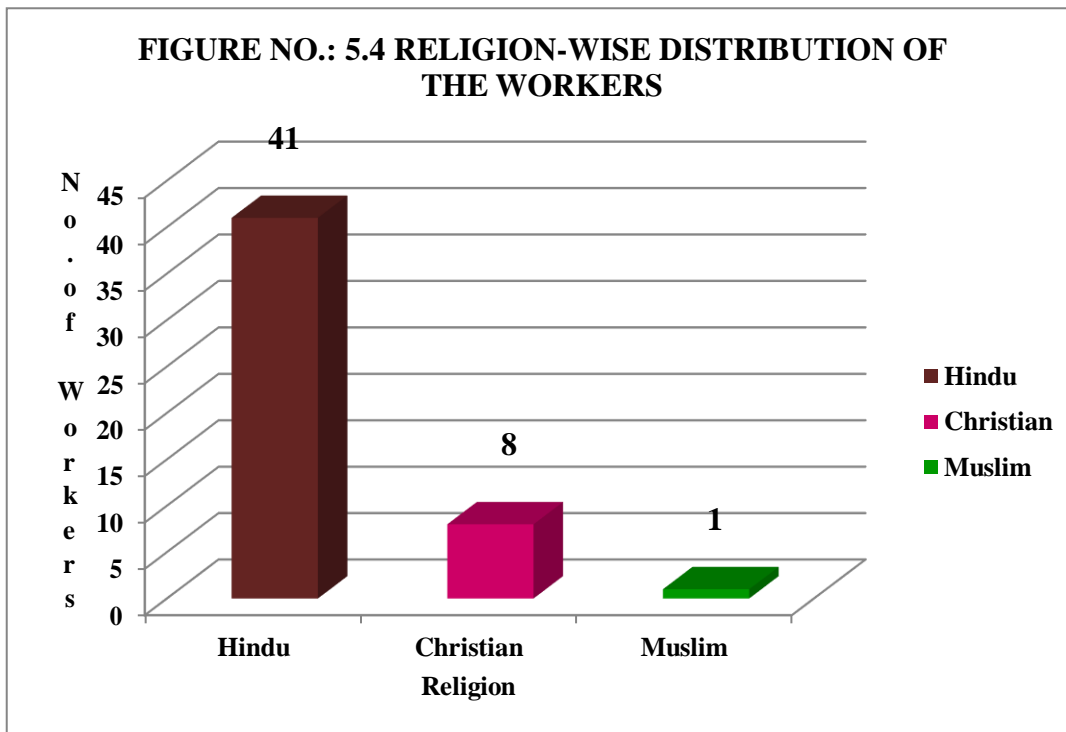


TABLE 5.5 MARITAL STATUS OF THE WORKERS

S.No	Marital Status	No. of Workers	Percentage
1	Married	40	80
2	Unmarried	10	20
Total		50	100

Source: Primary Data

From the table exhibits that out of 50 workers, about 80% were married and remaining 20% were unmarried.

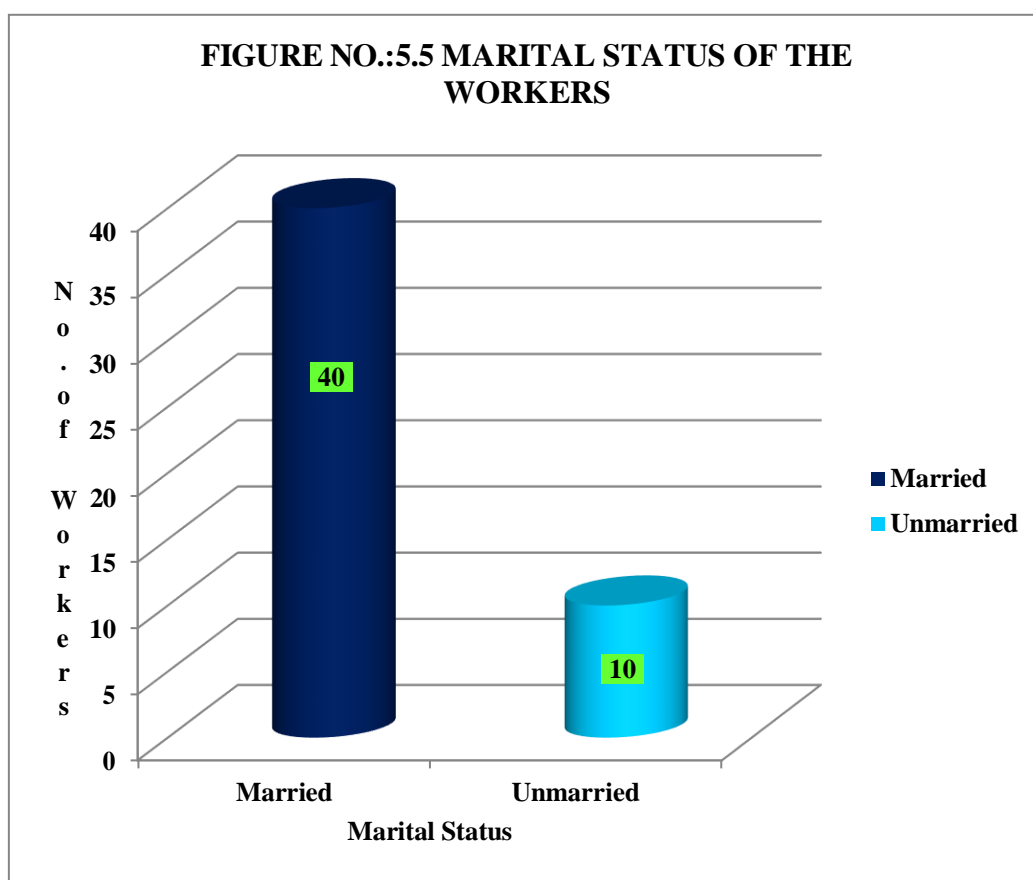


TABLE: 5.6. FAMILY SIZE OF THE WORKERS

S.No.	Family Size	No. of Workers	Percentage
1	Low (2-4)	16	32
2	Medium (4-6)	24	48
3	Large (6-8)	10	20
Total		50	100

Source: Primary Data

From the table 5.6 exhibits that, 48% of the workers have the family members between 4-6. 32% of the workers have the family size between 2-4 and remaining 20% of the workers have the family size between 6-8 members.

FIGURE NO.:5.6. FAMILY SIZE OF THE WORKERS

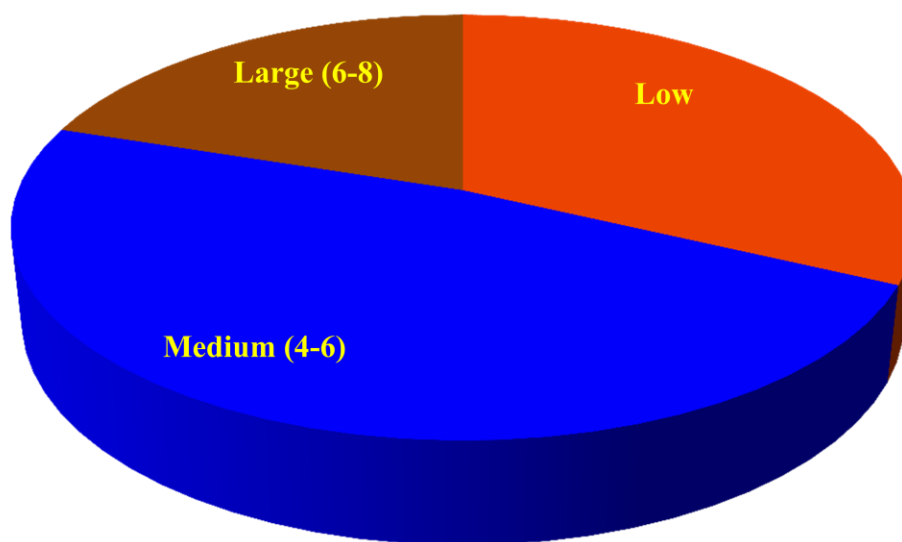


TABLE: 5.7 RESIDENTIAL POSITION OF THE WORKERS

S.No.	Residential Position	No. ofworkers	Percentage
1	Owned House	30	60
2	Rented House	20	40
Total		50	100

Source: Primary Data

In the present study, about 60% of the workers are living in their owned house and 40% of the workers are living rented house.

FIGURE: 5.7 RESIDENTIAL POSITION OF THE WORKERS

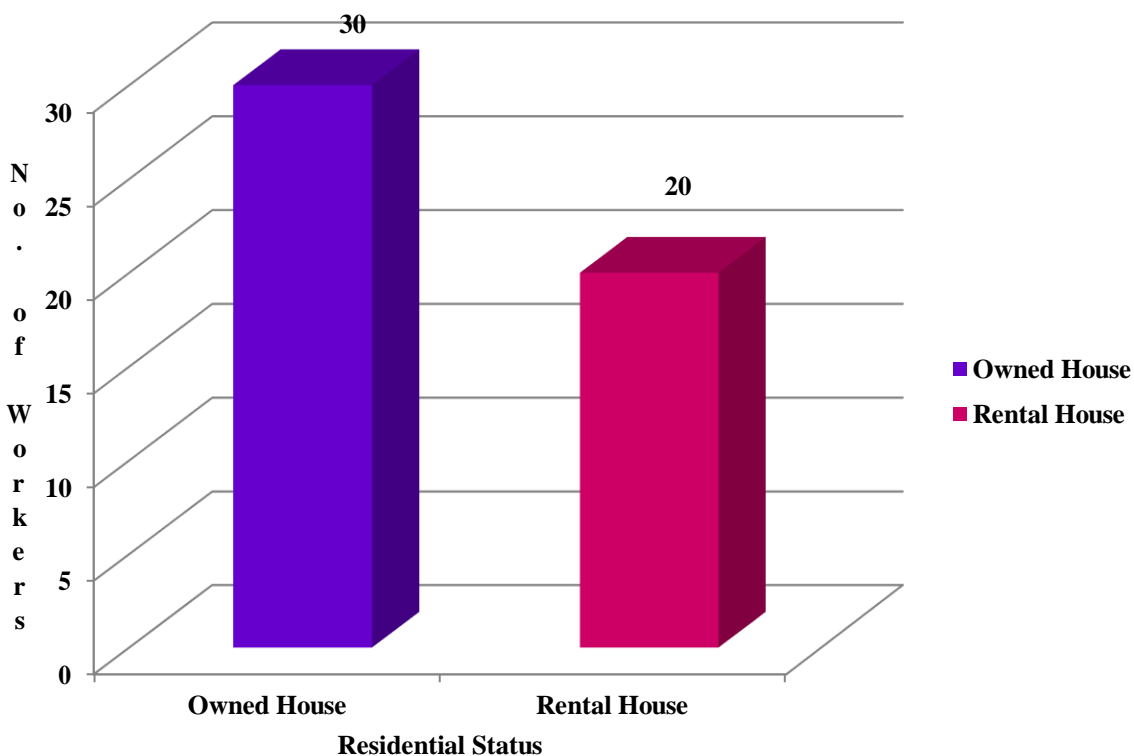


TABLE 5.8 EDUCATIONAL QUALIFICATION OF THE WORKERS

S.No	Educational Qualification	No of Workers	Percentage
1.	Illiterate	11	22
2.	Primary	19	38
3.	Secondary	09	18
4.	Graduate	11	22
Total		50	100

Source: Primary Data

Corrugated Carton industry workers are classified according to their education in table 5.8. 38% of them got primary education. Though 22% of the workers were completed graduation. 22% of the workers were illiterate and remaining 18% were completed their secondary education.

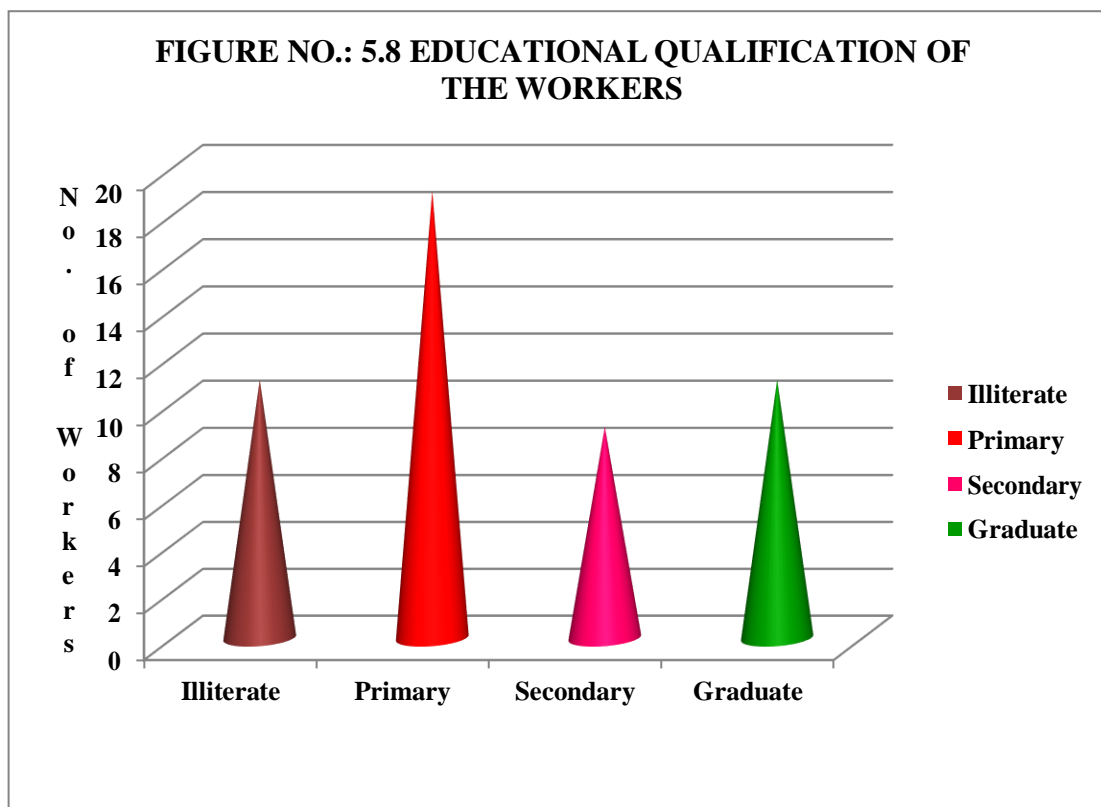


TABLE 5.9 WORKERS INVOLVEMENT IN VARIOUS STAGES

Stages of Work	Category of Labour		Total
	Male	Female	
Auto Plant	06	-	06
Cutting Line	-	10	10
Printing	04	04	08
Dye- Cut	-	06	06
Stitching & Gluing	-	13	13
Punching	-	07	07
Total	10	40	50

Source: Primary Data

Table no. 5.9 indicated the various stages of workers participation in corrugated carton process. There are six stages in carton process. In the first stage of Auto plant, there are six male workers involves, 10 female workers are participated in the second stage of cutting line. In the stage of printing there are 4 male and 4 female workers involved. Only 6 workers are participated in the fourth stage of dye- cut. In the stage of stitching & Gluing, there are 13 female workers working and 7 female workers involved in the last stage of punching.

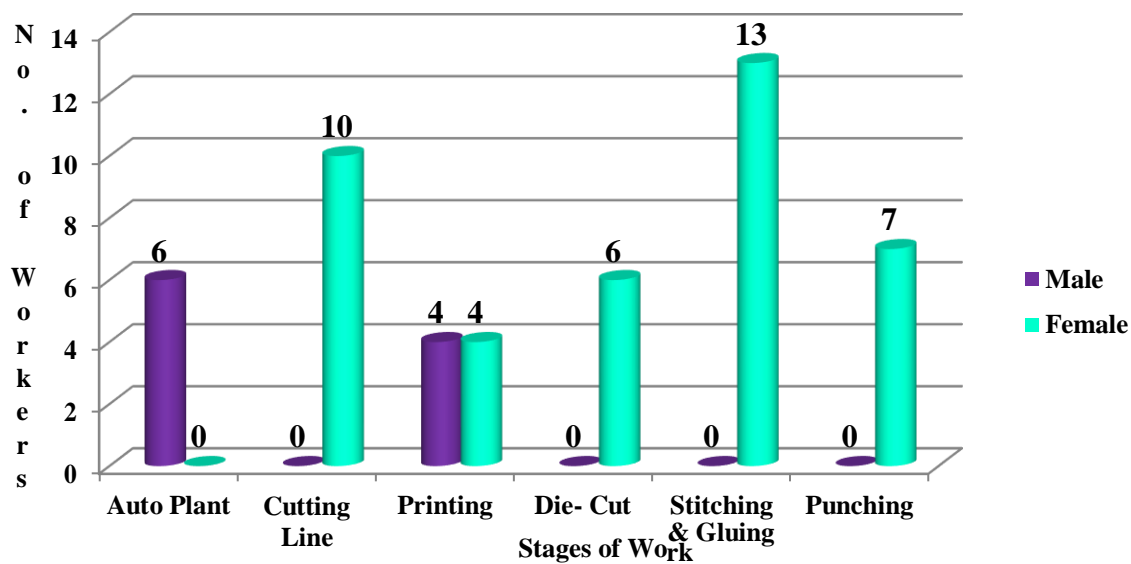
Figure No: 5.9 WORKERS INVOLVEMENT IN VARIOUS STAGES

TABLE 5.10 MONTHLY INCOME OF THE FEMALE WORKERS

S.No	Income (In Rs)	No of Workers	Percentage
1	4000 - 6000	12	30
2	6,000 - 8,000	16	40
3	8,000 -10,000	11	28
4	10,000 – 12,000	1	2
Total		40	100

Source: Primary Data

Above table reveals that 40% (16 workers) of the female workers have income between Rs. 6,000 – 8000. 30% (12 worker) of the female workers have income between Rs. 4,000 – 6,000. 28% (11 workers) of the female workers have income between Rs. 8,000 – 10,000 and only one worker have income between Rs. 10,000 – 12,000.

To find out the monthly average income of the female workers, the following formula is used.

$$\text{Arithmetic Mean} = \bar{X} = \frac{\sum fm}{N}$$

$$\sum fm = 2,82,000; N = 40$$

$$\bar{X} = 7,050$$

**TABLE: 5.11 AVERAGE MONTHLY INCOME OF FEMALE
WORKERS**

INCOME (In Rs.)	MID- POINTS(M)	NO OF WORKERS (F)	FM
4000 - 6000	5000	12	60,000
6,000 - 8,000	7000	16	1,12,000
8,000 -10,000	9000	11	99,000
10,000 – 12,000	11000	01	11,000
Total		40	2,82,000

From the above analyses, the average monthly income of female workers of the corrugated carton industry is **Rs: 7, 050/-**

TABLE 5.12 MONTHLY INCOME OF THE MALE WORKERS

S.No	Income (In Rs.)	No of Workers	Percentage
1	4,000 – 8,000	02	20
2	8,000 – 12,000	03	30
3	12,000 – 16,000	03	30
4	16,000 – 20,000	02	20
Total		10	100

Source: Primary Data

Above table found that 30% (3 workers) of the male workers have incomes between Rs. 12,000 – 16,000. 30% (3 workers) of the workers have income between Rs 8,000 – 12,000. 20% (2 workers) of the workers have income between Rs 16,000 – 20,000 and remaining 20% (2 workers) of the workers have income between Rs.4,000 – 8,000.

To find out the average monthly income of the male workers, the following formula is used.

$$\text{Arithmetic Mean} = \bar{X} = \frac{\sum fm}{N}$$

TABLE:5.13 AVERAGE MONTHLY INCOME OF MALE WORKERS

INCOME	MID- POINT(M)	NO OF WORKERS (F)	FM
4,000 – 8,000	6,000	02	12,000
8,000 – 12,000	10,000	03	30,000
12,000 – 16,000	14,000	02	28,000
16,000 – 20,000	18,000	03	54,000
Total		10	1,24,000

Source: Primary Data

From the above analyses, the average monthly income of male workers is **Rs: 12,400**

TABLE 5.14 MONTHLY EXPENDITURE OF THE FEMALE WORKERS

S.No	Expenditure	No of Workers	Percentage
1	1000 – 3000	27	68
2	3000 – 5000	09	22
3	5000 – 7000	02	05
4	7000 – 9000	02	05
Total		40	100

Source: Primary Data

Table 5.14 inferred that 27 female workers of the Corrugated Carton Industry families' yearly income spends to the range from Rs.1, 000 – Rs.3, 000. 9 female workers were spending Rs.3000 – Rs.5, 000. 2 workers of the industry families yearly income spends to the range from Rs. 5000 – 7000 and remaining two female workers were spend their income between the range of Rs.7, 000 to Rs. 9,000. The researcher is calculating average yearly necessary expenditure of the female workers.

To find out the monthly average expenditure of the female workers, the following formula is used.

$$\text{Arithmetic Mean} = X = \frac{\sum fm}{N}$$

Table: 5.15 AVERAGE MONTHLY EXPENDITURE OF THE FEMALE WORKERS

Expenditure	Mid - Values(M)	No. of Workers(F)	FM
1000 - 3000	2000	27	54,000
3000 - 5000	4000	09	36,000
5000 - 7000	6000	02	12,000
7000 - 9000	8000	02	16,000
Total		40	1,38,000

Source: Primary Data

From the above analyses, the average monthly expenditure of female workers of the coir industry is **Rs: 3,450/-**

TABLE 5.16 MONTHLY EXPENDITURE OF THE MALE WORKERS

S.No	Expenditure	No. of Workers	Percentage
1	1000 – 3000	05	50
2	3000 – 5000	03	30
3	5000 – 7000	01	10
4	7000 – 9000	01	10
Total		10	100

Source: Primary Data

Table 5.16 analyses that 50% (5workers) of the male workers families' yearly income spends to the range from Rs.1, 000 – Rs.3, 000. 3 workers (30%) were spending their income between Rs.3000 – Rs.5, 000. Only one worker (10%) family spends their income between the range of Rs.5, 000- Rs.7, 000 and remaining 10% (1 worker) of the male worker family yearly income spends to the range from Rs. Rs.7000 – Rs.9000. The researcher is calculating average yearly necessary expenditure of the male workers.

To find out the monthly average expenditure of the male workers, the following formula is used.

$$\text{Arithmetic Mean} = X = \frac{\sum fm}{N}$$

Table: 5.17.AVERAGE MONTHLY EXPENDITURE OF THE MALE WORKERS

S.No	Expenditure	Mid -values (X)	No.of male workers (F)	FX
1	1000 – 3000	2,000	05	10,000
2	3000 – 5000	4,000	03	12,000
3	5000 – 7000	6,000	01	6,000
4	7000 – 9000	8,000	01	8,000
Total			10	36,000

From the above analyses, the average monthly expenditure of male workers of the Corrugated Carton Industry is **Rs: 3,600/-**

TABLE 5.18 AMOUNTS SPENT FOR REPAIR AND MAINTENANCE

Year	Amount (IN RS:)
2015 – 2016	1,44,000
2016 – 2017	1,20,000
2017 – 2018	1,68,000
2018 – 2019	1,56,000
2019 – 2020	1,46,000

Source: Primary Data

In the above table 5.18 reveals that the repair and maintenance expenses of the corrugated carton industry. In the year 2017 – 2018 the industry has spends 1,68,000. The repair expenses of the industry was Rs. 1,56,000 in the year 2018 – 2019. In the year 2016 – 2017 the expenses was Rs. 1,20,000.

**FIGURE NO 5.10
AMOUNTS SPENT FOR REPAIR AND MAINTENANCE**

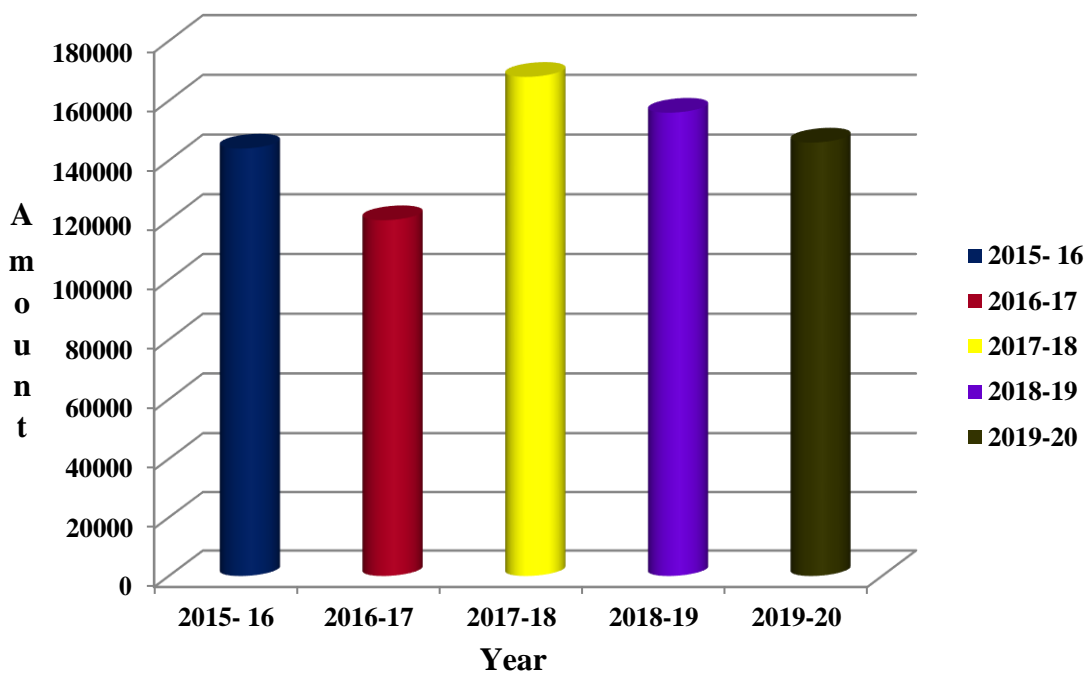


TABLE: 5.19. DEBT AMOUNT OF THE WORKERS

Debt Amount	No of Workers	Percentage
1000-4000	18	36
4000-8000	16	32
8000-12000	08	16
12000-16000	02	4
16000-20000	06	12
Total	50	100

Source: Primary Data

Table 5.19. inferred that 36 percent of the workers of the carton industry are having their debt between Rs: 1000-4000, 32 percent of the carton workers are having their debt between Rs: 4000 - 8000, 16 percent of the carton workers are having their debt between Rs: 8000- 12000, 12 percent of the workers are having their debt between Rs.: 16000- 20000 and remaining 4 percent of the workers are having their debt between Rs: 12000-16000.

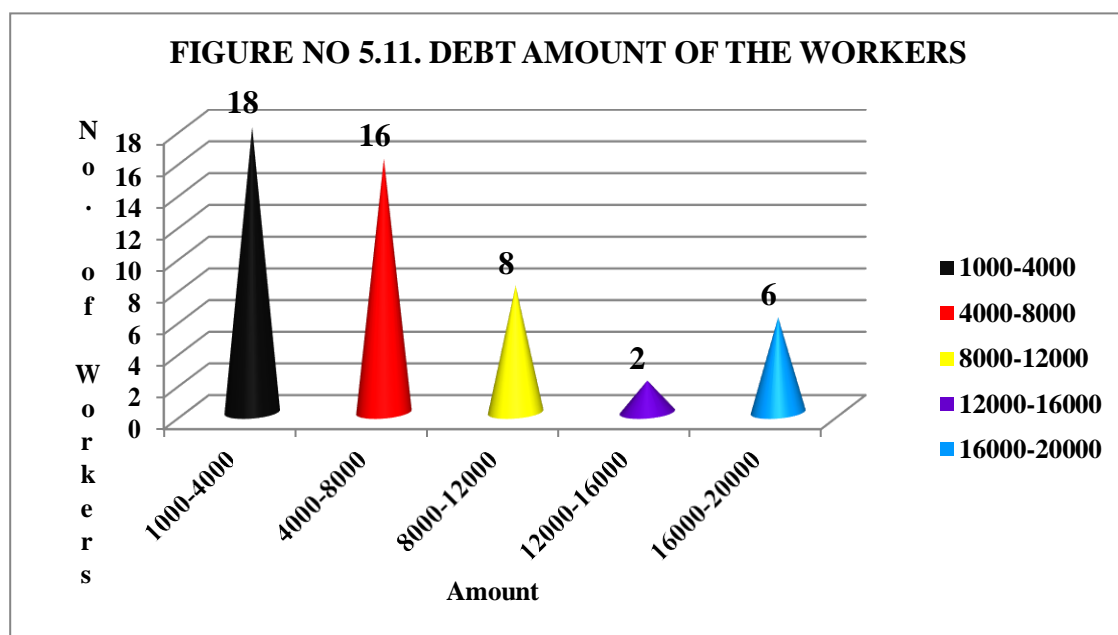


TABLE No.5.20: INVESTMENT OF THE CORRUGATED CARTON INDUSTRY

Year	Investment (In Rs.)	Increase/ Decrease
2015 – 2016	60,00,000	---
2016 – 2017	75,00,000	15,00,000
2017 – 2018	85,00,000	10,00,000
2018 – 2019	90,00,000	5,00,000
2019 – 2020	1, 00,00,000	10,00,000

Source: Primary Data

Investment is the foundation of profit. The above table explains the year wise investment of the Corrugated Carton industry. It's clear from this study; table 5.20 explicates the investment of the industry. In 2015-2016 the industry's investment stood at Rs: 60, 00,000. In 2016- 2017 it was Rs: 75, 00, 000. In 2017-2018 it raised to Rs; 85, 00, 000. The investment of the Corrugated Carton industry was Rs. 90, 00,000 in the year 2018-2019. In the year 2019-2020 it increased Rs.1, 00, 00,000

**FIGURE NO 5.12
INVESTMENT OF THE CORRUGATED CARTON INDUSTRY**

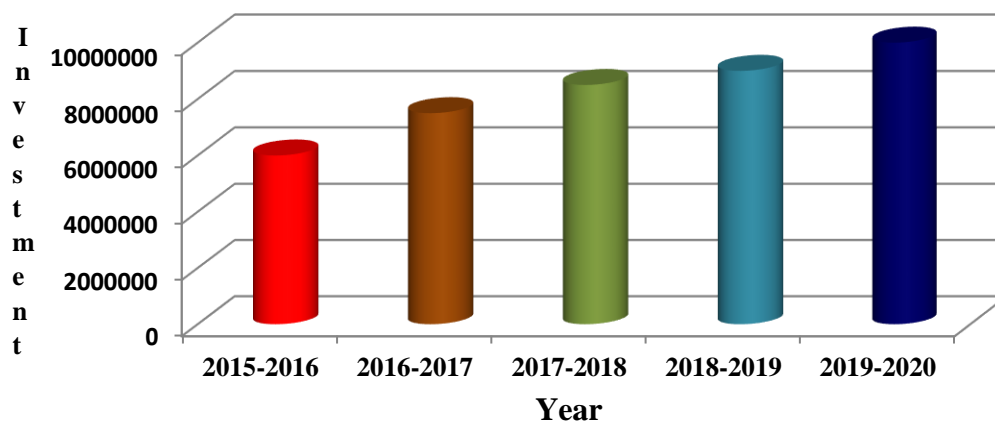


TABLE No.:5.21.PROGRESS OF THE PRODUCTION

YEAR	AMOUNT (In Rs)	INCREASE / DECREASE (IN RS:)
2015 – 2016	23,650,000	---
2016 – 2017	29,780,000	61,30,000
2017 – 2018	33,545,500	37,65,500
2018 – 2019	35,930,780	23,85,280
2019 – 2020	30,790,800	51,39,980

Source: Primary Data

In the present study, table 5.21. highlights that the total production of the Corrugated Carton Industry has continuously increasing trend during the year 2018 – 2019. The production reduced to Rs.21, 70,000. But it increased to Rs.30,790, 800 during the year2019-2020.

Trend Analysis:

Progress of the Corrugated Carton industry production is analysed by using trend values and have been predicated for the future year 2025 by using trend line. The data table 5.21 have been used. The trend value of investment has been estimated by using in linear trend equation given below.

$$Y_t = a + bx$$

Where, Y = Production of the Corrugated Carton Industry

X = Time variable

‘a’ and ‘b’ parameters to be estimated

Y_t =computed trend figure for period in order to determine the value by ‘a’ and ‘b’ the following two normal equations are to be solved. If $X = 0$, the value of ‘a’ and ‘b’ can be determined.

With the help of above linear equation, the trend values for production of the Corrugated Carton industry.

TABLE 5.22 TREND LINE TO PRODUCTION

YEAR	X	Y(Production)	X²	XY	Y_c
2015 – 2016	-2	23,650,000	4	-47,300,000	26,652,940
2016 – 2017	-1	29,780,000	1	-29,780,000	28,696,178
2017 – 2018	0	33,545,500	0	0	30,739,416
2018 – 2019	1	35,930,780	1	35,930,780	32,782,654
2019 – 2020	2	30,790,800	4	61,581,600	34,825,892
N= 5	$\sum X$ 0	$\sum Y$ 1,53,697,080		$\sum XY$ 20,432,380	

The production of the coir industry in the year 2025 will be Rs. 45,042,082/-

FIGURE NO . 5.13 TREND LINE OF PRODUCTION

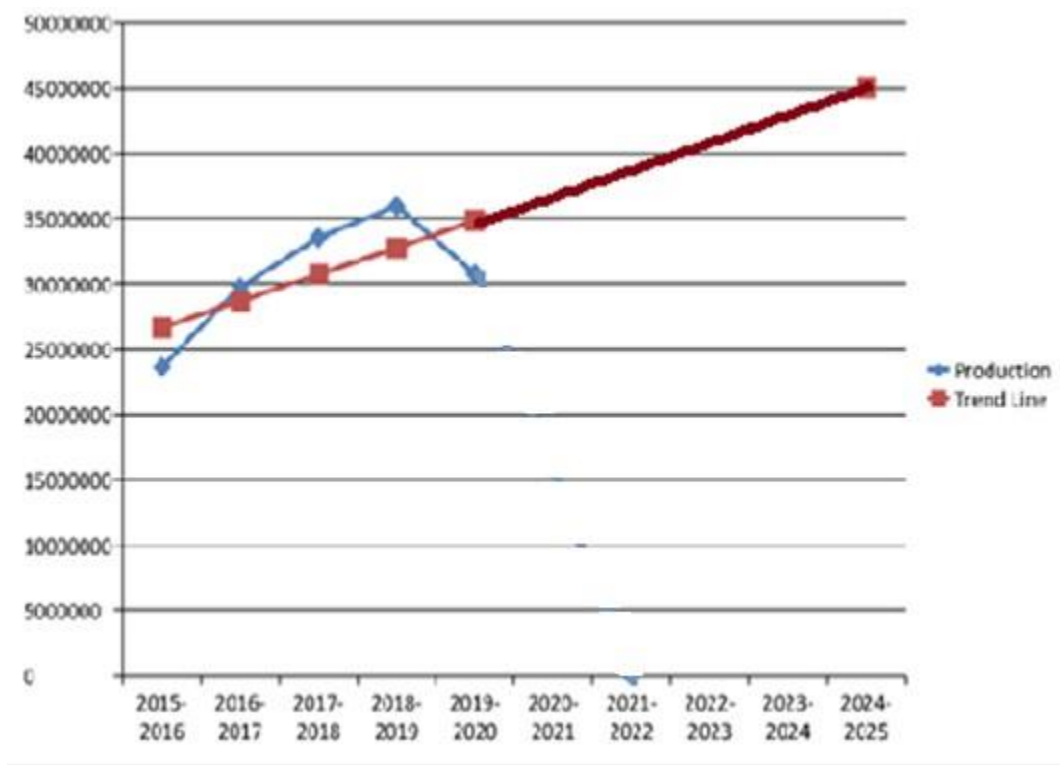
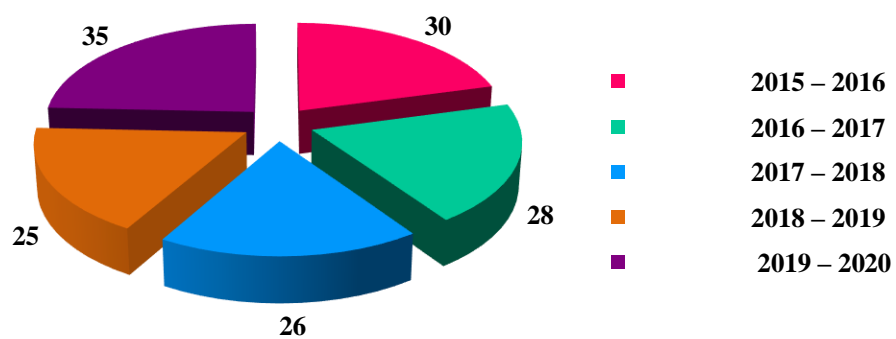


TABLE 5.23. STRENGTH OF HUMAN RESOURCE IN CORRUGATED CARTON INDUSTRY

Year	Strength of Human Resource
2015 – 2016	30
2016 – 2017	28
2017 – 2018	26
2018 – 2019	25
2019 – 2020	35

Table 5.23 indicate that the human resource power of the Corrugated Carton industry. In the year 2015-2016, the human power of the industry was 30. It was reduced in the year 2017-2018(26). After that, it was reduced 25 in the year 2018-2019. In the year 2019-2020 it was increased to 35.

**Figure No: 5.14. STRENGTH OF HUMAN
RESOURCE OF THE INDUSTRY**



CHAPTER – VI

FINDINGS, SUGGESTIONS AND CONCLUSION

SUMMARY OF FINDINGS:

This chapter presents the summary of the findings of the research work. This chapter also consist the suggestions to strengthen and recover the economic performance of Corrugated Carton Industry workers. The following are the main findings of this study.

- About 80% of the workers are female and remaining 20% of the sample workers are male. Majority of them are female workers.
- The study indicates that 38% of the workers are belongs to the age group 30 – 40 years. Among the workers 28% were in the age group of 40 – 50. 18% of workers are belongs to the age group of 20 – 30. 12% of the workers are 50 – 60 age group and remaining 04 % of workers are in the age group of 10 – 20. The age group between 30 - 40 is more in number.
- The study reveals that 44% of the workers are schedule caste. 42% of them are belonging to backward. 10% of the workers are most backward class and remaining 04% of the workers are schedule caste. The study is inferred that most of the workers are Schedule Caste.
- It is inferred that 82% of the workers are Hindus. 16% of the workers are Christians and remaining 2% of the workers are Muslim, which shows that majority of the sample respondents are Hindus.
- The study exhibits that out of 50 workers, about 80% were married and remaining 20% were unmarried. Most of them are married workers in the Corrugated Carton Industry.
- From the study exhibits that, 48% of the workers have the family members between 4-6. 32% of the workers have the family size between 2-4 and remaining 20% of the workers have the family size between 6-8 members.
- From the study exhibits that, 48% of the workers have the family members between 4-6. 20% of the workers have the family size between 6-8 members. Majority of the workers family size between 4-6 members.
- In the present study, about 60% of the workers are living in their owned house and 40%

of the workers are living rented house. Most of them workers live in owned house.

- Corrugated Carton industry workers are classified according to their education in this study. 38% of them got primary education. Though 22% of the workers were completed graduation. 22% of the workers were illiterate and remaining 18% were completed their secondary education. Most of them workers completed their primary education.
- The study indicated the various stages of workers participation in coir process. There are six stages in carton process. In the first stage of Auto plant, there are six male workers involves, 10 female workers are participated in the second stage of cutting line. In the stage of printing there are 4 male and 4 female workers involved. Only 6 workers are participated in the fourth stage of die- cut. In the stage of stitching & Gluing, there are 13 female workers working and 7 female workers involved in the last stage of punching. Female workers only involving in the stage of Stitching & Gluing process.
- The study reveals that 40% (16 workers) of the female workers have income between Rs. 6,000 – 8000. 28% (11 workers) of the female workers have income between Rs. 8,000 – 10,000. Only one female worker have income between Rs. 10,000 – 12,000.
- The researchers calculating average monthly income of the female workers of the Corrugated Carton Industry is Rs: 7, 050/-
- The study is found that 30% (3 workers) of the male workers have incomes between Rs. 12,000 – 16,000. 20% (2 workers) of the workers have income between Rs 16,000 – 20,000. Majority of the male workers having category of income between Rs:8000-12,000 & Rs: 12,000 -16,000/-.
- The researchers calculating average monthly income of the male workers of the Corrugated Carton Industry is Rs: 12, 400/-. The study found that the male workers income is more than the female workers in the study area of Corrugated Carton Industry.
- The study inferred that 27 female workers of the Corrugated Carton Industry families' yearly income spends to the range from Rs.1, 000 – Rs.3, 000. 9 female workers were spending Rs.3000 – Rs.5, 000. 2 workers of the industry families yearly income spends to the range from Rs. 5000 – 7000. Majority of the female workers expenditure between Rs;1000-Rs;3,000.

- The researchers calculating the average monthly expenditure of female workers of the Corrugated Carton Industry is Rs: 3,450/-
- The study analyses. 3 male workers (30%) were spending their income between Rs.3000 – Rs.5, 000. Only one worker (10%) family spends their income between the range of Rs.5, 000-Rs.7, 000 and remaining 10% (1 worker) of the male worker family yearly income spends to the range from Rs. Rs.7000 – Rs.9000. Majority of the male workers expenditure between Rs;1000-Rs:3,000.
- The researcher is calculating average yearly necessary expenditure of the male workers. the average monthly expenditure of male workers of the Corrugated Carton Industry is Rs: 3,600/- Average monthly expenditure of the male workers is more than the female workers.
- In study reveals that the repair and maintenance expenses of the corrugated carton industry. In the year 2017 – 2018 the industry has spends 1,68,000. The repair expenses of the industry was Rs. 1, 56,000 in the year 2018 – 2019. The industry was spend maximum amount of Rs. 1, 68,000 in the year 2017-2018.
- The study found that 36 percent of the workers of the Corrugated carton industry are having their debt between Rs: 1000-4000. 12 percent of the workers are having their debt between Rs. 16000- 20000. Only 4 percentage of the workers are having their debt between Rs: 12000-16000.
- The study explains the year wise investment of the Corrugated Carton industry. In 2015-2016 the industry's investment stood at Rs: 60, 00,000. In 2016- 2017 it was Rs: 75, 00, 000. In 2017-2018 it raised to Rs; 85, 00, 000. In the year 2019- 2020 it increased Rs.1, 00, 00,000. In the study period, the investment of the coir industry was increased.
- In the present study highlights that the total production of the Corrugated Carton Industry has continuously increasing trend during the year 2018 – 2019. The production reduced to Rs.21, 70,000. But it increased to Rs.30,790, 800 during the year 2019 – 2020, the Corrugated Carton industry had produce more.

- The production of the Corrugated Carton Industry is analysed by using trend values and have been predicated for the year 2025 by using trend line. During the study period the production of the coir industry is increasing trend. The production amount in the year 2025 will be Rs: 45,042,082/-

SUGGESTIONS:

The success of the industry is based on environmental conditions. On this basis, the environmental and working conditions of the workers are satisfied. The following suggestions are offered to improve the functioning of Bharathi Corrugated Carton Industry in future.

- The Corrugated Carton Industry is dominated by the female workers. But the remuneration for female workers is low in this industry. The industry should try to give Equal Pay for all kinds of workers.
- Packaging communicates all of that through color, shape and other design elements. The industry should reform the styles and models of the packing to raise the market area of their product.
- Strengthening and regulating the raw-material purchase is essential for the growth of the industry.
- Finance is a major production problem faced by the industry after Covid-19. So, the government may encourage the commercial banks, Co-operative banks and other financial institutions to offer loan facilities at subsidized rates of interest, especially to meet out their working capital requirements during the production.
- Corrugated Carton Industry is a labour intensive. Production section requires a number of workers in various processes. The extraction of fibre can be done traditional method as well as using machines. The coir industry should be focus innovation for improvement.
- Introduction of new working and training centres will be supported to develop the efficiency of the workers.
- The study observed that, comparing to other industries the production level is very low in the study area. The industry should rise to purchase the larger quantity of raw material.

- To avoid the wage differentiation, the establishment of the labour association is essential and most of the problems could be identified through the association.
- To contributing the environmental protection and maintaining the ecological balance the state government of Tamil Nadu should be encourage the Carton packing boxes in future.
- The Corrugated Carton Industry should be promote modern and upgraded technologies and machineries are very much required to produce qualitative carton
- products and this up gradation should reduce the expenditure of machineries repair and maintenance.

CONCLUSION:

The booming Indian economy and a flourishing organised retail have raised the expectations that consumption of corrugated packaging will expand further in terms of number and volume of goods packaged. MNCs are demanding corrugated boxes of international standards and the pattern of buying the packaging is changing. Moreover the Government has tried to boost up these industries; the government has sought higher allocation in the Indian budget to overcome the prevailing economic slowdown and the resultant impact on Corrugated Carton product exports, and a few steps to achieve higher production growth.

Corrugated packaging industry has been adequately meeting the packaging requirements of the country by successfully substituting wooden and plywood boxes, thereby contributing to environmental protection and the ecological balance. The foremost problems of the industry are inequality in wages, unavailability and poor quality of raw material. Technological adaptation and up gradation is very much required to sustain the production of Bharathi Corrugated Carton Industry, Arasadi in future.

A STUDY ON CORRUGATED BOX PRODUCTION AND WORKERS DETAILS OF BHARATHI CARTONS (P) LTD, ARASADI, THOOTHUKUDI DISTRICT.

Questionnaire

- 1) Name of the company :
- 2) Location of the industry :
- 3) Year of commencement of factory :
- 4) Employment (No of Labourpotential) :
- 5) Size of plot :
- 6) Types of industry :
- 7) Ownership :
- 8) Types of Establishment : a) Government b) Partnership
c) Co-Operative d) Proprietorship
undertaking e) Others
- 9) Major Raw Materials :
- 10) Average amount spent for investment :
- 11) Objectives of the industry :
- 12) Cost of Building & Structure :
- 13) Source of finance : a) Own b) Bank c) Relation
- 14) Detail for production per process :
- 15) Cost of Building of structure :
- 16) Transport Expenses :
- 17) Do you face any problems in respect of power failure YES / NO
- 18) Factory Building : Own / Rent
- 19) Types of establishment :
- 20) Division of labour :

21) No of manpower :

Category	Male	Female
Office Staff		
Workers (Main)		
Total		

22) Investment

Year	Amount

23) Plant & Machinery

Quality	Rate	Amount (Rs)

24) Average amount spent for repair and maintenance

Year	Amount

25) Average amount spent for wages

Year	No. of Manpower	Amount

26) Average amount spent for rent

Year	Amount

27) Estimated annual sales turnover

Year	Amount

28) Year wise production from the industry

Year	Production in Quantity	Amount

29) Calculation of weight of a box

30) Basis of Presumptions:

Content	No. of Workers
No of working days / year	
No of shifts / day	
No of working hours / shift	

A STUDY ON CORRUGATED BOX PRODUCTION AND WORKERS DETAILS
BHARATHI CARTONS (P) LTD, ARASADI, THOOTHUKUDI
DISTRICT.

Questionnaire for Employee

- 1) Name of the labour :
- 2) Sex : Male / Female
- 3) Age of labour :
- 4) Educational qualification : a) Illiterate b) Primary c) Secondary d) Graduate
- 5) Marital Status : Married / Unmarried
- 6) Community : SC / ST / BC / MBC
- 7) Religion : Hindu / Christian / Muslim
- 8) Income of the labour :
- 9) Terms of wage : Per hour / Daily / Monthly
- 10) Average daily hours of work :
- 11) Expenditure of the labour amount :
- 12) Job satisfaction : YES / NO
- 13) Any problems in working place ? : YES / NO
- 14) What kinds of problems? :
- 15) No of holidays :
- 16) Toilet facilities : YES / NO
- 17) Medical facilities : YES / NO
- 18) Canteen facilities : YES / NO
- 19) Water facilities : YES / NO

A STUDY ON CORRUGATED BOX PRODUCTION AND WORKERS DETAILS

BHARATHI CARTONS (P) LTD, ARASADI, THOOTHUKUDI

DISTRICT.

Questionnaire for Employee

- 1) Name of the labour :
- 2) Sex : Male / Female
- 3) Age of labour :
- 4) Educational qualification : a) Illiterate b) Primary c) Secondary d) Graduate
- 5) Marital Status : Married / Unmarried
- 6) Community : SC / ST / BC / MBC
- 7) Religion : Hindu / Christian / Muslim
- 8) Income of the labour :
- 9) Terms of wage : Per hour / Daily / Monthly
- 10) Average daily hours of work :
- 11) Expenditure of the labour amount :
- 12) Job satisfaction : YES / NO
- 13) Any problems in working place ? : YES / NO
- 14) What kinds of problems? :
- 15) No of holidays :
- 16) Toilet facilities : YES / NO
- 17) Medical facilities : YES / NO
- 18) Canteen facilities : YES / NO
- 19) Water facilities : YES / NO

20) Any health illness from the work : YES / NO

21) Leisure time between the working hours :

22) Human manpower in various department :

Department	Male	Female

23) Debt gets from : a) Banks b) Money lenders c) Friends d) Relations

24) Amount of debt :

BHARATHI CORRUGATED

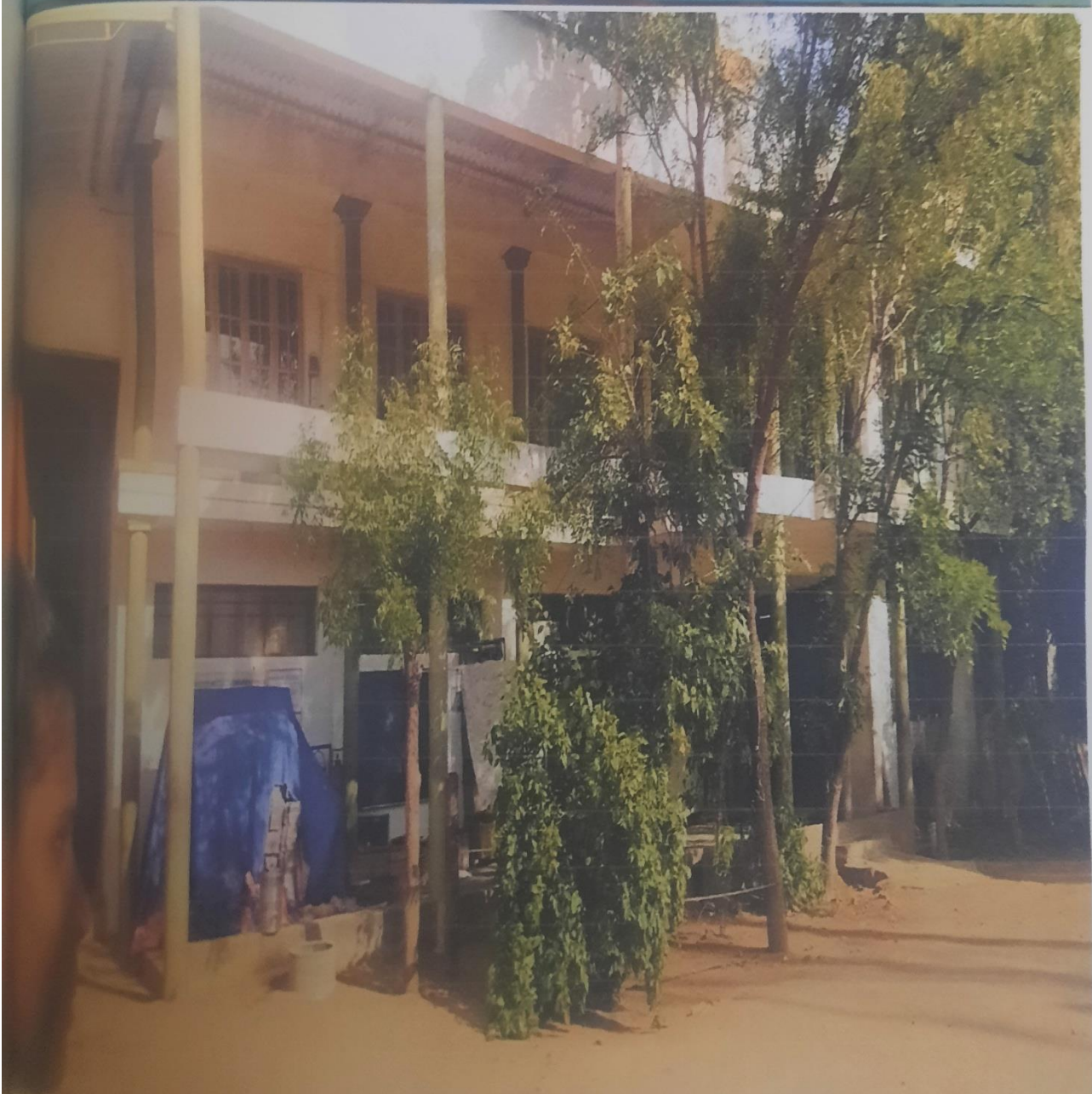
CARTON INDUSTRY



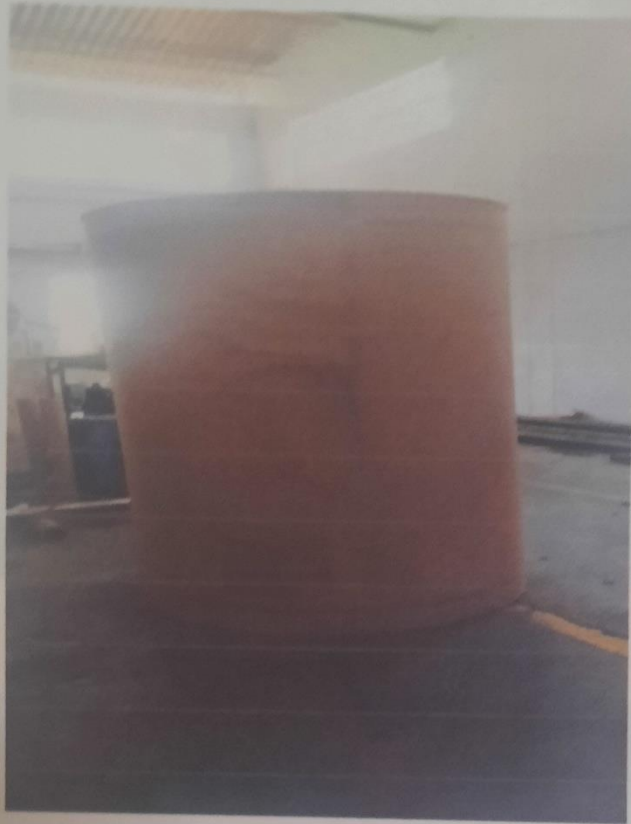
BHARATHI CARTONS (P) LTD

Complete Packaging Solution Provider

Mela Arasadi, TUTICORIN - 628002.



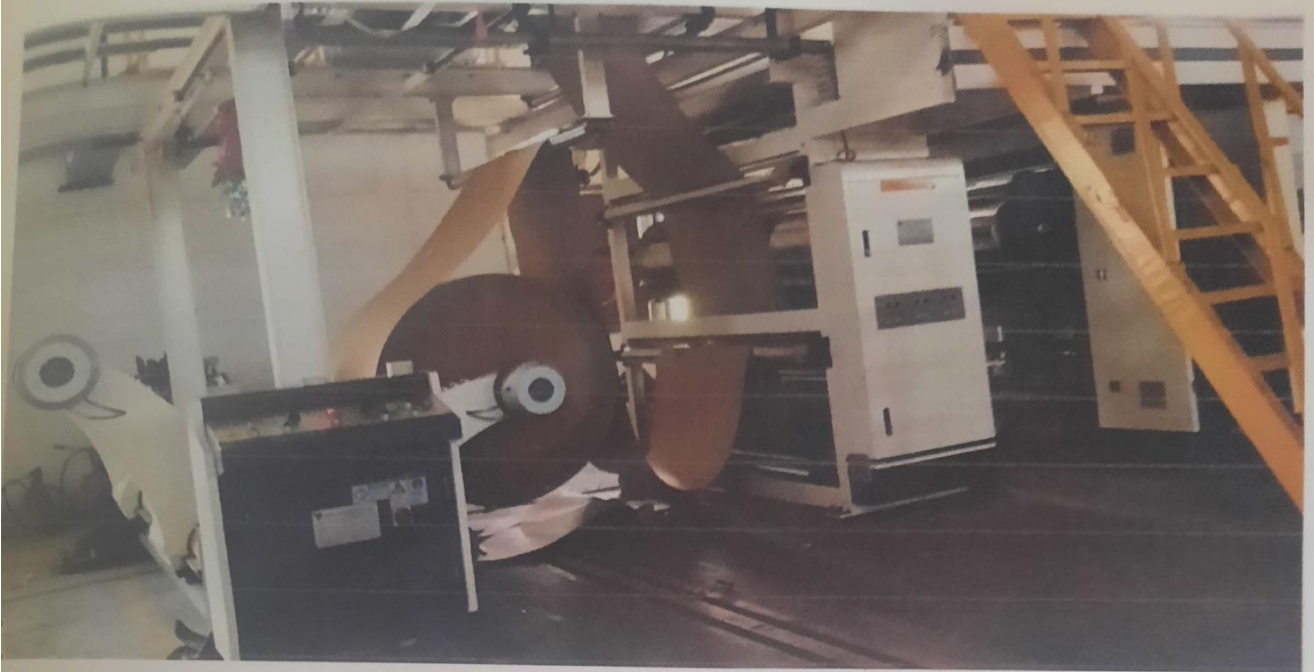
CORRUGATED CARTON



CARTON SHEET



AUTO PLANT MACHINE



CUTTING LINE



PRINTING MACHINE



DYE CUT MACHINE



STITCHING



GLUING



SHEET MEASUREMENT TOOL



DATA COLLECTION



**A STUDY ON CUCUMBER PRESERVATION OF SDK RAJAN INDIAN
TROPICAL AGRO PRODUCTS (P) LTD, MADATHUR, THOOTHUKUDI
DISTRICT**

Project report submitted to

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI
Affiliated to Manonmaniam sundaranar University, Tirunelveli

In partial fulfilment for the award of the degree
Bachelor of Arts in Economics

BY

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ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI

(Reaccredited with 'A + 'Grade by NAAC)


2021-2022

CERTIFICATE

This is to certify that the report of the project entitled 'A STUDY ON CUCUMBER PRESERVATION OF SDK RAJAN INDIAN TROPICAL AGRO PRODUCTS (P) LTD, MADATHUR, THOOTHUKUDI DISTRICT submitted to ST.MARY'S COLLEGE (AUTONOMOUS), Thoothukudi in partial fulfillment for the award of the Degree of Bachelor of Arts in Economics and is record of work done during the year 2021-2022 by the following students of III B.A. Economics.

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CHAPTER – I

1.1 INTRODUCTION:

The economic development of any country demands industrialization. Though it has got recognition in our country, it is high time we thought about balanced regional development, an important component of industrialization. Rural development forms a key component in a nation's progress towards economic freedom and equality. But the migration of rural people to cities and the ineffective utilization of rural resources stand as hurdles to rural development. Hence it is very important to develop and to encourage rural industry by considering its significance on the socio- economic front of the country.

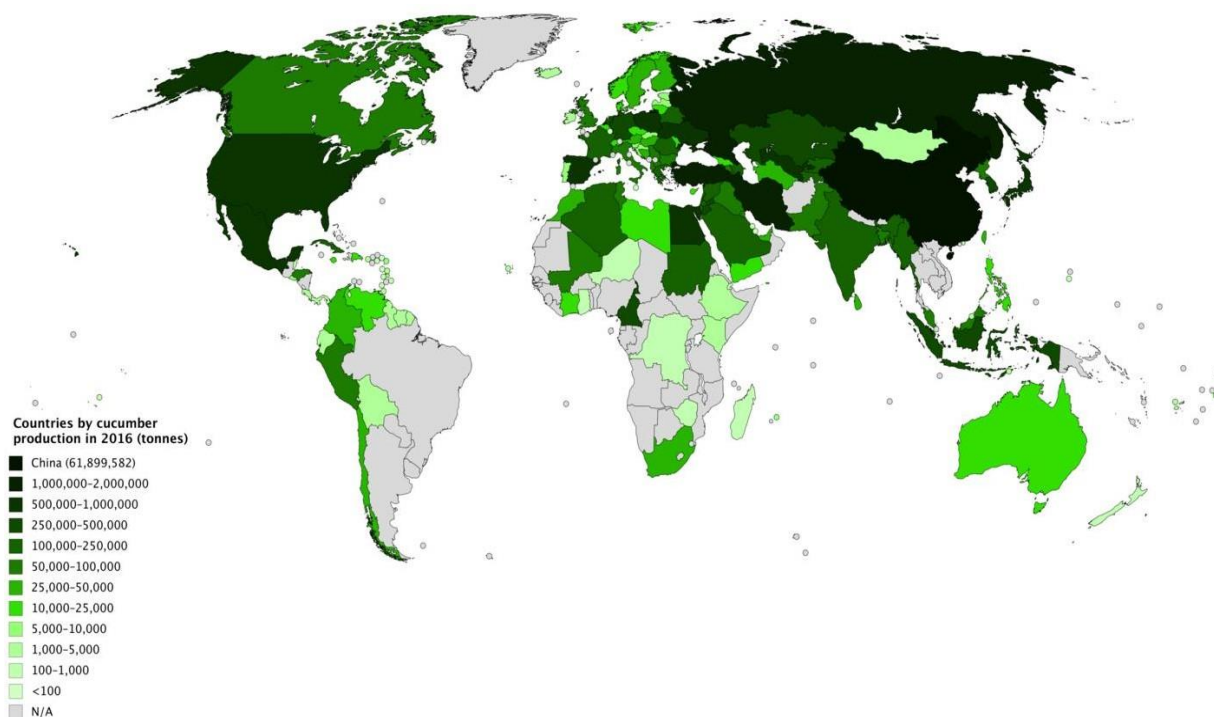
Rural or traditional industry, one of the sub-sectors of small scale industry, has a direct and important influence on sustainable economic development. "Encouraging set up of rural industries in the small area is an instrument for not merely attaining political freedom, but an instrument for economic freedom and a foundation of a new social order". It is a matter of common knowledge that India is a land of villages and two-thirds of its population lives in rural areas. The future of India lies in these teeming rural million. It is only from a progressive, growing and dynamic rural society that India could put herself on the desired developmental path. Rural small- scale industries play an important role under the peculiar Indian conditions. They contribute about half the gross value of output originating in the manufacturing sector. At present it contributes 40 percent to exports in the country and provides employment to 13 million

The agricultural sector makes a major contribution to the economy of India. In recent years, many agriculture-based industries have developed, contributing to almost 17% of the country's total GDP. Most importantly, this sector employs nearly 60% of India's population. Agro based products are essentially derived from the raw materials of agricultural products and include paper, textiles, sugar, and vegetable oil.

LIST OF COUNTRIES BY CUCUMBER PRODUCTION:

This is a list of countries by cucumber production from the years 2016 to 2018, based on data from the Food and Agriculture Organization Corporate Statistical Database. The estimated total world production for cucumbers in 2018 was 75,219,440 metric tonnes, down

3.4% from 77,896,545 tonnes in 2017. In 2]China was by far the largest producer, accounting for nearly 75% of global production at 56,240,428 tonnes. Dependent territories are shown in italics.



PRODUCTION REQUIREMENTS

Cucumbers are warm season vegetables. They do not tolerate frost. Temperatures below 10° C (50° F) may impact crop growth and negatively affect fruit quality. They require well drained, compaction-free locations with ample fertility. Freshmarket cucumbers respond well to plasticulture and fertigation. High levels of nitrogen may result in excess leaf growth and poor fruit development. Most vine crops benefit from supplemental beehives to promote pollination.

Average Time from Flower Set to Harvest:	Average Yields:
Cucumber (pickling) 4-5 days	Pickling - machine harvest: 4 tons per acre
	Pickling - hand harvest: 8-12 tons per acre

Cucumber (slicing) 15-18 days	Slicing: 200-400 bu per acre
-------------------------------	------------------------------

Seeding and Spacing:

Plant seeds into moisture, no more than 2-2.5 cm (1 in.) deep. Deeply planted seed is often slow to emerge, resulting in lower plant populations. Quick, uniform emergence is essential to avoid uneven stands weakened by insects and disease. Delay direct seeding until the soil temperature is 15°C (59° F) or higher. The optimum soil temperature range at planting is 25°-30° C (77°-86° F.) Do not set transplants in the field until all risk of frost has passed.

Row spacing ranges from 3-4 feet for handpicked cucumbers. Use 20-30" rows for machine harvest fields. In-row spacing for both hand and machine harvest should be set at 4-6".

Transplants

Successful cucumber establishment from transplants requires special care and attention. Germination and establishment in the greenhouse can be finicky. The young root system is easily injured and they are often slow to resume growth in the field. Overgrown transplants are readily damaged during planting, resulting in poor stand establishment.

Plant cucumbers 2-4 weeks before the anticipated field setting date. Use a maximum tray size of 128's. Larger tray cells will help promote faster crop establishment and earlier harvest. However, there is no great benefit to using cells larger than 50's.

Cucumbers require warm temperatures for germination; they will not germinate below 15° C (60° F). The optimum temperature for germination is 35° C (95° F). This should be maintained for 72 hours, or until the radicle emerges from the seed coat. After germination has occurred, maintain daytime temperatures of 21°-24° C (70°-75° F) and a nightly range of 61°-64° C (61°-64° F).

Cucumber transplants are not heavy feeders. A weekly application of 100-150 ppm Nitrogen should be sufficient. Ensure that the electrical conductivity of the fertilizer water does not exceed 1-2 mmho/cm.

INTERESTING FACTS ABOUT AGRICULTURE AND AGRO BASED INDUSTRIES:

- Food is among the most important needs of human beings, and it is a well-known fact that food security harbours economic growth.

- Food security is one of the essential pillars of the economy. Since independence, India has strived for food security through self-sufficiency using various popular government schemes and subsidies. This led to the now-infamous Green Revolution (Harit Kranti) in the 1960s. Even in the present generation, the government has set food grain production targets to obtain better yield year after year.
- Today, India is among the top 15 exporters of agricultural products across the globe. Agricultural exports from India to the USA in FY20 increased by 17.34%.
- Agriculture as an industry has taken a backseat in recent years because of climate change, trade issues etc., but still contributes 17% of the country's GDP.
- With an estimated 60% of India's working population employed in this sector, this is by far the largest sector providing employment and livelihood. Agriculture has produced various allied industries, also known as agro based industries.
- Agro based industries are those industries that rely on agricultural produce for raw materials to produce new products. In India, agro-based products include textiles, paper, sugar, vegetable oil, among others.
- The textile industry is the largest in India, accounting for almost 20% of the country's industrial output.
- Over decades, the agro-based industry has evolved into various types depending on the profitability of the market.

TYPES OF AGRO-BASED INDUSTRIES:

1. Agro-processing industries

One of the first agro-based industries, the processing industry, does not manufacture a new product from agricultural produce. Instead, this industry places itself in the supply chain to sustain agricultural products for longer periods by adequately packaging with appropriate preservatives. The products coming out of these industries are designed to make their transport, handling and storage easier down the supply chain. For example, the textile or sugar industries are part of the agro-based industries.

2. Agro-products manufacturing industries

In agro-products manufacturing industries, a completely new product is produced using agricultural produce. Most agricultural produce is not suitable for immediate consumption

by consumers. These industries produce a new product after processing agricultural produce. Sugar factories are a great example of agro-produce manufacturing units.

3. Agro-input manufacturing industries

Units in this industry facilitate improvement in agricultural production. Fertiliser production units and agriculture machine production units are good examples of such industries.

4. Agro-service industries

Agro-service industries are one of the essential sectors in the agriculture industries in India. It comprises agricultural consultation, research, equipment repair/supply and educational services, etc.

LIST OF AGRO-BASED INDUSTRIES IN INDIA:

After a quick brief on agriculture and allied industries, let's focus our attention back on the list of major agro-based industries in India.

1. Textile-Industry:

The textile industry is the largest agro-based industry and happens to be the largest industry in India, accounting for around 20% of industrial output. It offers employment for over 20 million individuals and contributes nearly 33% to the total exports. The Indian textile industry contributes 5% of the global trade in textiles.

It is also important to note that the textile industry is not entirely dependent on agriculture; a significant part of it also depends on synthetic material. Most of the agricultural contribution to the textile industry comes from cotton, silk, wool and jute.

2. Cotton Textile:

It will come as no surprise that India is the largest producer of cotton (agro based products), accounting for approximately 360 Lakh bales in FY21 till May. The cotton market touched a whopping 12,267,850 INR in FY19-20. The Cotton Textile industry involves the production of woven fabric using wholly partially spun cotton yarn. The textile industry in India has seen a significant jump in investment, including FDI worth INR 4,163 billion in 2020. The readymade garments sector is booming in this bracket, registering a substantial rate of exports from April 2020 to Mar 2021.

3. Silk Textile:

India isn't far behind in this trade too. India is the 2nd largest producer of natural silk after China. India's silk textile industry, categorised under agro based industry, is mostly based

out of Karnataka, with over 7 Lakh farm families enrolled. India is the only country where all 5 kinds of silk, namely Mulberry, Muga, Tropical and Temperate Tasar, are produced and woven. Silk products produced and exported include yarns, silk fabrics, readymade silk garments, made-ups, silk carpets and silk waste.

Readymade garments make up the bulk of exports, accounting for 4 Billion INR between April 2020 and November 2020. The government of India has played a vital role in the promotion of silk and silk-based textiles, with the Indian Silk Promotion Council initiating several promotional programs for further growth and development of this industry.

4. Dairy Industry:

The dairy industry in India has the potential to expand further with limited players in the market. Milk in India is the largest single product accounting for approximately 4% of the share in the economy. India happens to be the largest consumer of milk and milk-based products globally with the production of over 81,000 thousand metric tons per year, almost 3 times the second-largest consumer, which is the European Union.

The industry owes its growth to the Indian government's initiative started in the 1970s code-named “Operation Flood”. This turned out to be the world’s largest dairy development program. It is also important to note that the milk sector in India is a much more organized sector with strict adherence to FSSAI (Food Safety and Standards Authority of India) guidelines. It is estimated that by the year 2025, milk production in India will grow to 108 million tonnes. The milk processing and milk products manufacturing sector has huge potential to expand in the coming 4-5 yrs.

5. Sugar Industry:

India is the world's largest producer of sugar with over 25 million metric tonnes per year, way ahead of Brazil, which is at a distance of 18.11 million metric tonnes. Indian Sugar Mills Association (ISMA) has declared that sugar production in India has seen an increase of 14.4% and stood at 30.4 million tonnes between October 2020 and May 2021.

This agro based industry employs a good number of people. The sugar industry is a source of livelihood for over 50 million farmers and workers employed in sugar mills. One less known fact about the sugar industry is that it also helps produce power and contributes almost 1300 MW of power in India.

The Sugar industry also feeds the paper industry with its by-product called Bagasse. With incentives and export subsidies, along with a favourable weather forecast, sugar production in the country is estimated to reach 310 lakh tonnes in 20-21 compared to 274 lakh tonnes the previous year.

6. Vegetable Oil Industry

Vegetable Oil Industry is one of the significant agro based industries in India. Despite not being one of the largest producers of vegetable oil globally, India still stands 5th on the world map. India is, in fact, a heavy consumer of edible oil, with the country ending up importing oil worth INR 70,000 crores annually. This shows a considerable demand for edible oils driven by growth in the food processing sector and changing dietary habits. The edible oil market is estimated to grow over 60% by 2025. Among the most popular oils is Soya oil, accounting for more than 1/3rd of the market, followed by Mustard oil, Palm oil and Sunflower oil.

7. Tea Industry

India is the largest consumer of tea globally and almost 2/3rd of its total production is consumed locally. India is the 2nd largest tea producer globally, producing nearly 1.340 million kgs in the year 2019. Between April 2020 and Mar 2021, total tea exports of this agro based industry reached ₹265.69 crores from ₹175.45 crores in 2020. The tea industry also employs nearly a million people directly and another 10 million in related activities.

India is also one of the preferred destinations for speciality tea like Darjeeling, Assam and Nilgiris. The government body, Tea Board of India, set up in 1954, undertakes promotional activities that help increase tea production and improve the quality of its produce. It also facilitates participation in international tea fairs, exhibitions, buyer and seller meets, trade delegations.\

8. Coffee Industry

India is the 3rd largest coffee producer and exporter of coffee in the world. This agro based industry accounts for almost 3.2% of the global production. Coffee, unlike tea, is not heavily consumed in India. Most of its produce, almost 70%, is exported. The total value of coffee exported between April 2020 and Mar 2021 was pegged at INR 58 billion. The top importers of coffee from India are Italy, Germany, Russia, Belgium and Turkey.

9. Leather Goods Industry

The leather goods industry in India employs close to 4.4 million people. With a revenue of Rs 67,000 crore, this agro based industry stands 5th in the global leather trade. India is the 2nd largest producer of leather footwear and the 2nd in exporting leather garments. With over 20% of the world's cattle and buffalo share, India currently produces close to 3 billion sq. feet of leather annually. It is considered among the top 10 foreign exchange earning streams for India.

The leather industry in India comprises sub-industries like footwear, garments, saddlery and harness. In the Indian market, it has recorded a positive growth during April 2021 relative to April 2020. With over 40% of the population in India expected to live in cities by the year 2030, leather goods consumption is expected to increase proportionally. It is expected to grow by 8 times by 2030.

10. Jute Industry

The jute industry in India is one the oldest agro based industries in India, employing over 4 million people. The Jute industry produces goods like gunny bags, carpets, strings and ropes, packaging material, etc. West Bengal in India is the hub of jute production, with over 90% of mills located there. India is the largest producer of jute globally, accounting for over 50% of global production. With the urban population liking jute-based fashion powered by both aesthetic properties and ethical attributes, the jute industry in India is expected to grow significantly in the coming years.

11. Bamboo Industry

The bamboo industry may seem to be an unlikely contender in the top agro based industries list, but it consists of a significant potential for future growth in India. Bamboo has a heavy demand in the construction sector. It is also seen as a good alternative to coal. With a growing demand for eco-friendly products, bamboo has seen an increase in demand in recent years. The bamboo industry also fuels the paper industry like sugar cane. Being a fast-growing product, bamboo extracted cellulose fibre is a major raw material used in paper production.

12. Food Processing Industry:

With the world's 2nd largest population, India has one of the biggest food processing industries in the world. The food processing industry in India makes up almost 32% of the food industry here. It is still growing rapidly with the advent of technology at various stages of the

supply chain. According to CII (Confederation of India Industries), the food processing sector has shown the potential to attract an estimated INR 53,435,52 billion by FY 2024.

The government of India has run several initiatives such as National Mission on Food Processing, Cold Chain etc., to further the development of food processing in India. India now allows 100% FDI (foreign direct investment) in India's marketing of food products. A significant portion of the food budget is allocated to food processing industries like dairy with ₹3,289 crores in 2020-21.

FOOD PRESERVATION:

Food Preservation is the method of keeping prepared or raw food materials for future use in a way that prevents spoilage or growth of microorganisms. The main objective of food preservation is to retain as far as possible the original value of food and to maintain its nutritive value as high as possible.

Food preservation, any of a number of methods by which food is kept from spoilage after harvest or slaughter. Such practices date to prehistoric times. Among the oldest methods of preservation are drying, refrigeration, and fermentation. Modern methods include canning, pasteurization, freezing, irradiation, and the addition of chemicals. Advances in packaging materials have played an important role in modern food preservation.

Food spoilage may be defined as any change that renders food unfit for human consumption. These changes may be caused by various factors, including contamination by microorganisms, infestation by insects, or degradation by endogenous enzymes (those present naturally in the food). In addition, physical and chemical changes, such as the tearing of plant or animal tissues or the oxidation of certain constituents of food, may promote food spoilage. Foods obtained from plant or animal sources begin to spoil soon after harvest or slaughter. The enzymes contained in the cells of plant and animal tissues may be released as a result of any mechanical damage inflicted during postharvest handling. These enzymes begin to break down the cellular material. The chemical reactions catalyzed by the enzymes result in the degradation of food quality, such as the development of off-flavours, the deterioration of texture, and the loss of nutrients. The typical microorganisms that cause food spoilage are bacteria (e.g., *Lactobacillus*), yeasts (e.g., *Saccharomyces*), and molds (e.g., *Rhizopus*).

The most common methods used either to kill or to reduce the growth of microorganisms are the application of heat, the removal of water, the lowering of temperature during storage, the reduction of pH, the control of oxygen and carbon dioxide concentrations, and the removal of the nutrients needed for growth. The use of chemicals as preservatives is strictly regulated by governmental agencies such as the Food and Drug Administration (FDA) in the United States. Although a chemical may have preservative functions, its safety must be proved before it may be used in food products. To suppress yeast and mold growth in foods, a number of chemical preservatives are permitted. In the United States, the list of such chemicals, known as GRAS (Generally Recognized as Safe), includes compounds such as benzoic acid, sodium benzoate, propionic acid, sorbic acid, and sodium diacetate. The present study is analysing about the preservation of cucumber in the study area.

ANCIENTMETHODSOFFOODPRESERVATION:

Since the beginning of time, humans had to get creative when it came to survival. Ancient cultures around the world had to harness nature for local food sources while acclimating to the climate. Whether hunting or harvesting, food preservation allowed man to plan ahead and form a food supply. This was not only crucial for survival, but also for putting down roots and establishing communities.

As ancient cultures were adapting, they discovered techniques that have now become basic methods of food preservation.

1. Drying

The earliest form of curing meat was dehydration using the sun or wind. Dehydration dates back to the Middle East and oriental cultures that dried foods in the hot sun as early as 12,000 B.C. In regions without enough sunlight or wind, “still houses” were built and heated using fire to dry fruits, vegetables, and herbs.

2. Curing

As a form of dehydration, early cultures used salt to help dry out foods. The curing of meats and seafood not only preserves the taste and texture but also prevents the growth of harmful pathogens that need moisture to survive.

3. Freezing

In climates that experience freezing temperatures, freezing was an obvious method of

preservation. Food was buried underground or in the snow for preservation throughout the winter. This method led to the construction of “icehouses” or “iceboxes” for storage until the 1800’s when artificial refrigeration was invented.

4. Fermenting

A valuable method of preservation, fermentation prevents food from spoiling by using microorganisms to destroy harmful pathogens. The production of acid or alcohol during fermentation creates vitamins making fermented foods more nutritious and flavorful.

5. Pickling

A form of fermentation, pickling preserves foods in vinegar produced by starches or sugars. Pickling may have originated when food was placed in soured wine or beer to preserve it. It’s believed Indians were the first people in Asia to make cucumber pickles more than 3,000 years ago.

6. Sugaring

Known to the earliest cultures, sugaring preserves food in honey or sugar. The sugar not only sweetens but draws out water from harmful pathogens, which dehydrates and destroys them. The ancient Greeks and Romans mastered the technique of using heated sugar and fruit pectin which we have come to know as jams, jellies, and preserves.

7. Canning

Dating back to the 1790s, canning is the newest method of food preservation which involves the heating and cooling of food in jars or cans. Heating destroys harmful pathogens, while cooling creates a vacuum seal to prevent contamination and deterioration.

Today, most food is preserved and processed commercially. To ensure food preservation is carried out according to food safety standards, data loggers are often implemented into HACCP plans. Data loggers provide validation that specific time and temperature thresholds, or critical control points, were reached.

STATEMENT OF THE PROBLEM:

Cucumber preservation industry in India is an agro-based industry which affected by large number of problems in the form of labour, material, machinery and finance. These

problems may affect the growth and development of the industry. Further, it has great opportunities for investment, employment, production, workers, technology, marketing, productivity, profitability and earning more income. Therefore, an attempt is made in the study for indicating various problems faced by SDK Rajan Indian Tropical Agro Products (P) Ltd in the study area of Madathur and also available ample opportunities for its future and prospects.

OBJECTIVES OF THE STUDY:

- To trace the origin, growth and development of cucumber industries at the world and national levels.
- To analysis the socio – economic conditions and income variation of the workers in the Cucumber industry.
- To study of the process of cucumber preservation and workers involvement in various stages of cucumber process in Madathur.
- To analyse the investment, output and maintenance details of machinery in Madathur cucumber industry.
- To offer suggestion for improving the overall performance of cucumber industry based on the finding of the study.

LIMITATIONS OF THE STUDY:

The researcher was collected first-hand information from the SDK Rajan Indian Tropical Agro Products (P) Ltd. The period of study covers five years in the title of ‘**A study on Cucumber preservation of SDR Rajan Indian Tropical Agro Products (P) Ltd, Madathur, Thoothukudi District**’ from 2017-18 to 2020-2021. The socio – economic conditions of the employees were collected from 50 employees due to time constraint. The respondents were collected from SDR Rajan Indian Tropical Agro Products (P) Ltd, Madathur.

METHODOLOGY OF THE STUDY:

The study was undertaken to analyse the SDR Rajan Indian Tropical Agro Products (P) Ltd, Madathur. The analysis purely depends on both primary and secondary data. The primary data was collected from the coir industry employees with the help of specially prepared interview schedule. A sample of 50 employees has been selected on random sampling techniques administered with a pre-designed questionnaire.

The secondary data are collected from the Book, Journals, Magazines, publications reports, periodicals, articles, research papers, websites and manuals. This collected data classified and analyzed the simple statistical tools like percentage, averages and trend line are used in this study.

CHAPTER SCHEME:

The present research work is in ‘Six Chapters’

Chapter-I

The first chapter presents of Agro –Based industries & types of Agro-based industries, Food Preservation, Ancient methods of food preservation, statement of the problem, objectives of the study, limitations, methodology and chapter scheme.

Chapter-II

Second chapter deals with the concepts and review of previous studies.

Chapter-III

The third chapter deals with the profile of the study area of Madathur, Thoothukudi District.

Chapter-IV

The fourth chapter deals with the Cucumber Preservation Process of SDK Rajan Indian Tropical Agro Products (P) Ltd in Madathur.

Chapter-V

The fifth chapter analyses the age, work, caste, education, working hours, debt details, income and expenditure of the employee, purchase of raw material, factory weight of cucumber, weight age loss of cucumber and details of preservation chemicals in SDK Rajan Indian Tropical Agro Products (P) Ltd in Madathur.

Chapter- VI

Sixth chapter summarized the findings of the study, suggestions for improving the working of the SDK Rajan Indian Tropical Agro Products (P) Ltd in Madathur and final conclusion of the project.

CHAPTER- II

CONCEPTS AND REVIEW OF LITERATURE

CONCEPTS:

Agricultural Inputs:

Agricultural inputs are defined as products permitted for use in organic farming. These include feedstuffs, and permitted plant protection products as well cleaning agents and additives in food production.

Chemical:

A chemical is any substance that has a defined composition. In other words, a chemical is always made up of the same "stuff." Some chemicals occur in nature, such as water.

Covering:

Something laid over or wrapped around a thing, especially for concealment, protection, or warmth.

Dealers:

A dealers is person whose business involves buying and selling things.

Drying:

Drying is a mass transfer process consisting of the removal of water or another solvent by evaporation from a solid, semi-solid or liquid. This process is often used as a final production step before selling or packaging products.

Industry:

An industry is a sector that produces goods or related services within an economy. The major of utilizing forced labour to produce goods and services, has occurred since antiquity throughout the world as a means of low – cost production.

Investment:

The action or process of investing money or profit.

Machinery:

The means or system by which something is kept on action or a desired result is obtained.

Manpower:

Manpower is the strength or force of a human, or the combined strength of a group of people .

Preserve:

To keep the food safe from injury, harm, or destruction.

Production:

The action of making or manufacturing from components or raw materials, or the process of being so manufactured.

Raw Material:

Raw materials are the resources used by a company to produce its finished goods and products. Direct materials are used within the final product. Examples include the wood used to make furniture or the fabric used to make clothing.

Shocking:

It can be used to partially cook and preserve the color and crunch of almost any vegetable or fruit.

Slicing:

“Slicing” refers to cutting fruits or vegetables for immediate consumption or preservation.

Transport:

A system or means of conveying people or goods from place to place.

Worker: A Person who does a specified type of work or who workers in a specified way.

REVIEW OF LITERATURE:

Review of literature is a critical analysis of a segment of published body of knowledge through summary, classification and comparison of prior research studies and theoretical articles. The aim of literature review is to show that “the writer has studied existing work in the field with insight”. A good literature review presents a clear case and context for the project that makes up the rest of the thesis. So, a good literature review raises questions and identifies areas to be explored. Thus in this part, the previous studies pertaining to cucumber industry have been summarized.

Michigan is ranked among the top ten states in the nation for fresh market bell pepper (*C. annuum*), cucumber (*Cucumis sativus* L.), squash (*Cucurbita* spp.), tomato (*Solanum lycopersicon* L.), and snap bean (*Phaseolus vulgaris* L.) harvested ha (USDA, 2011b). The combined value of these crops, all of which are susceptible to *p. capsica* (Crossan et al., 1954 ; Gevens et al., 2008; Kreutzer et al., 1940 ; Tompkins and Tucker, 1941 ,in 2010 was \$ 137 million with 22, 460 harvested ha (USDA , 2011 b.) specifically, Michigan was ranked number one in 2010 for the harvested ha of pickling cucumber and second for the combination of processing and fresh market squash (USDA, 2011 b.) pickling cucumber and squash sales accounted for \$ 61.7 million in 2010 with 15,216 harvested has (USDA, 2011 b.) The processing

cucurbit industry is especially at risk to *P.capsica* epidemics (Babadoost, 2004) for instance, a farm in southern Michigan was unable to harvest \$ 300,000 of pickling cucumbers and ended future production of cucumbers at this site (Hausbeck and Lamour , 2004).

The cultivars used and fertility practices followed were according to Virginia recommendations (Alexander et al., 2001). Cucumber, zucchini squash, and yellow summer squash were planted using a commercial single row planter. The crops were seeded approximately 1.2 to 2.5 cm deep at a rate of 4 seeds per 0.9 m. Plots consisted of a single row, 2.7 m wide and 7.6 m long in the row. Pumpkin was planted by hand into the prepared bed at two seeds per hill, 2.5 cm deep, and approximately 1.2 m apart in the row; rows were 2.7 m apart. In 2001, the cucumber study was replanted due to poor emergence of the first planting.

Cucurbits are generally susceptible to injury from most herbicide applications, including registered herbicides. The effects of halosulfuron in these vine crops have been investigated previously. Garvey et al. (1997) found that cucumber tolerated PRE and POST applications of halosulfuron at 36 to 71 g/ha better than summer squash, and that summer squash showed varietal responses and was injured at higher rates and with sequential applications. Cucumber treated with halosulfuron produced yields similar to those by weed-free checks in both studies (Mitchem and Monks 1997).

Food Source Information, Colorado Integrated Food Safety Center for Excellence (2013) concluded Cucumbers are 90 – 95 percent water and, therefore, have limited nutritional value compared to other vegetables. One serving of cucumbers contains about 45 calories, 6% of Vitamin A and Vitamin B6, and 14% Vitamin C. Cucumbers are rich in vitamins A, B1, B6, C, and D and are a good source of Magnesium, Folate, Calcium, and Potassium. Cucumbers also

contain silica, which strengthens connective tissue and promotes healthy joints. Cucumbers contain three lignans: lariciresinol, pinoresinol, and secoisolariciresinol, all of which help reduce the risk of developing cancers such as breast cancer, ovarian cancer, uterine cancer and prostate cancer.

Cucumbers are 90 – 95 percent water and, therefore, have limited nutritional value compared to other vegetables. One serving of cucumbers contains about 45 calories, 6% of Vitamin A and Vitamin B6, and 14% Vitamin C. The cucumber can aid in alleviating irritation and sunburn similarly to the aloe plant by applying the sliced cucumbers to the affected area. The slices can also reduce puffiness under the eyes (also known as “bags” under the eyes) since it has anti-inflammatory properties. Cucumbers are rich in vitamins A, B1, B6, C, and D and are a good source of Magnesium, Folate, Calcium, and Potassium. Cucumbers also contain silica, which strengthens connective tissue and promotes healthy joints. Cucumbers contain three lignans: lariciresinol, pinoresinol, and secoisolariciresinol, all of which help reduce the risk of developing cancers such as breast cancer, ovarian cancer, uterine cancer and prostate cancer.

CHAPTER - III

PROFILE OF THE STUDY AREA

3.1. THOOTHUKUDI DISTRICT

Traditionally known as “Pearl City” on account of the prevailing Pearl fish in the past in the area, Thoothukudi has a fascinating History. Forming part of the Pandian kingdom between 7th and 9th Century A.D., Thoothukudi remained in the hands of the Cholas during the period between 9th and 12th century. Emergence of Thoothukudi as a maritime port attracted travelers, adventures, and eventually colonizers. The Portuguese were the first to arrive in Thoothukudi in 1532 A.D., followed by the Dutch in 1658 A.D. The English Captured Thoothukudi from the Dutch in 1782 and the East India Company established their control over Thoothukudi in the same year.

On the 20th, October 1986 a new district, carved out of the erstwhile Tirunelveli district was born in Tamil Nadu and named after V.O.Chidambaranar, a great national leader hailing from Ottapidaram who led the Swadeshi Movement in the south. Since 1997 as in the case of other districts of Tamilnadu, this district has also been named after its headquarters town, Thoothukudi.

Thoothukudi became the citadel of freedom struggle in the early of the 20th century. It was in Thoothukudi that the illustrious patriot , V.O.Chidambaram established the first swadesi Stream Navigation Company, sailing the first steamer S.S.Gaelia to Thoothukudi on 1st June 1907.

The minor port of the Thoothukudi anchorage port with lighter age facilities has had flourished traffic for over a century. The first wooden Jetty of this port was commissioned in 1864. This port was being used for export of salt, cotton yarn, senna leaves, palmyrah stalks, palmyrah fibres, dry, dry fish, Country drugs etc. to neighboring countries and for import of coal, cotton, copra, pulses and grains. The minor port of the Thoothukudi hand the distinction of being intermediate port handling the highest traffic tonnage of over 1million per annum.

The salient features of the district include its lengthy,curvy and scenic sea coast which was an international cynosure in the days of yore for its pearl fishery; beautiful coastel villages with their sacred temples, churches and mosques like Tiruchendur, Manappadu and Kayalpattinam respectively, Adhichanallur, one of the cradles of the ancient civilizations, Korkai, an ancient port of the Sangam Pandyas,Kayal, the confluence of the river Tamiraparani

with the Bay of Bengal, one of the five illustrious rivers of Tamilnadu, Panchalamkurichi, the capital of Veerapandiya Kattabomman, an early martyr, for the cause of freedom, Ettayapuram, the birth place of the great poet Subramanya Bharathi, Ottapidaram the home town of V.O.Chidambaram Pillai, who dared to sail ships as a measure to combat British imperialism; Maniyachi, where Vanchinathan assassinated Ashe, the British Collector for this high-handedness against the leaders during Swadeshi Movement; Kulasekarapattinam and Kurumbur where patriots showed their anger against alien rule, temple towns like Srivaikundam, Meignanapuram, one of the cradles of Christianity, Thoothukudi, besides being a major port, the earliest settlement of the Portuguese and the Dutch, the tall and dense palmyra groves and the bushy Odai trees, the Teris and the adjacent coral islands, Idayankudi and Manappadu and the adjacent places which became the headquarters of great missionaries like G.U.Pope, Veeramamunivar, Caldwell and others who, besides their missionary work, contributed a lot for the development of Tamil language and literature and above all the enterprising and hard working people who now constitute a major trading community in the State.

"The Government of Tamil Nadu in their G.O. Ms.No.535/ Revenue Department dated 23.04.1986 have ordered the formation of a new district viz..Thoothukudi district. Thoothukudi district was inaugurated on 19.10.1986 by the chief minister of Tamil Nadu and started functioning as the 20th district with effect from 20.10.1986 with the headquarters at Tuticorin". But in 1997, it was changed as the district of Thoothukudi, with Thoothukudi as its centre.

The District covers an extent of 4,621 sq.km in the South-Eastern portion of Tamilnadu and it is rectangular in shape. It is bounded by Virudhunagar and Ramanathapuram district in the North, Kanyakumari district in the South, Gulf of Mannar in the east and Tirunelveli district in the west. The district is roughly triangular in shape between 80-05' and 90 - 800 of the northern latitude and 770-05' and 780-25' of eastern longitude.

Agriculture:

The main food crop in the district is paddy. Out of the total area of 4,50,954 hectares, 2,11,811 hectares have been brought under the cultivation of different crops, which work out to 47 per cent of the total area of the district. The important food crops in the district are paddy, Cholan, Cumbu, ragi, Varagu, Samai and commercial crops like cotton, Chillies, Sugarcane, groundnut and banana. Irrigation:

The different sources of irrigation are channels, lanks and wells which cover 45,159 hectares in the district. Out of the total area irrigated, well irrigation covers 17,709 hectares, tank irrigation 22,538 hectares and channel irrigation 4,876 hectares for the year 1991-92.

Fisheries:

This district is an important coastal district having a vast coastal line of 160km and territorial water covering thousands of hectares. Fishing next to agriculture, is an important occupation of the district. Tuticorin is a major fishing centre. It is also considered to be the only pearl fishing centre in the whole of India. Besides, it is also noted for chunk fishing. Nearly 35000 MT of marine fish are produced per annum.

Mineral Resources:

Gypsum, Ilammanide, Monazide, Hyduim, Limestones, Corals from the Islands and Phosphate are some of its natural resources.

Forestry:

The area under forestry is 12724 hectares which occupies 2.77 per cent of the geographical area.

Industries:

The district constitutes 70 per cent of the total salt production of the State and meets 30 per cent requirement of our country. There are two industrial estates one at Kovilpatti with 11 units and the other at Thoothukudi with 20 units. The former is managed by SIDCO and the latter by SIPCOT. Small scale industries such as match industries, food-based and metal based industries are generally concentrated in Kovilpatti and Thoothukudi taluks. There are 2200 and above small scale industries registered in the district and about 12 major industries. These are engaged in the production of cotton and staple yarn, caustic soda, PVC resin, fertilizers, soda ash, carbon dioxide gas in liquid form, etc. The important major industries are SPIC, TAC, Dharangadhara Chemical Works, Loyal Textiles Ltd., Madura Coats Ltd., Sterlite Copper Industries, Kilburn Chemicals, Ramesh Flowers, Nila Sea Foods, Deva and Co. and Transworld Granite Industries. The public sector undertakings are the Thoothukudi Thermal Power Station Unit, Heavy Water Plant (HWP) and Port Trust. The Government is also encouraging unemployed youth and others to start industries by providing financial assistance and technical guidance.

[illegible]

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Madathur is a small village / hamlet in thoothukudi block in tuticorin district of tamil nadu state, india. It comes under milavittan panchayath. It is located 5 km towards west from district head quarters thoothukudi 4km from thoothukudi rural. 618 km from state capital chennai. The head postal office is millerpuram.

Milavittan (2 km), vms nagar south (2 km), kathirvelnagar extension (2 km), p & t colony (2 km), ayyanadaippu (2 km) are the nearby villages to madathur. Madathur is surrounded by Tuticorin block towards south, ottapidaram block towards north, srivaikundam bloc towards south, allwar thirunagarai block towards south. Thoothukudi, Thiruchendure, Thirunelveli, sattu are the near by citys to madathur. It's near to Bay of Bengal. There is change of humidity in the weather.

NEAR BY EDUCATIONAL AREA IN MADATHUR:

Jayaraj Annapackiam CSI Polytechnic college, St. Mary's college of education and St. Mary's college. There are two engineering colleges. Government Medical College is situated in this surrounding. One fisheries, one Government Polytechnic College and seven schools is situated here.

GOVERNMENT OFFICE NEAR MADATHUR, THOOTHUKUDI:

Some government offices also near to Madathur. They are Sipcot Assistance commissinor, Tamillnadu Pollution Control Board and Distric Industrial Centre.

RELIGIOUS PLACES:

Religious worship place is more in Madathur. They are Sri Utchinimakali amman sri Santhana mari amman kovil, Sree Siniamman Thirukovil, Paththirakaliamman Thirukovil, Shirdi saibaba Temple, Jumu masjid, Masjid – Un-Noor P&T Colony , Masjid Ahlo

HOSPITALS IN MADATHUR IN THOOTHUKUDI

Madathur primary health center, S.S Sundar Maruthuvamanai, Soma sundaram hospital are situated in Madathur.

CHAPTER - IV

CUCUMBER PRESERVATION PROCESS

Cucumbers are usually consumed raw, often eaten alone or in salads and sandwiches, but can also be pickled or fermented. Other dishes that include cucumber are juices, smoothies, salsas, sauces, and alcoholic beverages. As a mild and cool vegetable, cucumbers are commonly in the summer. Due to its cooling effect, cucumbers can be included in skincare products or be used directly on the skin, with reported benefits of hydrating, cooling, and soothing the skin. Pickled cucumbers are often consumed alone as well as in various sandwich types and appetizers. Pickle juice, the leftover brine from pickling cucumbers, is used for both health benefit and taste. Pickle juice is consumed by some individuals to reduce muscle cramping due to its electrolyte content. This brine can also be used in a variety of marinades and sauce to help enhance flavor.

CONSUMPTION:

From 1995–2005, there was a 15% growth in the consumption of fresh cucumbers—an approximately 1-pound per capita increase. As of 2012, Americans consumed an average of 6.5 pounds of fresh cucumbers per person. For pickled cucumber, Americans annually consume a more variable amount averaging 9 – 11 pounds per person. According to the *2006–2007 FoodNet Atlas of Exposures*, 46.9% of the survey cohort reported eating cucumbers within the past seven days.

HEALTH BENEFITS OF EATING CUCUMBER:

Though commonly thought to be a vegetable, cucumber is actually a fruit. It's high in beneficial nutrients, as well as certain plant compounds and antioxidants that may help treat and even prevent some conditions. Also, cucumbers are low in calories and contain a good amount of water and soluble fiber, making them ideal for promoting hydration and aiding in weight loss. Here, takes a closer look at some of the top health benefits of eating cucumber.

1. It's High in Nutrients

Cucumbers are low in calories but high in many important vitamins and minerals. One 11-ounce (300-gram) unpeeled, raw cucumber contains the following:

- **Calories:** 45

- **Total fat:** 0 grams
- **Carbs:** 11 grams
- **Protein:** 2 grams
- **Fiber:** 2 grams
- **Vitamin C:** 14% of the RDI
- **Vitamin K:** 62% of the RDI
- **Magnesium:** 10% of the RDI
- **Potassium:** 13% of the RDI
- **Manganese:** 12% of the RDI

Although, the typical serving size is about one-third of a cucumber, so eating a standard portion would provide about one-third of the nutrients above. Additionally, cucumbers have a high water content. In fact, cucumbers are made up of about 96% water. To maximize their nutrient content, cucumbers should be eaten unpeeled. Peeling them reduces the amount of fiber, as well as certain vitamins and minerals.

2. It Contains Antioxidants:

Antioxidants are molecules that block oxidation, a chemical reaction that forms highly reactive atoms with unpaired electrons known as free radicals. The accumulation of these harmful free radicals can lead to several types of chronic illness. In fact, oxidative stress caused by free radicals has been associated with cancer and heart, lung and autoimmune disease.

Fruits and vegetables, including cucumbers, are especially rich in beneficial antioxidants that may reduce the risk of these conditions. One study measured the antioxidant power of cucumber by supplementing 30 older adults with cucumber powder. At the end of the 30-day study, cucumber powder caused a significant increase in several markers of antioxidant activity and improved antioxidant status. However, it's important to note that the cucumber powder used in this study likely contained a greater dose of antioxidants than you would consume in a typical serving of cucumber. Another test-tube study investigated the antioxidant properties of cucumbers and found that they contain flavonoids and tannins, which are two groups of compounds that are especially effective at blocking harmful free radicals.

3. It Promotes Hydration:

Water is crucial to your body's function, playing numerous important roles. It is involved in processes like temperature regulation and the transportation of waste products and nutrients.

In fact, proper hydration can affect everything from physical performance to metabolism

While you meet the majority of your fluid needs by drinking water or other liquids, some people may get as much as 40% of their total water intake from food.

Fruits and vegetables, in particular, can be a good source of water in your diet.

In one study, hydration status was assessed and diet records were collected for 442 children. They found that increased fruit and vegetable intake was associated with improvements in hydration status. Because cucumbers are composed of about 96% water, they are especially effective at promoting hydration and can help you meet your daily fluid needs.

4. It May Aid in Weight Loss

Cucumbers could potentially help you lose weight in a few different ways. First of all, they are low in calories. Each one-cup (104-gram) serving contains just 16 calories, while an entire 11-ounce (300-gram) cucumber contains only 45 calories. This means that you can eat plenty of cucumbers without packing on the extra calories that lead to weight gain.

Cucumbers can add freshness and flavor to salads, sandwiches and side dishes and may also be used as a replacement for higher calorie alternatives. Furthermore, the high water content of cucumbers could aid in weight loss as well. One analysis looked at 13 studies including 3,628 people and found that eating foods with high water and low calorie contents was associated with a significant decrease in body weight.

5. It May Lower Blood Sugar

Several animal and test-tube studies have found that cucumbers may help reduce blood sugar levels and prevent some complications of diabetes. One animal study examined the effects of various plants on blood sugar. Cucumbers were shown to effectively reduce and control blood sugar levels.

Another animal study induced diabetes in mice and then supplemented them with cucumber peel extract. Cucumber peel reversed most of the diabetes-associated changes and caused a decrease in blood sugar.

In addition, one test-tube study found that cucumbers may be effective at reducing oxidative stress and preventing diabetes-related complications.

However, the current evidence is limited to test-tube and animal studies. Further research is needed to determine how cucumbers may affect blood sugar in humans.

6. It Could Promote Regularity

Eating cucumbers may help support regular bowel movements.

Dehydration is a major risk factor for constipation, as it can alter your water balance and make the passage of stool difficult.

Cucumbers are high in water and promote hydration. Staying hydrated can improve stool consistency, prevent constipation and help maintain regularity.

Moreover, cucumbers contain fiber, which helps regulate bowel movements.

In particular, pectin, the type of soluble fiber found in cucumbers, can help increase bowel movement frequency.

One study had 80 participants supplement with pectin. It found that pectin sped up the movement of the intestinal muscles, all while feeding the beneficial bacteria in the gut that improve digestive health.

7. Easy to Add to Your Diet

Mild with a distinctly crisp and refreshing flavor, cucumbers are commonly enjoyed fresh or pickled in everything from salads to sandwiches. Cucumbers are also often eaten raw as a low-calorie snack or can be paired with hummus, olive oil, salt or salad dressing to add a bit more flavor.

With just a bit of creativity, cucumbers can be enjoyed in many ways.

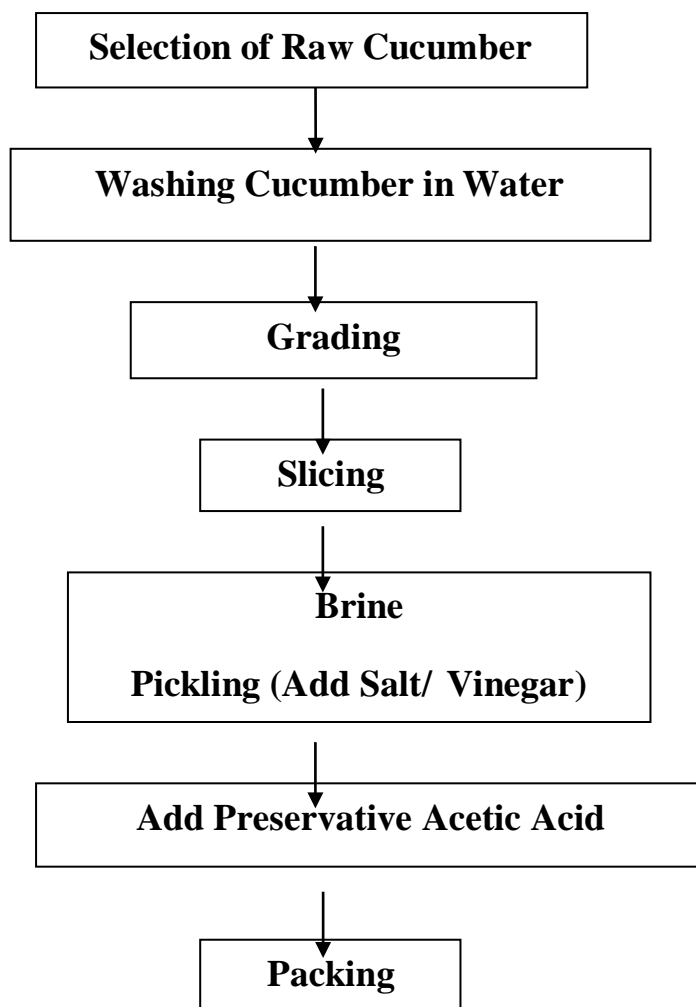
Here are a few recipes to help incorporate cucumbers into your diet:

- Baked Cucumber Chips
- Quick Pickled Cucumbers
- Thai Cucumber Salad
- Strawberry, Lime, Cucumber and Mint-Infused Water
- Cucumber and Mint Sorbet
- Cucumber Goat Cheese Grilled Cheese

PRESERVATION PROCESS OF CUCUMBER:

Gherkins are exported under two categories -- cucumbers and gherkins, which are prepared and preserved by vinegar or acetic acid and cucumbers and gherkins, which are provisionally preserved.

Chart No; 4.1. PRESERVATION PROCESS OF CUCUMBER:



The preservation of food in common salt is known as pickling. It is one of the most ancient methods of preserving vegetables. Pickles are good appetizers and add to the palatability of a meal. The growth of a majority of spoilage organisms is inhibited by brine containing 10-12 per cent salt. Pickling is the result of fermentation by lactic acid-forming bacteria" which are generally present in large numbers on the surface of fresh vegetables and fruits. Above preservatives improves the taste and flavour and hardness of the tissue of cucumber and controls fermentations.

Selection of Cucumber: The cucumber should be absolutely fresh. Cucumber should be ripe, but firm, and uniformly mature. Over-ripe fruits should be rejected because they are infected with microorganisms and give a poor quality product.

Washing: It is important to remove pesticide spray residue and dust from cucumber. One gram of soil contains 1012 spores of microorganisms. Therefore, removal of microorganisms by washing with water is essential. Cucumber can be washed in different ways. Other methods of washing are spray washing, steam washing, etc.

Size Reduction:

The selected cucumber is graded according to size and colour to obtain uniform quality. This is done by machines such as screw grader and roller grader. Cucumber is generally graded after cutting into pieces or slices.

Slicing: Pieces of the size required for canning are cut.

Brine: Add Salt/ Vinegar:

For pickling cucumber common salt is suitable which having less than 1% of impurities. It should not contaminated with chemicals such as tri-calcium phosphate or magnesium phosphate, which may leads to cloudiness of brine.

Add Preservative Acetic Acid:

To increase acidity of initial brine acetic acid is used. Addition of 1% acetic acid helps to prevent the growth of wild yeast on the brine.

Packing:

Cucumbers are packaged in various ways, including in strong cartons of corrugated board with plastic film lining. The sides of the cartons are reinforced and provided with perforations. The individual cucumbers are often heat-sealed in gas-permeable plastic film, which extends storage life.

CHAPTER- V

ANALYSIS OF DATA AND INTERPRETATION

This chapter deals with Production performance of SDK Rajan Cucumbeindustry in madathur,Thoothukudi district. The data collected are analyzed and tabulated for easy understanding and good presentation. Tabules, percentage, averages,trend lines and diagrams assist to analyze the data efficiently.

Table 5.1 GENDER DETAILS OF THE WORKERS

GENDER	NO.OF WORKERS	PERCENTAGE
Male	16	32
Female	34	68
Total	50	100

Source; Primary data

The above table reveals that the gender details og the workers. 68% of the workers(34) are female and remaining 32% of the Sample workers (16) are male.

FIG. NO: 5.1. GENDER DETAILS OF THE WORKERS

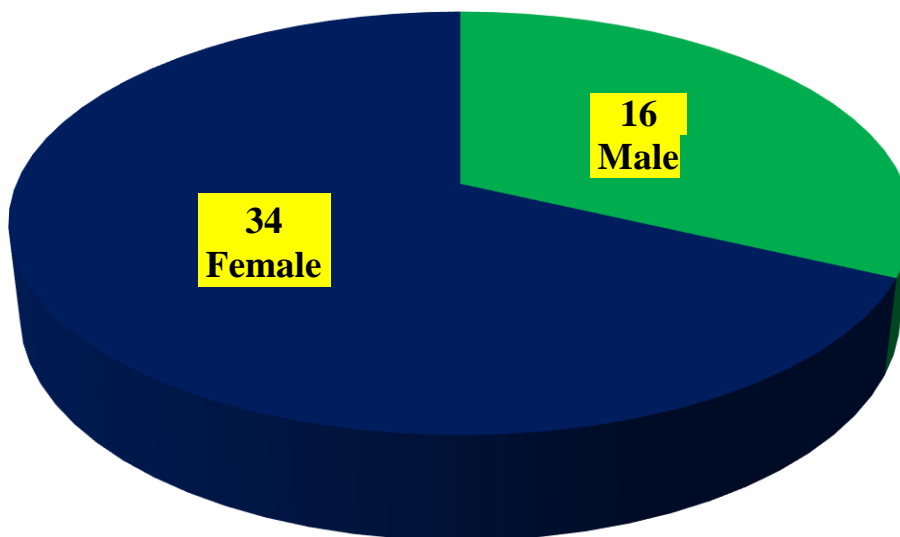


TABLE 5.2 AGEWISE CLASSIFICATION OF THE WORKERS

S.NO	Age	NO OF WORKERS	PERCENTAGE
1	10-20	19	38
2	20-30	12	24
3	30-40	9	18
4	40-50	10	20
Total		50	100

Source; primary data

The above tables indicates that 38% of the workers are belongs to the age group 10-20 years. Among the workers, 24% were in the age class of 20-30.20% of workers are belongs to the age group of 40-50 and remaining 18% of the workers are in the age group of 30-40.

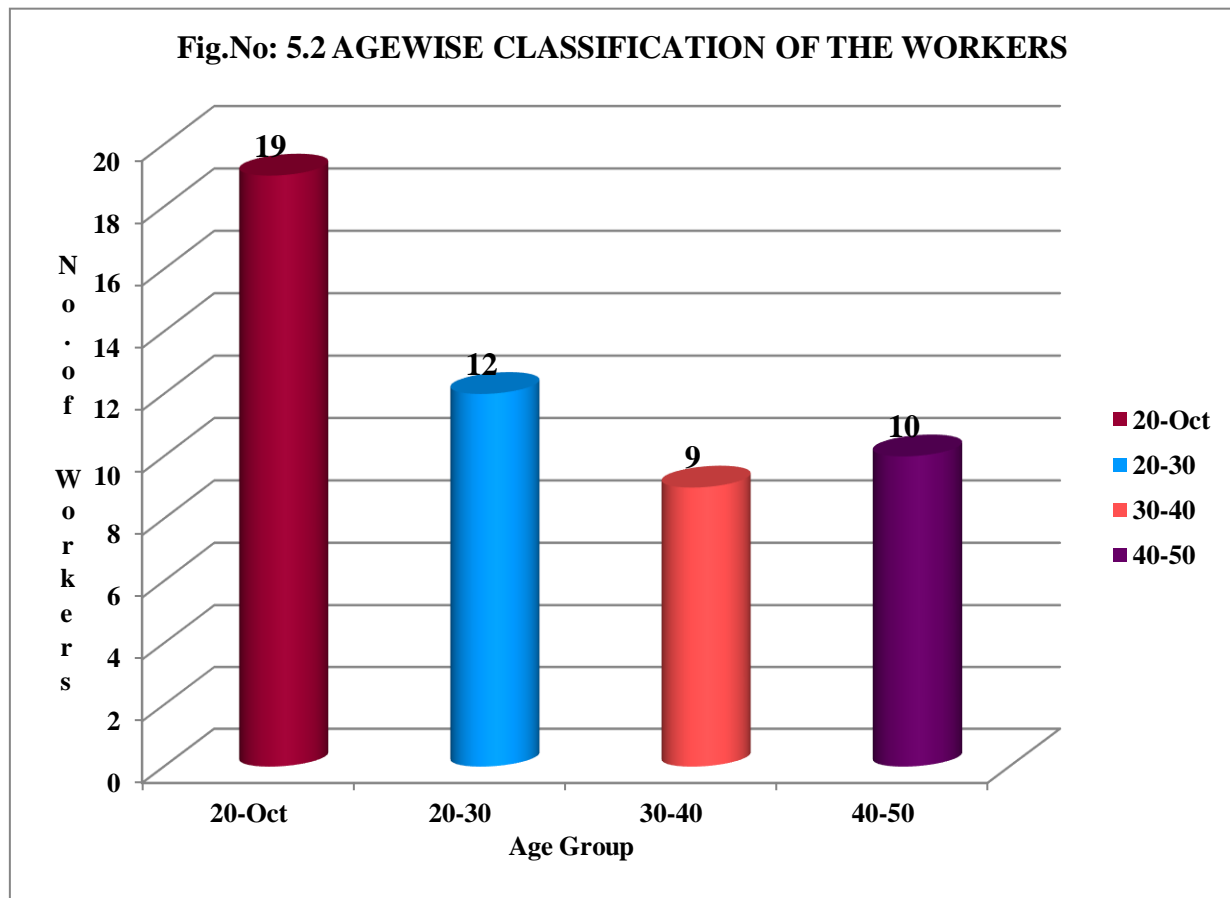


TABLE. 5.3. CASTE – WISE DISTRIBUTION OF THE WORKERS

S.NO		NO OF RESPONDENTS	PERCENTAGE
1	BC	22	44
2	SC	25	50
3	MBC	03	6
Total		50	100

Source: Primary data

The study reveals that 50% of the workers are schedule caste and 44% of the workers are backward caste and remaining 6% of the workers are most backward class.

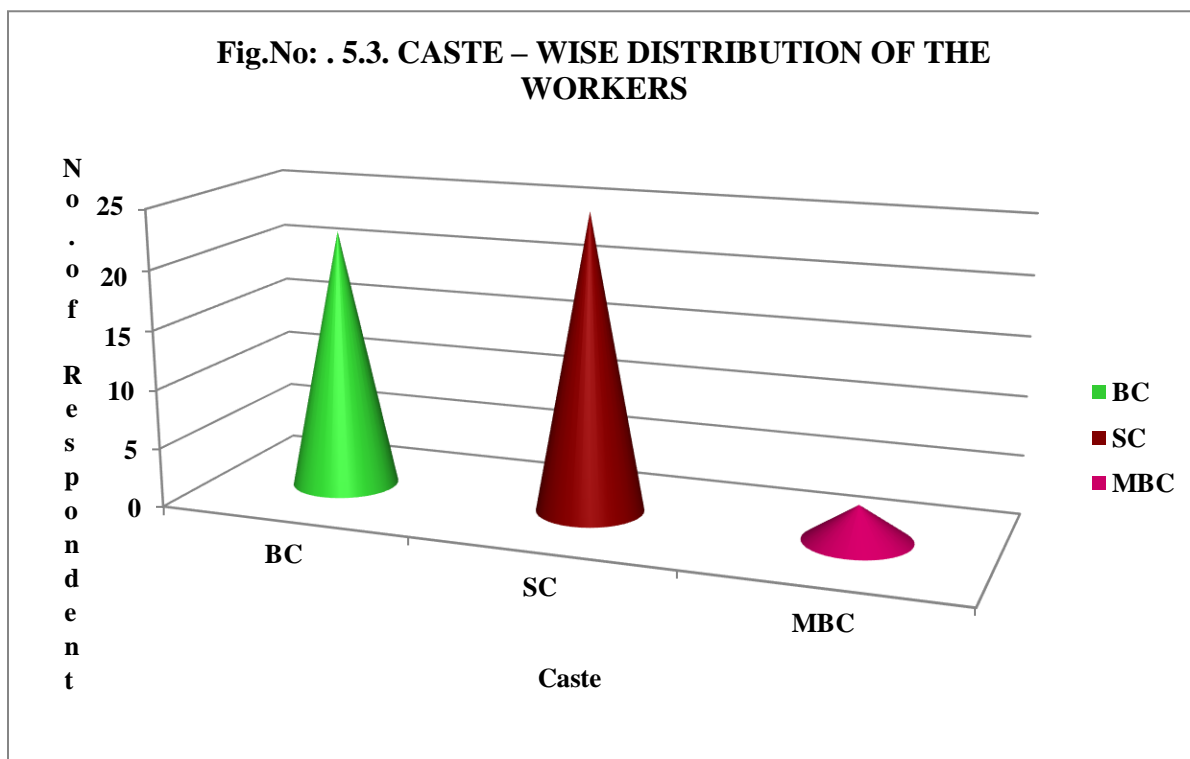


TABLE 5.4 RELIGION – WISH DISTRIBUTION OF THE WORKERS

S.NO	RELIGION	NO. OF WORKERS	PERCENTAGE
1	HINDU	41	82
2	CHRISTIAN	09	18
Total		50	100

Source: Primary data

From the above table 5.4 it is inferred that 82% of the workers are Hindus and remaining 18% of the workers are Christians, which shows that majority of the sample respondents are Hindus.

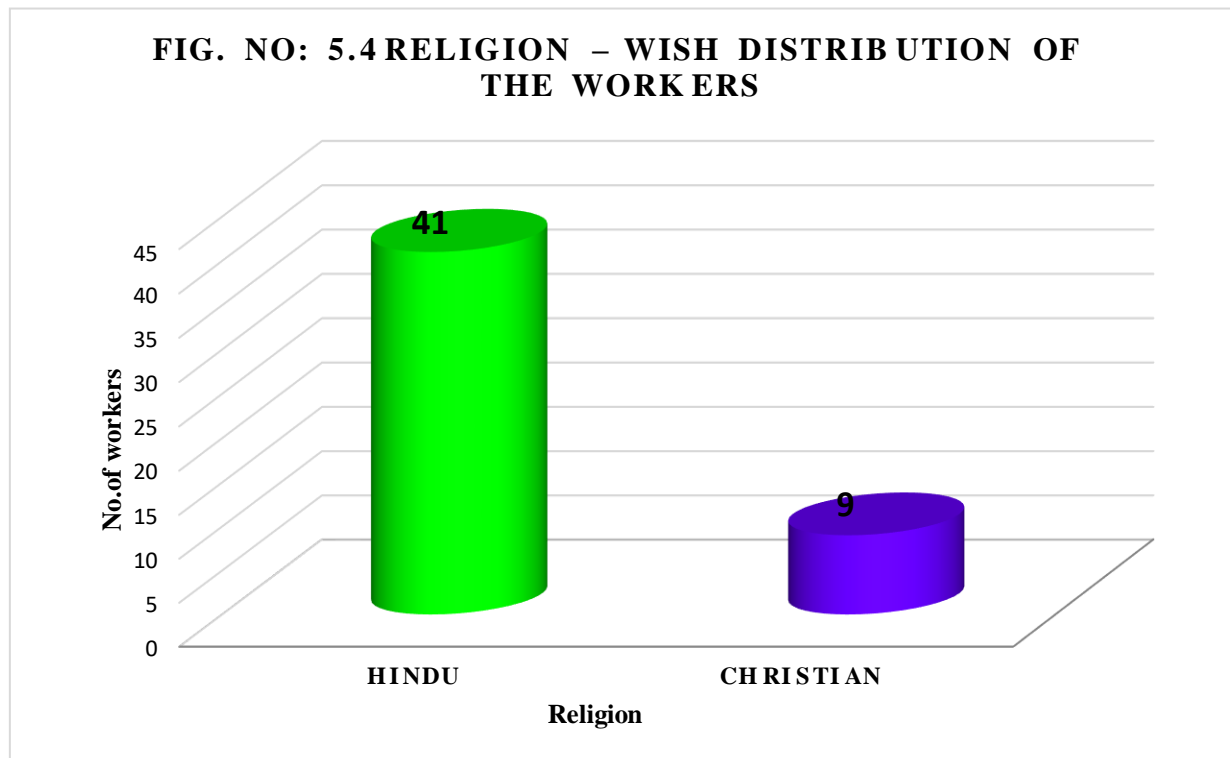
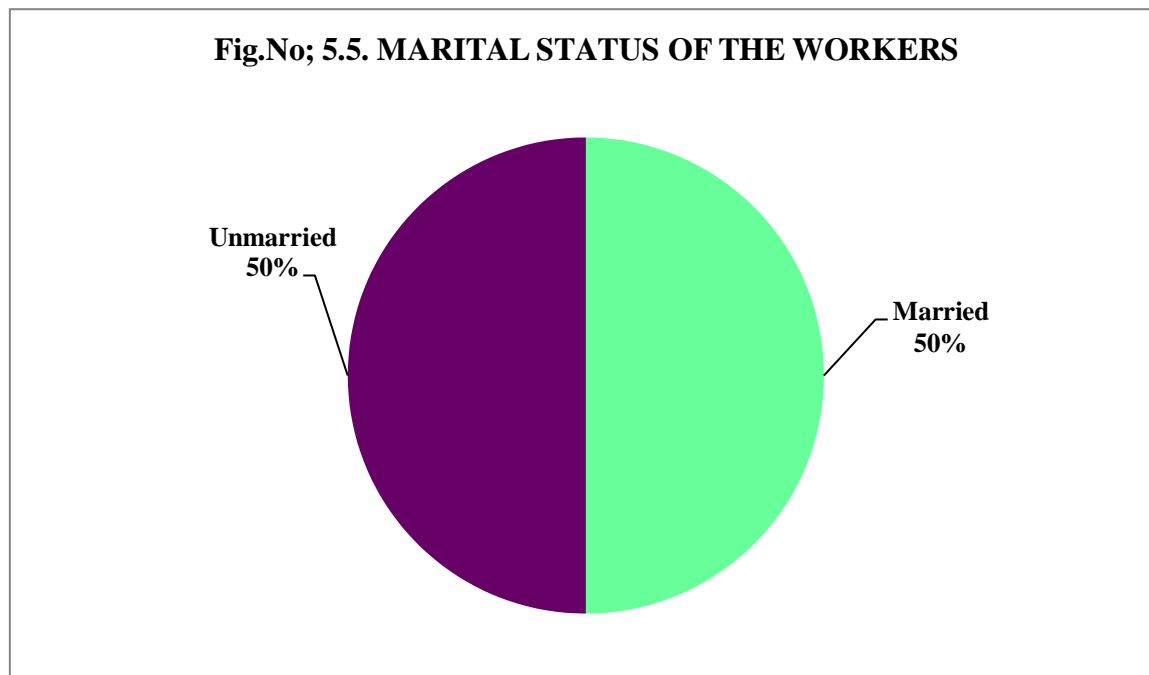


TABLE No; 5.5. MARITAL STATUS OF THE WORKERS

S.NO		NO OF RESPONDENTS	PERCENTAGE
1	Married	25	50
2	Unmarried	25	50
Total		50	100

Source; Primary data

From the table exhibits that out of 50 workers, about 50% (25) were married and 50% (25) were unmarried.



TABLE;5.6 EDUCATIONAL QUALIFICATION OF THE WORKERS

S.NO	EDUCATION	NO OF WORKERS	PERCENTAGE
1.	Illiterate	22	44
2.	Primary	16	32
3.	Secondary	9	18
4.	Graduate	3	6
Total		50	100

Source; Primary data

Agro industry workers are classified according to their education in table 5.6. 44 percent of them got illiterate education. Though 32percent of the workers were completed primary education.18 percent of the workers were Secondary and remaining 6 percent were Graduate.

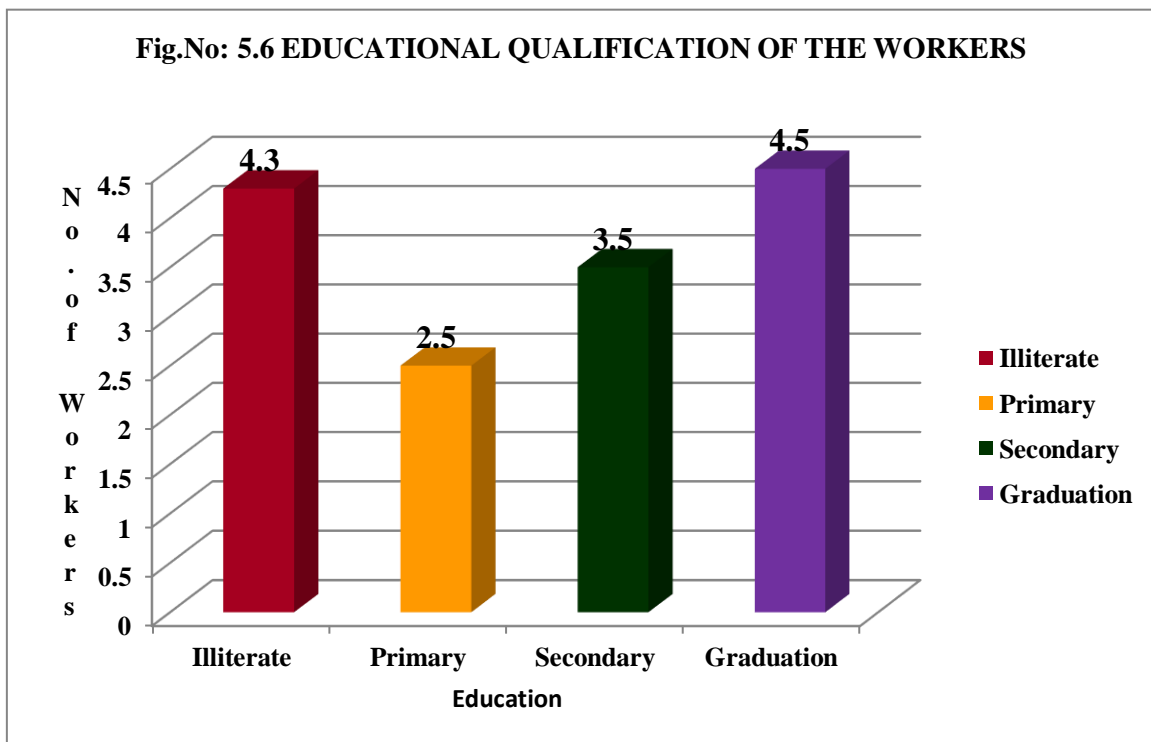
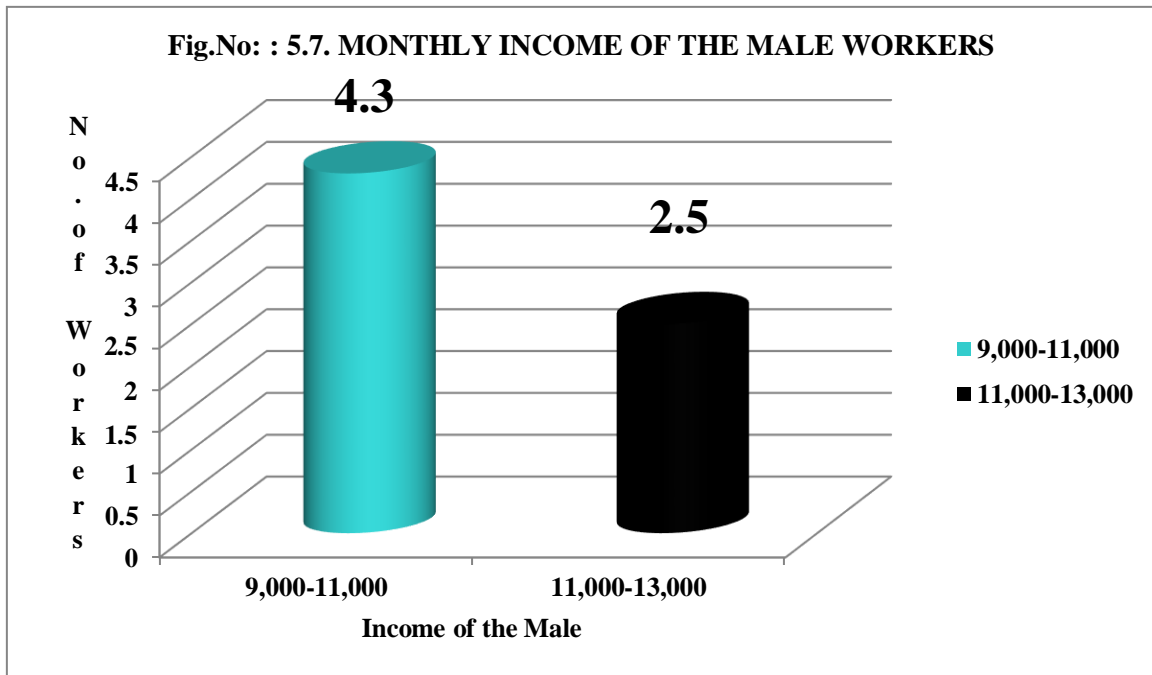


TABLE: 5.7. MONTHLY INCOME OF THE MALE WORKERS

S.NO	INCOME	NO OF WORKERS	PERCENTAGE
1.	9000-11000	13	81
2.	11000-13000	3	19
Total		16	100

Source; primary data

Above table reveals that 81% (13 workers) of the male workers have income between Rs:9,000.- 11,000. 19% (3 workers) of the male workers have income between Rs: 11,000-13,000



To find out the average monthly income of the male workers, the following formula is used.

$$\text{Arithmetic Mean} = \frac{\sum FM}{N}$$

N

$$\sum FM = 1,66,000 \quad N = 16$$

TABLE 5.8 AVERAGE MONTHLY INCOME OF MALE WORKERS

INCOME	MID – POINT(M)	NO.OF WORKERS (F)	FM
9,000-11,000	10,000	13	1,30,000
11,000 – 13,000	12,000	3	36,000
Total		16	1,66,000

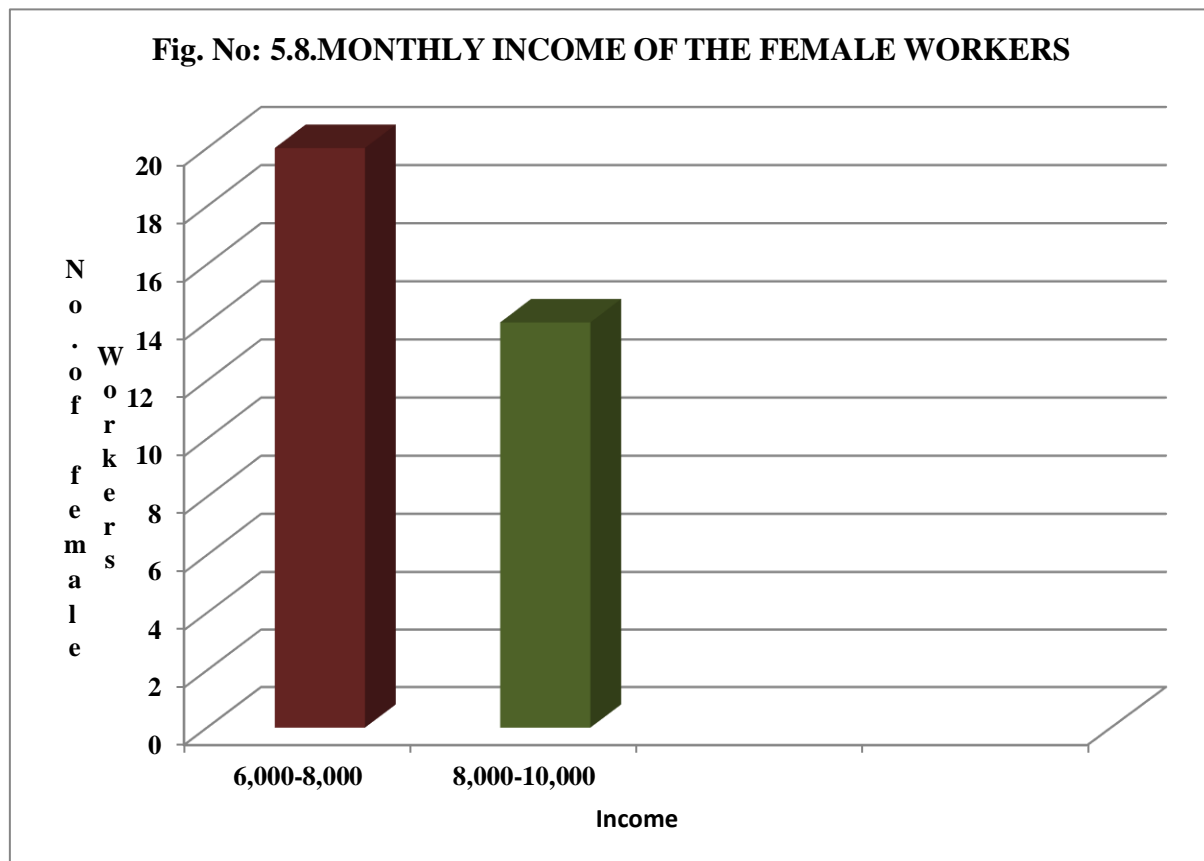
From the above analysis, the average monthly income of male workers is **Rs:10,375/**.

TABLE 5.9 MONTHLY INCOME OF THE FEMALE WORKERS

S.NO	INCOME (IN Rs:)	NO. OF WORKERRS	PERCENTAGE
1.	6,000-8,000	20	59
2.	8,000-10,000	14	41
Total		34	100

Source; Primary data

Above table reveals that 59% (20 workers) of the female workers have income between Rs.6,000-8,000. 41% (14 workers) of the female workers have income between Rs.8,000-10,000.



To find out the monthly average income of the female workers, the following formula is used.

Arithmetic Mean = $X = \frac{\Sigma FM}{N}$

N

TABLE 5.10 AVERAGE MONTHLY INCOME OF FEMALE WORKERS

INCOME IN (RS)	MID – POINTS (M)	NO.OF WORKERS (F)	FM
6,000- 8,000	7,000	20	1,40,000
8,000 -10,000	9,000	14	1,26,000
Total		34	2,66,000

From the above analyses, the average monthly income of female workers of the industry is **Rs.7824/**.

TABLE ; 5.11 MONTHLY EXPENDITURE OF THE MALE WORKERS

S.NO	EXPENDITURE	NO.OF WORKERS	PERCENTAGE
1	1000-4000	7	44
2	4000-7000	4	25
3	7000-10,000	5	31
	TOTAL	16	100

Source: Primary Data

Table 5.11 Analyses that 44% (7 workers) of the male workers families' yearly income spend to the range from Rs. 1000 _ Rs.4000. 5 workers (31%) were spending their income between Rs.7000-Rs.10,000. 4 workers (25%) family was spend their income between the range of Rs 4000 – Rs 7000. The researcher is calculating average yearly necessary expenditure of the male workers.

To find out the monthly average expenditure of the male workers , the following formula is used

$$\text{Arithmetic Mean} = \frac{\sum Fm}{N}$$

TABLE 5.12 AVERAGE MONTHLY EXPENDITUE OF THE MALE WORKERS

S.NO	INCOME	MID POINT (M)	NO.OF WORKERS	FM
1	1000-4000	2,500	7	17,500
2	4000-7000	5,500	4	22,000
3	7000-10,000	8,500	5	42,500
Total			16	82,000

Form above analyse, the average monthly expenditure of male workers of the cucumber industry is Rs= 5,125.

TABLE : 5.13.MONTHLY EXPENDITURE OF THE FEMALE WORKERS

S.NO	EXPENDITUE	NO.OF WORKERS	PERCENTAGE
1	1,000-3,000	5	15
2	3,000-5,000	25	73
3	5,000-7,000	4	12
Total		34	100

Source: Primary Data

Table 5.13 inferred that 25 female workers of the cucumber industry families yearly income spends to the range from Rs.3000- Rs.5000. 5 female workers were spending Rs. 1000- Rs. 3000. Remaining 4 female workers were spend their income between the range of Rs.5000 to 7,000. The researcher is calculating average yearly necessary expenditure of the female workers.

To find out the monthly average expenditure of the female workers, the following formula is used. **Arithmetic Mean**= $\frac{\sum Fm}{N}$

N

TABLE 5; 14 AVERAGEMONTHLY EXPENDITURE OF THE FEMALE WORKER

S.NO	INCOME	MID POINT (M)	NO.OF WORKERS	FM
1	1,000-3,000	2,000	7	14,000
2	3,000-5,000	4,000	4	16,000
3	5,000-7,000	6,000	5	30,000
Total			16	60,000

Source: Primary Data

From the above analyses, the average monthly expenditure of female workers of the cucumber industry is 3,750/.

TABLE 5.15 PROGRESS OF THE PURCHASE

YEAR	AMOUNT (IN KG)	INCREASE /DECREASE(IN KG)
2017-2018	25,47,824	-
2018-2019	26,92,776	1,44,952
2019-2020	30,52,105	3,59,329
2021-2022	29,81,284	-3,95,282

Source; primary data

In the presents study, table 5.15 highlights that the total purchasing of the cucumber industries has continuously increasing trend during the year 2017- 2018 to 2019-2020. The purchasing reduce to Rs.1,44,952. But it increased to Rs.3,59,329 during the year 2019-2020. After the year, it was decrease.

Trend Analysis:

Purchase of cucumber is analysed by using trend values and have been predicated for the future of 2025 by using trend line. The tables 5.15 have been used. The trend value of purchase has been estimate by using in liner trend equation given blow.

When, $Y_t = a + bx$

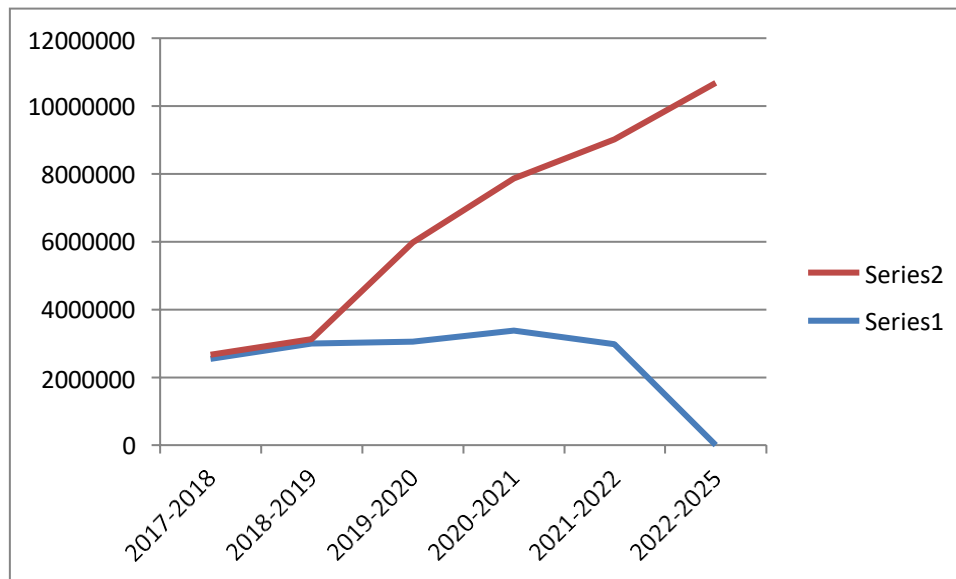
Y= Purchase of the cucumber industry

X= Time variable a and b parameters to be estimated

Y_t = computed trend figure for period in order determine the value by a and b the following two normal equations are to be solved. If $x = 0$ the value of A and B can be determind. With the help of above liner equation, the trend value for purchasing of the corrugated cucumber industry.

TABLE 5.16 TREND LINE TO PURCHASE

Year	X	(Purchase)	X ²	XY	YC
2017-2018	-2	25,47,824	4	-5,095,648	1,17,309
2018-2019	-1	29,92,776	1	-2,692,776	1,37,401
2019-2020	0	30,52,105	0	0	2,930,111
2020-2021	1	33,76,556	1	3,376,566	4,480,821
2021-2022	2	29,81,284	4	5,962,568	6,031,531
2022-2025	5		25		10,683,661
N= 5	$\Sigma X = 0$	$\Sigma Y =$ 14,650,555	$\Sigma X^2 = 35$	$\Sigma XY = 9,339,134$ - 7,788,424=1550710	



The production of the cucumber industry in the year 2025 will be Rs. 10,683,661/-

TABLE 5.17 FACTORY WEIGHT OF CUCUMBER

Source; primary data

Year	Amount(in kg)	Increase/decrease (in kg)
2017-2018	24,27,744	-
2018-2019	25,69,516	1,41,772
2019-2020	29,18,085	3,48,569
2020-2021	32,41,501	3,23,418
2021-2022	28,81,171	-3,60,332

Source; primary data

The above table 5.17 inferred that the factory weight of cucumber in the industry. In the year 2017-2018, the weight of the purchase cucumber is 24,27,744 K.G. It is increasing continuously till the year 2020-2021. In the year 2021-2022, the factory weight of the cucumber is 28, 81, 171 K.G.

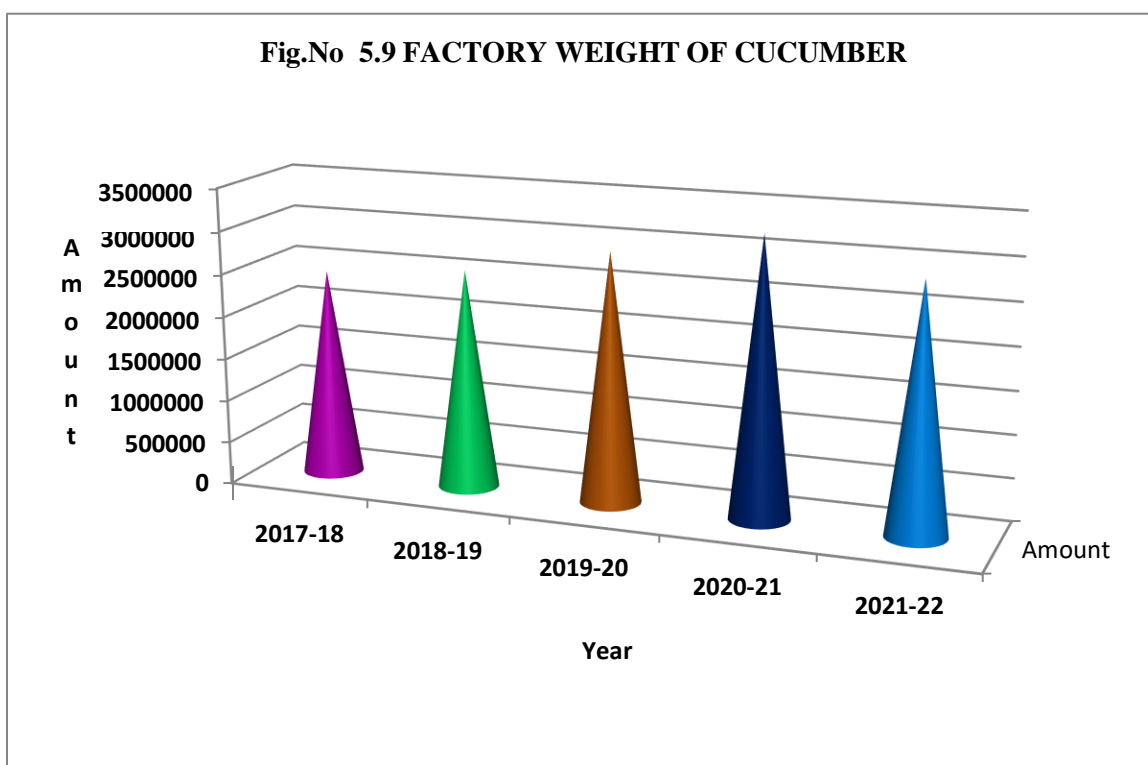


TABLE.5.18 LOSS OF WEIGHT OF CUCUMBER:

YEAR	LOSS AMOUNT (IN KG)
2017-2018	1,20,080
2018-2019	1,23,260
2019-2020	1,34,020
2020-2021	1,35,063
2021-2022	1,00,113

Source; primary data

The above table 5.18 clearly measure the weight loss of cucumber after the cleaning process. In the year 2017-18, it was Rs: 1,20,080. The money worth of weight loss was Rs: 1, 35,063 in the year 2020-2021. After the year, the weight was reduced to Rs: 1, 00,113.

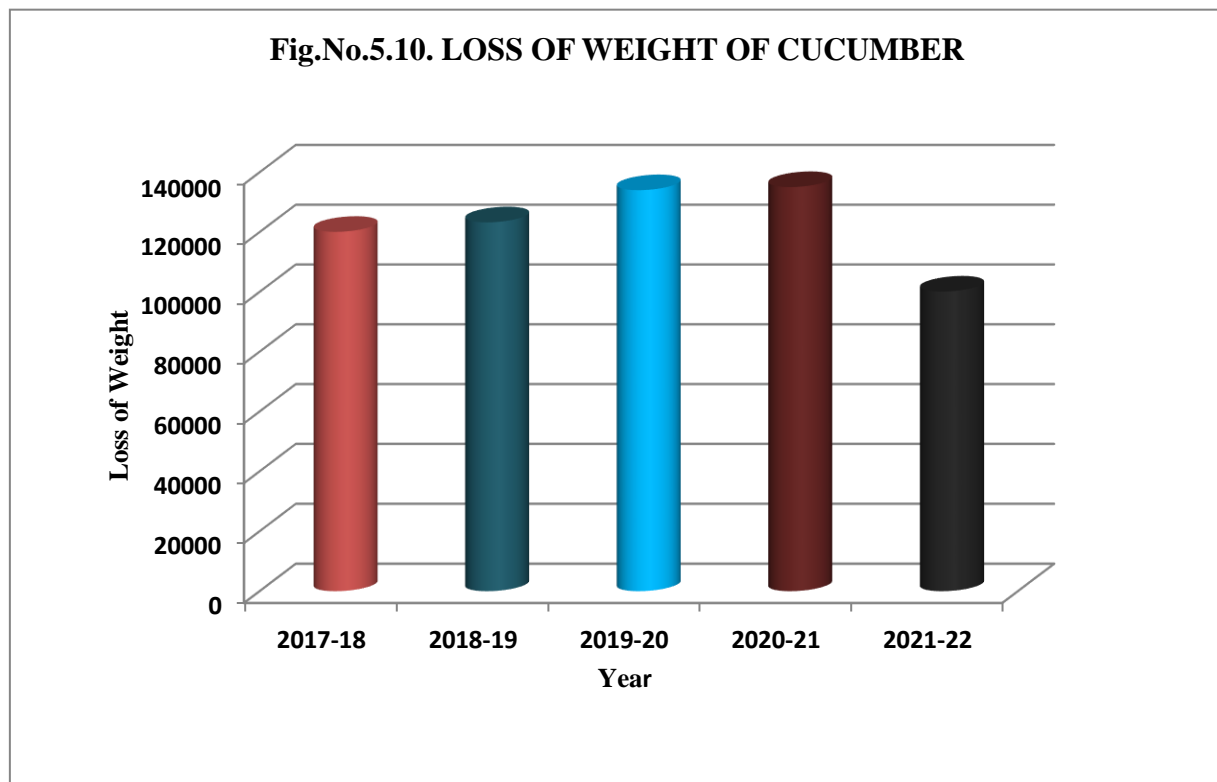
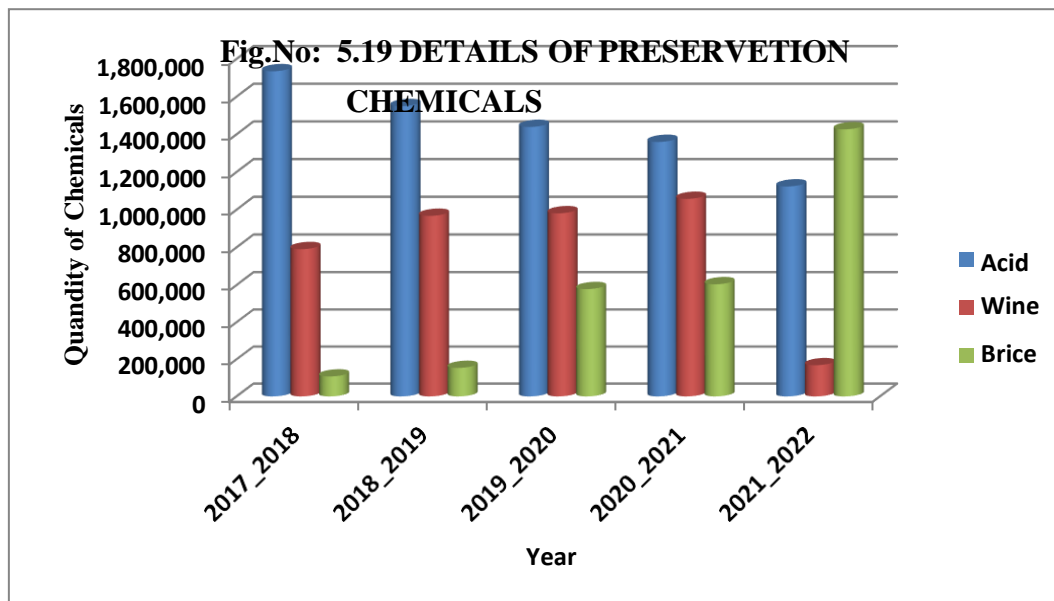


TABLE 5.19 DETAILS OF PRESERVATION CHEMICALS

Year	Acid	Wine	Brine
2017-2018	17,35,070	7,90,850	1,07,550
2018-2019	15,50,015	9,67,519	1,53,810
2019-2020	14,39,511	9,81,180	5,78,550
2020-2021	13,59,912	10,57,709	6,04,406
2021-2022	11,23,514	1,68,261	14,26,962

Source: Primary data

The above table 5.19 clearly measure the details of chemical preservation. In the year 2017-2018, Rs: 17,35,070 worth of Acid, wine worth is Rs; 7,90,850 and the Brine is worth of Rs; 1,07,550 is used for preserving the cucumber. The Acid added quantity is continuously decreasing to worth of Rs: 11, 23, 514 in the year 2021-2022. The highest quantity of wine is added in the year 2020-2021(Rs: 10, 57, 709). The lowest quantity of wine is used in the year 2021-22(Rs: 1, 68,261). In the year 2021- 22 is maximum quantity of Brine (Rs: 14, 26,962) is used. The lowest quantity of Brine is used in the year 2017-2018 Rs: 1,07,550).



CHAPTER- VI

FINDINGS, SUGGESTION AND CONCLUSION

6.1. SUMMARY OF FINDINGS:

This chapter presents the summary of the findings of the research work. This chapter also consist the suggestions to strengthen and recover the economic performance of SDK Rajan Indian Tropical Agro Products (P) Ltd, Madathur. The following are the main findings of this study.

- The present study reveals that the gender details of the workers. 68% of the workers(34) are female and remaining 32% of the Sample workers (16) are male. Majority of them are female workers.
- The study indicates that 38% of the workers are belongs to the age group 10-20 years. Among the workers, 24% were in the age class of 20-30.20% of workers are belongs to the age group of 40-50 and remaining 18% of the workers are in the age group of 30-40. The age group between 10 - 20 is more in number.
- The study reveals that 50% of the workers are Schedule Caste and 44% of the workers are backward caste and remaining 6% of the workers are most backward class. The study is inferred that most of the workers are Schedule Caste.
- The study inferred that 82% of the workers are Hindus and remaining 18% of the workers are Christians, which shows that majority of the sample respondents are Hindus.
- The present study exhibits that out of 50 workers 50% (25) were married and 50% (25) were unmarried. Both married and unmarried workers are equal in number.
- Cucumber industry workers are classified according to their education in the study area. 44 percent of them are illiterate. Though 32percent of the workers were completed primary education.18 percent of the workers completed secondary and remaining 6 percent were Graduates. Most of them workers completed their primary education.
- The study reveals that 81% (13 workers) of the male workers have income between Rs:9,000.- 11,000. 19% (3 workers) of the male workers have income between Rs: 11,000-13,000. Majority of the male workers having category of income between Rs:9000-11,000.
- The researcher is calculating average monthly income of the male workers. From the above analysis, the average monthly income of male workers is Rs:10,375/.

- The present study inferred that 59% (20 workers) of the female workers have income between Rs.6,000-8,000. 41% (14 workers) of the female workers have income between Rs.8, 000-10,000. Majority of the female workers having category of income between Rs:6,000-8,000.
- The researcher is calculating average monthly income of the female workers. From the above analysis, the average monthly income of female workers is Rs.7824/. Comparing to male workers, the average income of the female is low and appreciable.
- The study analyses that 44% (7 workers) of the male workers families' yearly income spend to the range from Rs. 1000 - Rs.4000. 5 workers (31%) were spending their income between Rs.7000-Rs.10,000. 4 workers (25%) family was spend their income between the range of Rs 4000 – Rs 7000. Majority of the male workers expenditure between Rs: 1000-Rs:4,000.
- The researcher is calculating average monthly necessary expenditure of the male workers. From the above analyses, the average monthly expenditure of male workers of the cucumber industry is Rs: 5,125.
- The study inferred that 25 female workers of the cucumber industry families yearly income spends to the range from Rs.3000- Rs.5000. 5 female workers were spending Rs. 1000-Rs. 3000. Remaining 4 female workers were spend their income between the range of Rs.5000 to 7,000.
- The researcher is calculating average monthly necessary expenditure of the female workers. From the analyses, the average monthly expenditure of female workers of the cucumber industry is 3,750/. Comparing to male workers, the average expenditure of the female is low and appreciable.
- In the presents study, table 5.15 highlights that the total purchasing of the cucumber industries has continuously increasing trend during the year 2017- 2018 to 2019-2020. The purchasing reduce to Rs.1, 44, 952. But it increased to Rs.3, 59, 329 during the year 2019-2020.Purchase of the cucumber is decreasing in the study period.
- The purchase of the cucumber industry in the year 2025 will be Rs. 10,683,661/-

- During the study period the purchase of the cucumber industry is decreasing trend. The researcher calculated the trend value for the cucumber purchase. The purchase amount in the year 2022 will be Rs: 46, 60,600/-
- The study inferred that the factory weight of cucumber in the industry. In the year 2017-2018, the weight of the purchase cucumber is 24, 27,744 K.G. It is increasing continuously till the year 2020-2021. In the year 2021-2022, the factory weight of the cucumber is 28, 81, 171 K.G.
- The above table 5.18 clearly measure the weight loss of cucumber after the cleaning process. In the year 2017-18, it was Rs: 1, 20, 080. The money worth of weight loss was Rs: 1, 35,063 in the year 2020-2021. After the year, the weight was reduced to Rs: 1, 00,113. The factory weight of the industry is reducing in the study period.
- The study clearly measure the details of chemical preservation. In the year 2017-2018, Rs: 17, 35, 070 worth of Acid, wine worth is Rs; 7, 90, 850 and the Brine is worth of Rs; 1, 07, 550 is used for preserving the cucumber. The Acid added quantity is continuously decreasing to worth of Rs: 11, 23, 514 in the year 2021-2022. The highest quantity of wine is added in the year 2020-2021(Rs: 10, 57, 709). The lowest quantity of wine is used in the year 2021-22(Rs: 1, 68,261). In the year 2021- 22 is maximum quantity of Brine (Rs: 14, 26,962) is used. The lowest quantity of Brine is used in the year 2017-2018 Rs: 1,07,550). The quantity of acid and wine is reducing comparing to Brine.

6.2. SUGGESTIONS:

The success of the industry is based on environmental conditions. On this basis, the environmental and working conditions of the workers are satisfied. The following suggestions are offered to improve the functioning of SDK Rajan Indian Tropical Agro Products (P) Ltd, Madathur industry in future.

- ✍ The cucumber industry is dominated by the female workers. But the remuneration for female workers is low in this industry. The industry should try to give Equal Pay for all kinds of workers.
- ✍ The establishment of the labourers' association is essential and most of the problems could be identified through the association.
- ✍ Cucumber is a labour intensive industry. Production section requires a number of workers in various processes. The preservation of cucumber can be done using machines. The coir industry should be focus more innovation for improvement of higher production.
- ✍ Strengthening and regulating the raw-material supply is essential for the growth of the industry.
- ✍ Introduction of new working and training centres will be supported to develop the efficiency of the workers.

- ✍ Finance is a major production problem faced by the industry. So, the government may encourage this kind of agro-based industries to offer loan facilities at subsidized rates of interest, especially to meet out their working capital requirements during peak seasons.
- ✍ The purchase weight is high than the industrial weight. The industry paid the money for the loss value. It is weakness and reduces the quantity of production in the industry. The industry should try to purchase the dustless cucumber.
- ✍ The ratio of adding chemical is high. It will affect the consumer health. The industry should reduce the quantity of adding acids in the cucumber.

6.3. Conclusion:

Agro-based industries will see a positive swing as agricultural production increases. With the sops and subsidies provided by the government, the agricultural produce will continue to grow over the years, also fuelling growth in agro-based industries. With the present dispensation open to increased participation from the private sector, there is tremendous scope for investment in these industries in the coming decade. So, if you want to start a business in one of these agro-based industries, conduct thorough research and develop a business plan before embarking on the journey. The present study industry of SDK Rajan Indian Tropical Agro- based industries is in increasing trend. If the industry will make some positive changes, It will automatically develop the industry in future.

References

1. Colucci SJ, Holmes GJ. Cucurbits – Downy Mildew [Internet]. NC State University – Department of Plant Pathology. 2007. Available from: <https://col.st/uWKan>
2. Cornell University. Growing Guide – Cucumbers [Internet]. Home Gardening – Vegetable Growing Guides. 2006. Available from: <https://col.st/N9Bn1>
3. Diver S, Hinman T. Cucumber Beetles: Organic and Biorational Integrated Pest Management. ATTRA – National Sustainable Agriculture Information Service [Internet]. 2008;2–20. Available from: <https://col.st/9mEg4>
4. Dunn T. New Introductions: Vegetables for 1994. Horticulture [Internet]. 1994;72(1):23–30. Available from: <https://col.st/YLjgl>
5. Du Toit A. 10 health benefits of cucumbers. Natural News [Internet]. 2012 Aug 6; Available from: <https://col.st/gnCNF>
6. Fleming HP. Developments in Cucumber Fermentation. Journal of Chemical and Biotechnology [Internet]. 1984 Jul 4;34(4):241–52. Available from: <https://col.st/Gb1Nh>
7. Fleming HP, McFeeters RF, Breidt F. Fermented and Acidified Vegetables [Internet]. Compendium of Methods for the Microbiological Examination of Foods; 2001. Available from: <https://col.st/YjByP>
8. Gill H, Goyal G, Gillett-Kaufman J. Spotted cucumber beetle *Diabrotica undecimpunctata howardi* Barber [Internet]. EDIS New Publications RSS; 2013. Available from: <https://col.st/lyi7r>
9. Haifa Group. Nutritional Recommendations for Cucumber [Internet]. Haifa; N/A. Available from: <https://col.st/3zRbV>
10. Hochmuth RC. Greenhouse Cucumber Production – Florida Greenhouse Vegetable Production Handbook, Vol 31" [Internet]. EDIS New Publications RSS; 1990. Available from: <https://col.st/krs2C>
11. Hoffman M, Zitter T. Vegetable Crops: Cucumber Beetles, Corn Rootworms, and Bacterial Wilt in Cucurbits [Internet]. Vegetable MD Online. 1994. Available from: <https://col.st/e8kyy>
12. International Trade Centre. International trade in goods – Imports 2001-2014 [Internet]. International Trade Centre. 2013. Available from: <https://col.st/JepxW>
13. Larson B, Mossler M, Nesheim ON. Florida Crop/Pest Management Profiles: Cucumbers [Internet]. EDIS New Publications RSS. 2000. Available from: <https://col.st/sL6Xa>

14. Marketing and Research Analysis – International Trade Center. List of Supplying Markets for a Product Imported by United States of America Metadata [Internet]. Trade Map – Trade Statistics for International Business Development. 2015. Available from: <https://col.st/y1C5g>
15. Nonnecke IL. Vegetable Production. New York: Van Nostrand Reinhold; 1989. 553 p.
16. Schrader W, Aguiar J, Mayberry K. Cucumber Production in California. University of California ANR [Internet]. 2002;(8050):1–8. Available from: <https://col.st/itvGm>
17. Nutrition Facts – Cucumber, with peel, raw [Internet]. 2014. Available from: <https://col.st/lqmHI>
18. Simonne E, Hochmuth R, Breman J, Lamont W, Treadwell D, Gazula A. Drip-irrigation systems for small conventional vegetable farms and organic vegetable farms [Internet]. EDIS New Publications RSS; 2008. Available from: <https://col.st/SxBjd>
19. Tips for Fresh Produce Safety: Safe Handling of Raw Produce and Fresh-Squeezed Juices. Tips for Fresh Produce Safety.
20. U.S. Environmental Protection Agency. Florida Cucumber (Vegetables) [Internet]. Pesticides: Science and Policy. 2012. Available from: <https://col.st/78qPo>
21. U.S. Department of Health and Human Services F and DA, Center for Food Safety and Applied Nutrition (CFSAN). Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables [Internet]. Washington, DC: U.S. Food and Drug Administration; 1998 Oct. (Guidance for Industry). Available from: <https://col.st/vITgl>
22. Villalta A. Cucumber Production: Postharvest Considerations. 2005.
23. Webb SE. Insect Management for Cucurbits (Cucumber, Squash, Cantaloupe, and Watermelon) [Internet]. EDIS New Publications; 2001. Available from: <https://col.st/XnYCK>
24. Wehner T. What are Burpless Cucumbers. HortTechnology [Internet]. 2000;10(2):317–20. Available from: <https://col.st/PXfoY>

Selection of Raw Cucumber



Washing Cucumber in water



Grading



Slicing



Brine Pickling (add Salt /Vinegar)



Add Preservative Acetic Acid



Packing



AN ANALYSIS OF CUCUMBER PROCESS AND WORKERS DETAILS OF STK RAJAN AGRO TROPICAL LTD ,MADATHUR, THOOTHUKUDI DISTRICT.

MANAGEMENT

1.Name of the factory:

2.Factory Building: Owned / Rented / Leased out / terms of lease

3. Location of the industry:

4. Ownership: Government / Private

5. Year of commencement of the factory:

6. Type of establishment:

a) Proprietorship b)partnership c) Government undertaking d) Co-operative e) Other

7. Average amount spent for investment:

8.Average amount spent for rent:

9. Objectives of the industry:

10. Origin of cucumber :

11. Medicinal advantages of cucumber:

12. Process of cucumber:

13. Preservation Cost of cucumber:

14. Various size, quality and rate of cucumber:

Size	Gram/ K.g	Rate

15. Investment:

Year	Amount
2016 - 2017	
2017 - 2018	
2018 - 2019	

2019- 2020	
2020- 2021	

16. Year wise product from the industry:

Year	Product in Quantity	Amount
2016- 2017		
2017- 2018		
2018- 2019		
2019- 2020		
2020- 2021		

17. Average amount spent for repair and maintenance:

Year	Amount
2016- 2017	
2017- 2018	
2018- 2019	
2019- 2020	
2020- 2021	

18. Company Dealers of cucumber for purchase inputs:

Dealers (Area)	No. of Years

19. Average amount spent for wages:

Year	No. of manpower	Amount
------	-----------------	--------

2016- 2017		
2017- 2018		
2018- 2019		
2019- 2020		
2020- 2021		

20. Reasons for replacement:

I) Outdated II) Workout

21. Do you face any problems in respect of power failure: Yes / No

22. Sources of finance:

a) Own b) Bank / Financial institution c) Relatives d) Friends

23. No. of manpower:

Category	Male	Female
Office staff		
Workers (main)		
Casual workers		
Total		

24. Details of machinery:

25. Details of export:

Name of dealers	Quantity

26. Details of production per process:

Quantity	Value Rs.

AN ANALYSIS OF CUCUMBER PROCESS AND WORKERS DETAILS OF STK RAJAN AGRO TROPICAL LTD ,MADATHUR, THOOTHUKUDI DISTRICT.

QUESTIONNAIRE (WORKERS)

1. Name of the Labour :
2. Sex: : Male / Female
3. Age of Labour :
4. Educational qualification : a) Illiterate b) Primary c) Secondary d) Graduate
5. Marital status : Married / Unmarried
6. Community : SC / ST / BC / MBC
7. Religion : a) Hindu b) Christian c) Muslim
8. Income of the labour (**Monthly**) :
9. Terms of wage : a) Per hour b) Daily c) Month
10. Average daily working hours :
11. Leisure time between the working hours :
12. Expenditure of the labour amount (**Monthly**) :
13. Job satisfaction : Yes / No
14. Any problems in working place? : Yes / No
15. What kinds of problems :
16. No. of holidays :
17. Toilet Facilities : Yes / No
18. Medical Facilities : Yes / No
19. Canteen Facilities : Yes / No
20. Water Facilities : Yes / No
21. Any health illness from the work : Yes / No

22. Human manpower in various departments:

Department	Male	Female
Total		

23. Debt gets from:

a) Banks b) Money c) Lenders d) Friends e) Relatives

24. Amount of Debt :

**AN ANALYSIS OF THE PERFORMANCE OF BANK OF INDIA,
BALAVINAYAGAR KOVIL STREET, THOOTHUKUDI**

Project report submitted to

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Thirunelveli

In partial fulfillment for the award of the Degree of

Bachelor of Arts in Economics

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DEPARTMENT OF ECONOMICS

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI

(Reaccredited with 'A + 'Grade by NAAC)

2021-2022

CERTIFICATE

This is to certify that the report of the project entitled 'AN ANALYSIS OF THE PERFORMANCE OF BANK OF INDIA, BALA VINAYAGAR KOVIL STREET, THOOTHUKUDI' submitted to ST.MARY'S COLLEGE (AUTONOMOUS), Thoothukudi in partial fulfillment for the award of the Degree of Bachelor of Arts in Economics and is record of work done during the year 2021-2022 by the following students of III B.A., ECONOMICS.

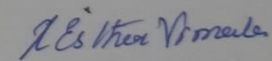
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V. Deeba

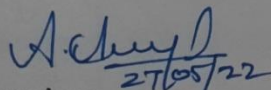
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Thoothukudi - 628 001.

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1.1. INTRODUCTION

The banking sector is the life blood of any modern economy. It is one of the important financial basements of the financial sector, which plays a vital role in the functioning of an economy. It is very important for economic development of a country that it's financing requirements of trade; industry and agriculture are met with higher degree of commitment and responsibility. The Indian banking sector is broadly classified into scheduled banks and non-scheduled banks. The scheduled banks are those included under the 2nd schedule of the Reserve Bank of India Act, 1934. The scheduled banks are further classified into: nationalized banks; India and its associates; Regional Rural Bank and other Indian private sector banks. The term commercial banks refer to both scheduled and non-scheduled commercial banks regulated under the banking Regulation Act, 1949 integrally linked in banking industry in gradually increasing. Their role of mobilization of deposits and disbursement of credit to various sector of banking industry. This will also reflect health of the country.

The Banking sector in India has always been one of the most preferred avenues of employment. In the current decade, this has emerged as a resurgent sector in the Indian economy. As per the McKinsey report 'India Banking 2010', the banking sector index has grown at a compounded annual rate of over 51 per cent since the year 2001, as compared to a 27 per cent growth in the market index during the same period. It is projected that the sector has the potential to account for over 7.7 per cent of GDP with over Rs. 7,500 billion in market cap, and to provide over 1.5 million jobs.

Banks were considered as a backbone to the financial system and play an important role in economic development of nation. They act as intermediaries in channelizing funds from surplus units to deficit units to the fully utilization of the funds. An efficient banking system of nations has significant positive externalities which increase the efficiency of economic transaction in general. There is a major shift in banking system in the policy atmosphere after the introduction of financial sector reform in 1992; these reforms impact the working of commercial banks. As one of the objectives of financial sector reform was to improve the efficiency of banking system in India economy.

INDIAN FINANCIAL SYSTEM:

The financial system's contribution to the economy depends upon the quantity and quality of its service and efficiency with which it provides them. Financial System of any country consists of financial markets, financial intermediation and financial instruments or financial products. The term "finance" in our simple understanding it is perceived as equivalent to 'Money'. The word "system", in the term "financial system", implies a set of complex and closely connected or interlined institutions, agents, practices, markets, transactions, claims, and liabilities in the economy. The financial system is concerned about money, credit, and finance- the three terms are intimately related yet are somewhat different from each other. Indian financial system consists of financial market, financial instruments, and financial intermediation. A Financial Market can be defined as the market in which financial assets are created or transferred. As against a real transaction that involves exchange of money for real goods or services, a financial transaction involves creation or transfer of a financial asset. It consists of market for government securities, corporate securities, foreign exchange, derivatives, short term finance or money market and capital market etc. Market for different types of financial instruments may be organized like stock exchange with centralized trading or informally as the over-the counter market. Financial Assets or Financial Instruments represent a claim to the payment of a sum of money sometime in the future and or periodic payment in the form of interest or dividend.

A financial system provides services that are essential in a modern economy. The use of a stable, widely accepted medium of exchange reduces the costs of transactions. It facilitates trade and, therefore, specialization in production. Financial assets with attractive yield, liquidity and risk characteristics encourage saving in financial form. By evaluating alternative investments and monitoring the activities of borrowers, financial intermediaries increase the efficiency of resource use. Access to a variety of financial instruments enables an economic agent to pool, price and exchange risks in the markets. Trade, the efficient use of resources, saving and risk taking are the cornerstones of a growing economy. In fact, the country could make this feasible with the active support of the financial system. The financial system has been

identified as the most catalyzing agent for growth of the economy, making it one of the key inputs of development.

ROLE OF BANKS IN THE ECONOMIC DEVELOPMENT OF A COUNTRY:

The banking system plays an important role in the modern economic world. Banks collect the savings of the individuals and lend them out to business- people and manufacturers. Bank loans facilitate commerce.

Manufacturers borrow from banks the money needed for the purchase of raw materials and to meet other requirements such as working capital. It is safe to keep money in banks. Interest is also earned thereby. Thus, the desire to save is stimulated and the volume of savings increases. The savings can be utilised to produce new capital assets. Thus, the banks play an important role in the creation of new capital (or capital formation) in a country and thus help the growth process.

Banks arrange for the sale of shares and debentures. Thus, business houses and manufacturers can get fixed capital with the aid of banks. There are banks known as industrial banks, which assist the formation of new companies and new industrial enterprises and give long-term loans to manufacturers. The banking system can create money. When business expands, more money is needed for exchange transactions. The legal tender money of a country cannot usually be expanded quickly. Bank money can be increased quickly and used when there is need of more money. In a developing economy (like that of India) banks play an important part as supplier of money.

The banking system facilitates internal and international trade. A large part of trade is done on credit. Banks provide references and guarantees, on behalf of their customers, on the basis of which sellers can supply goods on credit. This is particularly important in international trade when the parties reside in different countries and are very often unknown to one another.

Trade is also assisted by the grant of loans by discounting bills of exchange and in other ways. Foreign exchange transactions (the exchange of one currency for another) are also done through banks. Finally, banks act as advisers, counsellors and agents of business and industrial organisations. They help the development of trade and industry. Financial health of the banking sector has also improved a great deal as the non-performing asset (NPA) burden of

the banks eased considerably in the last few years, post the clean-up balance sheets undertaken by the banks due to the asset quality review.

NON PERFORMING ASSETS IN INDIAN BANKING INDUSTRY:

In 1996-97, the GNPA in the Indian banking industry was 15.7%. It fell to 2.35% at the end of March 2011 due to various reforms introduced by the RBI and the Government of India, such as implementation of the reforms suggested by the second M. Narasimham Committee on the banking sector in 1998, enactment of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act), and Credit Information Companies (Regulation) Act, 2005 etc.

However, due to various reasons, the total stressed assets, which stood at 9.8% at the end of March 2012, increased to 11.06% by March 2015 and then to 14.5% by the end of December 2015. , This affected the growth in the net profit of the SCBs, which declined from 2011-12 and led to a fall in the ROA and the ROE of banks

REASONS FOR HIGH GROWTH IN NPA:

There were many environmental factors which were responsible for the high growth of NPAs in India. One of the main reasons was the US financial crisis in 2008 which had a global impact. In addition to this, a fall in commodity prices and dumping from China had decreased the competitiveness of the Indian manufactures, which led to the reduction in cash flow of manufacturers which made it tough to repay their loans. This led to the growth in NPAs.

OVERHANG OF NPA - IMPACT OF COVID IN BANKING SECTOR:

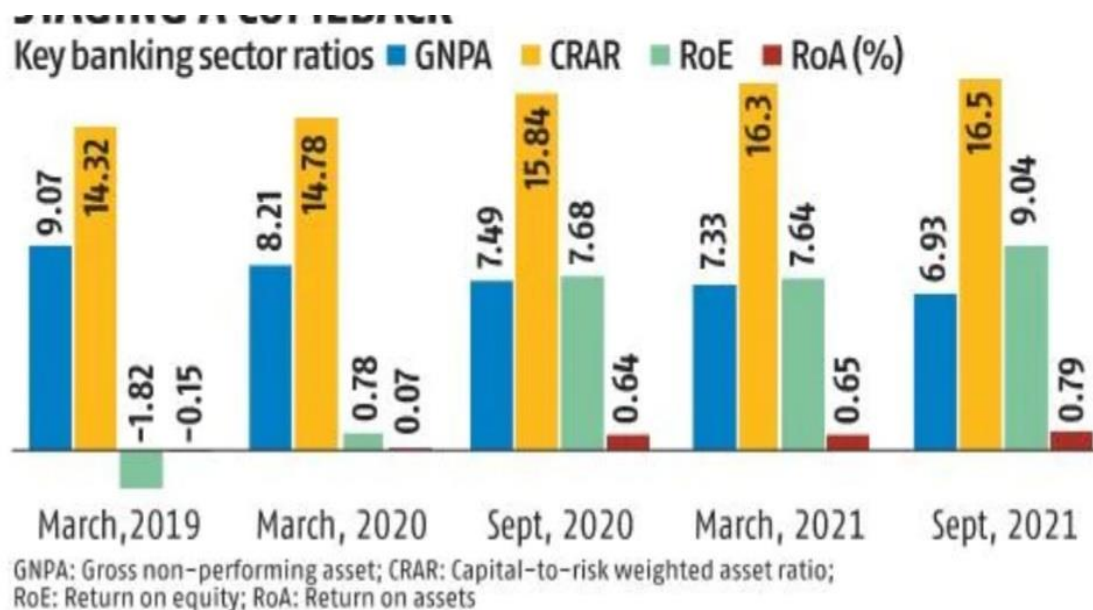
Financial health of the banking sector has also improved a great deal as the non-performing asset (NPA) burden of the banks eased considerably in the last few years, post the clean-up balance sheets undertaken by the banks due to the asset quality review. The Indian banking system has weathered the economic shock of the pandemic well so far but there is some lagged impact in the pipeline, said the Economic Survey of 2021-22.

According to the survey, the banking system is well capitalised and the overhang of Non-Performing Assets (NPAs) seem to have structurally declined even allowing for some lagged impact of the pandemic. The gross NPAs ratio of the banking system has declined from

11.2 per cent in 2017-18 to 7.5 per cent at the end-September 2020 to 6.9 per cent at end-September 2021. Similarly, the net NPAs ratio has declined from its highs of 6 per cent in 2017-18 to 2.2 at end- September 2021.

But, over the last year (September 2020 – September 2021), the stressed advances ratio of scheduled commercial banks increased from 7.9 per cent at end-September 2020 to 8.5 per cent at end-September 2021. And, the restructured Standard Advances (RSA) ratio of the banks increased from 0.4 per cent to 1.5 per cent during the same period.

“Various Covid-19 related dispensations/moratoriums provided with respect to asset quality contributed towards increase in restructured assets and as a result, stressed advances ratio for the banking system increased at end-September 2021”, the economic survey said. The Reserve Bank of India (RBI) had given a six-month moratorium on repayments of loans from March 2020 to August 2020. It had also come out with two restructuring schemes wherein distressed borrowers were allowed to restructure their loans to avoid economic complications.



Source: Economic Survey, Subrata Panda, Mumbai, 31st Jan 2022.

While the gross NPA ratio of the public sector banks decreased from 9.4 per cent at end-September 2020 to 8.6 per cent at end-September 2021. But the RSA ratio of such banks

increased marginally from 10.0 per cent to 10.1 per cent during the same period on account of rise in restructured advances.

The economic survey also said that the capital adequacy ratio of the banks has continued to improve since 2015-16, with capital to risk weighted asset ratio (CRAR) of the banks increasing from 15.84 per cent at end-September 2020 to 16.54 per cent at end-September 2021 on account of its improvement for both public and private sector banks.

While the improvement in CRAR levels of public sector banks was due to capital infusion by the government alongside fund raising from the markets, the private sector banks have tapped capital from market sources. Based on the capital position as on September 30, 2021, all public sector and private sector banks maintained the Capital Conservation Buffer (CCB) well over 2.5 per cent.

Structure of Banking Sector in India:

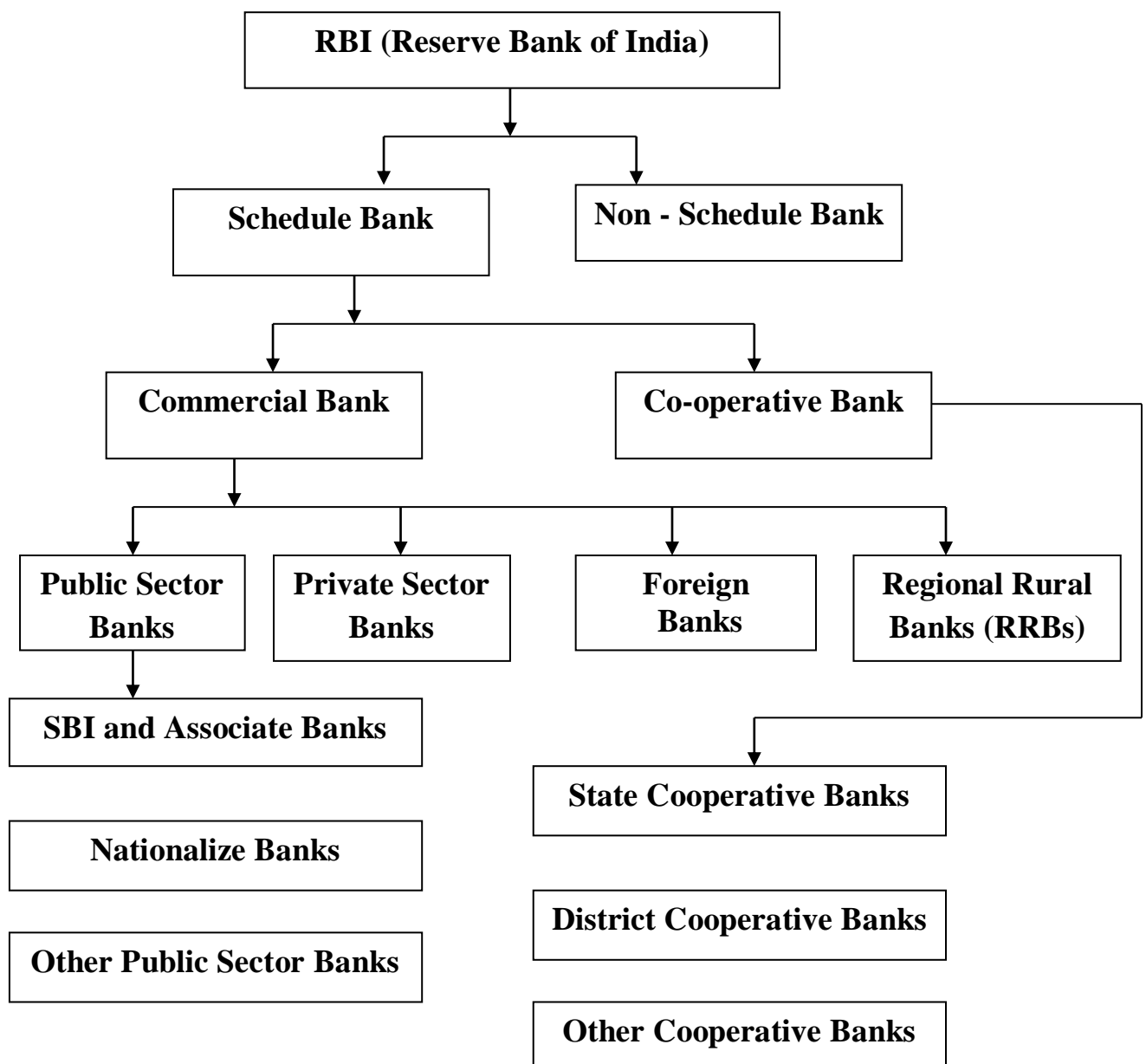
Reserve Bank of India is the Central Bank of our country. It was established on 1st April 1935 under the RBI Act of 1934. It holds the apex position in the banking structure. RBI performs various developmental and promotional functions. As of now 26 public sector banks in India out of which 21 are Nationalised banks and 5 are State Bank of India and its associate banks. There are total 92 commercial banks in India. Public sector banks hold near about 75% of the total bank deposits in India.

Indian Banks are classified into commercial banks and Co-operative banks. Commercial banks comprise: (1) Schedule Commercial Banks (SCBs) and non-scheduled commercial banks. SCBs are further classified into private, public, foreign banks and Regional Rural Banks (RRBs); and (2) Co-operative banks which include urban and rural Co-operative banks.

The Indian banking industry has its foundations in the 18th century, and has had a varied evolutionary experience since then. The initial banks in India were primarily traders' banks engaged only in financing activities. Banking industry in the pre-independence era developed with the Presidency Banks, which were transformed into the Imperial Bank of India and subsequently into the State Bank of India.

The initial days of the industry saw a majority private ownership and a highly volatile work environment. Major strides towards public ownership and accountability were made with Nationalisation in 1969 and 1980 which transformed the face of banking in India. The industry in recent times has recognised the importance of private and foreign players in a competitive scenario and has moved towards greater liberalisation.

STRUCTURE OF INDIAN BANKING SYSTEM



1. Reserve Bank of India:

Reserve Bank of India is the Central Bank of our country. It was established on 1st April 1935 accordance with the provisions of the Reserve Bank of India Act, 1934. It holds the apex position in the banking structure. RBI performs various developmental and promotional functions.

It has given wide powers to supervise and control the banking structure. It occupies the pivotal position in the monetary and banking structure of the country. In many countries central bank is known by different names.

For example, Federal Reserve Bank of U.S.A, Bank of England in U.K. and Reserve Bank of India in India. Central bank is known as a banker's bank. They have the authority to formulate and implement monetary and credit policies. It is owned by the government of a country and has the monopoly power of issuing notes.

2. COMMERCIAL BANKS:

Commercial bank is an institution that accepts deposit, makes business loans and offer related services to various like accepting deposits and lending loans and advances to general customers and business man. These institutions run to make profit. They cater to the financial requirements of industries and various sectors like agriculture, rural development, etc. it is a profit making institution owned by government or private or both.

Commercial bank includes public sector, private sector, foreign banks and regional rural banks:

3. PUBLIC SECTOR BANKS:

Currently there are 21 Nationalised banks in India. The public sector accounts for 75 percent of total banking business in India and State Bank of India is the largest commercial bank in terms of volume of all commercial banks.

We have an updated list of Government banks in India along with a merged banks list as of 2022.

1. State Bank of India
2. Punjab National Bank (with Merger of Oriental Bank of Commerce and United Bank of India)

3. Bank of Baroda
4. Canara Bank (with Merger of Syndicate Bank)
5. Union Bank of India (with Merger of Andhra Bank and Corporation Bank)
6. Bank of India
7. Indian Bank (with Merger of Allahabad Bank)
8. Central Bank of India
9. Indian Overseas Bank
10. UCO Bank
11. Bank of Maharashtra
12. Punjab & Sind Bank

4. BANK OF INDIA:

The present study is discussing about the Bank of India. Bank of India is the founder member of SWIFT (Society for Worldwide Inter Bank Financial Telecommunications) and one of the top 5 banks in India.

HISTORY OF BANK OF INDIA:

Bank of India was founded on 7th September, 1906 by a group of eminent businessmen from Mumbai. The Bank was under private ownership and control till July 1969 when it was nationalised along with 13 other banks. Beginning with one office in Mumbai, with a paid-up capital of Rs.50 lakh and 50 employees, the Bank has made a rapid growth over the years and blossomed into a mighty institution with a strong national presence and sizable international operations. In business volume, the Bank occupies a premier position among the nationalised banks.

The Bank has over 5430 branches in India spread over all states/ union territories including specialized branches. These branches are controlled through 59 Zonal Offices and 10 NBG Offices. There are 45 branches/ offices abroad which includes 23 own branches, 1 representative office and 4 Subsidiaries(20 branches) and 1 joint venture.

The Bank came out with its maiden public issue in 1997 and follow on Qualified Institutions Placement in February 2008.

While firmly adhering to a policy of prudence and caution, the Bank has been in the forefront of introducing various innovative services and systems. Business has been conducted with the successful blend of traditional values and ethics and the most modern infrastructure. The Bank has been the first among the nationalised banks to establish a fully computerised branch and ATM facility at the Mahalaxmi Branch at Mumbai way back in 1989. The Bank is also a Founder Member of SWIFT in India. It pioneered the introduction of the Health Code System in 1982, for evaluating/ rating its credit portfolio.

Table: 1.1: Numbers of Member of Bank of India

Year	No.of Member
2016-2017	5430
2017-2018	5412
2018-2019	5412
2019-2020	5430
2020-2021	5430

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

There are 5430 members during the year 2016-17, 5412 members in the year 2018-19 and 5430 shareholders during the year 2020-21.

Presently Bank has overseas presence in 18 foreign countries spread over 5 continents – with 45 offices including 4 Subsidiaries, 1 Representative Office and 1 Joint Venture, at key banking and financial centres viz., Tokyo, Singapore, Hong Kong, London, Paris, New York and DIFC Dubai.

BANK OF INDIA SERVICES AND FEATURES:

Every banking service provides different features and benefits that a common user might be interested to take and join after viewing, and below are the features that this bank provides.

- Consumer banking
- Corporate banking
- Internet and Mobile Banking
- Finances and Insurances
- Investment Banking
- Mortgage Loans

- Private Banking
- Securities
- Wealth Management
- Assets Management
- Saving, Equity and more

1.2 STATEMENT OF THE PROBLEM:

Banking plays an important role in the financial life of a business, and the importance of banks can be seen from the fact that they are considered as to be life – blood of modern economy. Acceptance of deposit and advancing the loan is the basic function of the bank. Bank operates different types of account for their customers, especially to the weaker sections of the society. Therefore for present study intends to focus the analysis of financial performance of Bank of India, Bala Vinayagar Kovil Street, Thoothukudi. from 2016-17 to 2020-2021

1.3 OBJECTIVES OF THE STUDY:

The main objectives of the present study summarizes as follows:

- To study and examine the financial performance and efficiency of bank of India.
- To analyse the total and fixed deposit of the bank.
- To study the Recovery of loan, Non Performing Assets and profit of the bank.
- To analyse the various type of loans provided by bank of India.
- To suggest the appropriate measures to improve the efficiency of the bank of India.

1.4 LIMITATIONS:

The present study is confined from 2016-17 to 2020-21 further the study depends mainly on secondary data obtained from the bank both published and unpublished. The financial details of the Bank of India, Bala Vinayagar Kovil Street, were collected from the higher officials of the bank. This study is undertaken with reference to the following aspects.

- a) Deposits of the bank
- b) Lending performance
- c) Profit of the bank

1.5 METHODOLOGY:

The present study will be primarily based on the secondary data- the data to be collected from Bank and other source. The required data will be collected from Banks which are the units of the present study. Besides, the necessary data will be collected from other sources such as annual reports, bulletins, magazines, articles, newspapers, e-sources, etc,

Information was collected partly through personal investigations and questionnaire schedule techniques have been followed in support of it. This collected data were classified and analyzed , the simple statistical tools like percentages and trend line are used in this study.

1.6. CHAPTER SCHEME:

The present research work is analyses the performance of Bank of India, Bala Vinayagar Kovil Street, Thoothukudi in five chapters.

CHAPTER - I

The first chapter deals with Introduction. It presents a glimpse of the Indian Financial System, Role of banks in the Economic Development of a country, Non Performing Assets, Structure of Banking Sector in India, History of Bank of India, Statement of the problem, objectives of the study, Limitations, Methodology and Chapter scheme.

CHAPTER - II

The second chapter deals with the Concepts and Review of previous studies.

CHAPTER - III

The third chapter deals with Profile of the study area of Thoothukudi District.

CHAPTER – IV

The fourth chapter deals with the objectives and features of the bank, origin and human resource power of the bank and the loan procedure of the Bank of India, Bala Vinayagar Street, Thoothukudi.

CHAPTER - V

The fifth chapter analyses the human resource strength of the bank, reserves, share capital, total & fixed deposits, loan recovery, NPA, various types of loan, and profit of the bank.

CHAPTER – VI

The sixth chapter summarized the findings of the study, suggestions for improving the working of the Bank of India and final conclusion of the study.

CHAPTER - II

CONCEPTS AND REVIEW OF PREVIOUS STUDIES

2.1. CONCEPTS:

1. Account:

1. An account maintained by a bank or building society in which a depositor's money is kept.
2. A statement of indebtedness from one person to another. A provider of goods or services may render an account to a client or customer.
3. A named segment of a ledger recording transactions relevant to the person or matter named.

2. Bank:

The commercial institution that taken deposits and extends loans, banks are concerned mainly with making and receiving payments on behalf of their customers accepting deposits and making short- term loans to private individuals companies and other organizations.

3. Bank Account:

A bank account is a financial account maintained by a bank or other financial institution in which the financial transactions between the bank and a customer are recorded. There are several types of bank account Deposit Accounts, Current Accounts and Loan Accounts.

4. Balance Sheet:

A statement of the assets, liabilities, and capital of a business or other organization at a particular point in time, detailing the balance of income and expenditure over the preceding period.

5. Capital:

1. The total value of the assets of a person less liabilities.
2. The amount of the proprietor's interests in the assets of an organisation, less its liabilities.

6. Deposits:

A sum of money left with an organisation such as a bank for safe keeping or to earn interest or with a broker etc as a security to cover any trading losses incurred.

7. Loan:

The borrowing of a sum of money at an agreed rate of interest usually for a specified period of time by a government an institution a business firm or an individual.

8. Profit:

For a single transaction or set of transactions, the excess of sales revenue over the costs of providing the goods or services sold.

9. Rate of Interest:

A payment by a borrower for the use of the sum of money for a period of time. It is one of the 4 types of income the others being rent, wages and profit.

10. Share Capital:

A Bank's share capital is the money that shareholders invest in order to start or expand the finance in bank.

11. Working Capital:

Working capital is money that's available to a bank for its day- to- day operations. Simply put, working capital indicates a bank's operating liquidity and efficiency. Working capital is obtained by subtracting the current liabilities from the current assets.

2.2. REVIEW OF PREVIOUS STUDIES:

In this chapter, an attempt is made to review some relevant studies. This review would facilitate the researcher to have a comprehensive knowledge of earlier studies and to adopt, modify and formulate an improved conceptual framework for the present study.

A number of studies related to performance of banks in India have been conducted. Here, an attempt is being made to provide an over view of various aspects and issues of this study through the review of existing literature. Some of the main studies selected for review have been selected here.

B.B.beohar and R.K. Khare(2010) have analysed the repayment of loan by borrowers of the district central cooperative bank, branch in Jabalpur district of Madhya Pradesh, their over dues and repayment capacity based on data collected from 45 Farmers respondents and from nine village served by three societies relating to the period 1999-2009. The study reevaluated that the farmers who obtained credit for the purpose of fertilizer and digging of wells did not replay the loan in proper time. The farmers who adopted a large number of packages of production practices, irrespective of the purpose of credit, had higher repaying capacity per frame compared to another.

Misra (2009) identified that the factors which may have led to the unstable financial condition of the PACS. The inferences drawn from the study was that the government

contribution to the share capital of the cooperatives adversely affects the recovery performance. It also found that, larger membership size has a negative effect on recovery performance. Again it was established that there is an inverse relationship between higher proportion of non borrowing members and recovery performance.

Singla(2008) emphasized on financial management and examined the financial position of sixteen banks by considering profitability, capital adequacy, debt-equity and NPA.

Mavaluri, Boppana and Nagarjuna (2006) suggested that performance of banking in terms of profitability, productivity, asset quality and financial management has become important to stable the economy. They found that public sector banks have been more efficient than other banks operating in India.

The Report of the Task Force on Revival of Cooperative Credit Institutions (2004) pointed out that the low recovery of loans obviously affected the profitability of the institutions and poor loan recovery had resulted in a peculiar phenomenon, often referred to as imbalances. It also viewed that PACCS were mainly conducting their business through borrowed funds.

Mariappan,V (2003) indicated that 75 percent of deposits come from high cost schemes such as fixed deposits, deposits doubling schemes etc. Ravichandran K. and Revathi Bala M. (2004) found that the dominance of the moneylenders could still be found in satisfying the credit needs of the members of the PACCS.

Ravi Verma S (2003) revealed that among the different categories of the farmers, large and medium farmers are provided disproportionately higher amount of credit than their corresponding share in the number of accounts.

Viswanath (2001) in his study titled, "An Analysis of Performance of Agricultural Credit Co- operatives and their overdues Problems in India" concluded that during the period 1950-51 to 1995-96, the total loans advanced by PACs increased from Rs.24 crore to `14,201 crore i.e .587 times, but fortunately this increase was followed by a corresponding increase in overdues. The results of Development Index in PACs of 16 states indicated that the performance of only 5 states, i.e., Karnataka, Gujarat, Tripura, Orissa, and Maharashtra was above the National average, while that of the remaining 11 states including Punjab were below the average. Using a correlation technique, the extent of relationship between overdues and four variables, i.e., number of societies, total membership, working capital and total amount of loans advanced was studied. He concluded that there was a direct and positive link between overdues and membership on one hand, and overdues and working capital, amount of loans advanced on the other.

Gurumoorthy.T.R (2001) revealed that the loan recovery would contribute to fresh loans that create new business and employment and interest income would meet establishment expenditure and profit requirement of the financial institutions.

Sarthak Chowdhury and Prabuddha Ray (2001) found that women were not given equal opportunity in availing credit from the Cooperative Banks. A study conducted by Somendra Singh (2001) identified that Self reliance, deployment of Resources, Member Utilization, participation and Economic Performance were the criteria for assessing the performance of PACCS.

Mr.Veluchamy (1983) studied the impact of agricultural credit on output in revenue village. He deals with different sources of agricultural credit and their relative significance in advancing credit to the farmers. He studied the structure of credit, the purpose of the credit to cropping patterns cost components, average production and net profit of various groups farmers.

The Study Team on Overdues (1974) went deep into this problem and revealed that the overdues exceeded the owned funds of almost 80 per cent of the DCCBs along with the deposits of all the PACS. This resulted in the crippling of the cooperative credit structure by making them unable to absorb the credit facility from the higher financing agencies and extend support to agricultural development programmes. Further, it concluded that the defaults were by and large wilful. Lack of will and discipline among the cultivators to repay and the unhelpful attitude of the State Governments in creating a favourable climate for recovery were the reasons for the willful defaults.

CHAPTER - III

PROFILE OF THE STUDY AREA

3.1. THOOTHUKUDI DISTRICT

Traditionally known as “Pearl City” on account of the prevailing Pearl fish in the past in the area, Thoothukudi has a fascinating History. Forming part of the Pandian kingdom between 7th and 9th Century A.D., Thoothukudi remained in the hands of the Cholas during the period between 9th and 12th century. Emergence of Thoothukudi as a maritime port attracted travelers, adventures, and eventually colonizers. The Portuguese were the first to arrive in Thoothukudi in 1532 A.D., followed by the Dutch in 1658 A.D. The English Captured Thoothukudi from the Dutch in 1782 and the East India Company established their control over Thoothukudi in the same year.

On the 20th, October 1986 a new district, carved out of the erstwhile Tirunelveli district was born in Tamil Nadu and named after V.O.Chidambaranar, a great national leader hailing from Ottapidaram who led the Swadeshi Movement in the south. Since 1997 as in the case of other districts of Tamilnadu, this district has also been named after its headquarters town, Thoothukudi.

Thoothukudi became the citadel of freedom struggle in the early of the 20th century. It was in Thoothukudi that the illustrious patriot , V.O.Chidambaram established the first swadesi Stream Navigation Company, sailing the first steamer S.S.Gaelia to Thoothukudi on 1st June 1907.

The minor port of the Thoothukudi anchorage port with lighter age facilities has had flourished traffic for over a century. The first wooden Jetty of this port was commissioned in 1864. This port was being used for export of salt, cotton yarn, senna leaves, palmyrah stalks, palmyrah fibres, dry, dry fish, Country drugs etc. to neighboring countries and for import of coal, cotton, copra, pulses and grains. The minor port of the Thoothukudi hand the distinction of being intermediate port handling the highest traffic tonnage of over 1million per annum.

The salient features of the district include its lengthy,curvy and scenic sea coast which was an international cynosure in the days of yore for its pearl fishery; beautiful coastel villages with their sacred temples, churches and mosques like Tiruchendur, Manappadu and Kayalpattinam respectively, Adhichanallur, one of the cradles of the ancient civilizations, Korkai, an ancient port of the Sangam Pandyas,Kayal, the confluence of the river Tamiraparani

with the Bay of Bengal, one of the five illustrious rivers of Tamilnadu, Panchalamkurichi, the capital of Veerapandiya Kattabomman, an early martyr, for the cause of freedom, Ettayapuram, the birth place of the great poet Subramanya Bharathi, Ottapidaram the home town of V.O.Chidambaram Pillai, who dared to sail ships as a measure to combat British imperialism; Maniyachi, where Vanchinathan assassinated Ashe, the British Collector for his high-handedness against the leaders during Swadeshi Movement; Kulasekarapattinam and Kurumbur where patriots showed their anger against alien rule, temple towns like Srivaikundam, Meignanapuram, one of the cradles of Christianity, Thoothukudi, besides being a major port, the earliest settlement of the Portuguese and the Dutch, the tall and dense palmyra groves and the bushy Odai trees, the Teris and the adjacent coral islands, Idayankudi and Manappadu and the adjacent places which became the headquarters of great missionaries like G.U.Pope, Veeramamunivar, Caldwell and others who, besides their missionary work, contributed a lot for the development of Tamil language and literature and above all the enterprising and hard working people who now constitute a major trading community in the State.

"The Government of Tamil Nadu in their G.O. Ms.No.535/ Revenue Department dated 23.04.1986 have ordered the formation of a new district viz..Thoothukudi district. Thoothukudi district was inaugurated on 19.10.1986 by the chief minister of Tamil Nadu and started functioning as the 20th district with effect from 20.10.1986 with the headquarters at Tuticorin". But in 1997, it was changed as the district of Thoothukudi, with Thoothukudi as its centre.

The District covers an extent of 4,621 sq.km in the South-Eastern portion of Tamilnadu and it is rectangular in shape. It is bounded by Virudhunagar and Ramanathapuram district in the North, Kanyakumari district in the South, Gulf of Mannar in the east and Tirunelveli district in the west. The district is roughly triangular in shape between 80-05' and 90 - 800 of the northern latitude and 770-05' and 780-25' of eastern longitude.

Agriculture:

The main food crop in the district is paddy. Out of the total area of 4,50,954 hectares, 2,11,811 hectares have been brought under the cultivation of different crops, which work out to 47 per cent of the total area of the district. The important food crops in the district are paddy, Cholan, Cumbu, ragi, Varagu, Samai and commercial crops like cotton, Chillies, Sugarcane, groundnut and banana. Irrigation:

The different sources of irrigation are channels, lanks and wells which cover 45,159 hectares in the district. Out of the total area irrigated, well irrigation covers 17,709 hectares, tank irrigation 22,538 hectares and channel irrigation 4,876 hectares for the year 1991-92.

Fisheries:

This district is an important coastal district having a vast coastal line of 160km and territorial water covering thousands of hectares. Fishing next to agriculture, is an important occupation of the district. Tuticorin is a major fishing centre. It is also considered to be the only pearl fishing centre in the whole of India. Besides, it is also noted for chunk fishing. Nearly 35000 MT of marine fish are produced per annum.

Mineral Resources:

Gypsum, Ilammanide, Monazide, Hyduim, Limestones, Corals from the Islands and Phosphate are some of its natural resources.

Forestry:

The area under forestry is 12724 hectares which occupies 2.77 per cent of the geographical area.

Industries:

The district constitutes 70 per cent of the total salt production of the State and meets 30 per cent requirement of our country. There are two industrial estates one at Kovilpatti with 11 units and the other at Thoothukudi with 20 units. The former is managed by SIDCO and the latter by SIPCOT. Small scale industries such as match industries, food-based and metal based industries are generally concentrated in Kovilpatti and Thoothukudi taluks. There are 2200 and above small scale industries registered in the district and about 12 major industries. These are engaged in the production of cotton and staple yarn, caustic soda, PVC resin, fertilizers, soda ash, carbon dioxide gas in liquid form, etc. The important major industries are SPIC, TAC, Dharangadhara Chemical Works, Loyal Textiles Ltd., Madura Coats Ltd., Sterlite Copper Industries, Kilburn Chemicals, Ramesh Flowers, Nila Sea Foods, Deva and Co. and Transworld Granite Industries. The public sector undertakings are the Thoothukudi Thermal Power Station Unit, Heavy Water Plant (HWP) and Port Trust. The Government is also encouraging unemployed youth and others to start industries by providing financial assistance and technical guidance.

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CHAPTER-IV

4.1 PERFORMANCE OF BANK OF INDIA

Origin of the Bank:

The Bank of India, Bala Vinayagar Kovil Street started functioning on 28.10.1974 the area of operation of the bank is Thoothukudi. The present manager of Bank of India is Mr. V. Poobagan.

Objectives of the Bank:

1. To collect deposits from members and non-members of the bank and granting advances for useful purpose.
2. The mobilize deposits and encourage the savings habit and to the needy people.
3. Generally to encourage thrift self-help and co –operative among the members.
4. To undertake financing for the promotion and development of cottage and small scale industries.
5. To argue for the initial and periodical training of the men and women in that service and also for the training of non-financial workers in the co-operative field.

Table 4.1

Details about the Employee of the Bank

Senior Manger	1
Manger	1
Assistant Manger	2
Officer	2
Clerk	7
Sub. Staff	3
Total	16

Source: Attendance Register of the Bank of India.

Feature:

- This bank is a voluntary institution any normal person can become a member by paying the share capital.
- Top priority is given to the weaker section of the people at large.
- Mobilize the deposit from the members and people.
- The bank encourage co-operation.

Procedure of loan in Co-operative Bank Limited:

Bank of India was started in the country to remove the proverbial poverty. It was adopted as the most useful weapon for ending stagnation of the poor masses.

Loans except those on the security of deposits are given only to members. Loans on the security of deposits are given both members and non-members. No person can claim a loan as a matter of right. Application for loans excepting those mentioned under useful purposes shall be disposed of by the bank.

The secretary has got the discretionary power to sanction loans against tangible security such as deposits and ornaments, Government and other trustee securities, and the subject to the ratification by the bank. All application for loans should be made to the secretary in the prescribed form.

Achievement of the bank

- To collect deposits from members and non-members of the bank and granting advances for useful purpose.
- The mobilize deposits and encourage the savings habit and to the needy people.
- To undertake financing for the promotion and development of cottage and small scale industries.
- To argue for the initial and periodical training of the men and women in that service and also for the training of non-financial workers in the field.

Term Loans:

A loan with a fixed and determinable repayment schedule, where the principle is normally repaid on an equal, semi annual basis; here the bank gives a specified sum of money to a person against some security. It is an ordinary loan.

Short -term loan:

It is generally made for 12 months. These are required to meet the day-to-day business requirements. In other words, short-term finance is obtained to meet the working capital requirements of the enterprise. Short-term loan is the loan given for Jewel Loan, and Personal Loan. The bank sanctioned lump sum amount for Jewel Loan.

Medium Term Loans:

The bank provides medium term loans. The period of medium term loans not less than 15 months and not exceeding 5 years. Medium term loan is the loan given for Micro credit Loan and Small and Medium Scale Industries loan. The bank sanctioned maximum amount for Micro Credit loan.

Long Term Loan:

Long term loans are provided for both agriculture and industry by the bank. Generally long term loans are provided against the security of land and it is repayable over a period of 15 or 20 years. Long term Loan is the loan given for House Construction Loan, Staff Loan, Staff Consumer Loan, Staff Housing Loan, Staff Flood Relief loan and Mortgage Loan.

CHAPTER –V

ANALYSIS OF DATA AND INTERPRETATION

This chapter deals with ‘An Analysis of the performance of Bank of India, Bala Vinayagar Kovil Street, Thoothukudi. The data collected are analyzed and tabulated for easy understanding and good presentation. Tables, percentage, averages, trend, line and diagrams assist to analyze the data efficiently.

TABLE NO: 5.1: NUMBERS OF MEMBER OF THE BANK

Year	No. of Members
2016-2017	5430
2017-2018	5412
2018-2019	5412
2019-2020	5430
2020-2021	5430

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

There are 5430 shareholders during the year 2016-17, 5412 shareholders in the year 2018-19 and 5430 shareholders during the year 2019-21. The highest shareholders were in the year 2020-21.

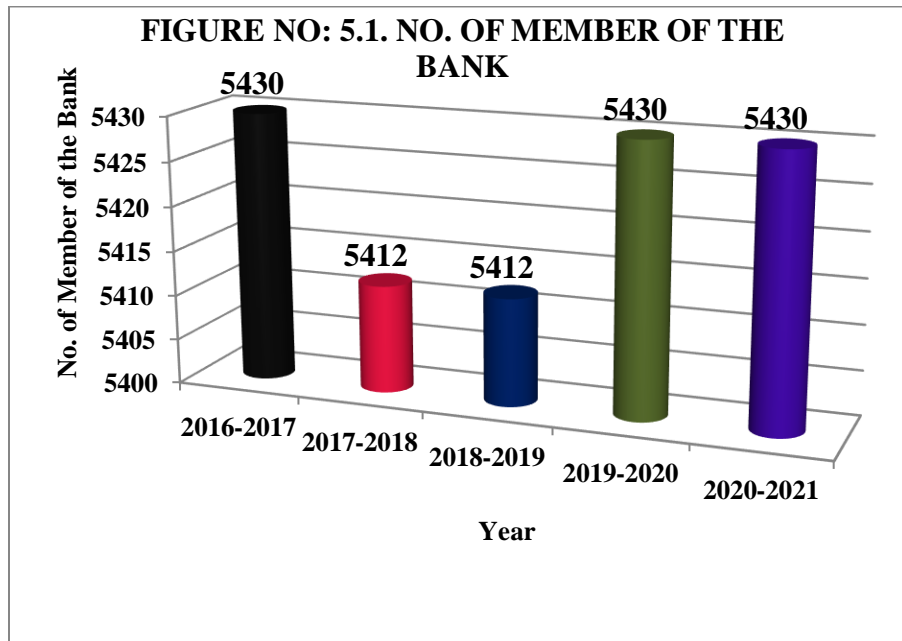


TABLE NO: 5. 2 HUMAN RESOURCE STRENGTH OF THE LOAN

Year	Human Resource Strength
2016-2017	49,010
2017-2018	48,757
2018-2019	50,450
2019-2020	50,257
2020-2021	51,459

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

Table 5.2 indicates that the number of loan holders of the bank is 50,450 in 2018-2019. The number of loan holders of the bank was 48, 757 in the year 2017- 2018.

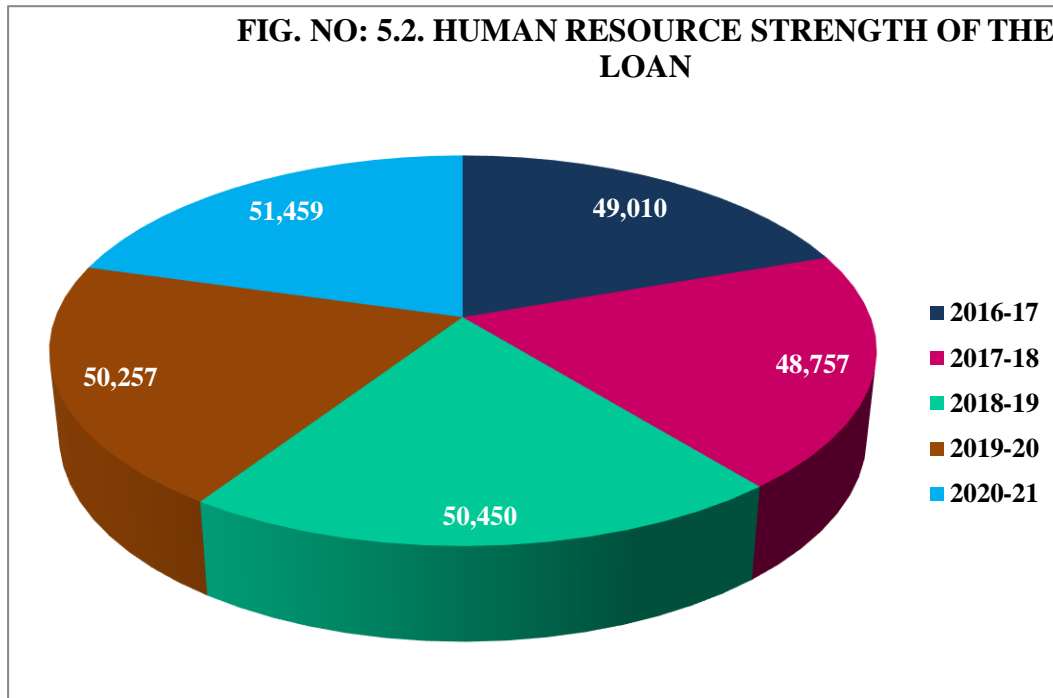


TABLE NO: 5.3: RESERVES AND OTHER FUNDS

Year	Amount (In Lakh.)
2016-2017	30851
2017-2018	35012
2018-2019	40253
2019-2020	41795
2020-2021	43702

Source: Annual Reports and Balance sheet of the bank from 2016-17 to 2020-21.

From above table reveals that, it could be seen that the reserve of Rs. 30851 in 2016-17 has increased to Rs. 43702 during 2020-21. The maximum abnormal increase is during 2020-21. The reserve shows an increasing trend.

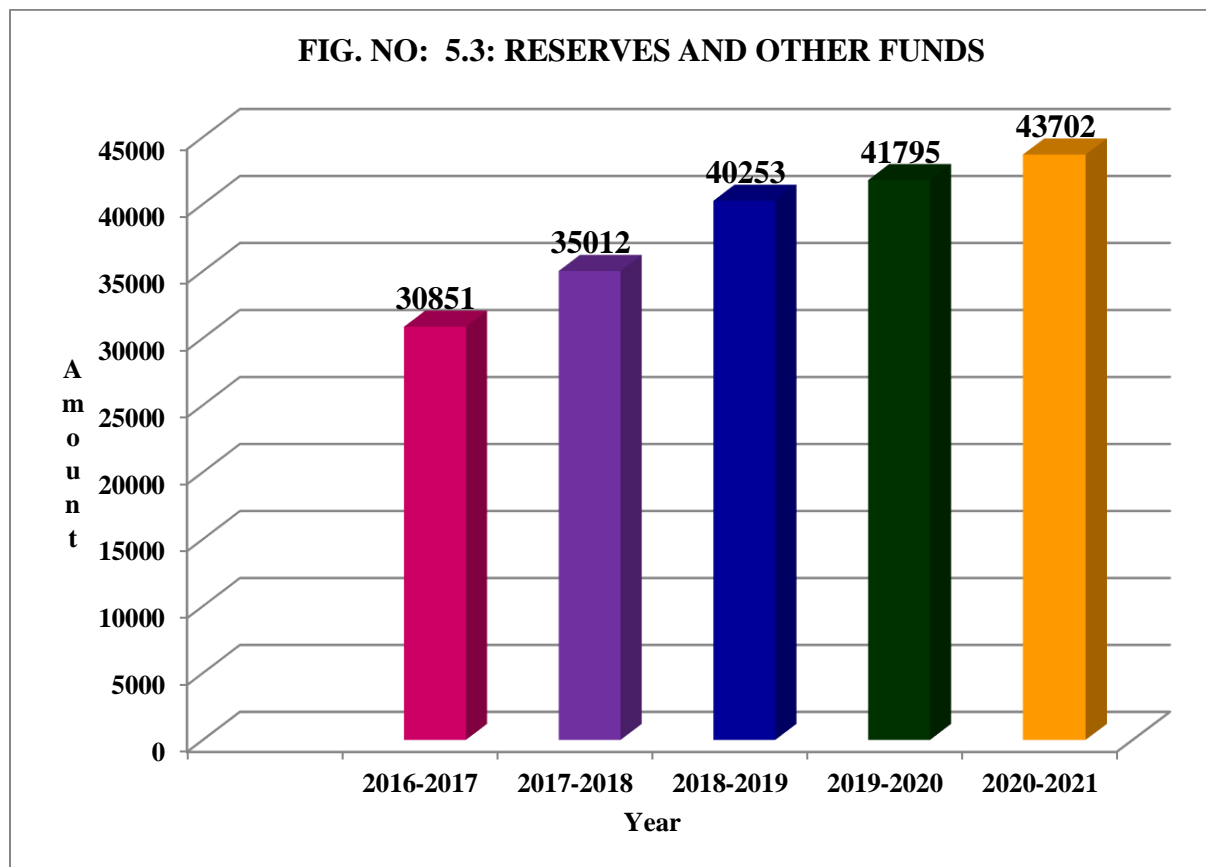


TABLE NO: 5.4: SHARE CAPITAL OF THE BANK

Year	Share Capital (In Laks)
2016-2017	1055
2017-2018	1743
2018-2019	2760
2019-2020	3277
2020-2021	3277

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-2021

The above table shows that growth of the total share capital of the Bank. In the year 2016-17 the share capital amounted to Rs.1055 lakhs. In 2017-18 the share capital increases to Rs. 1743 lakhs. In the year 2020-2021 the share capital increased Rs. 3277 lakhs and it shows positive results. The annual growth of share capital percentage is increasing the study period.

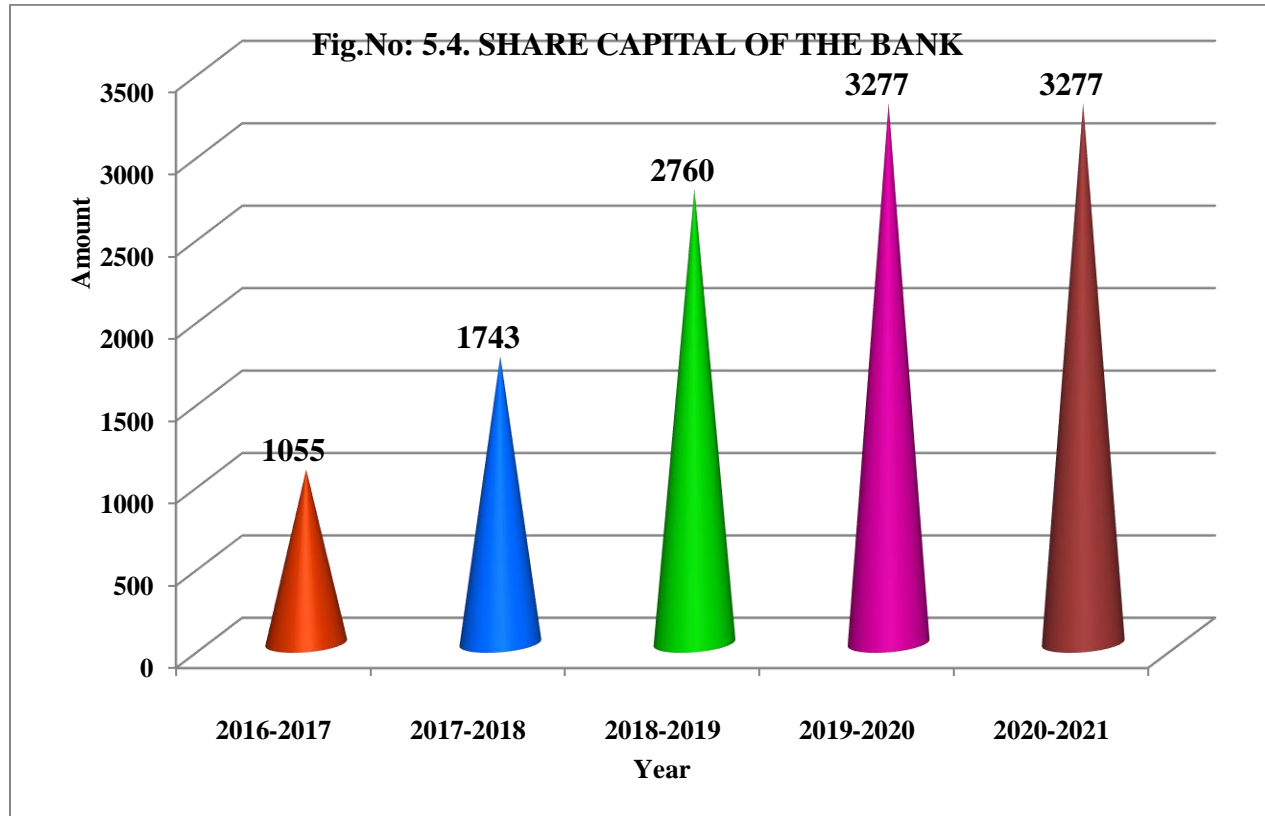


TABLE 5.5. GROWTH OF TOTAL DEPOSIT OF THE BANK

Year	Total Deposits (In Lak.)
2016-2017	5,42,352
2017-2018	5,22,996
2018-2019	5,22,554
2019-2020	5,57,386
2020-2021	6,29,098

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

Table .5.5. inferred that the growth of the total deposit of the bank. In 2018-19, the deposits increased to Rs.5,22,554 lakhs. In the year 2016-17 the deposits amounted to 5,42,352 lakhs. In 2019-2020 it increased to Rs. 5,57,386 lakhs .In the year 2020-21, the deposit also increased Rs. 6,29,098 Lakhs and it shows positive results of annual growth rate.

Trend Analysis:

Growth of Total deposits of the bank is analysed by using trend values and have been predicated for the future year 2030 by using trend line. The data table 5.5 have been used. The trend value of total deposit has been estimated by using in llinear trend equation given below.

$$Y_t = a + bx$$

Where,

Y = Total deposit of the bank

X = Time Variable

‘a’ and ‘b’ parameters to be estimated.

Y_t = computed trend figure for period in order to determine the value by ‘a’and ‘b’ the following two normal equations are to be solved.

If $X=0$, the value of ‘a’ and ‘b’ can be determined.

$$a = \sum y / N$$

$$b = \sum xy / X^2$$

With the help of above linear equation, the trend values for total deposits of the bank.

TABLE No: 5.6 TREND LINE TO TOTAL DEPOSIT

Year	Total Deposits	X	XY	X²	Yc
2016-2017	5,42,352	-2	-10,84,704	4	4,20,822
2017-2018	5,22,996	-1	-5,22,996	1	4,41,610
2018-2019	5,22,554	0	0	0	4,62,398
2019-2020	5,57,386	1	5,57,386	1	4,83,186
2020-2021	6,29,098	2	12,58,196	4	5,03,974
Total	$\Sigma Y=27,74,386$	$\Sigma X=0$	$\Sigma XY=207882$	$\Sigma X^2=10$	

The total deposit of the bank in the year 2030 will be Rs.8,43,515.

TABLE .5.7. GROWTH OF FIXED DEPOSIT

Year	Fixed Deposit (In Laks.)
2016-2017	3,69,775
2017-2018	3,45,177
2018-2019	3,35,270
2019-2020	3,54,218
2020-2021	3,98,659

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

Table 5.7 shows the year- wise fixed deposits of the bank. In the year 2016-2017 the bank's fixed deposits amounted Rs. 3,69,775 lakhs. In the year 2018-2019 it increased Rs. 3,35,270 lakhs. The fixed deposit amount increased in the year 2019-2020. In the year 2020-21(Rs3,98,659 lakhs) it was continuously increased.

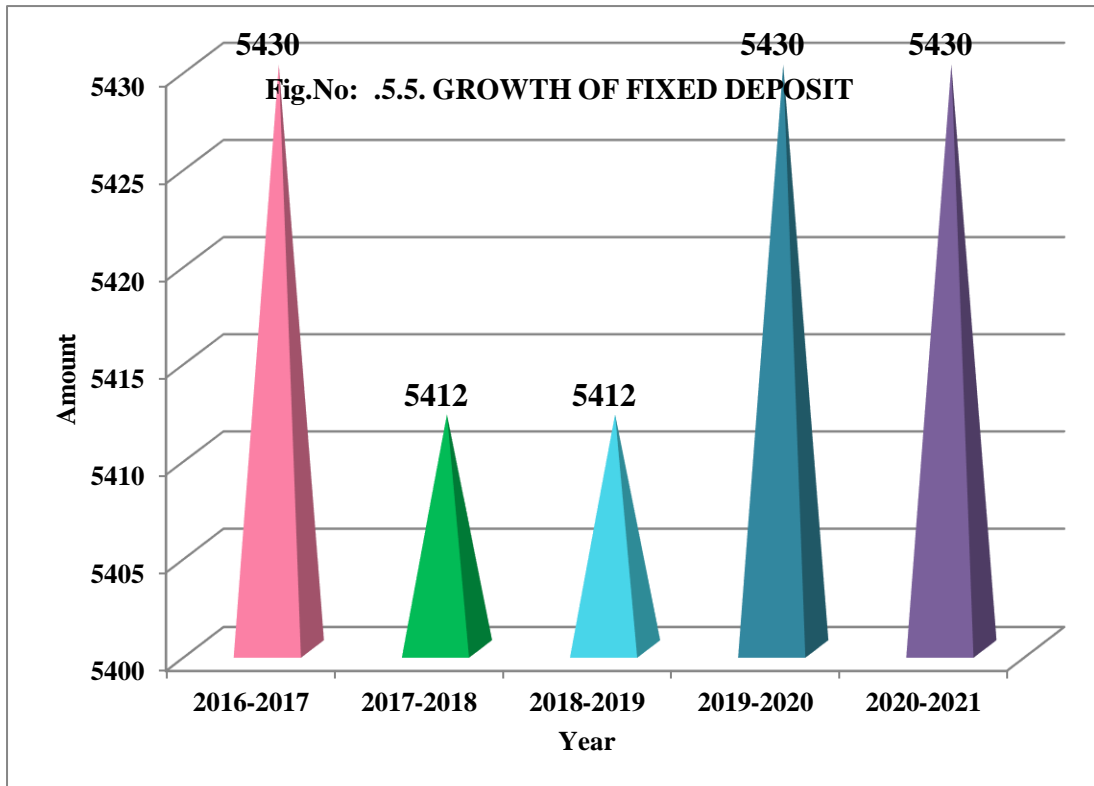


TABLE: 5.8. LOAN RECOVERY

Year	Loan Recovery (Amount In Lakhs)
2016-2017	-0.23 %
2017-2018	-0.96 %
2018-2019	-0.86 %
2019-2020	-0.46 %
2020-2021	0.28 %

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

The above table referred that the loan recovery of the bank. In the year 2016-17, loan recovery was Rs:-0.23 % lakhs. In the year 2017-18 the recovery of the bank was increased Rs: -0.96 % lakhs. The loan recovery of the bank was Rs: 0.28 % lakhs in the year 2020-21. Bank of India bank loan recovery was continuously decreases.

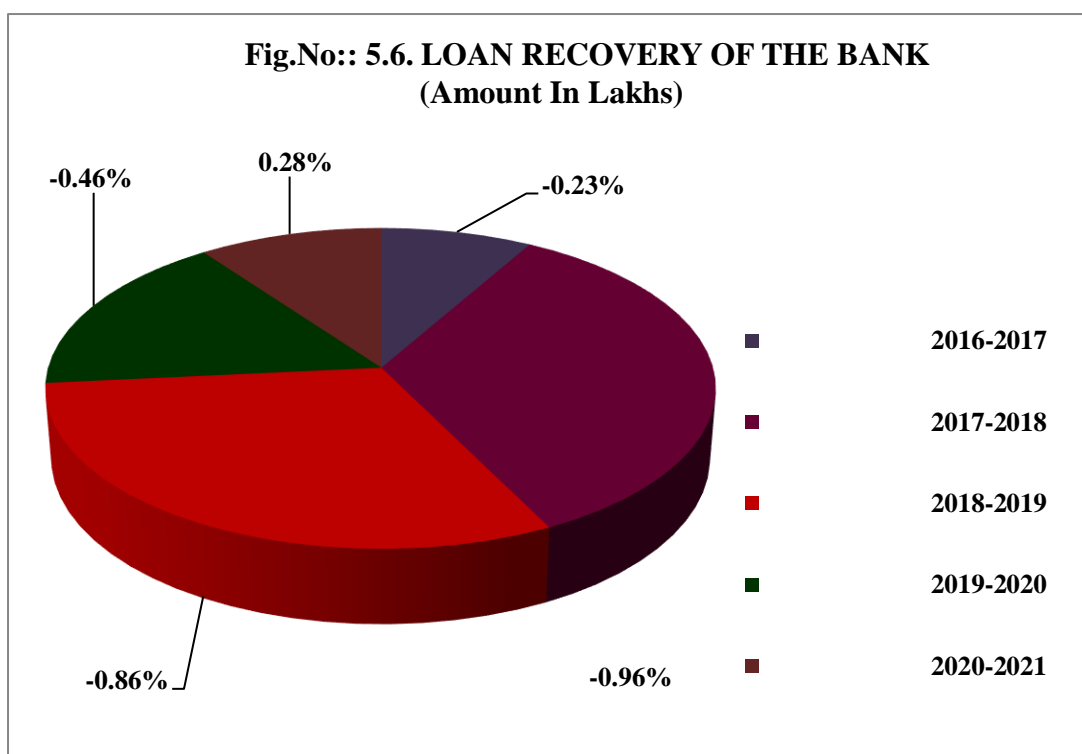


TABLE: 5.9. NON PERFORMING ASSETS OF THE BANK

Year	NET NPA (Rs. In Lakh)
2016-2017	25,305
2017-2018	28,207
2018-2019	19,169
2019-2020	14,347
2020-2021	12,262

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

Table 5.9 focuses that the NPA (Non Performing Assets) of the bank. In the year 2017-2018, the NPA amount was very high (28,207 lakhs) comparing to other years. The NPA of the bank was Rs.19, 169 lakhs in the year 2018-2019. It was very lower in the year 2020-21. It was clearly focused that the bank reduces the amount of NPA.

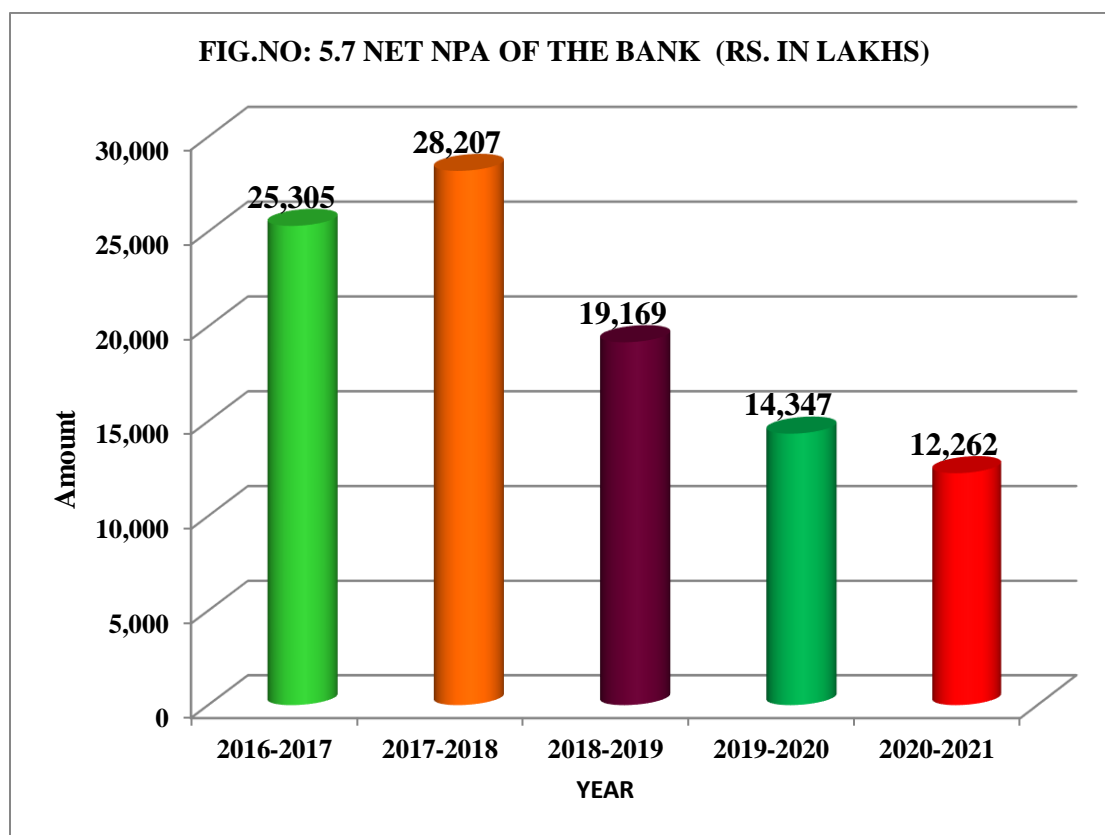


TABLE.5.10. PROFIT OF THE BANK

Year	Profits (Rs.In Lakhs)
2016-2017	9,831
2017-2018	7,214
2018-2019	8,194
2019-2020	11,595
2020-2021	10,922

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

Table.5.10 reveals the profits of the bank. The highest profit was observed in 2016-17 which is Rs: 11,595lakhs. Second highest increase in profit was seen in 2018-19 which is Rs: 8194. The profit of the bank was very low (in the year 2017-2018.

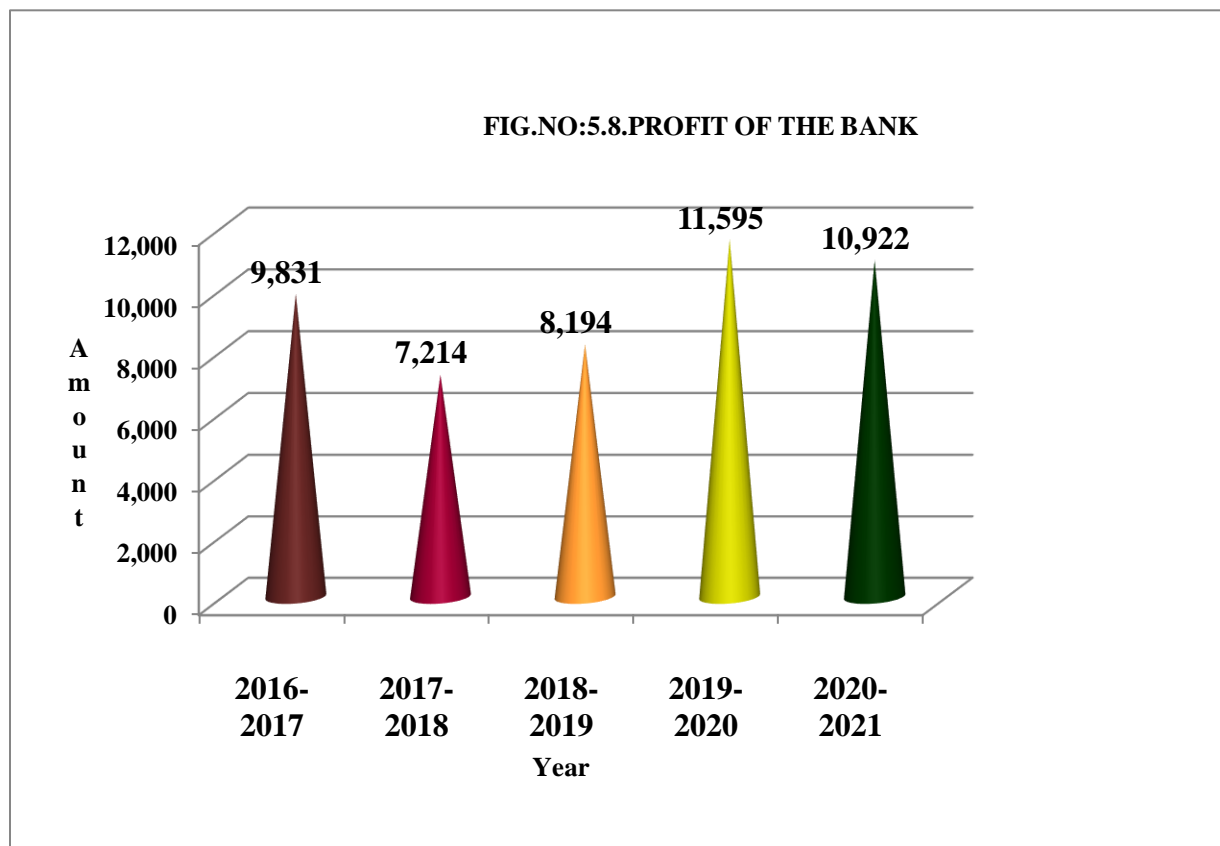


TABLE 5.11. SHORT TERM LOANS ISSUED BY THE BANK

Year	Loan Issued (Rs In lakhs)	Percentage to Total
2016-2017	15.04	22.95
2017-2018	14.26	21.76
2018-2019	13.56	20.70
2019-2020	11.22	17.12
2020-2021	11.44	17.46

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

It could be seen from Table 5.11 that the Short term loans issued by the bank continuously reduced in study period. In the year 2016-2017, the bank gave only Rs.15.04 lakhs. The short period loan reduced in the year 2019-2020, it was Rs.11.22 lakhs. The lowest percentage share of short term loans was Rs: 17.12 lakhs from total percentage.

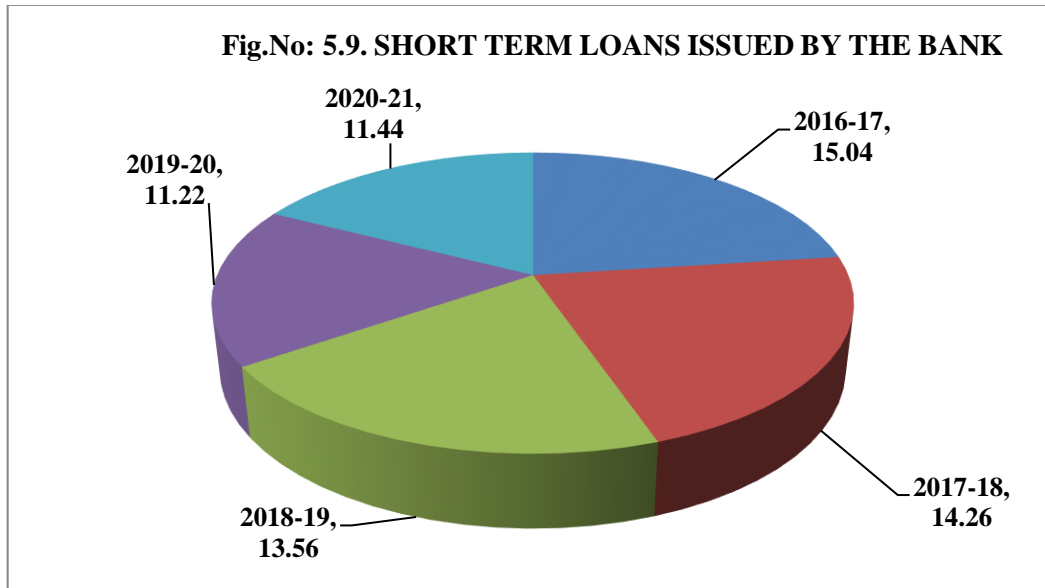


TABLE 5.12. JEWEL LOAN ISSUED BY THE BANK

Year	Loan issued (in lakhs)	Percentage to Total
2016-2017	14.94	23.38
2017-2018	14.10	22.06
2018-2019	13.36	20.90
2019-2020	10.68	16.71
2020-2021	10.82	16.94

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

From the above table shows the components of total Jewel loan issued during the period 2016-17 to 2020-21. This table observed that during the year 2016-17 the bank issued Rs.14.94, lakhs amount of loans. The percentage to total varied between 23.38 percent and 16.94 percent. In the case of Jewel loan given through the bank, the lowest was Rs: 10.68 lakhs in 2019-20 and the highest was Rs: 14.94 lakhs in 2016-17 during the study period.

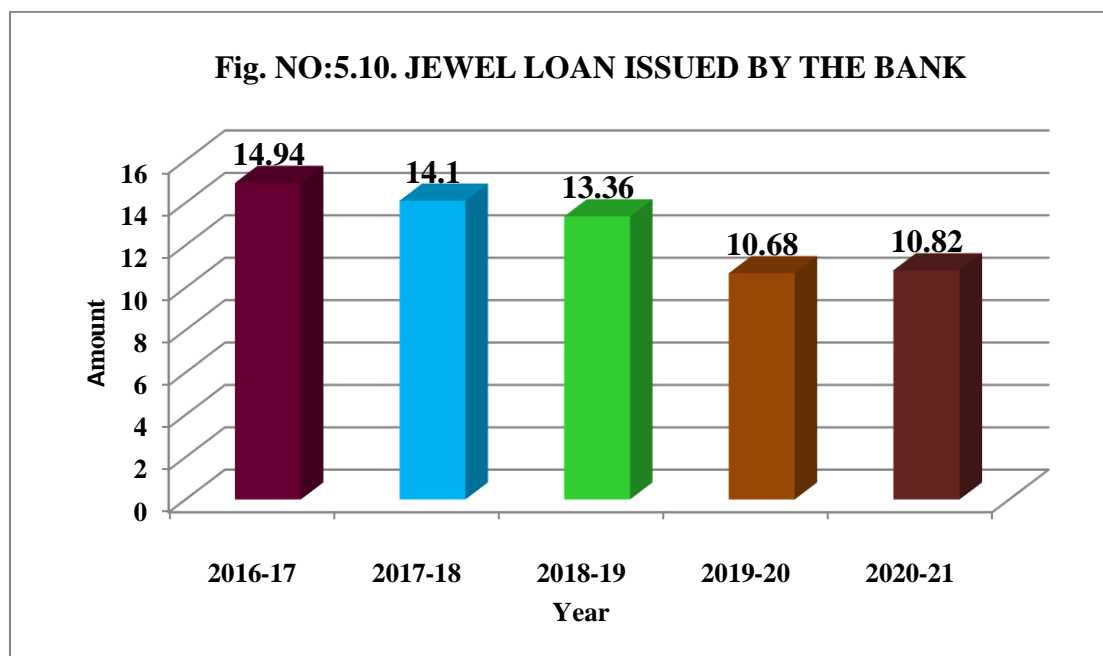


TABLE No: 5.13. MEDIUM TERM LOANS ISSUED BY THE BANK

Year	Loan issued (Rs In lakhs)
2016-2017	46.20
2017-2018	35.47
2018-2019	27.43
2019-2020	10.09
2020-2021	34.48

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

The above table inferred the Medium term loans issued by the bank. The medium term loans continuously reduced from 2016-17 to 2019-20. In the year 2019-20, the bank gave Rs. 10.09 lakhs. After the year 2019-20 it was increased. The lowest percentage share of medium term loans was Rs: 10.09 lakhs. In the year 2020-21 the medium term loans reduced again, it was Rs.34.48 lakhs.

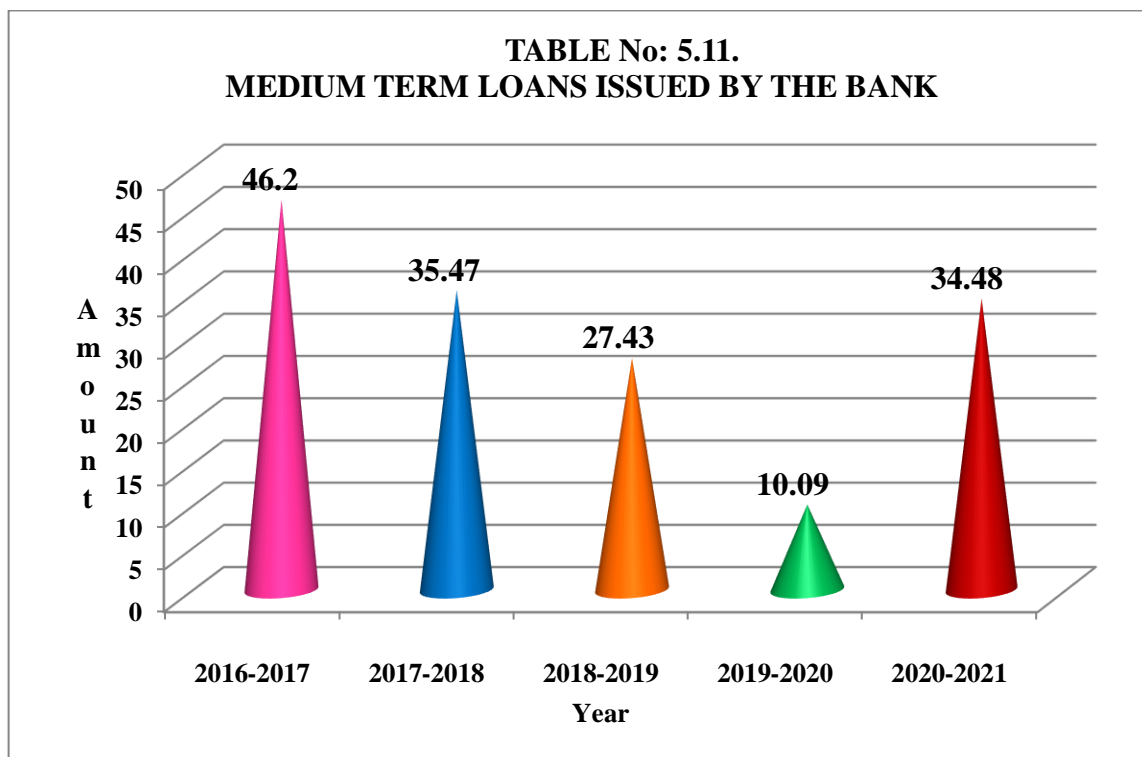


TABLE No: 5.14. MICRO LOANS

Year	Loan issued (Rs.in lakhs)	Percentage to Total
2016-2017	1.07	16.85
2017-2018	1.08	17.00
2018-2019	1.07	16.85
2019-2020	2.06	32.44
2020-2021	1.07	16.85

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

Table no. 5.14 indicates the micro loans issued by the bank. In the year 2019-2020 the bank gave Rs. 2.06 lakhs. The micro loans reduced in the year 2020-21, it was Rs. 1.07 lakhs. The lowest percentage share of micro loans was 16.85percentages and largest share was 32.44 percentages from the total.

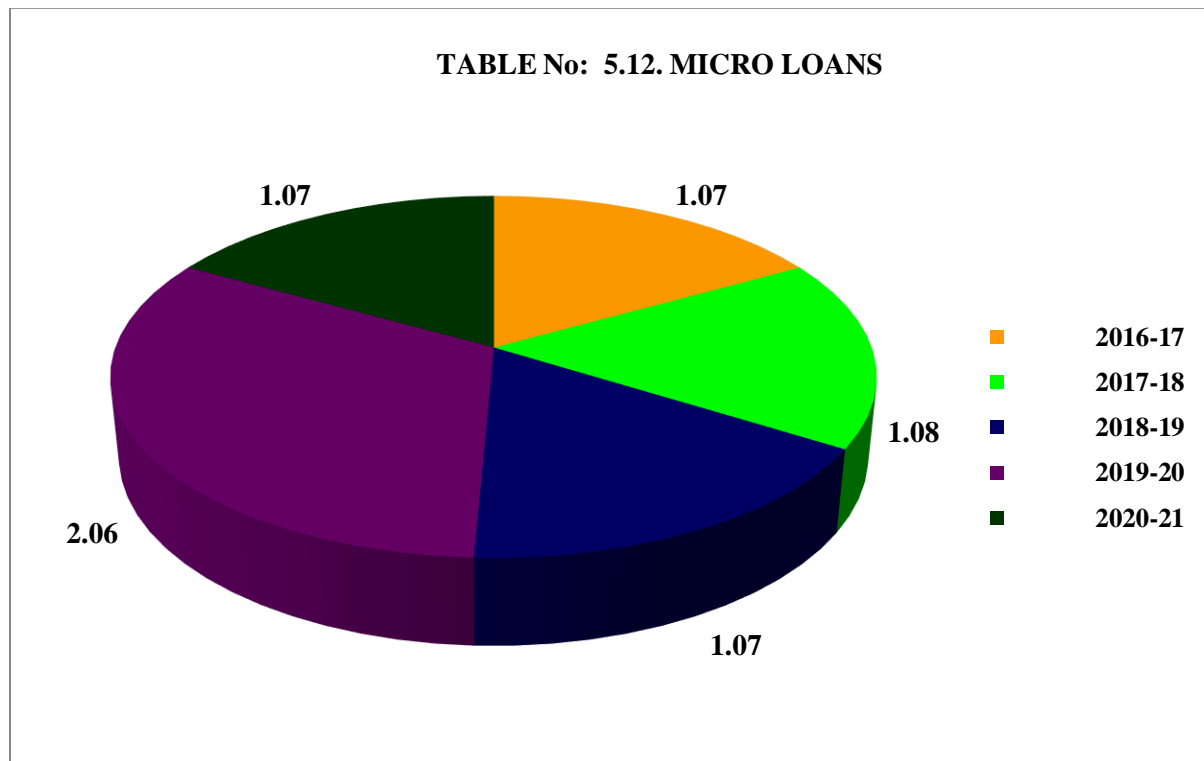


TABLE 5.15. LONG TERM LOAN ISSUED BY THE BANK

Year	Loan issued (Rs)
2016-2017	19.43
2017-2018	19.55
2018-2019	63.91
2019-2020	25.10
2020-2021	33.42

Source: Annual Report and Balance Sheet of the bank from 2016-17 to 2020-21

Table 5.15 explained that the long term loans issued by the bank. In the year 2016-2017 the bank issued Rs. 19.43lakhs. The long term loans continuously increased from 2016-17 to 2018-19. In the year 2019-20, it was Rs.63.91 lakhs. After the year 2019-20 it was reduced again. The lowest percentage share of loan was Rs. 19.43 lakhs in the year 2016-17. In the year 2020-21 the long term loans increased again, it was Rs. 33.42 lakhs.

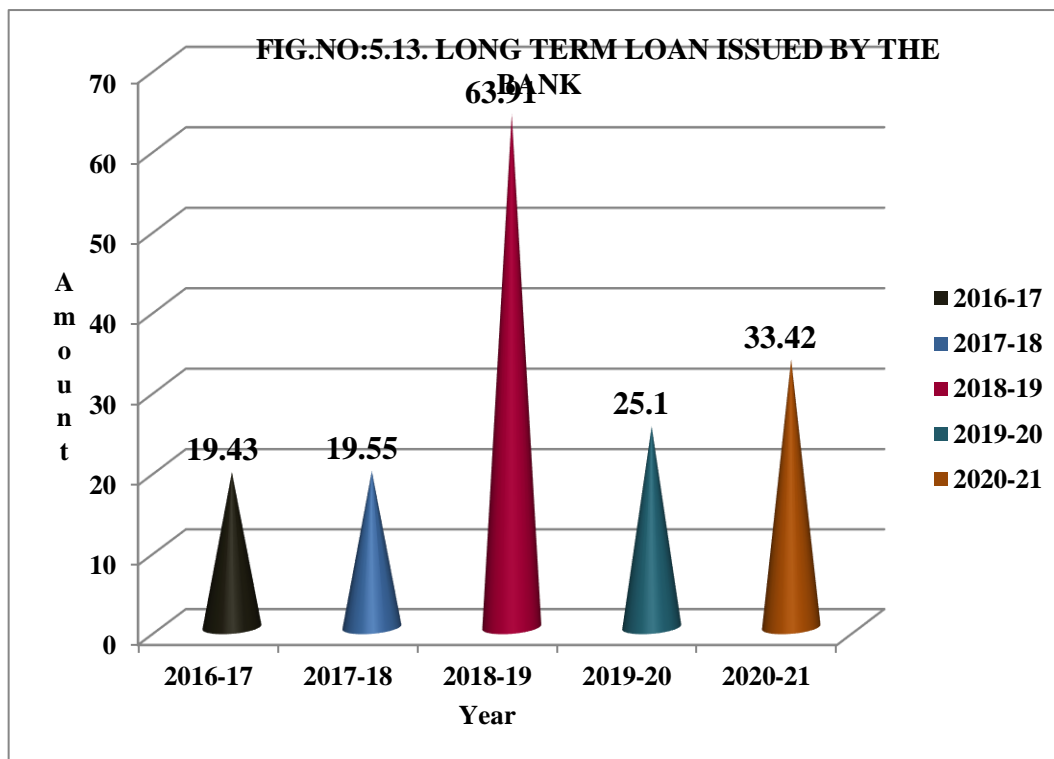
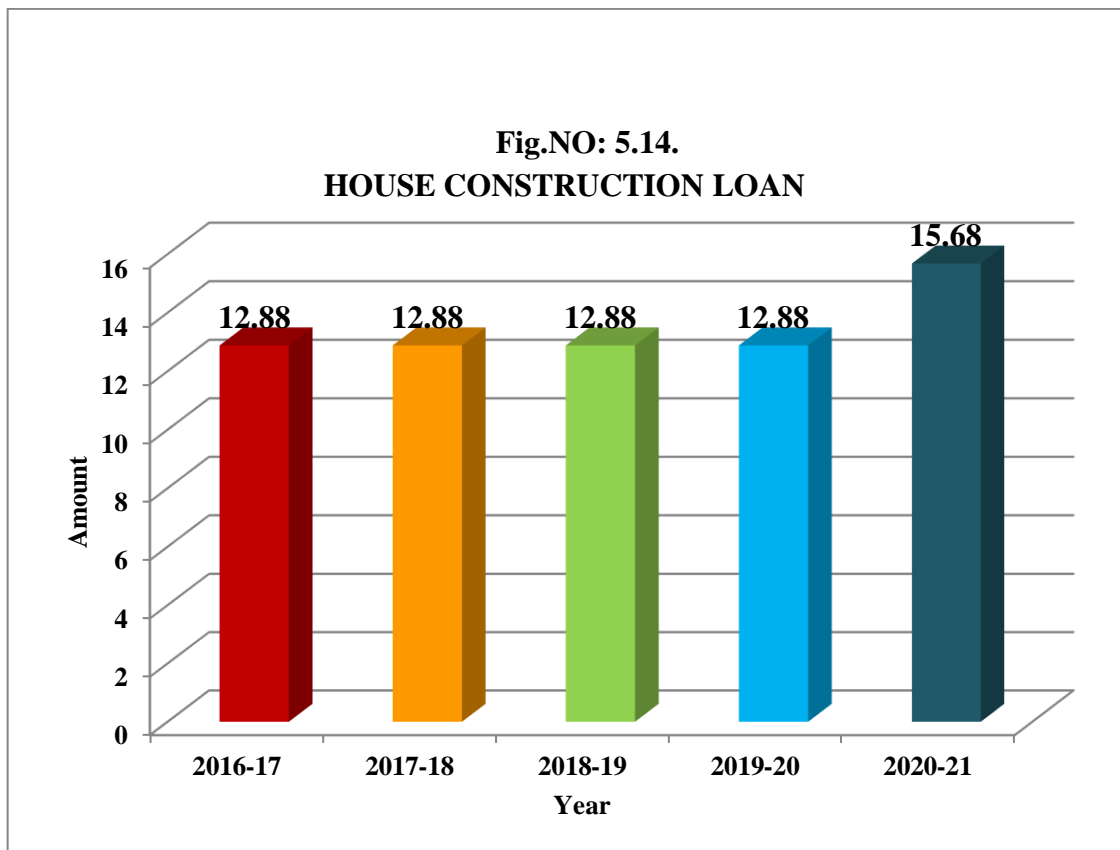


TABLE 5.16.HOUSE CONSTRUCTION LOAN

Year	Loan issued (Rs. in lakhs)
2016-2017	12.88
2017-2018	12.88
2018-2019	12.88
2019-2020	12.88
2020-2021	15.68

Source: Annual Reports and Balance Sheet of the bank from 2016-17 to 2020-21

Tables 5.16 inferred the House construction loan issued by the bank. In the year 2016-2017 to 2019-20 the bank sanctioned Rs.12.88 lakhs. The loans increased in the year 2020-21, it was Rs.15.68 lakhs.



CHAPTER - VI

FINDINGS, SUGGESTIONS AND CONCLUSION

The Bank of India is functioning for the economic welfare and well being of the people in the state. This Bank have an important role in the socio- economic development of the society.

6.1.Summary of Findings:

This chapter presents the summary of the findings of the research work and conclusions of the study. This chapter also consist the suggestions to strength and recover the financial performance of the bank. The following are the main findings of the study.

- There are 5430 shareholders during the year 2016-17, 5412 shareholders in the year 2018-19 and 5430 shareholders during the year 2019-21. The highest shareholders (5430) were in the year 2020-21.
- The study indicates that the number of loan holders of the bank is 50,450 in 2018-2019. The number of loan holders of the bank was 48, 757 in the year 2017- 2018. In the year 2020-2021the number of loan holders increased to 51,459.
- The study reveals that, it could be seen that the reserve of Rs. 30851 in 2016-17 has increased to Rs. 43702 during 2020-21. The maximum abnormal increase is during 2020-21. The reserve shows an increasing trend.
- The study shows that growth of the total share capital of the Bank. In the year 2016-17 the share capital amounted to Rs.1055 lakhs. In 2017-18 the share capital increases to Rs. 1743 lakhs. In the year 2020-2021 the share capital increased Rs. 3277 lakhs and it shows

positive results. The annual growth of share capital percentage is increasing the study period.

- The present study inferred that the growth of the total deposit of the bank. In 2018-19, the deposits increased to Rs.5,22,554 lakhs. In the year 2016-17 the deposits amounted to 5,42,352 lakhs. In 2019-2020 it increased to Rs. 5,57,386 lakhs. In the year 2020-21, the deposit also increased Rs. 6,29,098 Lakhs and it shows positive results of annual growth rate.
- Growth of Total deposits of the bank is analysed by using trend values and have been predicated for the future year 2030 by using trend line. The total deposit of the bank in the year 2030 will be Rs.8,43,515.
- The research shows the year- wise fixed deposits of the bank. In the year 2016-2017 the bank's fixed deposits amounted Rs. 3,69,775 lakhs. In the year 2018-2019 it increased Rs. 3,35,270 lakhs. The fixed deposit amount increased in the year 2019-2020. In the year 2020-21(Rs3,98,659 lakhs) it was continuously increased.
- The research referred that the loan recovery of the bank. In the year 2016-17, loan recovery was Rs:-0.23 % lakhs. In the year 2017-18 the recovery of the bank was increased Rs: -0.96 % lakhs. The loan recovery of the bank was Rs: 0.28 % lakhs in the year 2020-21. Bank of India bank loan recovery was continuously decreases.
- The study focuses that the NPA (Non Performing Assets) of the bank. In the year 2017-2018, the NPA amount was very high (28,207 lakhs) comparing to other years. The NPA of the bank was Rs.19, 169 lakhs in the year 2018-2019. It was very lower (12,262 Lakhs) in the year 2020-21. It was clearly focused that the bank NPA reduces in the study period.

- The study reveals the profits of the bank. The highest profit was observed in 2016-17 which is Rs: 11,595 lakhs. Second highest increase in profit was seen in 2018-19 which is Rs: 8194. The profit of the bank was low (10,922 Lakhs) in the year 2020-2021.
- The Short term loans issued by the bank continuously reduced in study period. In the year 2016-2017, the bank gave only Rs.15.04 lakhs. The short period loan reduced in the year 2019-2020, it was Rs.11.22 lakhs. The lowest percentage share of short term loans was Rs: 17.12 lakhs from total percentage. In the year 2020-21, it was little increased.
- The study shows the components of total Jewel loan issued during the period 2016-17 to 2020-21. The study observed that during the year 2016-17 the bank issued Rs.14.94, lakhs amount of loans. The percentage to total varied between 23.38 percent and 16.94 percent. In the case of Jewel loan given through the bank, the lowest was Rs: 10.68 lakhs in 2019-20 and the highest was Rs: 14.94 lakhs in 2016-17 during the study period. In the year 2020-2021, it was little increased.(10.82 lakhs).
- The study inferred the Medium term loans issued by the bank. The medium term loans continuously reduced from 2016-17 to 2019-20. In the year 2019-2020, the bank gave Rs. 10.09 lakhs. After the year 2019-20 it was increased. The lowest percentage share of medium term loans was Rs: 10.09 lakhs. In the year 2020-21 the medium term loans reduced again, it was Rs.34.48 lakhs.
- The study indicates the micro loans issued by the bank. In the year 2019-2020 the bank gave Rs. 2.06 lakhs. The micro loans reduced in the year 2020-21, it was Rs. 1.07 lakhs. The lowest percentage share of micro loans was 16.85 percentages and largest share was 32.44 percentages from the total.

- The study explained that the long term loans issued by the bank. In the year 2016-2017 the bank issued Rs. 19.43lakhs. The long term loans continuously increased from 2016-17 to 2018-19. In the year 2019-20, it was Rs.63.91 lakhs. After the year 2019-20 it was reduced again. The lowest percentage share of loan was Rs. 19.43 lakhs in the year 2016-17. In the year 2020-21 the long term loans increased again, it was Rs. 33.42 lakhs.
- The research inferred the House construction loan issued by the bank. In the year 2016-2017 to 2019-20 the bank sanctioned Rs.12.88 lakhs. The loans increased in the year 2020-21, it was Rs.15.68 lakhs.

6.2. Suggestions:

In the light of the findings a few suggestions are offered to improve the functioning of Bank of India.

- ✍ The present staffs are only 16 in the Bank of India. It is the weakness of the bank for financial transaction. The bank should raise the employee to uplift the bank in future.
- ✍ The bank should recruit sufficient number of employee in order to improve the performance of the bank.
- ✍ Members of the bank are strength of the bank. The bank should encourage the members in increasing level.
- ✍ The loan holders of the bank are another strength of the bank. On this way, the loan holders are increasing very low in the study period. It is negative focus of the bank. The bank should try to raise the load holders.
- ✍ The member of the bank who availed the loans should come forward to repay the loan promptly.

- ✍ The government should pass the necessary legislative measures for taking strong action against willful defaulters.
- ✍ The Share capital of the bank was stable in the study period. The bank should take necessary actions for the improvement of this area.
- ✍ The total deposit of the bank was increasing in the study period. It is the functioning fund of the bank. It should encourage the banking performance in future.
- ✍ The Bank should also mobilize funds under low cost deposit schemes of fixed deposit to the maximum extent. The bank should concentrate on low cost Savings, Current Account and Term Deposits of lower tenure.
- ✍ It is necessary for the banker to watch on movement of borrowers stocks and assets so that it would make bankers trained to recover the loans in systematic way before its turns to NPAs category.
- ✍ The Bank of India profit is in decreasing trend. The above factors contributed to decrease in profitability for bank in the era of study. Bank should take appropriate cost control measures and to increase noninterest income with a view to increase profit every year.
- ✍ The short term loan of Jewel loan is in increasing trend. It should be the strength of the bank in the future days.
- ✍ The bank overall medium term loan is increasing in the study period. But the Short period loan of Micro credit loan is decreasing in this bank. It is one of the weaknesses for the bank. So, the bank should concentrate this area.
- ✍ The bank should take necessary action to increasing the short term and medium term loans process. Because the Short and medium term benefit is important for the quick economic process.

- ✍ Special action programmes can be arranged for deposit mobilization.
- ✍ The branch manager has to conduct seminars to increase the knowledge of people about the different programmes, proper utilization of loans and repayment.
- ✍ The bank should formulate appropriate recovering programmes for reducing the overdues from the borrowers.
- ✍ Sending timely reminders, notice and the like.
- ✍ More number of branches can be opened in the area where the possibilities of mobilising funds and rendering financial services. In the study all the new generation banks have established branches by covering all the areas.

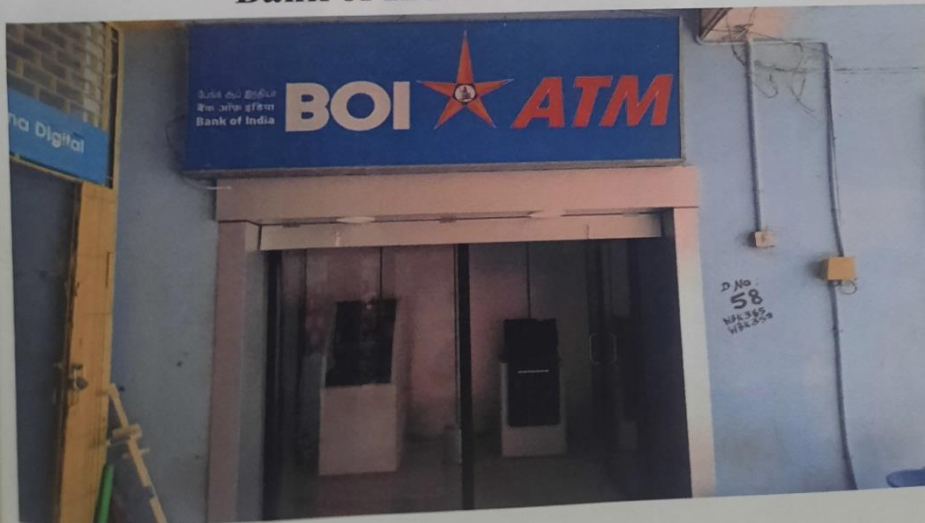
6.3. Conclusion:

By analyzing performance of the Bank of India in Bala Vinayagar Kovil Street is finally conclude that reserves and other funds, total deposit, fixed deposits and short term loans especially Jewel loan of the bank is satisfactory in the study period. Members of the bank, share capital, profit, micro credit loan of the bank and Non Performing Assets of the bank is in negative position. The bank should take constant and confident effort in the weaker areas. If the bank is taking continuous actions in this area, definitely the bank will attain the stage of a successful performance in future.

Bank of India- Study Area



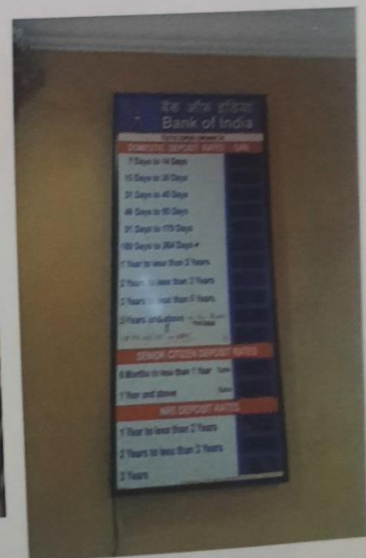
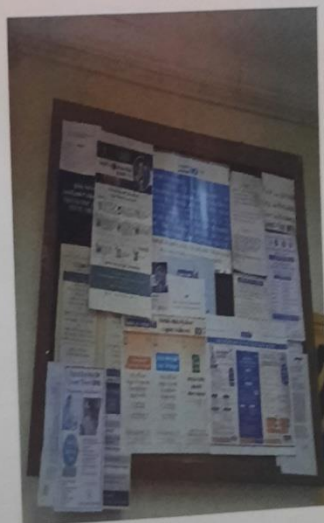
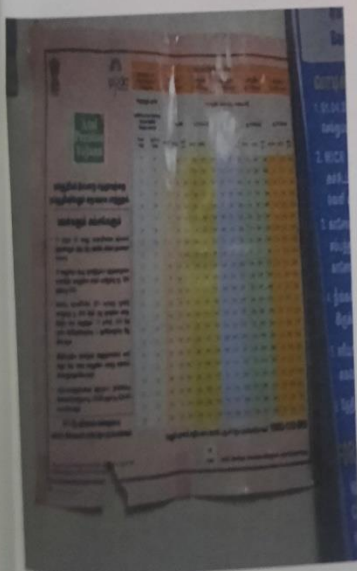
Bank of India ATM Service



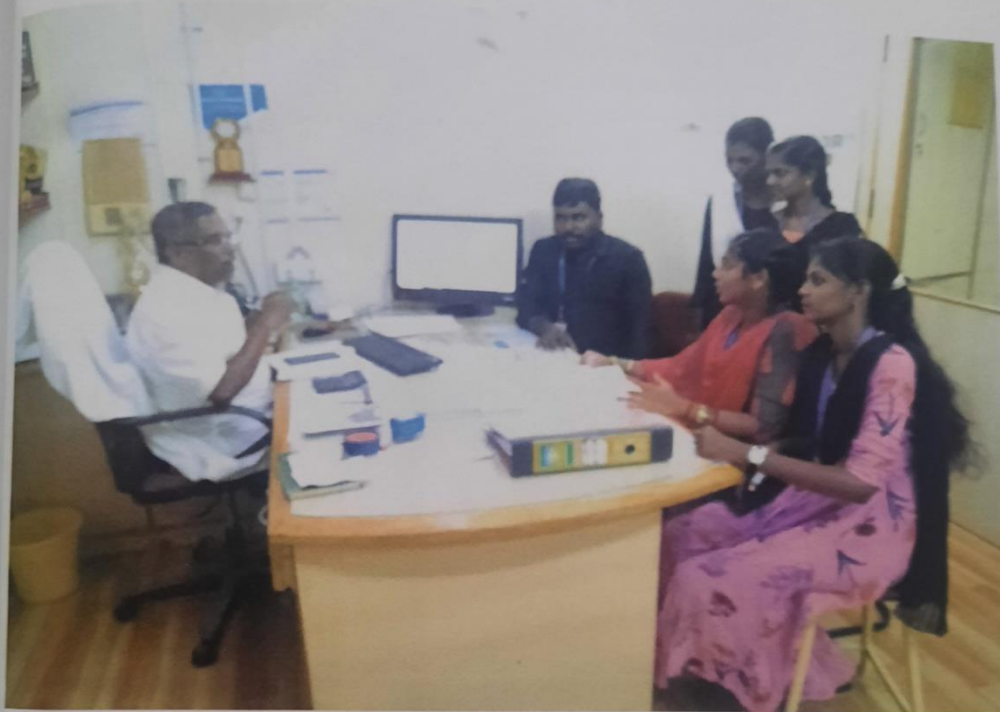
Jewellery Loan



Current Updation of the Bank



Data Collection



**A STUDY ON MUDIVAITHANENDAL VILLAGE OF THOOTHUKUDI DISTRICT
WITH SPECIAL REFERENCE TO GOVERNMENT EMPLOYEES**

Project Report Submitted to the

DEPARTMENT OF ECONOMICS

ST. MARY'S COLLEGE (AUTONOMOUS) THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Tirunelveli

In partial fulfillment for the award of the Degree of

Bachelor of Arts in Economics

By

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May 2022

CERTIFICATE

This is to certify that the project report entitled "A STUDY ON MUDIVAITHANENDAL VILLAGE OF THOOTHUKUDI DISTRICT WITH SPECIAL REFERENCE TO GOVERNMENT EMPLOYEES" is submitted to St. Mary's College (Autonomous) Thoothukudi, in partial fulfillment for the award of the degree of Bachelor of Arts in Economics and is a record of work done during the year 2021-2022 by the following students of III B.A Economics.

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CHAPTER I

Introduction

A STUDY ON MUDIVAITHANENDAL VILLAGE OF THOOTHUKUDI DISTRICT WITH SPECIAL REFERENCE TO GOVERNMENT EMPLOYEES

CHAPTER I INTRODUCTION

1.1 INTRODUCTION

A **village** is a clustered human settlement or community, larger than a hamlet but smaller than a town (although the word is often used to describe both hamlets and smaller towns), with a population typically ranging from a few hundred to a few thousand. Some geographers specifically define a village as having between 500 and 2,500 inhabitants. In most parts of the world, villages are settlements of people clustered around a central point. Though villages are often located in rural areas, the term urban village is also applied to certain urban neighborhoods. Villages are normally permanent, with fixed dwellings; however, transient villages can occur. Further, the dwellings of a village are fairly close to one another, not scattered broadly over the landscape, as a dispersed settlement. Villages are also called by many other names like hamlet, small-town, community, settlement, burg, microcosm, borough, dorp, pueblo and thorp etc.

In the past, villages were a usual form of community for societies that practice subsistence agriculture, and also for some non-agricultural societies. In Great Britain, a hamlet earned the right to be called a village when it built a church. In many cultures, towns and cities were few, with only a small proportion of the population living in them. The Industrial Revolution attracted people in larger numbers to work in mills and factories; the concentration of people caused many villages to grow into towns and cities. This also enabled specialization of labor and crafts, and development of many trades. The trend of urbanization continues, though not always in connection with industrialization. Historically homes were situated together for sociability and defence, and land surrounding the living quarters was farmed. Traditional fishing villages were based on artisan fishing and located adjacent to fishing grounds.

"The soul of India lives in its villages," declared Mahatma Gandhi at the beginning of 20th century. According to the 2011 census of India, 69% of Indians (around 833 million people) live in 640,867 different villages. The size of these villages varies considerably. 236,004 Indian villages have a population of fewer than 500, while 3,976 villages have a population of 10,000+. Most of the villages have their own temple, mosque, or church, depending on the local religious following.

Of all emerging economies, India is the only one that continues to be predominantly rural, with more than two-thirds of its population living in more than half a million villages. Over the past

two decades, faster growth has also brought about greater rural–urban disparities. There has been pervasive crisis in rural occupations – in occupations such as handloom weaving as much as in agriculture. The process of economic growth and the integration of the village into larger markets and political systems have also brought about greater mobilisation and self-assertion among oppressed social groups, resulting in changes in rural power structures. Ironically, it has been in this period that priorities in social science research have shifted away from the agrarian question and rural transformation.

Village Community: Evolution, Features and Growth of Village Community

The Village Community:

The earliest human communities were perhaps the loosely organised aggregations of a few families who carried on mutually interdependent activities in gathering food and defending themselves against their enemies. These primitive bands were migratory communities. Gradually man acquired skill and knowledge in agriculture.

With the development of agriculture and the consequent stabilization of the source of food, the people began to lead a settled life and human communities became more stationary. The village emerged which signified that man has passed from nomadic mode of collective life to the settled one.

It is difficult to form a precise definition of the term ‘village’. Generally, it is understood to mean a small area with small population which follows agriculture not only as an occupation but also as a way of life.

The village is the oldest permanent community of man. Kropotkin writes, “We do not know one single human race or one single nation which has not had its period of village communities.” Human Society”, as Bogardus says, “has been cradled in the rural group.” The most impressive of the villages said to have existed five thousand or more years ago, are the lake dwellings of Switzerland and nearby sections of Germany, France, Italy and Austria.

The houses were built on platforms supported by piles driven into the lake bottom. Bridges connected these houses with the shore where fields and pasture lay. Today, a variant type of these houses may be seen in Kashmir where these are built on boats supported by ropes driven into the Dal lake bottom. These houses are called ‘House-boats’ magnificently furnished and decorated and are hired out to visitors to Kashmir valley.

Evolution of Village Community:

The village community has passed through the following stages:

(i) Primitive Village Community:

There are two peculiar features of the primitive village community; first, the part played by kinship and, second, its collectivist basis. The ancient village community was a very small group of ten or twenty families. Owing to smallness of size everybody knew each other.

The feeling of familiarity was so great that if a child wandered off from the home, the parents had nothing to worry because there were numerous “relatives in that village who would keep an eye on him. Since due to lack of means of communication and transport the members of the village community were separated from other communities by a great distance, considerable inbreeding occurred, so that a large part of the members were related by kinship.

In primitive village community land was the common property. All the members jointly tilled it. Always it was a group trust. The village was organised on a collectivist basis, so far as land was concerned. The bond of kinship and close ties of the inhabitants with the land developed a high sense of community feeling in the primitive village community.

(ii) Medieval Village Community:

The primitive village community underwent a fundamental change by the time of the middle Ages. Neither kinship any longer played a prominent part in binding the people nor did the land belong to the group as a whole. Instead, feudal system came into existence. The land now belonged to a lord of some sort, to the king, to a member of the nobility or to an ecclesiastical chief.

It was tilled by tenants who were the vassals of their feudal lords. Their relation with the feudal lords was that of slave and master. There were, however, certain factors which bound the rural folk. One of these was their common subjection, their serfdom; the other was their occupational unity.

(iii) Modern Village Community:

With the rise of industrialism in modern times the rural group began to lose its importance. Now urban group began to dominate civilization. However, in spite of growth of urbanism it is a fact that even at the present time a large proportion of population lives in villages. In India, about 75 per cent of the population lives in villages.

The modern village community stands in sharp contrast to the primitive one. Urbanization, the dominant feature of the modern age has made its impact on the village community. The modern city has set the pattern of the rural way of life. Rural social forms have been changing. The rural people have taken over the urban forms of life.

The kinship bond, a peculiar feature of the primitive village community, has been broken due to the increased size and mobility of population. The land is no longer owned collectively or cultivated jointly. Even the methods of working the land have taken on urban characteristics.

Thus, the two factors that made an individual to identify himself with his village community have ceased to exist.

What the residents have in common today is a set of traditions, habits and activities which do not produce such a complete identification with the village community as was produced in primitive times. They continue to work the land but then try to live in the mode of the city. In short, the rural social forms have changed under the impact of urbanisation. By and large the rural' way of life has been withering away.

Life in an Indian Village

Village is the pride of India. The calm, clean, and serene ambiance of the communities help in keeping the mind clear and the body fit. According to the census, almost two-thirds of India's population still resides in the villages. Agriculture constitutes a significant part of the Indian economy and the fundamentals of this lie in the village. In villages, the people stay united no matter what. Agriculture and farming are some of the toughest jobs in India because most of them depend on manual labor and persistence. We have compiled some long and short essays for the use of the readers.

When the word "village" first comes to mind, we imagine a lush green field and unpolluted environment, and this is the exact scenario in Indian villages. They learn to share and care from a very young age, which comes from the concept of joint families. The majority of India's population depends on agriculture, as India is an agricultural country. Agriculture is both practiced as a commercial activity and for self-sustenance. The life in the community is a lot different than the urban lifestyle. The financial conditions of the farmers are not that good, and they do not have access to advanced tools, which makes farming a tough job for them.

People in villages lead a very ordinary life with almost no luxury, but they are happy with their limited resources. The locals live in “kaccha” houses or temporary houses, made up of mud or clay, which has thatched roofs made out of straws or burnt clay tiles. The infrastructure is not that good in the villages; there might be just one or two schools and hospitals in the whole village. The literacy rate in villages is also very less due to this fact.

The transport system in the villages is not as smooth as in the urban cities. Many communities are connected by kutchra roads and usually involve a long commute. The villagers like to spend their time in harmony. They like to celebrate together during the time of harvest or any local festival. The art forms of the natives are quite impressive. Their music, dance, paintings are all inspired by nature and their regular lifestyle.

Though the village lifestyle may seem soothing, there are many back draws of it. For example, the quality of education provided is not that good in the villages, which leads to limited career options. The medical supplies are limited. The primary backlog of the villagers is that most of them have a very rigid mentality where they are very strict about following old traditions and customs. Even the basic amenities are not available to lead a healthy lifestyle. The hygiene and sanitation quality in a village is considerably poor and should be taken care of.

Agriculture and farming are some of the toughest jobs in India because most of them depend on manual labor and persistence. The government should work to make life a bit easy in villages to make it a better place to live in.

Life in an Indian village is elementary, where the people need to wake up very early in the morning to go to fields and work, and their life is not easy at all. It is a daily routine of the village where the men will go to work in the fields, and the women of the house will stay behind to manage the household so that when the men come back from work in the evening, they can be served with delicious food.

Life in a village is not as fast as it is in city. villagers in the plains use well, hand pump or pond water for the same. Those residing near the river use river-water. Most houses in remote villages have ponds in front of them They use the same water for different purposes. Some villages have government water supply facilities. Most villages do not have provision for clean drinking water. Some villagers take their cattle to the pond. Buffaloes go deep into the water and make it dirty.

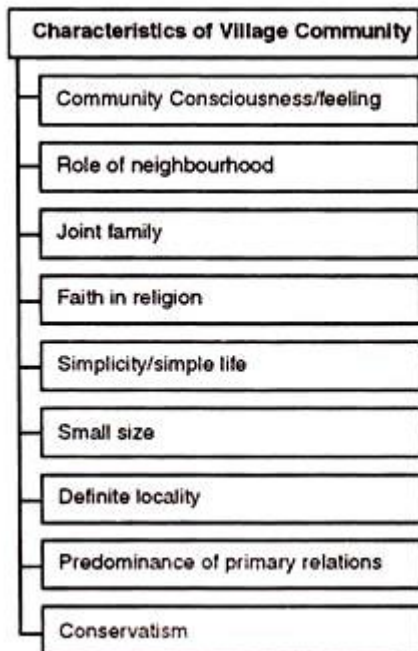
Most villagers do not understand the value of sanitation. They do not have proper sanitation facilities. Some villagers keep their cattle adjacent to their house which is unhygienic. Most of the villages in India do not have medical facilities. They do not have electricity also. Most of the rural areas are characterized by poverty. The levels of productivity are low. there is a lack of basic minimum services. Villagers are superstitious in some ways.

The oldest living elderly man in the house is the head of the house. All important decisions are taken under his guidance. Women has to look after her house and even sometimes has to work with other family members in fields, even school going children have to take part in household activities and rearing of cattle, working on fields with family members. As LPG is costly so, women use woods to cook food on 'chulas. Children go to government schools and take part in all household activities. Man acts as a social being and manages all relations and other outdoor activities. A new trend of equal participation of women in outdoor activities and in gaining education and being equal parts of the society is uprising quickly and is being accepted by people of extreme men fellowship also. Social gathering is organized in villages for entertainment and cultural activities and village theater shows called as 'Nautankies'. These drama shows are based on village stories, mythological beliefs and stories with moralistic endings. People laugh take part and enjoy these social activities and these are an important part of village life. These things increase the level of understanding and cooperation between them.

Girls in the villages are mostly brought up in a more confined manner where they are made to learn the household work such as cleaning, stitching, and cooking from their childhood. Their job is to help their mothers in their daily routine. Many people in villages have this typical mindset that sending girls to school is not necessary as they believe they only need to learn how to take care of the household and their families. However, luckily, the mindset of people is changing now as the literacy rate in the villages is increasing day by day, which denotes that people no longer consider that girls' going to school is a taboo.

Features of Village Community:

The village community is marked by several features. The important ones are the following:



1. Community Consciousness/Feeling:

The village dwellers have a sense of unity. The relations between the village people are intimate. They personally know each other. Their customs, conventions and culture are common. They jointly take part in religious celebrations. Structurally and functionally the village is a unit.

The village is a community whose members have a sense of “we feeling”. Their relation is intimate. They are having a strong community feeling.

2. Role of Neighbourhood:

In a village neighbourhood is of great importance. The village people are generally in need of one another’s assistance. There is not enough of individuality and speed in the life of the village to disable one from paying attention to his neighbour—his sorrow, and joys. In the village people assist each other and thus they have closest neighbourhood relations. Hence neighbourers have intimate relations with each other.

3. Joint Family:

Though in the cities the joint family system is breaking down, yet in the villages it still retains its hold. The agricultural occupation requires the cooperation of all the family members. The men plough the field, the women harvest the crops and the children graze the cattle.

In the village, the family has strict control and administrative powers over the individual. All the members of the family share the burden of the family occupation. Much attention is directed towards the preservation of the family honor and utmost care is taken to observe and maintain the tradition of the family.

4. Faith in Religion:

The people in the villages have deep faith in religion and deities. They are mostly God-fearing. Their main occupation is agriculture which largely depends upon the vagaries of nature. The farmer acquires an attitude of fear and awe towards natural forces and starts worshipping them.

5. Peace and Simplicity:

The village people lead a simple and secure life. It is not ostentatious. They are far away from the evils of modern civilization. They are a simple and plain people believing in God. They do not show pretensions. Their behaviour is natural and not artificial. They are free from mental conflicts. They do not suffer heart strokes. They are sincere, hospitable and hardworking. The level of morality is high. Social crimes are very rare. Their life is governed by norms.

An Indian village is the atmosphere of simplicity, calmness and peace prevailing therein. In the village there is no noise and little sophistication. The humdrum activities of modern civilisation are rarely seen there. Though occasionally a car or a bus rolling along the kutcha road enveloped in thick clouds of dust may be seen there, but, on the whole, life in the village moves with traditional quietude and peace. The villagers lead a simple life, eat frugally, dress simply, and live in mud-walled houses completely lacking in the trappings of modern civilisation.

But here also the old order is yielding place to a new one. The mud-walled houses are giving place to well-designed buildings. Fashion is making its inroads in the life of young men and women of the village. Here and there notes of music issue from dry cell radio. However, this change is gradual and slow.

In this way, the village is a community whose members have a sense of unity, close neighbourhood relations, faith in religion, and a simple life in a joint family.

6. Small Size:

Village communities are small in size. The census in India designates a place with 5000 inhabitants as a village community. The populations of villages vary from place to place.

7. Definite Locality:

A group of people forms village community only when it begins to reside in a definite locality. Locality is the physical basis of village community.

8. Predominance of Primary Relations:

The village community is characterised by the predominance of personal and relatively durable relations. Kinship plays a very important role in the context of village community.

9. Conservatism:

The village people are very conservative. They do not wish to introduce any radical changes. The inhabitants of the village are strongly attached to old customs and traditions. Their outlook is primarily conservative and they accept changes with extreme reluctance. They love old ways and are less eager to follow the advice of zealous social reformers regarding their marriage and other customs.

Sir Charles Metcalf once wrote about the conservatism of the Indian villages by saying, “they seem to last where nothing else lasts. Dynasties tumble down; revolution succeeds revolution. Hindu, Pathan, Moghul, Marathe, Sikh, English all the masters change in turn, but the village communities remain the same.”

Some more Characteristics of Indian Villages:

1. Isolation and Self-Sufficiency:

Almost till the middle of the 19th century, the villages in India were more or less self-contained, isolated and self-sufficient units. The inhabitants of the village had very little to do with the people outside. All of their essential needs were satisfied in the village itself. This feature of the Indian village is described graphically as follows:

Each village tends to be self-contained, in each will be found persons with permanent rights in the lands as owners or tenants with hereditary occupancy rights; of these some cultivate all they hold, others with large areas at their disposal rent out to tenants on a yearly agreement a part or whole of their lands; below these in the scale are agricultural labourers. some have a field or two on rent, some work in the fields only at times of pressure and are mainly engaged in crafts, such as leather work, or in tasks regarded as menial.

In all but the smallest village, there are one or two skilled artisans, carpenters or blacksmiths who provide and repair the simple agricultural implements, bullock gear and water-lifts. The household requirements are supplied by a shop or two whose Owners usually provide the first market for the village produce and add to their earnings in money-lending.” In short, it was more of a society within itself.

However, changing political and economic conditions are putting an end to the isolation and self-sufficiency of the Indian village. The rapid development of the means of transport and communication has broken the barriers between the village and city. The former is now socially and even economically connected with the neighbourhood city or town. Political parties have made village the centre of their activities as much as die city.

2. Poverty and Illiteracy:

Probably the most glaring and also depressing features of Indian villages are the poverty and illiteracy of the village people. They are generally poor with a very low income. They take coarse food and put on rough clothes. The pressure on land is high resulting in fragmentation of holdings and poor productivity.

Besides poverty the village people are steeped in ignorance and illiteracy. The opportunities for education are meagre in the villages. The village school is generally in a dilapidated condition. Facilities for higher education are practically nil. Due to poverty the villagers cannot send their sons to city for education. Due to illiteracy they cannot improve upon their agriculture or supplement their income by other means. Poverty is thus the cause and effect of illiteracy and the backwardness of the villagers.

However, recently the need has been realised for rural reconstruction. An all India organisation under the name of All India Kissan Sammelan’ has been formed to focus the attention of the government on the problems of peasantry class. There is greater realisation now that the country can march ahead only if its villages are prosperous.

The governments, both at the centre and states, have launched numerous schemes like total literacy programme, fertilizer subsidy, crop insurance, free power, concessional water-rate, minimum procurement price and low- interest loans for liquidating illiteracy and removing poverty of the people living in the villages. Agricultural production is becoming more and more mechanized and agricultural products are fetching high prices.

3. Local Self-government:

The villages in ancient India enjoyed a considerable measure of autonomy or self-government. The villagers managed their own affairs through the traditional institution of Panchayat. The central government had neither the inclination nor the means for interfering with the self-government of villages.

With the advent of Britishers in India and their introduction of a highly centralised system of administration the importance of Panchayats began to decline. Their judicial powers were taken over by the British courts and the officers were appointed to look after the administrative affairs of the villages.

This change produced unpleasant results. Since the times of Lord Ripon attempts were made to revive the old system of village local self-government, but the progress was very slow in this direction. With the attainment of freedom now fresh efforts are being made to strengthen the panchayat system and make Panchayats play a better part in the work of national reconstruction. The 73rd Amendment Act, 1993 has laid the foundation of strong and vibrant Panchayati Raj institutions in the country.

Growth of Village Community:

The growth of village community depends upon the following factors:

(i) Topographical Factors:

Among the topographical factors are included land, water and climate. It is obvious that these factors influence the growth of village community. Land is the most important topographical factor. People would like to settle at a place where land is fertile and plain.

It is difficult to carry agriculture on land which is rocky and uneven. If the land is not fertile and is sandy the villages cannot develop there. In the rocky areas and in deserts habitation is scarce. On the other hand, in the plain and fertile lands of Punjab one can observe villages at every two or three miles. The villages settled on fertile lands are more developed and prosperous. The villages in the mountainous areas are not so prosperous.

The facility of water also contributes to the growth and prosperity of villages. Water is required not only for drinking, bathing, cooking, etc., but also for irrigating the lands. If water is not easily available, much use cannot be made even of fertile and plain lands. Where water is not easily available as in the case of deserts the villages are far and scattered. The villages situated on

the banks of canal or having tube wells are in a much prosperous condition than those which are seeking out a miserable existence in the deserts and hills.

A temperate climate is most favourable to the growth of village community. Man cannot lead a natural and prosperous life in areas of extreme climate. Hence village communities inhabiting the Equator and the Polar regions are undeveloped. In too hot climate, people become lazy. The hot climate of India is one of the operative factors for the poor living standard of the village folk.

(ii) Economic Factors:

Among the economic factors we may include the condition of agriculture, rural economy and cottage industries.

Agriculture is the mainstay of the village community. As such the growth of village community depends upon the condition of agriculture. If farming yields a good crop, the economic condition of the village people will be better. If, on the other hand, they have to exert themselves to the point of exhaustion just to get enough for two meals a day, their economic and social condition will not be better.

In those countries where scientific inventions and favourable natural conditions have increased the agricultural production the village communities are in an advanced stage of development. In India, the village communities are poor because of low agricultural production.

The village economy also is an important factor in the growth of village community. The farmer must be in a position to procure animals of good breed, good seeds, good manure and scientific implements. There should be cooperative societies for supplying capital, good seeds, implements and to arrange the sale of agricultural produce at reasonable prices.

Cottage industries play an important part in the development of village community. While cottage industries provide a means of livelihood to landless people, they also offer means of utilization of the farmers and female labour in productive activities

(iii) Social Factors:

Among the social factors we include peace, security, cooperation and intelligence etc. For the development of the village community it is essential that there must be peace in the village. Besides peace, the village people must be guaranteed security—security from disease, and in

agriculture. They also need security against natural calamities. Agriculture Insurance can give them this sense of security.

Community development is not possible without cooperation. In the village there are many activities which depend upon cooperation of the whole community. Such activities, for example, are public health and sanitation, peace and order, proper use of public amenities, education and recreation, etc. Through cooperation the village people can bring about their development and put the village community on the way to prosperity.

Ultimately, the growth of the village community depends upon the intelligence of the villagers. Lacking intelligence, they cannot raise the agricultural output nor profit by the scientific discoveries. The village communities in the west are prosperous because they are intelligent. In India the villages are in a backward state because the village people lack intelligence to make use of scientific discoveries.

Village Community in India: Spheres of Change of Indian Villages

Villages play an important part in Indian life. From the prehistoric times, the village has been enjoying an important place as the unit of Indian social structure. India can rightly be called a land of villages. The bulk of her population lives in the villages. According to the census of 1991, about 75 per cent of the total population lives in villages.

There are 5, 75, 721 villages in the country, 26.5 per cent of the total rural population lives in small villages (under 500 persons). 48.8 per cent in medium sized villages (between 500 and 2,000 persons), 19.4 per cent in large villages (between 2,000 and 5,000 persons), and 5.3 per cent in large villages (over 5,000 persons)

The figures of the villages classified according to their population are given in the above table.

Change in Village Community:

Villages with a Population of		Number
Less than	500	3,18,611
Between	500 and 999	1,32,873
Between	1,000 and 1,999	81,911
Between	2,000 and 4,999	35,992
Between	5,000 and 9,999	4,976
	10,000 and over	1,358

Change is the law of nature. It is the need of life. Change is but natural in human communities. The village community is less susceptible to change than the urban community; but it does not imply that village community undergoes no change. It is also undergoing change though the speed of change as compared to urban community is slow.

The change in village community may be seen in different spheres:

(i) Caste System:

The British rule in India gave a serious blow to the caste system in the villages. The economic policy and the laws of British rulers induced the different castes to adopt occupations other than the traditional ones. The hold of caste panchayat was loosened.

The status of a village man was determined on the basis of his economic position and personal attainments. The restrictions on food, dress, mode of living and other matters imposed under caste system were removed. Even untouchability was weakened. Thus, caste system has

now lost its traditional hold in the villages, however, casteism is getting strengthened on account of selfish political interests.

(ii) Jajmani System:

‘Social Stratification in India’ the “Jajmani” system, a feature of village community in India has now weakened due to the governmental efforts to raise the status of the lower castes and impact of urbanisation. The occupations adopted by the village people are not entirely hereditary or based on caste system, nor the payment for services rendered by the lower caste is in kind; it is now mostly cash payment.

(iii) Family System:

The joint family system is no longer the peculiar characteristic of the village community. Nuclear families have taken its place. The family control over its members in matters of diet, dress and marriage has weakened. The family is no longer an economic unit. Several activities which once were carried within the family are now performed by outside agencies. The education of village girls has raised the status of rural women.

(iv) Marriage System:

Change can also be seen in the institution of marriage. Although inter-caste marriages are rare and parents continue to dominate the mate-choice, yet the boys and girls are consulted by the parents in the matter of mate- choice. Love marriages and divorces are almost non-existent. The individual qualities like education, economic pursuit, beauty and appearance of the marriage partners are given preference over the old family status. There is now less expenditure on marriages. The marriage rites also have been minimised. The custom of child marriage is being abolished.

(v) Living Standards:

The standard of living in the village community is gradually going higher. The rural diet no more consists of coarse food only. It now includes vegetables, milk, bread, tea and vegetable ghee. The dress is getting urbanized. The youths put on pants and the girls put on frocks and Bell Bottoms.

Even the old ladies put on blouses instead of shirts. The mill cloth is used in place of handloom cloth. Gold ornaments have replaced the old heavy silver ornaments. The young boys live bare-headed with well combed long hair while the girls use cosmetics. There are now ‘pucca’ houses to live. These are now better ventilated, well furnished, and in some cases electrified too. The ceiling fans can also be seen in some houses. Lanterns have replaced the earthen lamps in most

houses. Gobar gas plants have also been installed in some houses. The sanitary habits of the people have improved.

They now use soap for bath and washing the clothes. The safety razors are used for shaving. The drainage system is also better one. The primary health centres have made the villages people health conscious. The threat of epidemics has lessened due to the vaccination and other preventive measures taken to the villages.

The family planning program has been understood by the village people who now adopt measures to limit the family size. Schools have been opened. In some villages degree and post degree colleges can also be found. Agriculture Institutes and other Rural Institutes have also been opened in some villages.

(vi) Economic System:

Change has also taken place in the economic field. The educated rural youth seeks jobs in the cities rather than settle on the land. The demand for new scientific instruments of agriculture is increasing. The farmers have been taught new methods to raise their production. The rural cooperative societies have lessened the woes and miseries of the village people in getting seeds, fertilizers and credit.

The 'Sahukara' system is on the wane. More and more banks are being opened in the villages. The Government gives financial assistance and other facilities for setting up industries in the villages. The per capita income has increased. Economic exploitation has decreased and the farmers get good price for their products.

(vii) Political System:

The setting up of 'panchayats' has led to the growth of political consciousness among the village people. The newspapers, radio and television in some areas have added to the political knowledge of the villagers. However, the political parties have divided the people into groups and led to groupism among them. Caste conflicts and group rivalries have increased. The community feeling has decreased. Selfishness and individualism are growing.

It is thus evident that the Indian village is not a static community. It is dynamic. Sir Charles Metcalfe was wrong to hold that the village communities in India seem to last where nothing else lasts.

The villages in India are at present passing through a transitional period. From the sociological point of view the old social relations, bonds and ties have disappeared. The community consciousness is steadily decreasing. Politics of the country has made deep in roads into the peaceful life of the village people and has divided them into political and sub-caste groups. The joint family system is fast disintegrating and morality has gone down. The only feature of the village community now left is agriculture.

In India the task of rural reconstruction is a big and complicated affair not to be accomplished easily. As we have seen above, 75 per cent of population lives in villages. To raise the standard of living of 64 crores of people is no easy task. However, the trends show that considerable progress is under way despite great difficulties.

A Ministry of Rural Development has been formed at the centre to look after the overall task of rural development and co-ordinate the different schemes in this direction. Agricultural development along with irrigation and generation of electric power had the highest priority in the First Plan.

Both the short term and long-term objectives of the First Plan were by and large achieved. In the Second Plan new targets of agricultural production were laid down which have been more than achieved. In the Third and Fourth Plans also adequate importance was given to the task of rural reconstruction.

The successive plans also have given due attention to the programme of rural development. Various schemes like Small Farmers Development Project (SFDP), Marginal Farmers and Agricultural Labourers Project (MFAL), Drought Prone Areas Programme (DPAP), Integrated Rural Development Programme (IRDP), Applied Nutrition Programme (ANP) and finally Jawahar Rozgar Yojna Programme have been in vogue for the upliftment of rural masses.

The rural school is undergoing transformations under the impact of Operation Blackboard. It is now better equipped and adequately staffed. The introduction of labour-saving machinery has shortened farm hours, decreased the difficulty of labour and increased the amount of leisure time. Link roads are being constructed in the villages, electricity provided, sanitary conditions improved, health facilities provided and well-equipped hospitals with qualified doctors opened.

Many of the conveniences and comforts of the city are being introduced into rural homes. The 73rd Amendment Act, 1993 has sought to make the Panchayati Raj System more effective and role playing in the field of rural development. With the passing of the unattractive, barren and drudgery features of village home, it is hoped, there would come a new appreciation of the deeper rural values so that the young men would not flee to the cities, depriving the village of energetic and educated rural leadership.

Socio-Cultural Features of Village Community in India

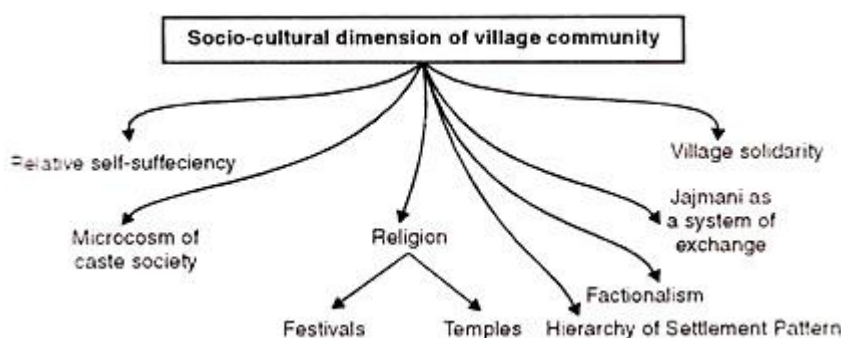
1. Relative Self-Sufficiency:

In the past, a traditional village was very much self-sufficient in several respects.

The village was a unit of production as well as consumption. Politically there was less interference from outside world.

Conflicts arising in the villages were solved in the village panchayat itself. There were also caste panchayats to give respective rights to each caste.

But gradually, the village community in India has been changed. It is no more static; it has changed from time to time. According to modern anthropological studies, the village community was not and is not self-sufficient. The whole nature of the traditional society is militated against the independent isolation of a village. In earlier days there was a good deal of coming and going among villages.



There were several reasons:

(i) A village is usually multi-caste. The number of castes in each village is not sufficient to carry-out the multifunctional roles a village requires, of necessity.

(ii) The rule of caste endogamy was prevalent. A village, more often than not, is inhabited by a particular sub-caste of the endogamous caste group. This necessitates a villager to seek alliance from other village or villages.

(iii) Markets are a major reason for travel within a locality. People from adjoining areas come to attend weekly markets and interact with one another.

(iv) Village folks, specially the elderly go on pilgrimage to visit certain places like Varanasi, Dwarka, Rameswaram and so on. This brings the villagers into contact with the town people as well as the people of other places.

Thus, the village was never entirely a closed or self-sufficient unit.

2. Microcosm of Caste Society:

The village is usually multi-caste. The pattern of Interactions among the various caste groups is governed by ritual hierarchy which in turn is manifested in rules governing, commensality, pollution, occupation and marriage.

But the British rule in India gave a serious blow to the caste system in the villages. Caste panchayats became extinct. The caste system lost its traditional hold in the villages. But casteism is getting strengthened on account of selfish political interests.

3. Hierarchy of Settlement Pattern:

The geography of a village follows a fixed pattern. Each caste usually has a separate settlement ward. In Gujarat, such areas are called “Phaliya”, In Karnataka it is “Keri”, in Maharashtra it is “Wada”. Everywhere we find the so called untouchables and Dalits live separately from the caste Hindus. The members of a ward show a strong sense of unity. Inter ward disputes occur occasionally like inter-village disputes.

4. Jajmani as a system of exchange:

It has been the basis of economic, social and cultural solidarity in the villages. It involved both the relationship of dominance and reciprocity. Under this system some castes are patrons (Jajman) and other are service castes (Kameen).

These service castes generally under obligation to serve the patron castes and their families. But now-a-days, this system has been weakened due to the influence of market forces, migration, contacts with towns, impact of education etc.

5. Village Solidarity:

People live in villages with close proximity and close interaction among them. They share the same familiar life-space, share the common experiences of natural forces/disasters/ calamities etc. A villager's closest economic associates are within his village.

“The villagers have separate hearths and common home.”

—Mandelbaum

Their very life experiences develop a sense of unity and identity. This sense of solidarity is reflected in various contexts. Village solidarity is commonly expressed in village ceremonies. Ritual occasions, for example the life-cycle ceremonies require the co-operation of several castes. The functioning of the village as a political and social entity brings together members of all castes.

6. Religion:

Religion provides the woof and warp of the community life in a village. The Hinduism that they follow is neither of the high spiritual order nor of the abstract intellectual type, nor even of the popular puranic nature. They worship number of Gods and goddesses such as Durga-Kali, Lakshmi, Saraswati etc.

People also worship the village deities. They also worship trees, especially “Pipal” and the “Tulsi” Beliefs in ghosts and witches are also prevalent.

Temple-the place of worship is also a place where the people from all castes get together to celebrate religious and social occasions. It is a place of congregation. Festivals are also celebrated in each and every village with pomp and ceremony. Festivals strengthen the association of castes in the villages.

7. Factionalism:

Every village witnesses elements of factionalism in its daily round of activities. There are many basis of factionalism such as economic, kinship ties, caste affiliation, new political consciousness etc. With the breakdown of Jajmani relations, many kamin (castes) have shifted their allegiance to new groups usually outside the village namely urban businessmen.

Modern politics has led to the strengthening of what sociologists call “horizontal solidarity” that is solidarity of caste. Now castes belonging to different villages come together to act as “pressure group”. This has special bearing on the traditional power structure. Improved means of transport and communication system have further consolidated this trend towards factionalism.

Village Life: Advantages and Disadvantages of Village Life

It is said that God made the village and human-being made the town. This expresses much of the difference between the two.

Advantages of Village Life

It represents the ideal life of which the poets sing. The life of villagers passes quietly. The works of nature surrounds the villagers.

The craving of children for the village is a sign that it is the most natural and healthy life for men.

- In villages the environment is peaceful. Villagers live a simple life.
- Villagers get abundant opportunities to enjoy the beautiful gifts of nature.
- People living in villages breathe pure air.
- People living in villages are healthier, active, and simpler in habits than the people living in towns.
- The quiet and peace of village life give opportunities for thought, study, and mental development, which are impossible in town life.
- The abundance of pine air, and the healthier conditions of life, also establishes physical health and strength as town life can never do.

Thus, the rural populations are always the backbone of a village.

Disadvantages of Village Life

The dwellers in the village miss the conveniences and opportunities of life in the town. The educational advantages are often few and difficult to secure, and opportunities for work are far less than in the city.

Life in the village may become dull, and engender a lack of brightness and polish which puts the village people at a disadvantage beside the town dweller.

Ignorance, prejudice, and narrowness, too, are more characteristic of the village than of town life.

It can be concluded that the improved train-ways, the post, newspapers, the bicycle, the bus, the motor, and the improved means of intercourse between town and village go far to minimize these drawbacks so that the dweller in the village need not lack the culture of the town.

GOVERNMENT EMPLOYEES

Government employee means any employee, including independent contractors, of the state executive branch, the state legislative branch, a state agency, a public institution of higher education, or any local government, except a member of the general assembly or a public officer.

A growing trend has been seen in recent years that more and more people are opting for government jobs. The main reason behind this is that government jobs secure the people's life in India. Besides the salary factor, there are pension and other benefits and most importantly job security that make Government jobs in India more and more popular.

To get a good job with a good income is the dream of every individual. Every year, the GOI release many job opportunities in various divisions. The government jobs, or in normal hindi terminology, Sarkari Naukri in India is basically divided in to two divisions namely:

Central Government Jobs: Central government jobs pertain to departments like central soil conservation department, Military services and other armed forces, Police, income tax department, Central Railways, and other departments like judiciary, executive etc.

State Government Jobs: State Government Jobs in India include financial institution, educational institution, banking institution, judiciary, and other departments like Forest and Animal husbandry etc.

Central Government & State Government Jobs Benefits:

The Employee of the Central government get benefits in terms of better emoluments, housing loan facilities, medical facilities, gratuity, bonus & provident fund. The Employee of the state government is governed by different rules and regulations in terms of his pay-scale fixed by the respective departments. Compared to Central Govt., the salaries and the other emoluments are less than Central government.

To get a govt job is not so easy. It is based on written test and interview and appropriate qualifications to qualify the job. There are yearly vacancies for banks, railways, universities, colleges etc. for which you need to be fully prepared. From home ministry to planning commission,

from Doordarshan to Akashvani, from public sector unit to government led banks, there are lucrative govt jobs in India. Most of Indian citizens opt for the government appointment to have better facilities & better living conditions. The craze of Govt. Jobs in India is still stable, inspite of several multinational companies in the country. These jobs give you the guarantee for whole life. Govt. Jobs in India are known for their reliability and credibility and huge monetary benefits altogether.

Benefits of Government Employees

A government employee not only enjoys high prestige in the society but also other benefits such as **job security, fixed working hours, paid holidays, retirement benefits and most important of all various tax benefits on his salary** as compared to a non-government employee.

The Benefits of Working a Government Job are as follows:

1. Job Security and Every Month Salary on Time

Whether the country is in great economic depression or milk & honey is flowing on the streets, it does not matter. In both circumstances, you will get your monthly salary on time. However, in a private job, a person will get his salary only if the company is making a profit, when the company stops making a profit then there is no salary for employees. Hence people love Sarkari jobs because their salary is guaranteed every month.

Government jobs give you a steady income and job security, especially during challenging economic times. Unlike private sector companies that can go out of business anytime, the government remain stable or take new forms over time. In fact, corporate employees are three times more likely to get terminated by employers than government workers.

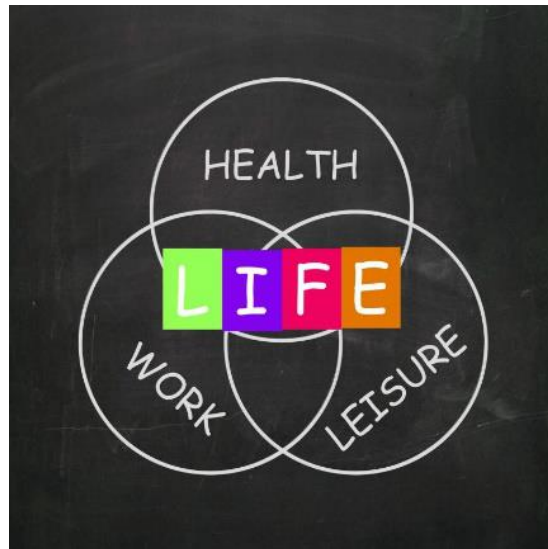
The government is always employing—and even if they rehash a new project or revamp an old one, new people will be required to support them.

2. Jobs for Everyone

The government offers jobs to everyone; whether you're a science, business, healthcare, or in politics, you'll find a job that's suited to your expertise. So no matter what you want or aspire to become, the chances are always there for you.

3. Work/Life Balance

The work culture in the government sector is unique, but one thing remains the same—the provision of work/life balance. The government offers flexible work schedules, telework options, and remote working options for those who work long-hour shifts and have an extended commute.



This particular advantage makes the sector extremely attractive for students who are looking to earn a solid income while they study by maintaining the balance between a personal and professional life.

The jobs offer permissive vacation and leave time, travel opportunities, and some states may also have additional holidays, depending on local governments.

4. Housing Facility

In a time when paying for a mortgage is out of reach for many people. Prices are so high that people from the middle class cannot imagine affording the mortgage. Even renting a house is beyond their means. But if you work for a government job, then you do not have to bother about mortgage or rent. In a government job, you will be provided with a housing facility. You can live in government quarters without any tension of paying rent. And they are as good as an apartment in a posh locality. You can save the same money that a person working in a private company has to pay for monthly rent. That amount of money could be quite large.

5. Generous Benefits

Government job benefits almost always exceed the private sector's offerings. And due to the favorable health and retirement plans, employees have more savings and investments by the time they retire.

6. Health Care Benefits and Insurance

We all know that day by day, health care for ordinary people is becoming out of their reach. Even people from the the upper-middle class is finding it difficult to afford health care for their family. But if you work in a government job, then the government will bear all your medical expenses, not

just for you but your entire family. Even complicated surgeries, which could cost you thousands of dollars, would be done free of cost for a government employee. The government would bear all expenses for the surgery. However, if you work for a private company, then you have to spend from your pocket. This is why people love government jobs.

The government offers a more extensive range of healthcare plans. The project covers existing and retired employees and covers general health insurance for spouses, as well as children.

7. Insurance

The government's life insurance plans allow you to avail life insurance for your family too.

8. Social Security all Types of Allowances

All government employees receive full social security, Your earnings from a government job count toward a future social security benefit just like private work earnings do. In fact, a job in the government sector would take care of all your extra expenses. From grocery to traveling, all expenditure will be subsidized by the government. You will get a dearness allowance (DA) and Travelling Allowance (TA) to cover all your extra expenditure. It won't hurt you, even if inflation is so high. Moreover, you can travel anywhere in the country with a concession. You will not find such concessions in private sector jobs. You enjoy a great sense of social security. You are in a position where you can live the rest of your life without tension. The biggest fear in your life could be insecurity, and government jobs make your life socially secure. That's why people still aspire for government jobs.

9. Retirement Plan

Government jobs have the most comprehensive retirement savings plan you could ever get. After your retirement, you will be eligible to enjoy lifetime retirement benefits. The eligibility depends on the number of years served and your job responsibilities. But this is subject to government norms and regulations.

10. Get Maximum Vacations to Spend

The workload in a government is less compared to private jobs. Hence, you get the maximum number of holidays in a year. In a private job, you hardly get any holiday. In a year you get maximum 4 to 5 holidays. But in a government job holidays, you get in a year are greater than any private job

11. Work to Make a Difference

If you want to work for others while earning a good and having a secure job, the public sector is waiting for you. Government jobs are created to make living standards and conditions better for citizens. Regardless of the field you choose, you know you'll be working for the greater good.

Although the younger generation has the least interest in government jobs but still there is a large crowd who is aspiring for it. Although there are many disadvantages in government jobs, there are many advantages that will make you think why you should work in a govt Job. Aspiration for government jobs is mainly in the lower middle class and middle class. If you come from an affluent class or upper-middle-class then you will give a damn about government jobs.

However, aspiration for government jobs among the middle class and lower middle class is not without any reason.

Pension benefits of Central Government & State Government Employees:

1. The employee gets half of his salary as a pension after his retirement.
2. The wife gets the pension if the employee dies. After the employee's death, some pension is also given to the employee's child if the child is handicapped.
3. It has been rightly said that "Government Jobs Are Like Bullet Proof Jacket For A Family" The govt. jobs give proper security and safety to the employee and his family. Loans can be easily availed by govt employees for education, marriages etc.
4. Medical expenses are also provided.

But all these benefits are subject to government norms and regulations and they change from time to time.

Disadvantages of Government Job

1. Each Day is Boring & Monotonous.
2. Discouraging & Frustrating Work Environment.
3. No Merit, Only Reference.
4. Monthly Salary is Peanuts.
5. Transfers in Inhospitable Areas.
6. Government Gives a Damn about Employees.
7. Inferior Lifestyle.
8. Stunted Personality.
9. Doomed Future for Remaining Career.
10. Never Contented

1.2 Objectives of the Study

The following are the objectives of the study:

1. To collect the socio-economic information of the government employees living in Mudivaithanendal village.
2. To identify the type of government jobs in which the people of Mudivaithanendal village are employed.
3. To analyse the level of satisfaction of the government employees of this village.
4. To identify the problems and challenges of the government employees in the village and suggest remedial measures to solve those problems.

1.3 Methodology and Survey Design

In this study we have used simple random sampling method and selected 80 respondents. We have used direct interview method for the collection of information by respondents of Mudivaithanendal village of Thoothukudi district who are employed in various government sector jobs. We have also used primary and secondary sources to collect the data with structural development perspective. Statistical tools like averages, percentages and arithmetic mean have been used in the study. The period of study is February 2022 to April 2022.

Sources of information

- 1) Primary resources: - To collect the primary information we used self-prepared questionnaire on developmental perspective for interview and then information is collected from 80 respondents.
- 2) Secondary resources: -we have collected information from village Panchayat Board, and other information through various articles, journals, library, newspapers and websites.

1.4 Significance of the study

In this study, only government employees are taken as respondents by the research team. We definitely know that government jobs provide permanent income and job security. This is one of the main reasons why people want to be placed in government jobs. But, still they also face many problems and challenges in their real life. Army personnel, men from BSF, CRPF, Police, fire service, government bus drivers, etc. really face innumerable challenges and hardships during their career. So, this research has focused on finding out their socio-economic conditions and identifies their problems and challenges.

It is the common observation that Indian village society is characterized by social and economic inequality and hierarchy embedded in the caste stratification. In the social organization of Indian village society, the land, wealth, status, labour and power are also divided on the basis of social status of each caste in the social structure. Such a distribution creates socio-economic inter-dependency among caste groups in the village. Thus, the co-existence of agrarian castes of a non-economic structure and the most Fundamental fact about the Indian agrarian social structure to be reckoned with. So, to some extent, this problem also has been addressed.

1.5 Statement of the problem

In this research, the respondents are all government employees from various sectors. Even though they have permanent income and job security, they also facing many problems in their day to day life. They also have some practical difficulties in their profession like respondents from Armed forces lead a very difficult life throughout their career. They have to encounter many problems in their work place and also in battlefield. They generally work in a very harsh environment and live in rough, undesirable conditions. The BSF and CRPF personnel are also trapped in the same environment and they generally don't live with their families and also don't have life assurance. This is the reason why we call the people of armed forces as "Real Heroes". And respondents of police department are really experiencing bad situations often and they have enormous emotional burden. Sometimes they have to make difficult decisions. The army personnel and police force have to work 24x7 for the welfare of the public and this may be very tiring and also cause many health problems. Similarly, government drivers should be very cautious and alert during driving. It is really a tedious job. Some of them have faced accident situations while driving for the public.

So, in this research the main focus is to identify the various problems of the government employees of Muduvaithanendal Village.

1.6 Limitation of the study

The researcher has collected data from nearly 80 government employees from Muduvaithanendal Village of Thoothukudi District. Most of the government servants have chosen government job because of their opinion that it is a secure and safe job for them so that they will get continuous and regular income. As they are government employees, they fear to disclose their full income and property details. but fear to share them. Hence there may be lack of accurate data Time constraint is also one of the basic limitations of this study.

1.7 Chapter Scheme

The present study on “**A STUDY ON MUDIVAITHANENDAL VILLAGE OF THOOTHUKUDI DISTRICT WITH SPECIAL REFERENCE TO GOVERNMENT EMPLOYEES**” is organised in to five chapters.

Chapter I deals with Introduction about village, Village Community: Evolution, Features and Growth of Village Community, Life in Indian Village, Socio-Cultural Features of Village Community in India and advantages and disadvantages of village community, Government Employees, Central and State Government Jobs, Advantages, Benefits and disadvantages of government jobs.

This chapter also includes Objectives of the study, Methodology, Significance of the Study, Statement of the problem, Limitation of the Study and Chapter Scheme.

Chapter II deals with the Review of Literature and Concepts.

Chapter III deals with the Profile of the Study Area.

Chapter IV deals with Analysis and Interpretation of the data.

Chapter V deals with Findings, Suggestions and Conclusion.

A photograph of a study desk. In the foreground, a silver laptop is open. On the laptop's keyboard, a pair of black-rimmed glasses and a black pen with gold accents are resting. To the right of the laptop, a stack of five books is piled up. The books have various colored spines, including black, white, and red. In the background, a bright light source, possibly a window or a lamp, creates a strong glow and lens flare, illuminating the scene. The background also shows blurred bookshelves filled with books.

CHAPTER II

REVIEW OF LITERATURE & CONCEPTS

CHAPTER II

REVIEW OF LITERATURE AND CONCEPTS

2.1 Review of Literature

Researchers Geethu Gopi, D. Priyanka, and R. Preetha (2018)¹ have said that paid workers have come to appreciate the value of money. Because of this, they began preparing a personal budget that they could monitor, so they would not get caught up in any additional enticing and stylish spending. According to the findings of the study, much of the money saved by employees is going toward personal goals including paying for their children's education, getting married, and saving for their retirement.

M. Nallakannu, Dr. V. M. Selvaraj (2018)² has stated that investors are concerned about their investments' safety. For their investments, they require a high level of security and confidence. Investment has not been affected by the current trend. Investments made by college professors in a more secure environment necessitate a steady flow of income. According to the findings of this study, most teachers believe that saving in the form of bank deposits or insurance is the safest bet when it comes to investing their money.

Bindu. T (2017)³ stated analytical form of study that uses both primary and secondary data. A systematic questionnaire was used to obtain primary data from salaried personnel in the Palakkad district. A straightforward sampling procedure was used to choose a group of forty government employees. Traditional tax planning approaches like NSC, PPF, and other creative tools are no longer the only options available to investors today. There are a variety of ways to invest in these types of assets, but the level of risk and return varies greatly, making them unsuitable for many investors. Gender has no bearing on an employee's ability to make wise investment decisions. There is a strong correlation between employees' yearly income and their investment percentage. Employees' levels of awareness are similar regardless of gender.

¹ Geethu Gopi, D. Priyanka and R. Preetha, International Journal of Pure and Applied Mathematics, Volume 118 No. 18, 2018, ISSN: 1314-3395, Pp 1347-1362.

² M. Nallakannu, Dr. V. M. Selvaraj (2018) Saving and Investment Pattern of College Teachers, International Journal of Management Studies, ISSN 2231-2528 Pp 13-18.

³ Bindu. T (2017), Savings and investment pattern of salaried employees in Palakkad District, Intercontinental Journal of Finance Research review ISSN: 2321-0354 - Online ISSN: 2347-1654 - Print - Impact Factor:4.236, Volume 5, Issue 6, June 2017.

Arti Fattepuria, Sukeshni Telgote, and Hemali Choudhary (2015) ⁴found that Mysore city's government school teachers use a variety of techniques to save and invest their money. Teachers' investment decisions are influenced by a variety of circumstances, according to a new study. Because Mysore is a haven for retirees, there is a dearth of knowledge about investing. As a result, it must be developed at the educational level. Savings and annual income were also examined in connection to investment preferences and predicted returns.

Deepak Sood and Dr. Navdeep Kaur (2015) ⁵, who conducted this study that people in the salaried class have begun to realise the value of saving money and properly investing. They do not want to spend money on a lavish lifestyle and prefer a more basic quality of living. Most people are saving their money for their children's education, their marriage, and other life's ambitions, according to the report. Chandigarh's salaried population has a lot to gain by adopting better saving and investing practises.

According to Mr. P. Arulmurugan, Dr. K. Balanagaguruthan, and Ms. Mirudhubashini (2013) ⁶, the competence of government professors is a critical factor of educational quality. It is the study's primary goal to investigate the investment habits of Tamil Nadu state's government professors in regard to gold investment. Surveys were utilised to collect data from 101 professors at various colleges and universities in the state of Tamil Nadu that specialise in the social sciences, engineering, and business. According to this survey, professors in Tamil Nadu are more interested in the future promise of high profits, liquidity, assured returns, and less interested in status, risk management, the optimal moment for investing and as a tool for investment in a precedence order. Other kinds of gold investment are also examined, and the study found that academics favour gold jewellery and bars over ETFs by a wide margin.

⁴ Arti Fattepuria, Sukeshni Telgote, Hemali Choudhary (2015) Saving and Investment Pattern of Private School Teachers – A Study with Reference To Wardha City, Maharashtra, International Journal of Advance Research in Computer Science and Management Studies, ISSN: 2321-7782, Volume 3, Pp73-78.

⁵ Deepak Sood, Dr. Navdeep Kaur, A study of saving and investment pattern of salaried class people with special reference to Chandigarh, International Journal of Research in Engineering, IT & Social Sciences, Volume 5, February 2015, ISSN 2250-0588, Pp 1-15.

⁶ Mr. P. Arulmurugan, Dr. K. Balanagaguruthan, Ms. Mirudhubashini, A Study on Investment Behavior of Professors Towards Gold with Special Reference to Tamilnadu State-International Journal of Scientific Research, Vol.2 issue 2 Feb.2013.

Government school teachers in Rajkot were asked about their savings and investment habits by **Dr.Varsha Virani,(2012)⁷**. She used a microeconomic technique to gauge their opinions on these topics. Teachers' salaries have a significant impact on savings. According to the findings, the vast majority of people are putting money aside in the form of bank deposits in anticipation of the unpredictability of the future. In terms of investing, the most common avenues are bank savings, with the primary goal of providing for the education, marriage, and security of one's children.

According to L. Pandiyan, Dr. T. Aranganathan (2012)⁸, should encourage individuals to save from their income, even if they have to give up some of their pleasures and luxuries. Countries can't continue to grow unless they have enough money saved up. As a result, the government must ensure a favourable climate for investment, ensuring that assets can be acquired, maintained, and liquidated. The government uses legal measures to encourage savings accumulation as a means of encouraging investment. The government must maintain a well-planned monetary policy in order to support the growth of a disciplined investment market, while protecting the investments from inflation or depletion.

Georgellis.Y, Lossa.E & Tabvuma.V (2011)⁹ found that public sector employees pull towards rendering services to the public mainly due to intrinsic rewards and it was the prime concern to make the employees a committed workforce.

Perry.J.L.(2008)¹⁰ diagnosed factors that motivates employees to become public servant namely participation in public policy making, committing themselves to solve public issues, altruism and empathy.

⁷ Varsha Virani, Saving and Investment pattern of school teachers- A study with special reference to Rajkot City, Gujrat, Abhinav National Refereed journal of research in Commerce and Management 2(4) (2012), 2277-1166.

⁸ L. Pandiyan, Dr. T. Aranganathan (2012), Savings and Investments Attitude of Salaried Class in Cuddalore District, IOSR Journal of Business and Management (IOSRJBM) ISSN: 2278-487X Volume 1, Issue 1 (May-June 2012), PP 40-49.

⁹ Georgellis, Y, Lossa, E. & Tabvuma, V. Crowding out intrinsic motivation in the public service. Journal of Public Adminsitration Research Theory, 2011;21 (3), 473-493.

¹⁰ Perry, James L. & Annie Hondeghe. Motivation in Public Management. The Call of Public Service. New York: Oxford University Press. 2008.

Pattakos (2004)¹¹ found that respondents who have non-altruistic motives for joining the public sector can be encouraged to seek the deeper meaning of government service, with regular exposure to appropriate activities or events in their workplace.

Wright, (2004)¹² revealed that Government employees who are highly committed tend to have a value-based system which in turn a smooth relationship will be developed between organization and the employee to serve public interest.

S.K. Srivastava (2002)¹³ studied the impact of labour welfare on job satisfaction in Public & Private sector in Kanpur city results indicates that welfare activities affect the workers attitude towards management and job satisfaction in both the sectors. If laborers are satisfied their attitudes are also pro and positive attitude pays a great role in the development of an organization. The Sixth central pay commission has recommended some schemes and policies to motivate the government employees such as performance based pecuniary benefit.

Jurkeiwicz, Massey and Brown (1998)¹⁴ exposed that public employee do not show much interest to render service or benefit to the society.

Crewson (1997)¹⁵ originated that public sector employees give less importance to job security than private sector employees.

Behn (1995)¹⁶ has posed a strong question concerning motivation which is “how public managers [can] motivate public employees (and citizens too) to pursue important public purposes with intelligence and energy”

¹¹ Pattakos, A.N. The Search for Meaning in Government Service, *Public Administration Review*, 2004; 64, 1, 106 – 12.

¹² Wright, B.E. Role of Work Context in Work Motivation: A Public Sector Application of Goal and Social Cognitive Theories, *Journal of Public Administration Research and Theory*, 2004; 14, 1, 59 – 78.

¹³ Srisvata, S.K. (2001). An empirical Study of job satisfaction and work adjustment in public sector personnels. *Prestige Journal of Management and Research*. 5 (2), 184–189.

¹⁴ Jurkiewicz, C.L., T.K. Massey Jr and R.G. Brown. Motivation in Public and Private Organizations: A Comparative Study, *Public Productivity and Management Review*, 1998; 21, 3, 230–50.

¹⁵ Crewson, P.E. Public-Service Motivation: Building Empirical Evidence of Incidence and Effect, *Journal of Public Administration Research and Theory*, 1997;7, 4, 499 – 518.

¹⁶ Behn, Robert D. The Big Questions of Public Management, *Public Administration Review*, 1995; Vol. 55, No. 4, pp.313-324.

2.2 Concepts

Village

A village is a clustered human settlement or community, larger than a hamlet but smaller than a town, with a population typically ranging from a few hundred to a few thousand. Though villages are often located in rural areas, the term urban village is also applied to certain urban neighborhoods.

Village panchayat

Panchayat means **a group of "Five Persons"**. In simple words, a Panchayat is a council of elders representing a village. The Panchayat system covers the village level (Gram Panchayat), clusters of villages (block Panchayat) and the district level (District Panchayat).

Gender

Gender is the range of characteristics pertaining to femininity and masculinity and differentiating between them. Depending on the context, this may include sex-based social structures and gender identity.

Age

Age of a respondent is defined as the span of life and is operationally measured by the number of years from his/her birth to the time of interviewing.

Caste

Caste is a form of social stratification characterised by endogamy, hereditary transmission of a style of life which often includes an occupation, ritual status in a hierarchy, and customary social interaction and exclusion based on cultural notions of purity and pollution.

Religion

Religion is usually defined as a social-cultural system of designated behaviors and practices, morals, beliefs, worldviews, texts, sanctified places, prophecies, ethics, or organizations, that generally.

Educational Level

Educational Level is usually thought to mean the highest level of formal schooling a person has completed. Education refers to the discipline that is concerned with methods of teaching and learning in schooling or school like environments as opposed to various nonformal and informal means of socialization.

Family size

Family size refers to the number of member including the respondent himself / herself, his/her wife/ husband children and other permanent dependents, who live and live together in a family unit.

Land

In Economics, land means the resource that encompass the natural resources used in production. In Classical Economics, there are three factors of production, i.e. land, labour, capital. Land was considered to be the original and inexhaustible gift of nature.

Luxury Item

In economics, a luxury good is a good for which demand increases more than what is proportional as income rises, so that expenditures on the good become a greater proportion of overall spending. Luxury goods are in contrast to necessity goods, where demand increases proportionally less than income.

Income

It is the flow of money of an individual or group of individuals or a firm over some period of time. It may originate from the sale of productive services. It may be in the form of wages, profits, rent or interest.

Expenditure

Expenditure refers to the total purchase price of a good or service or its is the money spent on something.

Socio Economic Condition

Socioeconomic status is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education and occupation. If at the current level of output or income could be redistributed equally among all the people, the conditions of the poorest segments would no doubt improve materially.

Consumption Expenditure

Consumption expenditure comprises of all expenditures incurred by the households exclusively on domestic accounts.

Savings

Savings is a positive function of income. This is not used for consumption at present. In short it is income minus consumption.

Borrowings

Money borrowed at interest for a specific period of time, It has to be repaid within the stipulated time period else people will get into high debt condition.

Debt

Amount of money borrowed by one person or party from another.

Investment

Investment or investing means that an asset is bought, or that money is put into a bank to get a future interest from it. It is the total amount of money spent by a shareholder in buying shares of a company. In economic management sciences, investments mean longer-term savings.

Banks

A bank is a financial institution licensed to receive deposits and make loans. There are two types of banks; commercial/retail banks and investment banks. In most countries, banks are regulated by the national government or central bank.

Standard of living

Standard of living generally refers to the level of wealth, comfort, material goods and necessities available to a certain geographic area. An evaluation of standard of living commonly includes the following factors: income, quality and availability of employment.

Savings

Savings is the amount of money left over after spending and other obligations are deducted from earnings. Savings represent money that is otherwise idle and not being put at risk with investments or spent on consumption.

Credit

A wide term which has been used in connection with operation of state involving lending, generally for short-term. To give credit is to finance directly, the expenditure of others against future repayment.

Bonus

Bonus is given to employees in various occasions. It may be a Diwali bonus, profit sharing bonus, service bonus, waste elimination bonus or year-end bonus etc.

Self –Help Groups

Self-Help group (SHG) is a small voluntary association of poor people, preferably from the same socio-economic background. They come together for the purpose of solving their common problems through self-help and mutual help. The SHG promotes small savings among its members. The savings are kept with a bank.

Chit Funds

A chit Fund is all in one financial instrument. Chit Funds are saving cum borrowing schemes, where member or subscriber agrees to contribute fixed amount every month for the fixed period. The total amount contributed by subscribers shall be auctioned and given as prize money to the needy subscriber every month.

Stress

A state of mental or emotional strain or tension resulting from adverse or demanding circumstances.

Migraine

A recurrent throbbing headache that typically affects one side of the head and is often accompanied by nausea and disturbed vision.

Hypertension

Also known as high blood pressure (HBP), is a long term medical condition in which the blood pressure in the arteries is persistently elevated. High blood pressure usually does not cause symptoms.

Dizziness

A sudden internal or external spinning sensation, often triggered by moving head too quickly.

Medical facilities

A health facility is, in general, any location where healthcare is provided. Health facilities range from small clinics and doctor's offices to urgent care centers and large hospitals with elaborate emergency rooms and trauma centers.

Insurance

Insurance is a means of protection from financial loss. It is a form of risk management, primarily used to hedge against the risk of a contingent or uncertain loss. An entity which provides insurance is known as an insurer, an insurance company, an insurance carrier or an underwriter.

Insurance Policy

An Insurance Policy is a legal contract between the insurance company (the insurer) and the person (s), business or entity being insured. Reading your policy helps you verify that the policy meets your needs and that you understand your and the insurance company's responsibilities if a loss occurs.

Central Government

A central government is the government that is a controlling power over a unitary state. Another type of distinct but sovereign political entity is a federal government, which may have distinct powers.

State Government

A state government is the government that controls a subdivision of a country in a federal form of government, which shares political power with the federal or national government. A state government may have some level of political autonomy, or be subject to the direct control of the federal government.

Army

An army, ground force or land force is a fighting force that fights primarily on land. In the broadest sense, it is the land-based military branch, service branch or armed service of a nation or country. It may also include aviation assets by possessing an army aviation component.

Police

The police are a constituted body of persons empowered by a state, with the aim to enforce the law, to ensure the safety, health and possessions of citizens, and to prevent crime and civil disorder. Their lawful powers include arrest and the use of force legitimized by the state via the monopoly on violence.

BSF

The Border Security Force is India's border guarding organisation on its border with Pakistan and Bangladesh.

CRPF

The Central Reserve Police Force is India's largest Central Armed Police Force. It functions under the authority of the Ministry of Home Affairs of the Government of India. The CRPF's primary role lies in assisting the State/Union Territories in police operations to maintain law and order and counter insurgency

Government exam

Government exams are **the ones that government organizations conduct to provide government jobs**. Furthermore, there are about 164 different government exams, and various organizations conduct these exams. Some organizations are UPSC, SSC, RBI, IBPS, SBI, LIC, and NIACL.

Pension

A pension is a fund into which a sum of money is added during an employee's employment years and from which payments are drawn to support the person's retirement from work in the form of periodic payments.

Social security

Social security is the protection that a society provides to individuals and households to ensure access to health care and to guarantee income security, particularly in cases of old age, unemployment, sickness, invalidity, work injury, maternity or loss of a breadwinner.

Policy

Policy is a deliberate system of guidelines to guide decisions and achieve rational outcomes. A policy is a statement of intent and is implemented as a procedure or protocol. Policies are generally adopted by a governance body within an organization

Fire Service

A fire department or fire brigade, also known as a fire authority, fire district, fire and rescue, or fire service in some areas, is an organization that provides fire prevention, fire suppression, rescue, and hazardous materials mitigation.

CHAPTER - III

PROFILE OF THE STUDY AREA



CHAPTER III

PROFILE OF THE STUDY AREA

Profile of the study Area – Thoothukudi District

Thoothukudi is a port on situated in Gulf Manner about 125Km. Thoothukudi is part of the pearl Fisheries Coast and it is known for Pearl Fishing and Ship Building industries. The major labour of Thoothukudi is well known fishing centre. It is one of the oldest seaports in the world and was the seaport of the Pandian Kingdom after Korkai near Palayakayal it was later taken over by the Portuguese in 1548 capture by the batch in 1658 and coded to British in 1825. The light built in 1842 marked the beginning of the history harbour development in the city. Thoothukudi was established as a municipality 1866 with Roche Victoria as its First chairman it attained than status of Corporation on August 5th 2008 after 142 years of being a municipality.

Thoothukudi district has given India many great Freedom Fighters like the great poet Subramaniya Bharathi, V.O.Chidambaram Pillai, Veerapandia Kattapomman, Vellaiyathevar, Sundharalingam etc.,

Geography

Thoothukudi District is situated in the extreme South-Eastern corner of Tamilnadu. It is bounded on the east and south-east by the Gulf of manner and on the west and south east by Tirunelveli district. The total area of the district is 4621Km, the administrative headquarters within. Thoothukudi district was derived from Tirunelveli district in 1986.

Thoothukudi was a part of Tirunelveli Loksabha till 2009. Thoothukudi was separated from Tirunelveli Loksabha consistency comprises the whole of Thoothukudi District, which includes Vilathikulam, Thoorhukudi, Tiruchendur, Srivaikundam, Ottapidaram and Kovilpatti.

Notable People

1. Subramanya Bharathi, Freedom fighter, poet, journalist, Indian Independence activist and social reformer.
2. V.O.Chidambaram Pillai, also known as Kappalottiya Tamilan.
3. Shiva Nadar, Indian industrialist and philanthropist. He is the founder and chairman of HCL Technologies.
4. Veerapandia Kattabomman.
5. Oomathurai.
6. AlagumuthuKane.
7. Veeran Sundharalingam was from the district.
8. Ramanichandran, a prolific Tamil romance novelist, and presently the best-selling author in the Tamil language

Water bodies

There are no large reservoirs in this district so the papanasam and Manimutharadams located in the Tirunelveli district in Thamirabarani River's flow are the main sources of irrigation. Other than the Thamirabarani River, the river Vaipar in Vilathikulam taluk, the river Karumeni which traverses through Sathankulam and Tiruchendur taluks, Palayakayal are all sources

Population

According to the 2011 census Population of India is 1,278,119,445 (1.27 billion) Tamil Nadu has a population of 76,656,206 and Thoothukudi population is 1,756,176. This gives it a ranking of 277th in India (out of the total area of 640)

Industry

Major industries such as SPIC< Chemical Industries, Heavy water plant and Thermal plant are located here. SIPCOT has rendered fruitful services to the state by identifying, developing, maintaining industrial areas in backward and most backward taluqs of the state, which had potential to grow. SIPCOT's role in assisting The industrialization in the state is not only quantitative but also qualitative SIPCOT has

created industrial complexes, Parks, growth centers in various strategically located places which occupy a place in Tamilnadu's industrial map.

The Thoothukudi city has Five Arts College, One Government Polytechnic, One Fisheries College, One Government Medical College, Two Training Colleges and Fourteen Higher Secondary Schools, Six Primary Schools, Nine Middle Schools. There is no adult literacy centre, once reorganized short hand writing and twenty one Vocational Training institution and four Public Libraries.

Medical Facilities

There are also many hospitals including one District College Hospital and many private Hospitals with all facilities. They are Sundaram Arulraj Hospital, AVM Hospital, City Hospital and the Sacred Heart Hospital (American Hospital) and there are so many clinical laboratories and few x-rays centres that are saving the people of Thoothukudi.

Airport

Thoothukudi airport is at Vagaikulam 14km from the heart of the city. It was for some year closed to commercial traffic but reopened in April 2006. The state government plans to extend the runway and modernize the airport to handle more traffic and bigger aircraft. There was also a proposal in 2009 for a green field airport. Kingfisher & Spice Jet are operating flights daily.

Rail ways

Thoothukudi city railway station is one of the oldest stations in India and south Indian Railway began Madras-Thoothukudi service connecting with the beat to Ceylon in 1899. The station was declared a modal station in 2007 and several Developments are in process. There is also another station, known as Thoothukudi Melur.

Roads

Thoothukudi city is well connected by road. The major Highways are;

- Thoothukudi – Madurai – Trichy (NH45-B)
- Thoothukudi – Palayamkottai (NH7-A)

- Thoothukudi – Palayamkayal – Thiruchendur (State Highway)
- Thoothukudi – Ramanathapuram (State Highway) we recently upgraded as part of the East Coast Road (ECR) project which will soon connect Thoothukudi with through coastal line.

Geology

Being a hinter town most of the land has sandy surface. The southern part of the town has gravel soil. A channel is running through the town towards east and confluence with the sea.

Climate and Temperature

The climate is generally hot and drier in the district except in coastal area. The mean maximum temperature varies from 18°C to 26.7°C. The highest temperature was recorded between the months of May and August and the lowest during December and January.

Tourism

Apart from being a commercial center, this is an exotic tourist attraction for its sunny and pristine sandy beaches. Sea sports like surfing and paragliding facilities are also available. There are lot religious and historically important places around Tuticorin. The district headquarter is well connected by road, rail, air and sea. People of the district hope to generate significant revenue from developing tourism sector.

- Kulasekharapatnam Beach.
- Lord Subramanya Temple, Thiruchendur.
- Holy Cross Church, Manapad.
- Harbour Beach, Tuticorin.
- Roche Park, Tuticorin.
- Pearl Beach, Tuticorin.

THOOTHUKUDI DISTRICT





3.2 Profile of Study Area: Mudivaithanendal Village

Mudivaithanendal village is located in India and listed under Taluk : Thoothukkudi, in the district of Tuticorin, Tamil Nadu State, India

- It is located 22 KM towards west from District head quarters Thoothukkudi
- 22 KM from Thoothukkudi Rural
- 634 KM from State capital Chennai, Mudivaithanendal Pin code is 628102 and postal head office is Mudittanendal.
- Kumaragiri (8 KM) , Servaikaranmadam (8 KM) , Sivagalai (10 KM) , Meenchipuram Sekkarakudi (11 KM) , Parakiramapandi (11 KM) are the nearby Villages to Mudivaithanendal
- Mudivaithanendal is surrounded by Alwarthirunagari Taluk towards South , Tuticorin Taluk towards East , Karungulam Taluk towards west , Thoothukkudi Taluk towards East
- Thoothukkudi , Tiruchendur , Tirunelveli , Vadakkuvalliyur are the nearby Cities to Mudivaithanendal
- It is near to bay of Bengal
- There is a chance of humidity in the weather
- Tamil is the Local Language here.

There is no railway station near to Mudivaithanendal in less than 10 km. However Tuticorin Rail Way Station is major railway station 22 KM near to Mudivaithanendal

According to Census 2011 information the location code or village code of Mudivaithanendal village is 642470. It is situated 25km away from Thoothukkudi, which is both district & sub-district headquarter of Mudivaithanendal village. As per 2009 status, Mudivaithanendal village is also a gram panchayat.

The total geographical area of village is 1930.87 hectares. Mudivaithanendal has a total population of 5,927 peoples, out of which male population is 2,968 while female population is 2,959. There are about 1,762 houses in mudivaithanendal village.

Some more informations about the village are:

Nearby Railway Stations

Tattapparai- 14 KM

Alwar Tirunagri- 15 KM

Kailasapuram- 15 KM

Srivaikuntam- 15 KM

Places near Mudivaithanendal

Tuticorin- 24 KM

Thiruchendur- 31 KM

Tirunelveli- 38 KM

Courtallam- 92 KM

Sivakasi- 92 KM

Vadakkuvalliyur- 59 KM

Taluks

Srivaikundam- 15 KM

Alwarthirunagari- 15 KM

Karungulam- 19 KM

Tuticorin- 21 KM

Airports

Tuticorin Airport- 5 KM

Trivandrum International Airport- 135 KM

Madurai Airport- 139 KM

Kochi Airport- 265 KM

District Head Quarters

Tuticorin- 21 KM

Tirunelveli- 38 KM

Kanniyakumari- 95 KM

Virudhunagar- 106 KM



CHAPTER IV

ANALYSIS AND INTERPRETATION



CHAPTER IV

ANALYSIS OF DATA AND INTERPRETATION

This chapter deals with 'A Study on MUDIVAITHAENDAL VILLAGE of THOOTHUKUDI District with Special Reference to Government Employees. The data collected are analysed and tabulated for easy understanding and good presentation. Tables, percentage and diagram assist to analyse the data efficiently.

TABLE 4.1
Gender details of Sample Respondents

S NO.	Gender	NO. OF RESPONDENTS	PERCENTAGE
1.	Male	55	69.75
2.	Female	25	31.25
	Total	80	100

Source: Survey

The above table shows that 69.75% of the respondents are male and 31.25% of the respondents are females.

Figure: 4.1

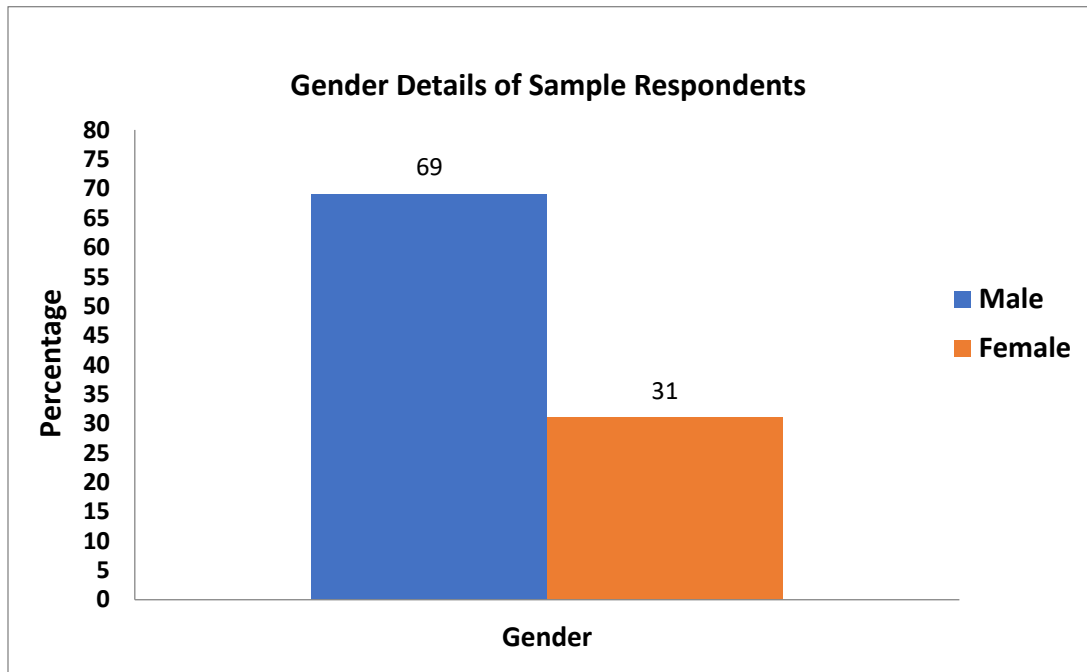


Table 4.2
Age –Wise distribution of Sample Respondents

S. No	Age (In years)	No. of Respondents	Percentage
1.	20- 29	16	20
2.	30-39	12	15
3.	40-49	21	26.25
4.	50-59	19	23.75
5.	60-69	9	11.25
6.	Above -70	3	3.75
	Total	80	100

Source: Survey

The above table reveals that 26.25% of the respondents are in the age group of 40-49 years. 23.75% of the respondents are in the age group of 50-59 years, 20% of the respondents are in the age group of 20-30 years, 15% of the respondents are in the age group of 30-39 years, 11.25% of the respondents are in the age group of the 60-69 years, 3.75% of the respondents are in the age group of above 70 years.

Figure 4.2

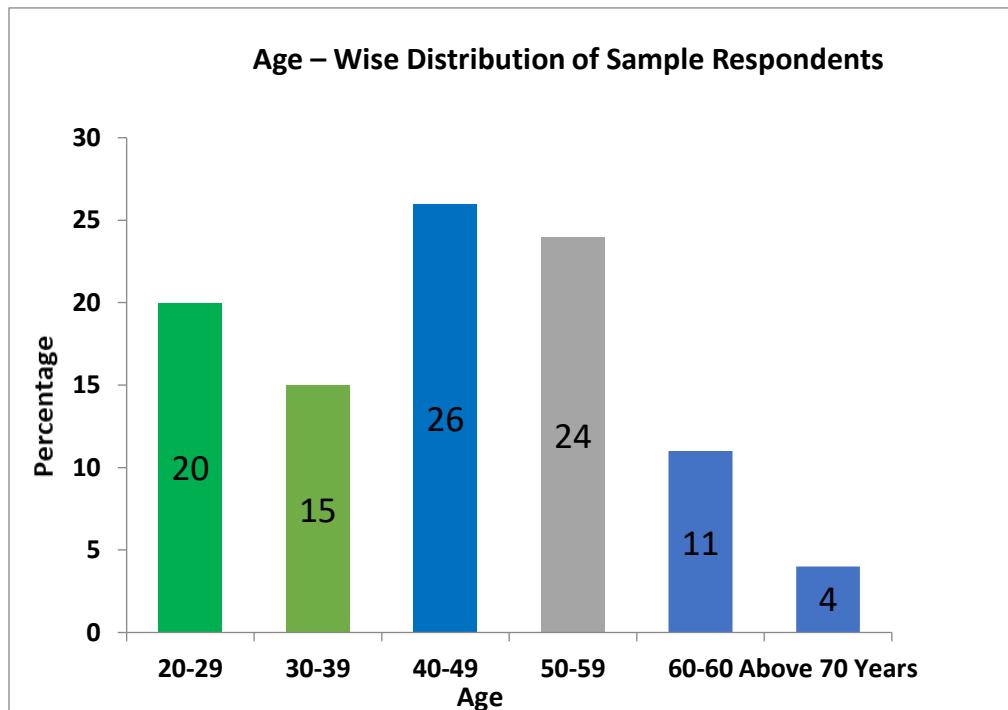


Table 4.3
Caste-Wise Distribution of Sample Respondents

S. No	Caste	No. of persons	Percentage
1.	OC	16	20
2.	BC	46	57.5
3.	MBC	10	12.5
4.	SC	8	10
	Total	80	100

Source: survey

The above table shows that 57.5% of the respondents belong to BC category, 20% of them belong to OC, 12.5% of them are MBC and 10% of them are SC.

Figure 4.3

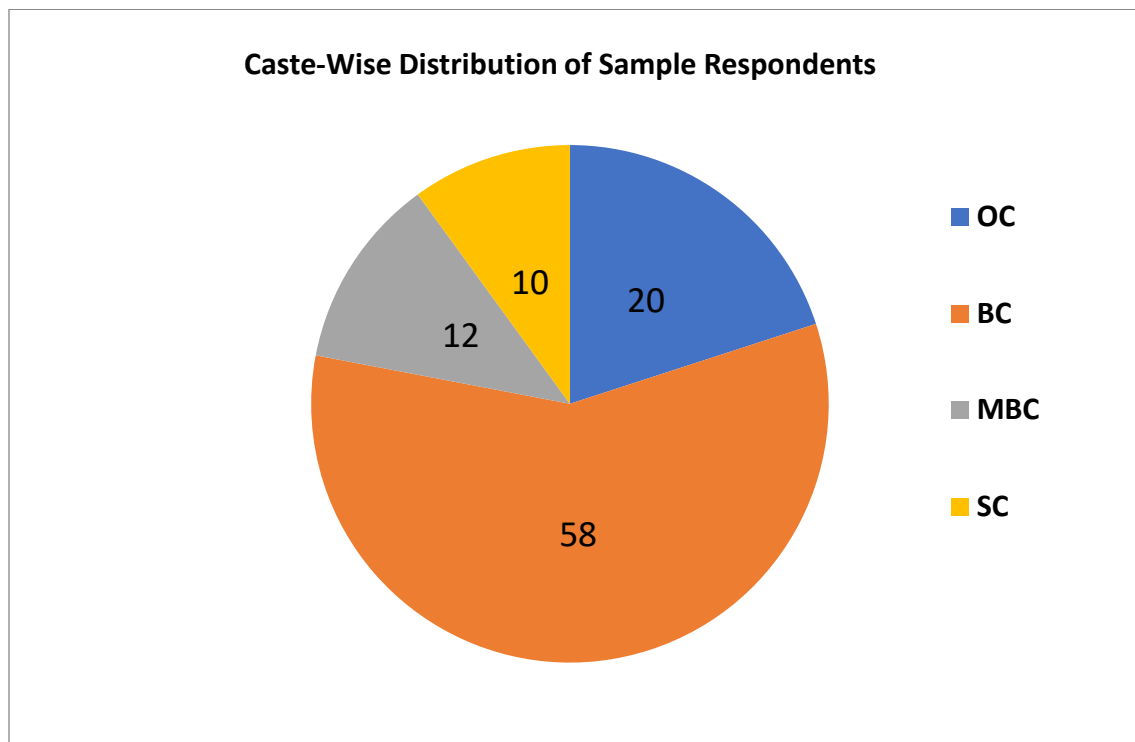


Table 4.4

Religion – Wise Distribution of sample Respondents

S. No	Religion	No. of Respondents	Percentage
1	Hindus	74	92.5
2	Christians	6	7.5
	Total	80	100

Source: Survey

The above table shows that 92.5% of the respondents are Hindus and only 7.5% of the respondents are Christian. This shows that most of them are Hindus in this village.

Figure 4.4

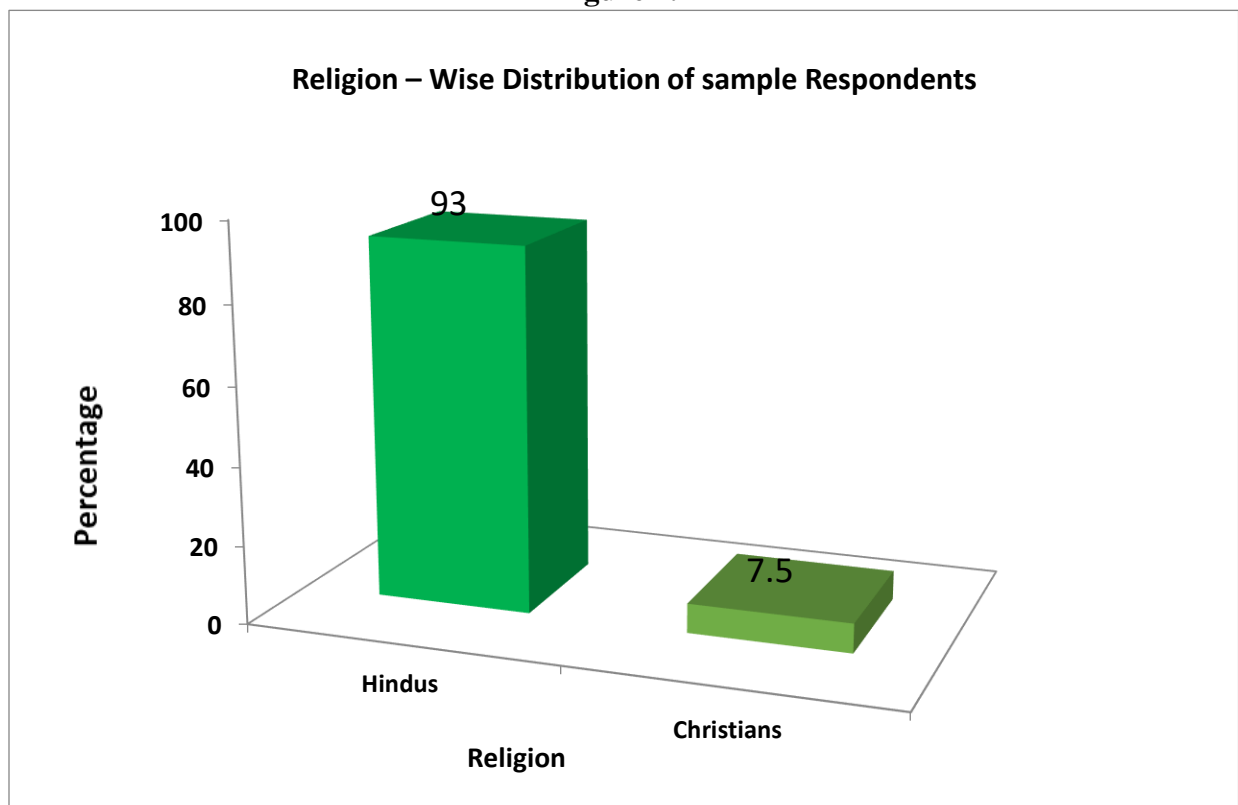


Table 4.5
Educational Distribution of Sample Respondents

S. No	Education	No. of Respondents	Percentage
1.	Primary	14	17.5
2.	High School	19	23.75
3.	Hr. Sec	15	18.75
4.	Graduate	32	40
	Total	80	100

Source: Survey

The above table shows that 23.75% of the respondents have completed High school, 18.75% of the respondents are completed Higher Secondary education, 17.5 % of the respondents have completed primary education and 40% of the respondents are graduates.

Figure 4.5

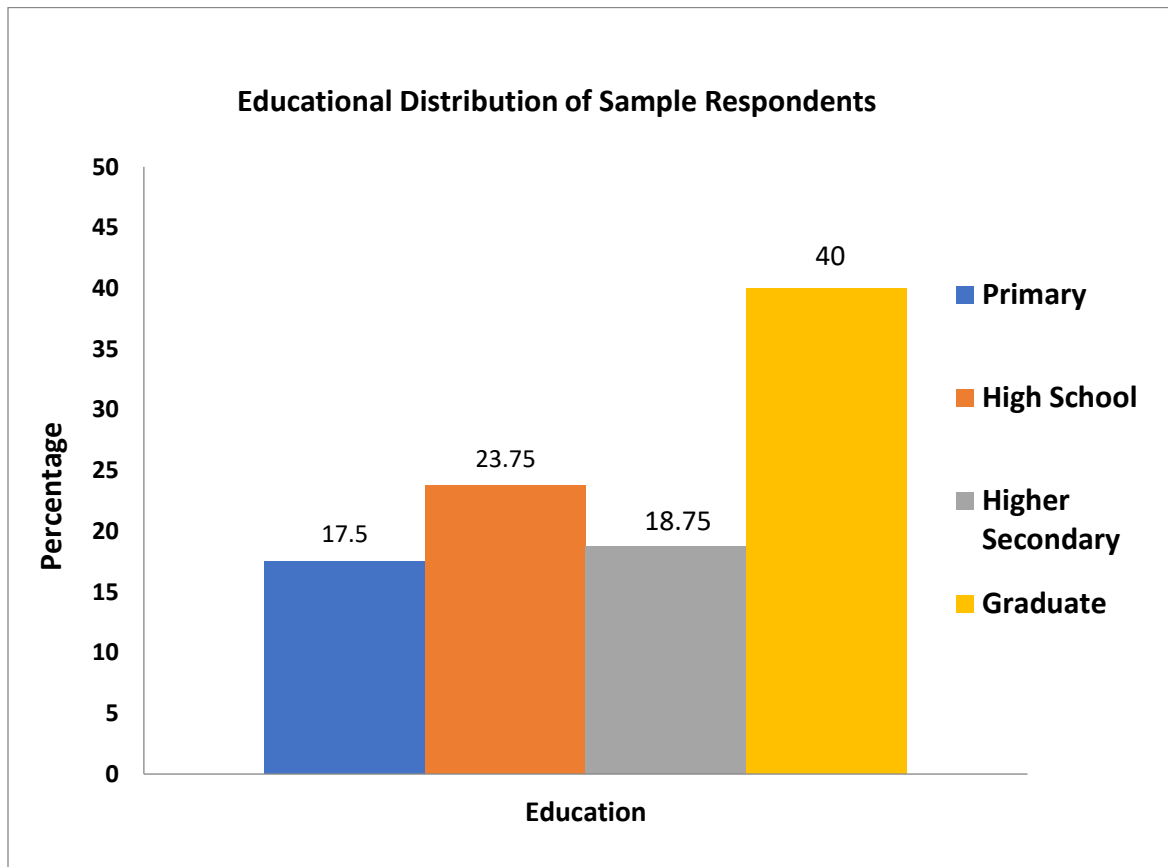


Table 4.6
Family Type of the Sample Respondents

S. No	Family Type	No. of Respondents	Percentage
1.	Joint family	14	17.5
2.	Nuclear family	66	82.5
	Total	80	100

Source: survey

The above table shows that 82.5% of the respondents live in nuclear family and 17.5% of the respondents live in joint type of family.

Figure 4.6

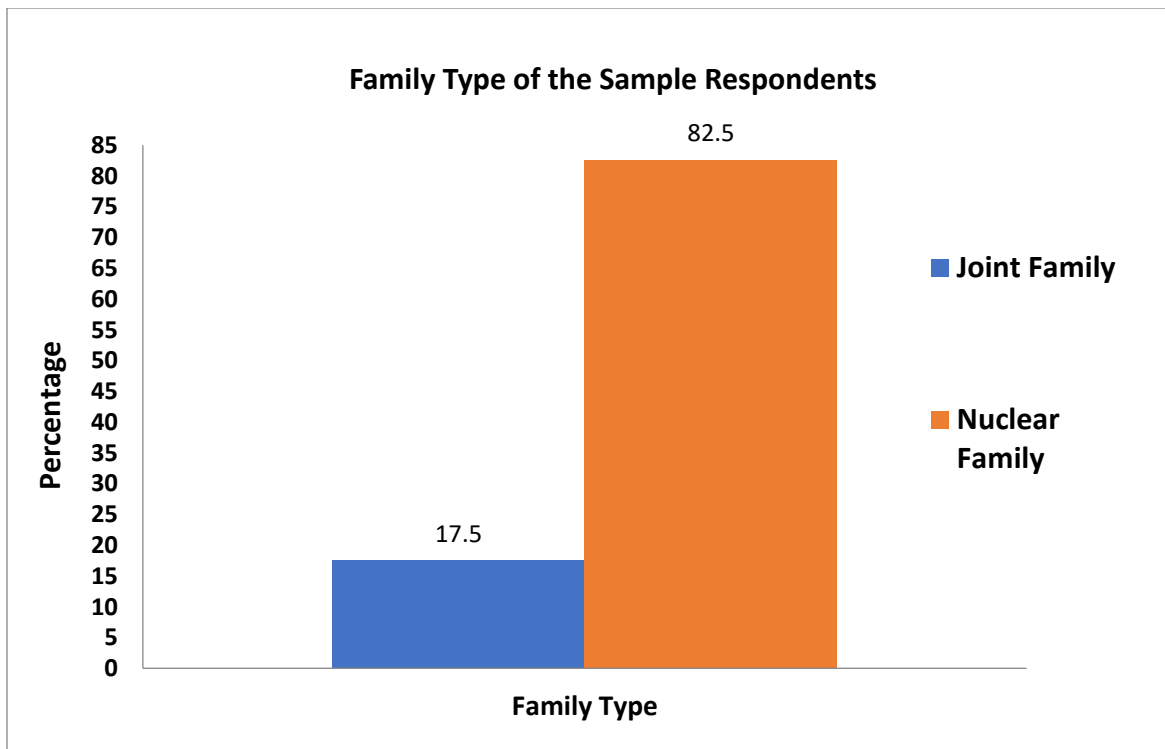


Table 4.7

Family size of the sample Respondents

S. No	Size	No of Respondents	Percentage
1.	1-3	35	43.75
2.	4-8	45	56.25
	Total	80	100

Source: Survey

The above table shows that 56.25% of the respondents are having 3-8 members in their family and 43.75% of the respondents are having 1-3 members in their family.

Figure 4.7

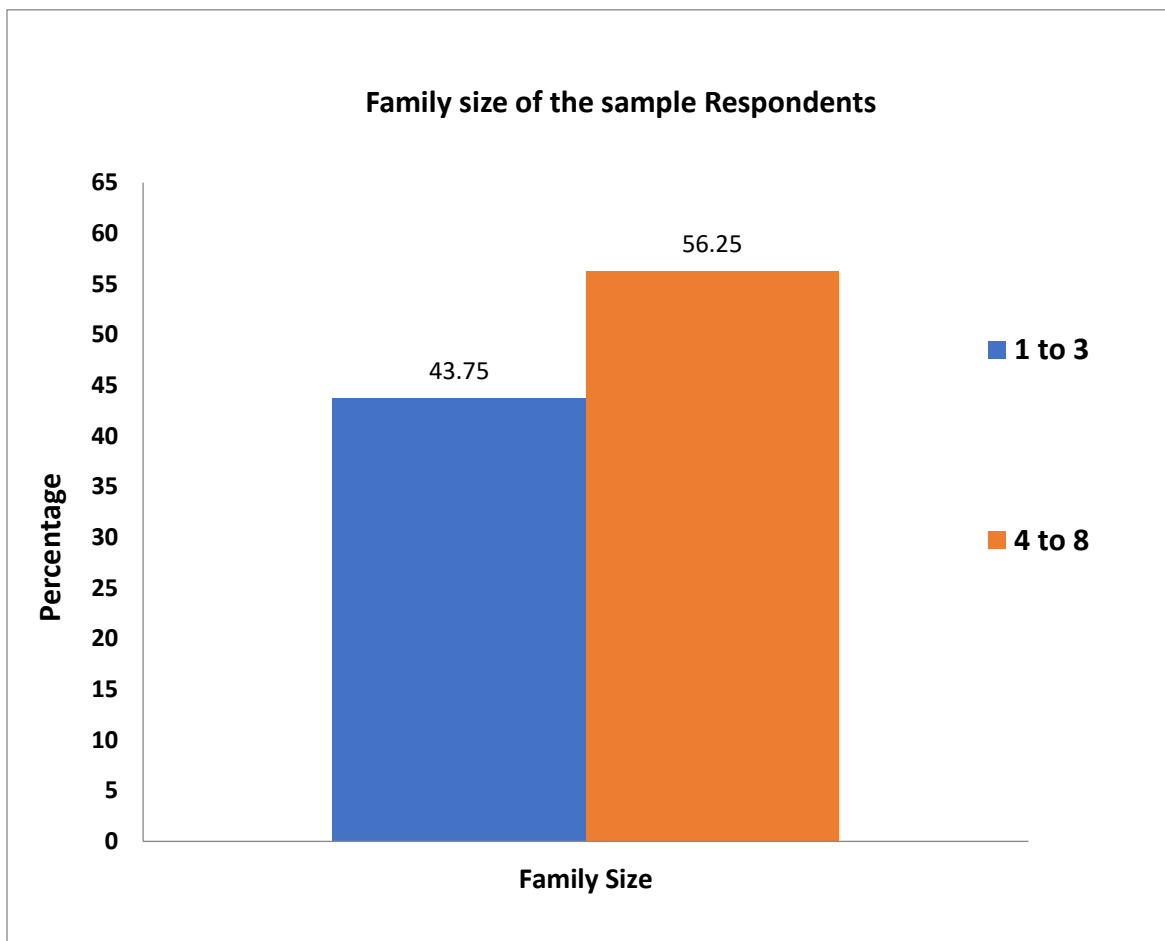


Table 4.8

Residential Position of Sample Respondents

S. No	Residential Position	No. of Respondents	Percentage
1.	Owned	67	83.75
2.	Rented	13	16.25
	Total	80	100

Source: Survey

The above table shows that 76.25% of the sample respondents live in their own house and 23.75% of the sample respondents live in rental house. Hence, majority of sample respondents have their own house.

Figure 4.8

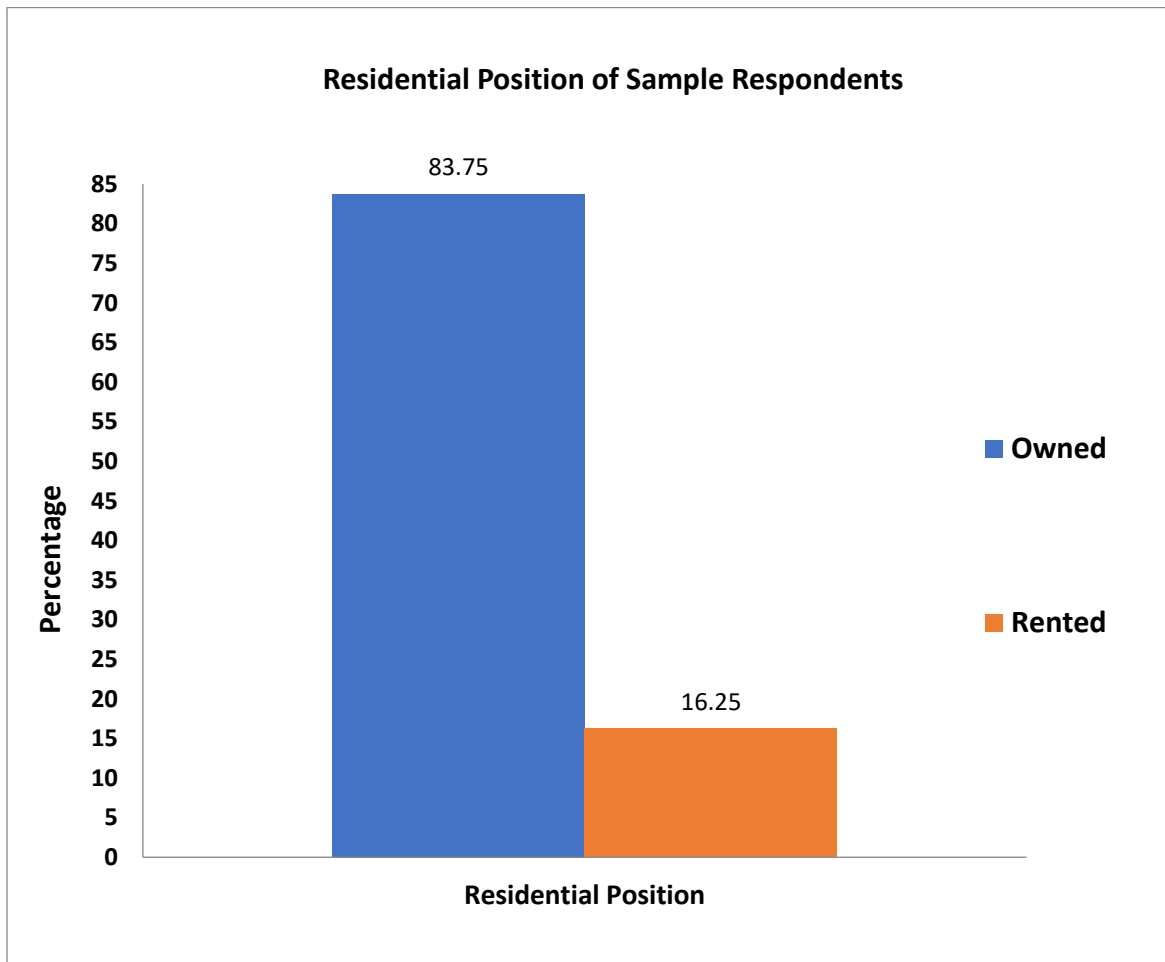


Table 4.9
Housing Type of Sample Respondents

S. No	Housing type	No of Respondents	Percentage
1.	Tiled house	36	45
2.	Concrete house	38	47.5
3.	Hut house	6	7.5
	Total	80	100

Source: Survey

The above table show that 47.5% of the sample respondents live in concrete house, 7.5% of the respondents live in huts, and 45% of the sample respondents re live in tiled house.

Figure 4.9

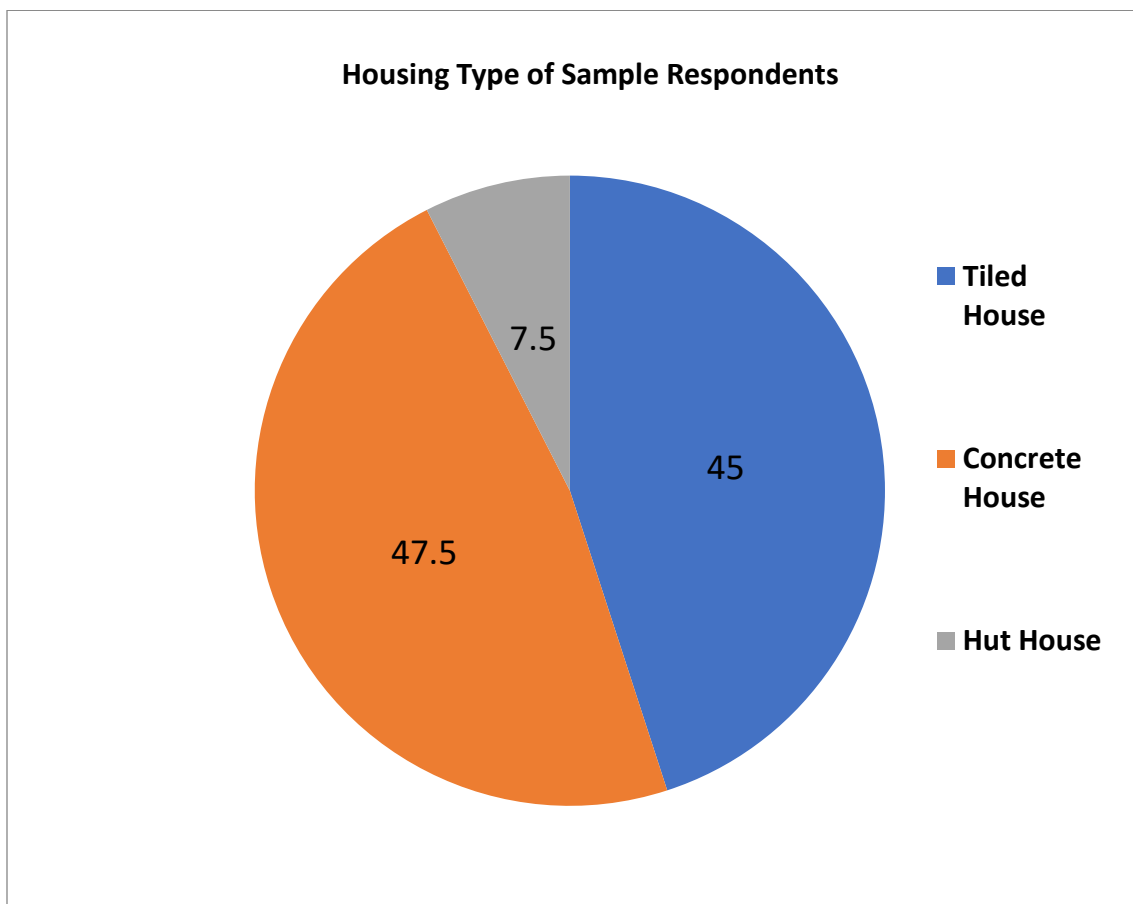


Table 4.10

Basic facilities available to Sample Respondents

S. No	Facilities	No of Respondents	Percentage
1.	Yes	59	73.8
2.	No	21	26.2
	Total	80	100

Source: survey

The above table shows that 73% of the sample respondents have obtained all the basic facilities like electricity, drinking water and toilet in their houses and only 26.2 % of the sample respondents don't have all these facilities. They only have few basic facilities.

Figure 4.10

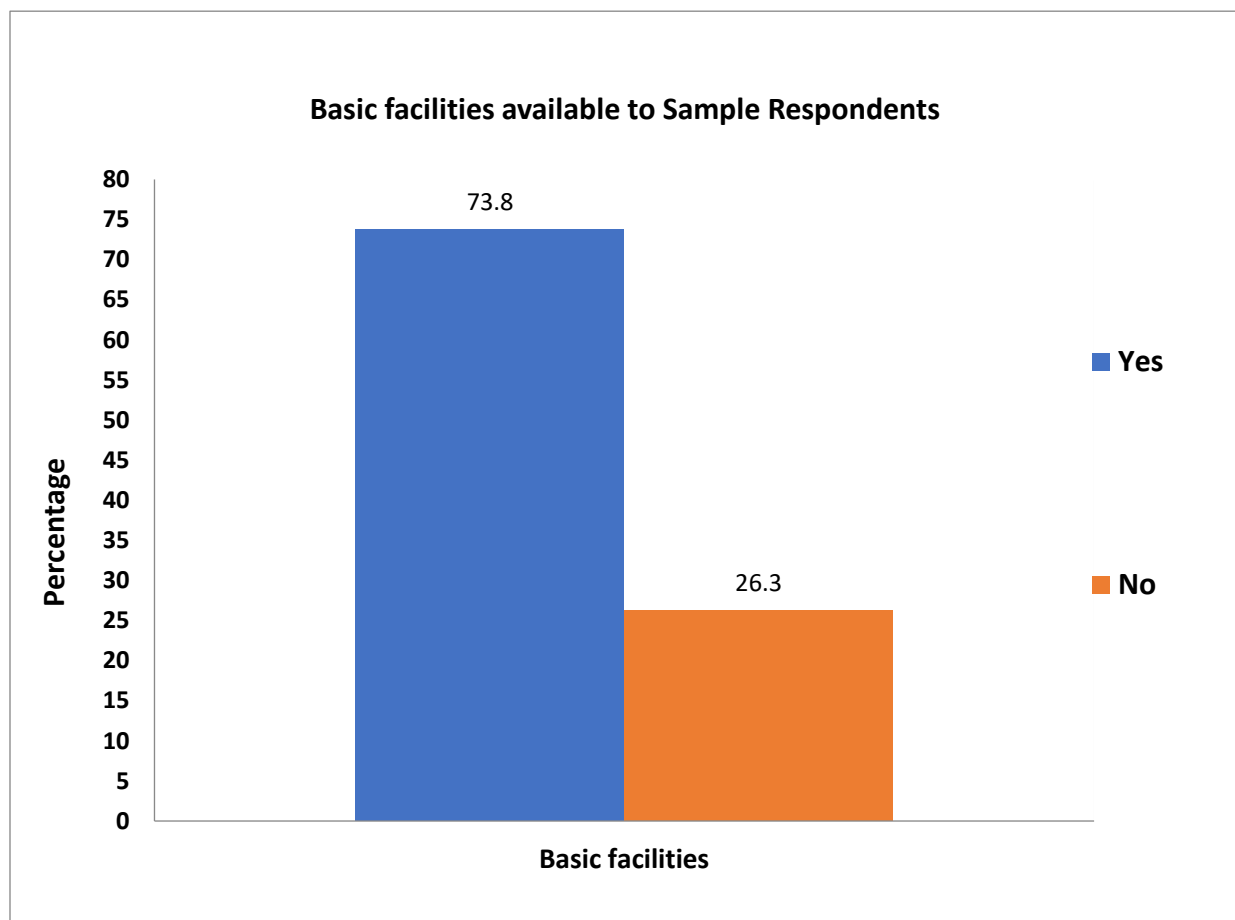


Table 4.11

Luxury Items used by sample Respondents

S. No	Luxury items	No of Respondents	Percentage
1.	Yes	55	68.75
2.	No	25	31.25
	Total	80	100

Source: survey

The above table shows that 68.75% of the respondents possess luxury items like two-wheeler, refrigerator, mixer, grinder, air conditioner, washing machine etc., and 31% of the respondents don't possess all the luxury items. They only have two-wheeler and refrigerator, mixer and grinders.

Figure 4.11

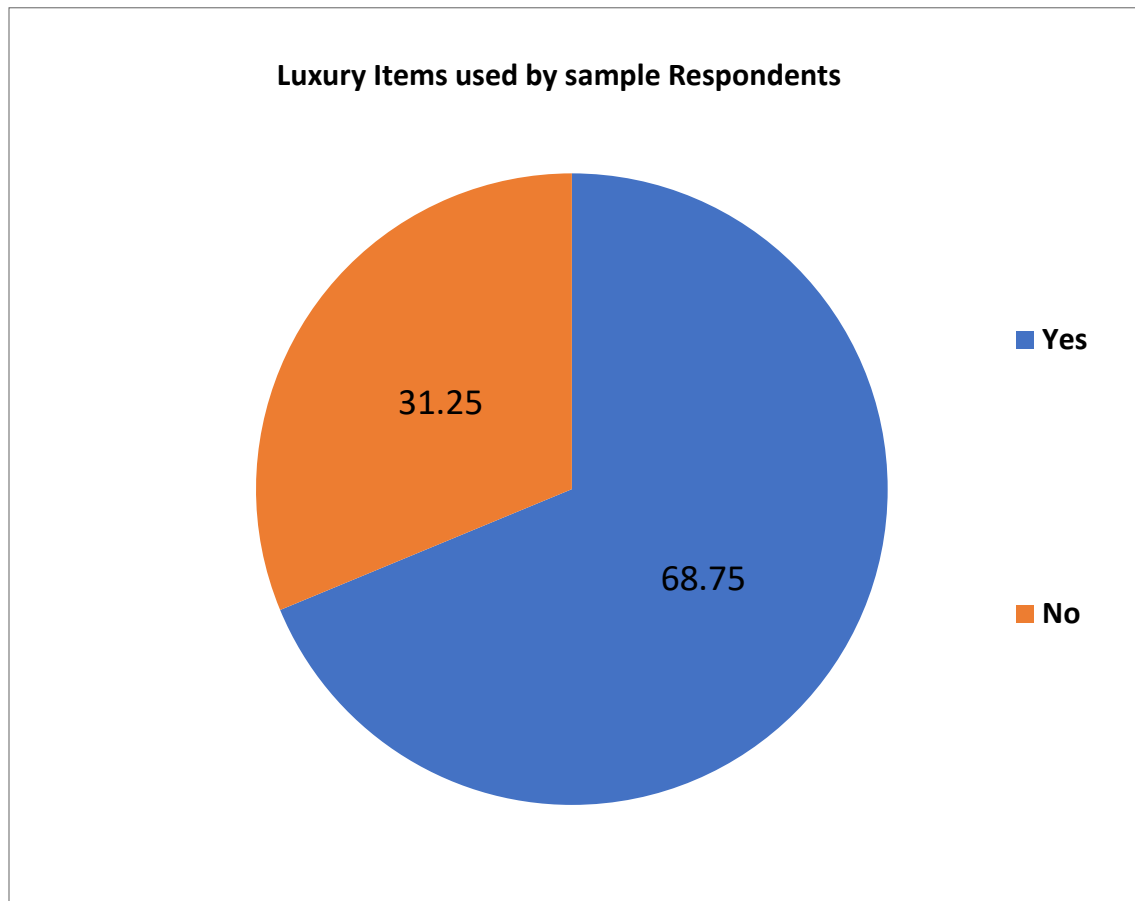


Table 4.12

Livestock Breeding of the sample Respondents

S. No	Live stock	No of Respondents	Percentage
1.	Yes	47	58.75
2.	No	33	41.25
	Total	80	100

Source: survey

It shows that 58.75% of the respondents are breeding not-livestock like goat, hen and cow etc.,and 41.25% of the respondents don't breed any livestock.

Figure 4.12

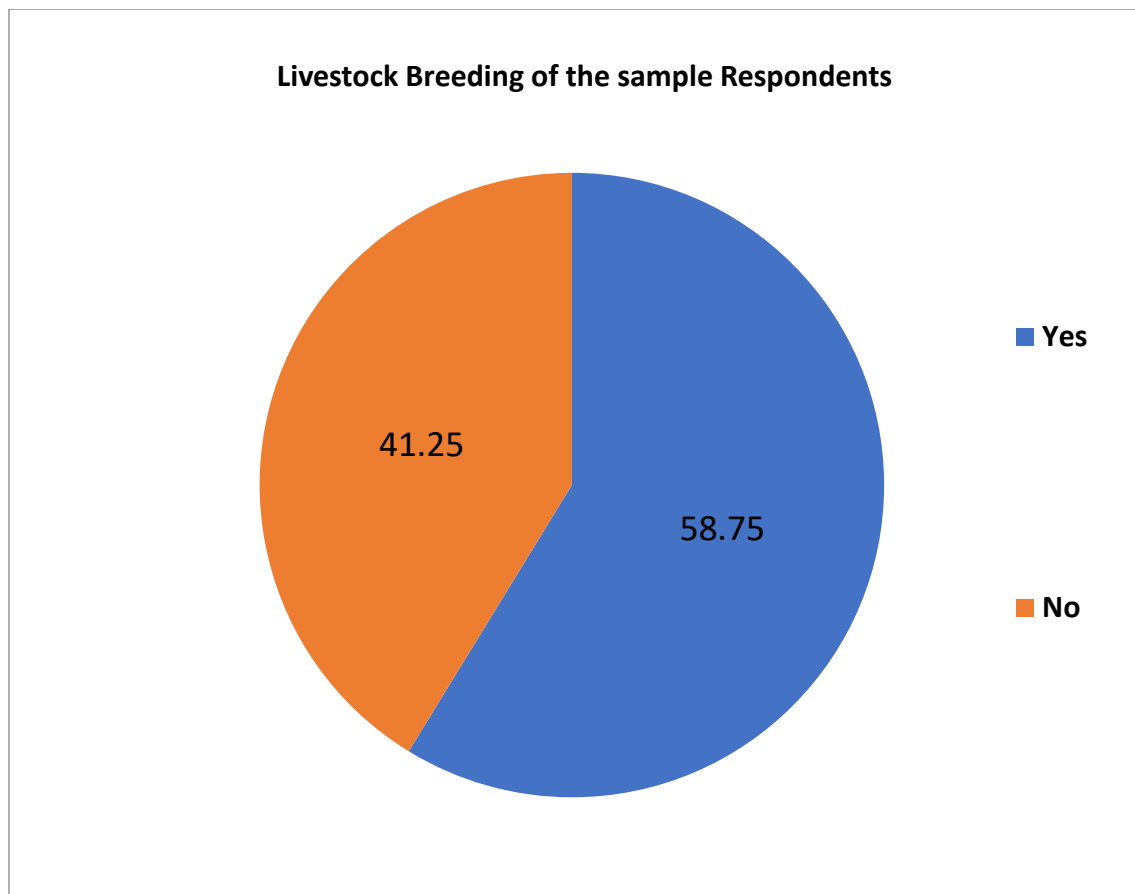


Table.4.13

Land possession of Sample Respondents

S. No	Land	No. of Respondents	Percentage
1.	Yes	45	56.25
2.	No	35	43.75
	Total	80	100

Source: survey

The above table shows that 56.25% of the sample respondents have land, 43.75% of the sample respondents own no land.

Figure 4.13

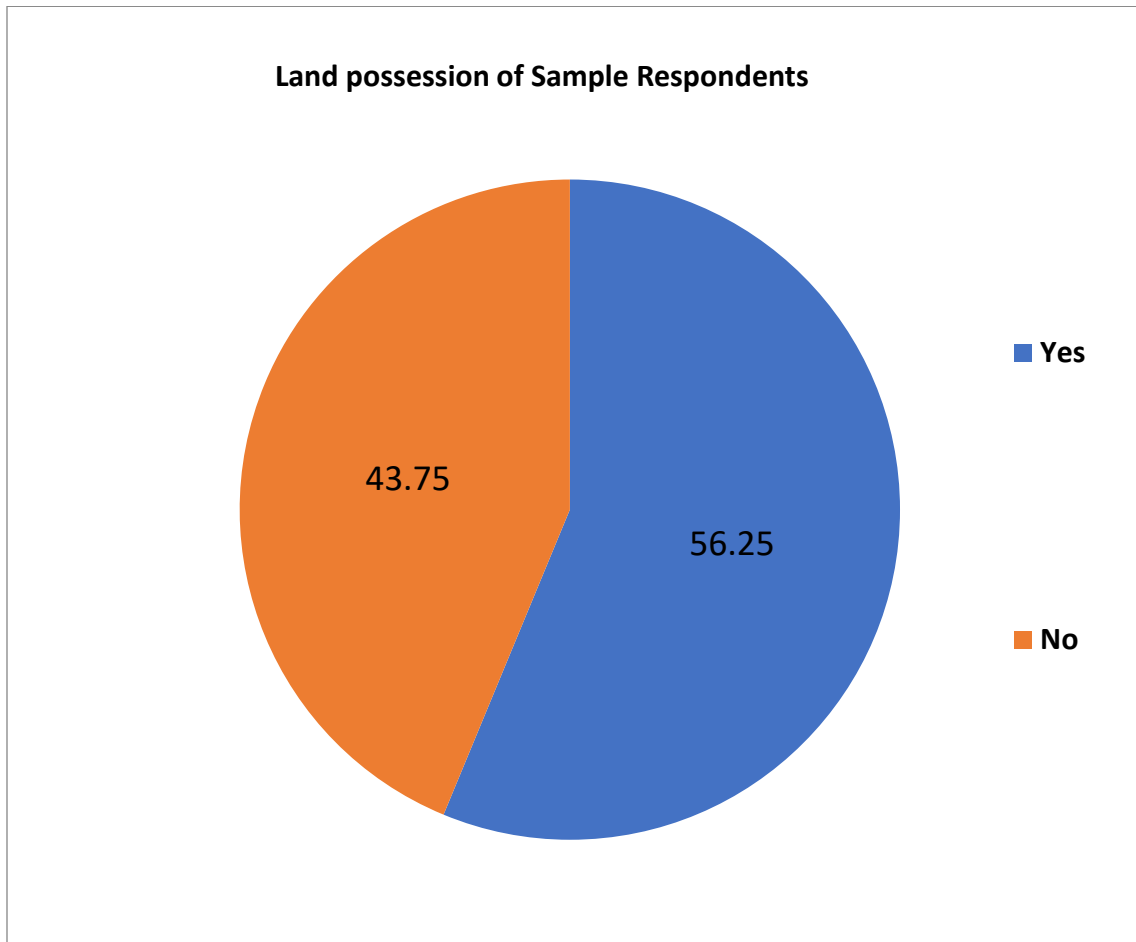


Table 4.14

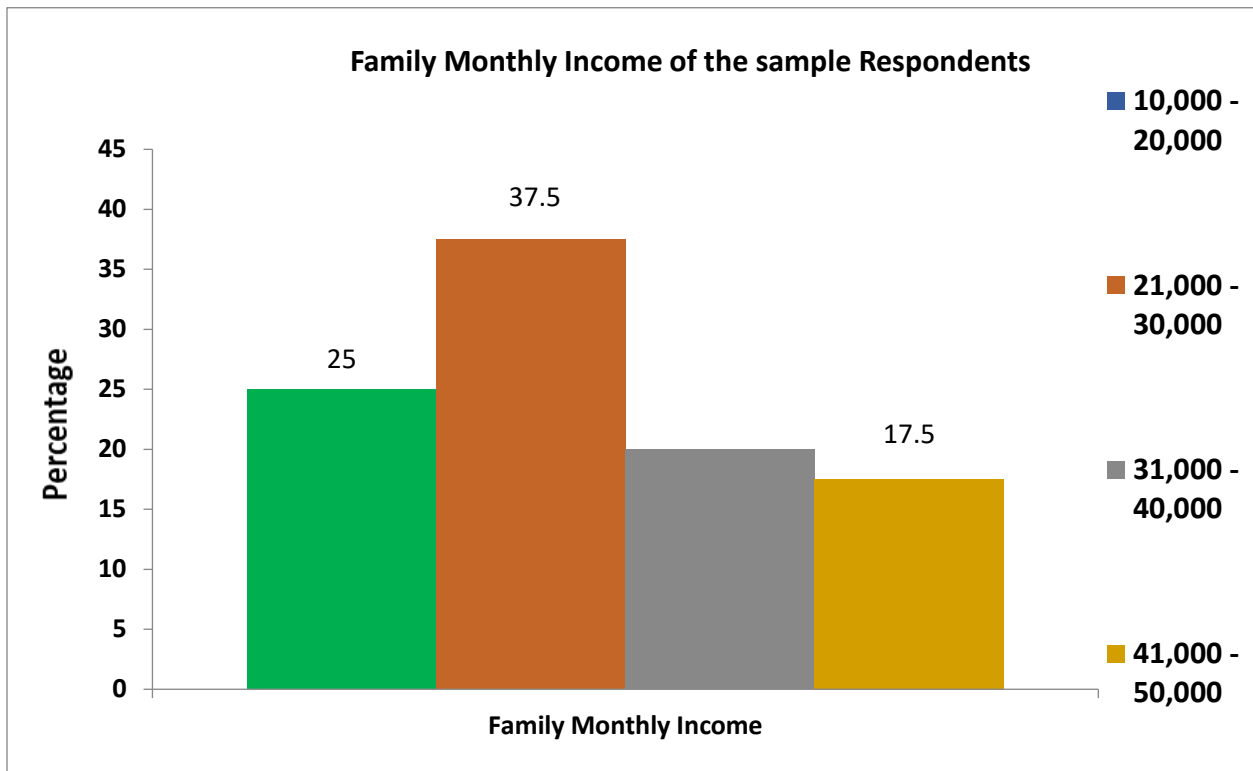
Family Monthly Income of the sample Respondents

S. No	Income (RS)	No. of Respondents	Percentage
1.	10,000-20,000	20	25
2.	21,000-30,000	30	37.5
3.	31,000-40,000	16	20
4.	41,000-50,000	14	17.5
	Total	80	100

Source: Survey

From the above show that 37.5% of the sample respondents get income between Rs.21,000-Rs.30,000. 25% of the respondents receive income in the range of Rs. 10,000 – Rs. 20,000. 20% of the respondents receive income in the range of 31,000-40,000 and 17.5% of respondents receive income between Rs.40,000 -Rs.50,000.

Figure 4.14



For calculating the average monthly income, the researcher has used the statistical tool like simple **Arithmetic mean (AM)**

$$AM = \sum fm / \sum f$$

Where $\sum m$ is the total income and $\sum f$ is the total number of sample respondents

Table 4.14.1
Family Monthly Income of the sample Respondents

S. No	Income (RS)	Mid -Point (m)	Frequency ($\sum f$) No of Respondents	$\sum fm$
1.	10,000-20,000	15000	20	3,00,000
2.	21,000-30,000	25500	30	7,65,000
3.	31,000-40,000	35500	16	5,68,000
4.	41,000-50,000	45500	14	6,37,000
	Total		80	22,70,000

Source: Primary data & Analysis

$$AM = \sum fm / \sum f$$

$$22,70,000 / 80 = 28,375$$

Thus, the average monthly income of the government employees is Rs.28,375

Table 4.15
Monthly Family Expenditure of Sample Respondents

S. No	Family Expenditure (In Rs.)	No of Respondents	Percentage
1.	10,000 -20,000	55	68.75
2.	21,000-30,000	25	31.25
	Total	80	100

Source: survey

From the above table, we can find out that 68.75% of the respondents have the monthly expenditure ranging from Rs.10,000 -Rs. 20,000 and 25% of the respondent's monthly expenditure is between Rs.21,000 -Rs.30,000

Figure 4.15

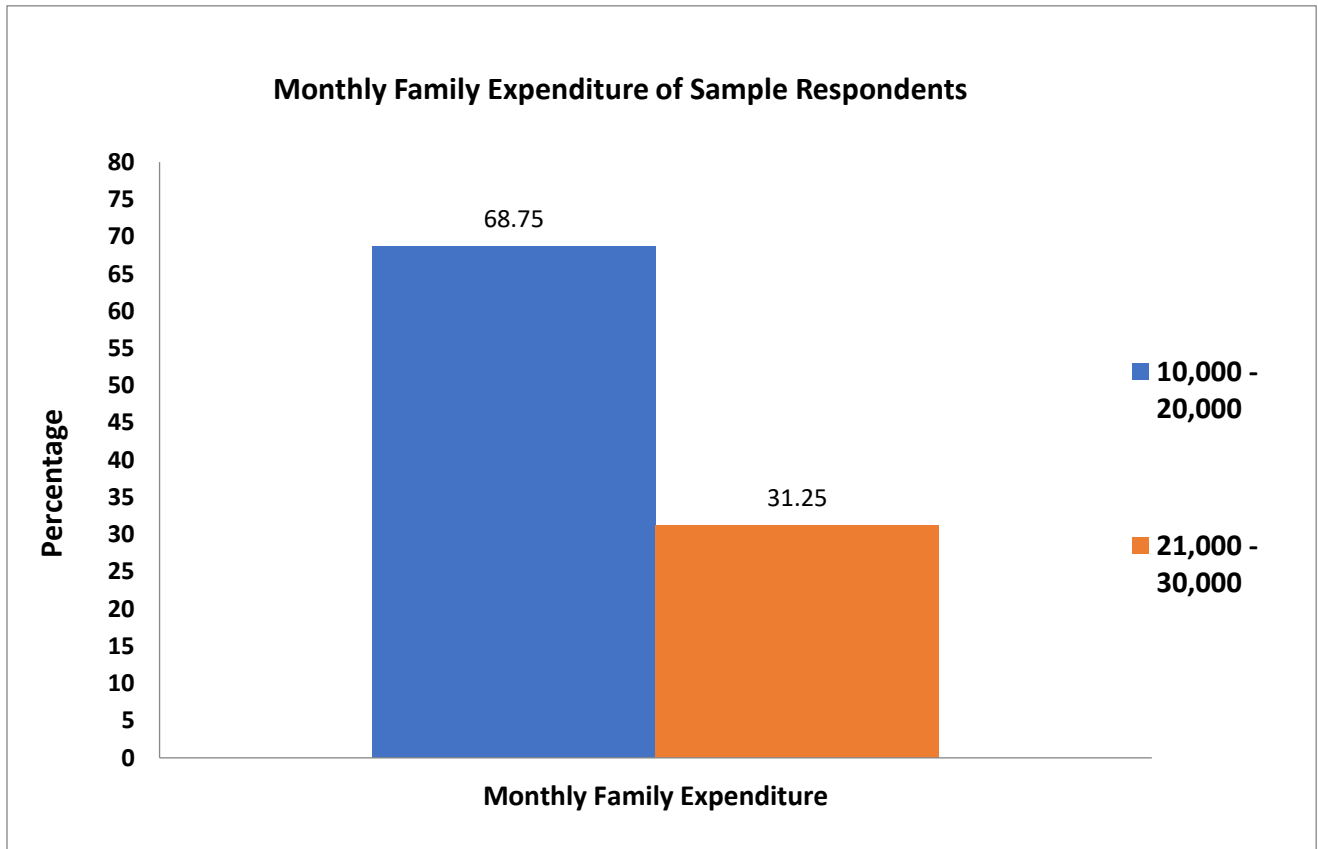


Table 4.16
Saving Habit of the Sample Respondents

S. No	Saving	No. of Respondents	Percentage
1.	Yes	76	95
2.	No	4	5
	Total	80	100

Source: Survey

The above table shows that 95% of the sample respondents have saving habit and only 5% of the sample respondents don't have the habit of saving.

Figure 4.16

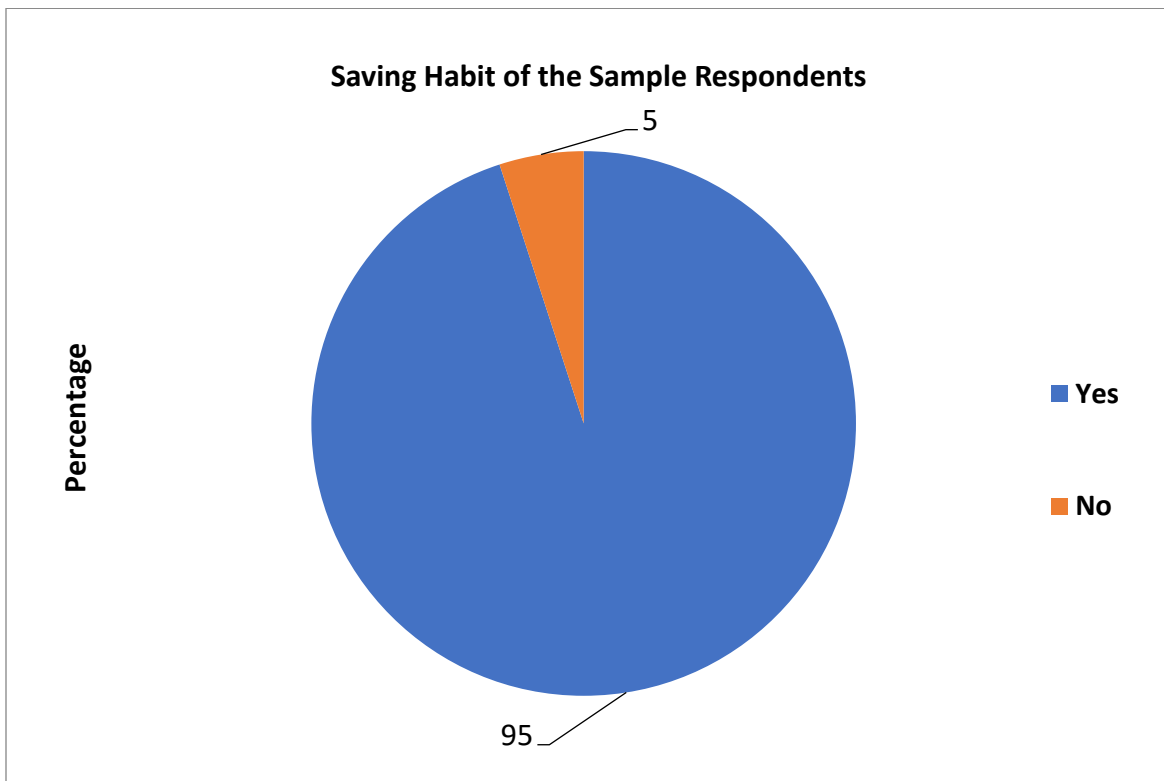


Table 4.17
Mode of Savings of the Respondents

S. No	Saving Mode	No. of Respondents	Percentage
1.	Post Office	24	31.58
2.	Bank	38	50
3.	Others	14	18.42
	Total	76	100

Source: survey

The above table shows that 50% of the respondents save through banks, 31.58% of the respondents save through post offices and 18.42% of the respondents are saving through other mode of savings like chit funds/ gold savings etc.

Figure 4.17

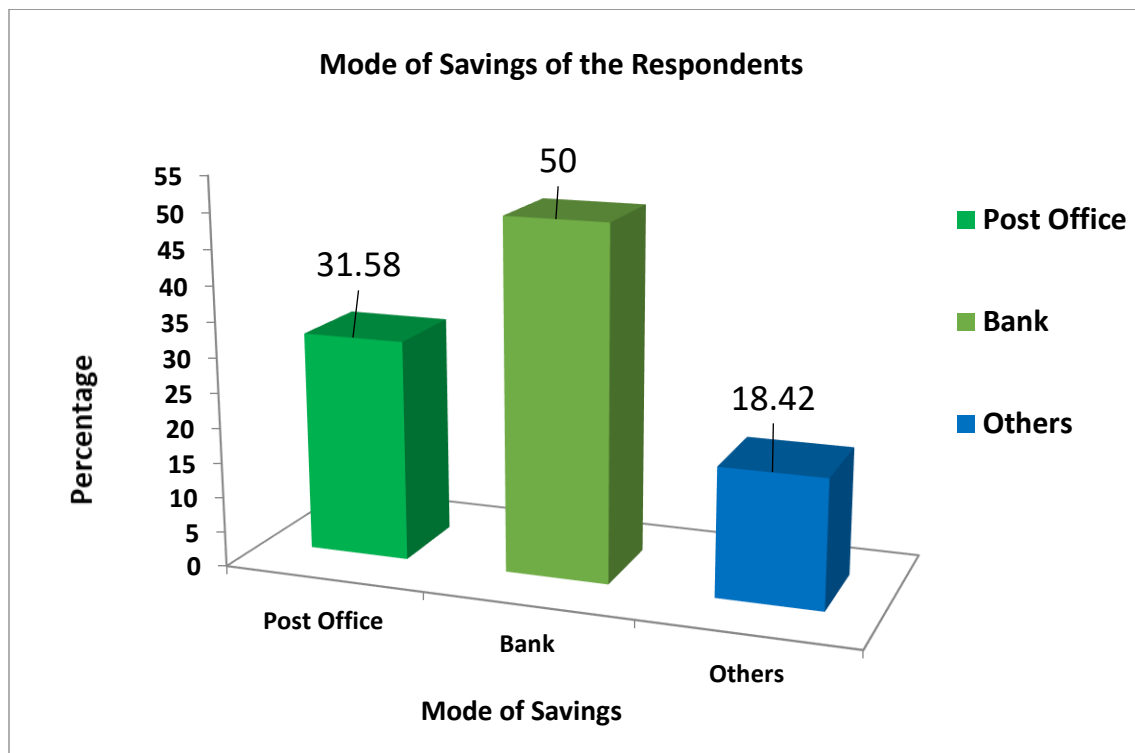


Table 4.18

Willingness for Transferable Government Jobs for children/Relative

S. No	Opinion	No. of Respondents	Percentage
1.	Yes	42	52.5
2.	No	38	47.5
	Total	80	100

Source: Survey

The above table reveals that 52.5 % of the respondents are willing to send their children or relatives to join transferable government jobs and remaining 47.5 % do not wish to send their children and relatives to transferable government jobs.

Figure 4.18

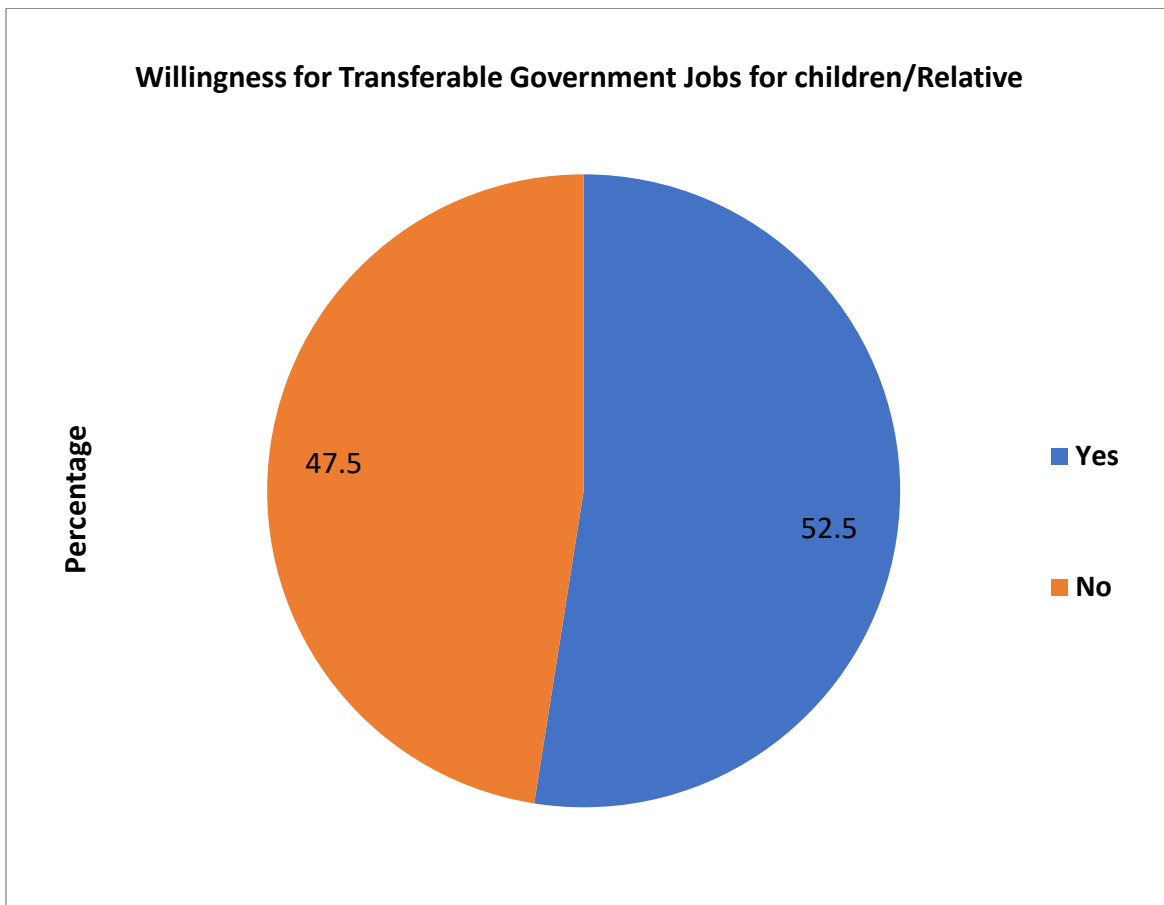


Table 4.19

Type of Government Job

S. No	Type of Government Job	No. of Respondents	Percentage
1.	State	47	58.75
2.	Central	33	41.25
	Total	80	100

Source: Survey

The above table shows that 41.25% of the respondents are in Central government job and 58.75% of the respondents are in state government job.

Figure 4.19

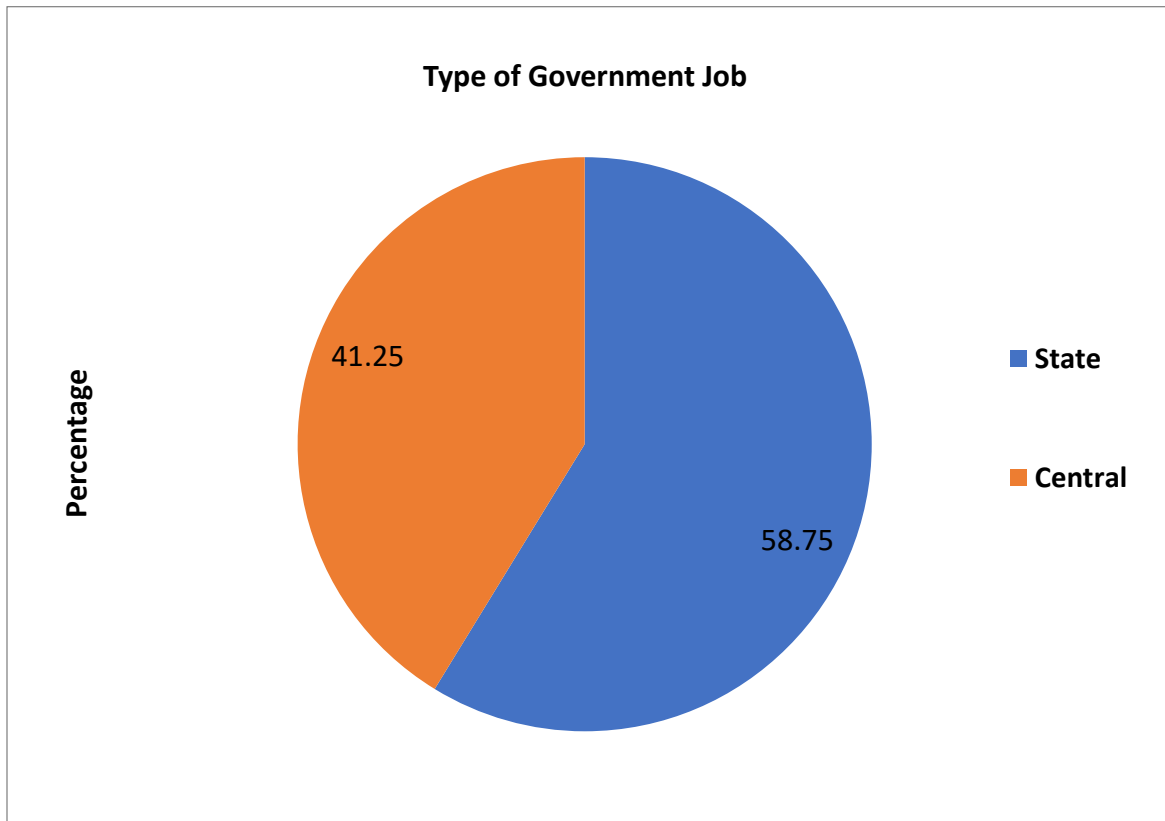


Table 4.20

Wives Working /Not Working

S. No	Opinion	No. of Respondents	Percentage
1.	Yes	35	63.6
2.	No	20	36.4
	Total	55	100

Source: Survey

The above table shows that the wives of 63.6% of the respondents are working and the spouse of 36.5% of the respondents are not working.

Figure 4.20

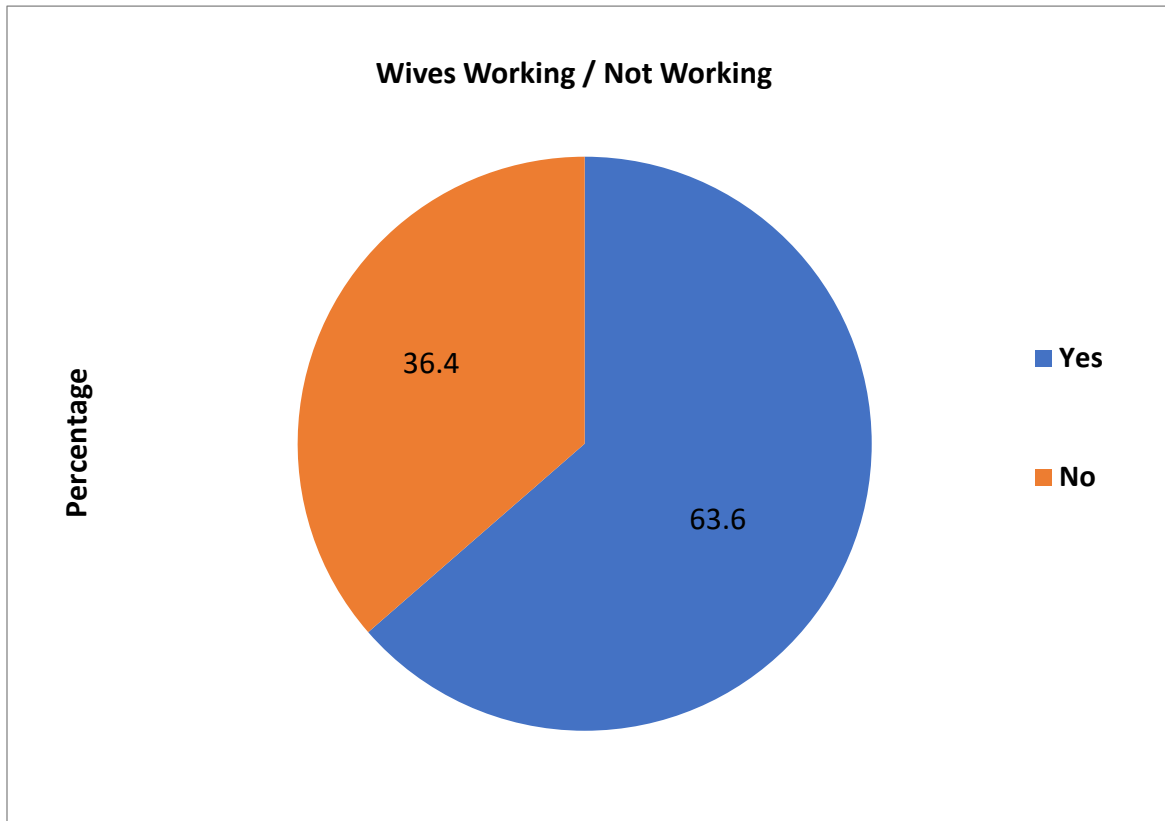


Table 4.21

Reason for Choosing Government Job

S. No	Reason	No. of Respondents	Percentage
1.	Permanent Job	40	50
2.	Parent's Job transferred to Child	15	18.75
3.	Government benefit	25	31.25
	TOTAL	80	100

Source: Survey

The above table shows that 50 % of the respondents have chosen government job because it is a permanent job. 18.75% respondents have joined government job because that job has been transferred by their parent's after their retirement and 31.25% of the respondents have joined government job because of the various benefits they receive from government.

Figure 4.21

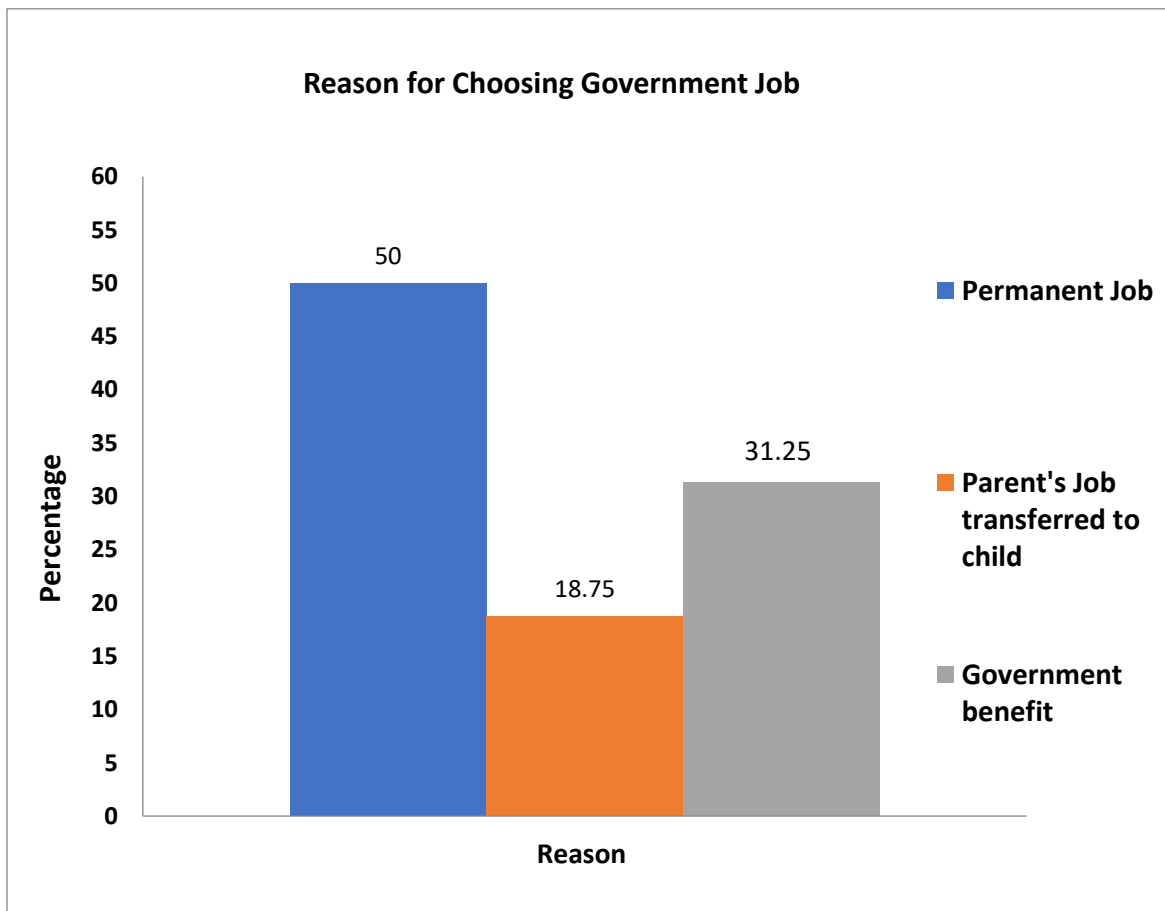


Table 4.22

Job Specifications of the Respondents

S. No	Job Specification	No. of Respondents	Percentage
1.	Army	12	15
2.	Police	13	16.25
3.	BSF/CRPF	3	3.75
4.	Government Driver	15	18.5
5.	Government Teachers	8	10
6.	Other Government Jobs	29	36.50
	TOTAL	80	100

Source: Survey

The above table reveals that 15% respondents are from Army. 16.25% of respondents are in Police, 3.75% respondents are in BSF/CRPF. 18.5% respondents are government drivers, 10% respondents are teachers in government schools and 36.25% respondents are employed in other government jobs.

Figure 4.22

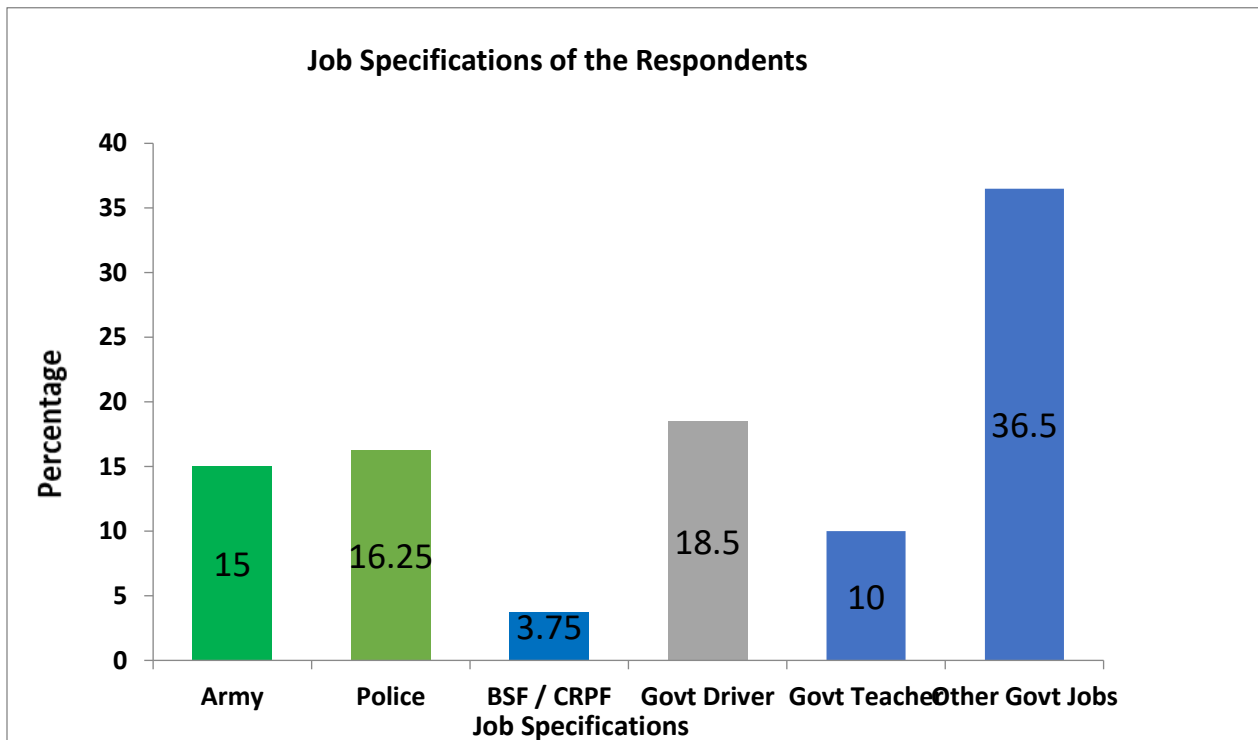


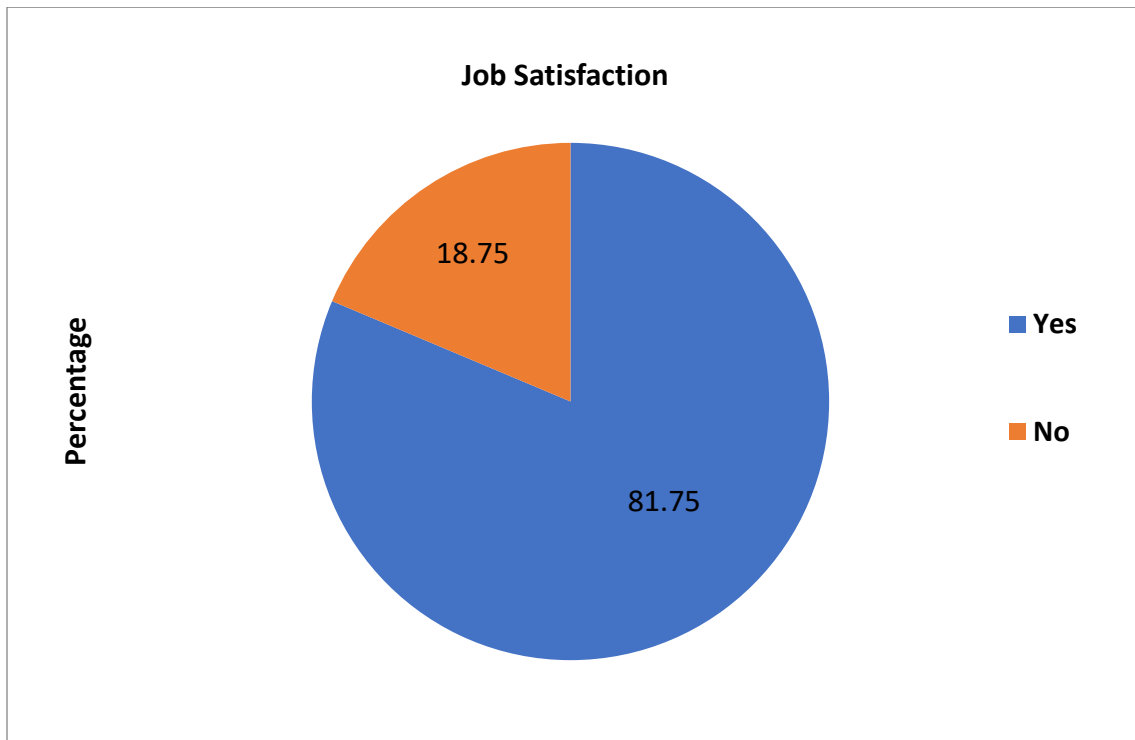
Table 4.23
Job Satisfaction

S. No	Satisfaction	No. of Respondents	Percentage
1.	YES	65	81.25
2.	NO	15	18.75
	TOTAL	80	100

Source: Survey

The above table reveals that 81.25% of respondents are satisfied with their jobs and only 18.75% of respondents are not satisfied by the nature of job. They face practical difficulties in their jobs like not getting transfer to their native place etc.

Figure 4.23



CHAPTER V

FINDINGS ANALYSIS AND SUGGESTION



CHAPTER V

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS

1. The gender of the respondents shows that 69.75% of the respondents are male and 31.25% of the respondents are females.
2. 26.25% of the respondents are in the age group of 40-49 years. 23.75% of the respondents are in the age group of 50-59 years, 20% of the respondents are in the age group of 20-30 years, 15% of the respondents are in the age group of 30-39 years, 11.25% of the respondents are in the age group of the 60-69 years, 3.75% of the respondents are in the age group of above 70 years.
3. 57.5% of the respondents belong to BC category, 20% of them belong to OC, 12.5% of them are MBC and 10% of them are SC.
4. 92.5% of the respondents are Hindus and only 7.5% of the respondents are Christian. This shows that most of them are Hindus in this village.
5. 23.75% of the respondents have completed High school, 18.75% of the respondents are completed Higher Secondary education, 17.5 % of the respondents have completed primary education and 40% of the respondents are graduates.
6. 82.5% of the respondents live in nuclear family and 17.5% of the respondents live in joint type of family.
7. 56.25% of the respondents are having 3-8 members in their family and 43.75% of the respondents are having 1-3 members in their family.
8. 76.25% of the sample respondents live in their own house and 23.75% of the sample respondents live in rental house. Hence, majority of sample respondents have their own house.
9. 47.5% of the sample respondents live in concrete house, 7.5% of the respondents live in huts, and 45% of the sample respondents live in tiled house.
10. 73% of the sample respondents have obtained all the basic facilities like electricity, drinking water and toilet in their houses and only 26.2 % of the sample respondents don't have all these facilities. They only have few basic facilities.

11. 68.75% of the respondents possess luxury items like two-wheeler, refrigerator, mixer, grinder, air conditioner, washing machine etc., and 31% of the respondents don't possess all the luxury items. They only have two-wheeler and refrigerator, mixer and grinders.
12. 58.75% of the respondents are breeding not-livestock like goat, hen and cow etc., and 41.25% of the respondents don't breed any livestock.
13. 56.25% of the sample respondents have land, 43.75% of the sample respondents own no land.
14. 37.5% of the sample respondents get income between Rs.21,000-Rs.30,000. 25% of the respondents receive income in the range of Rs. 10,000 – Rs. 20,000. 20% of the respondents receive income in the range of 31,000-40,000 and 17.5% of respondents receive income between Rs.40,000 -Rs.50,000 and by using the statistical tool of arithmetic mean, the average monthly income of the government employees is calculated to be Rs.28,375
15. 68.75% of the respondents have the monthly expenditure ranging from Rs.10,000 -Rs. 20,000 and 25% of the respondent's monthly expenditure is between Rs.21,000 -Rs.30,000
16. 95% of the sample respondents have saving habit and only 5% of the sample respondents don't have the habit of saving.
17. 50% of the respondents save through banks, 31.58% of the respondents save through post offices and 18.42% of the respondents are saving through other mode of savings like chit funds/ gold savings etc.
18. 52.5 % of the respondents are willing to send their children or relatives to join transferable government jobs and remaining 47.5 % do not wish to send their children and relatives to transferable government jobs.
19. 41.25% of the respondents are in Central government job and 58.75% of the respondents are in state government job.
20. The wives of 63.6% of the respondents are working and the spouse of 36.5% of the respondents are not working.
21. 50 % of the respondents have chosen government job because it is a permanent job. 18.75% respondents have joined government job because that job has been transferred by their parent's after their retirement and 31.25% of the respondents have joined government job because of the various benefits they receive from government.

22. 15% respondents are from Army. 16.25% of respondents are in Police, 3.75% respondents are in BSF/CRPF. 18.5% respondents are government drivers, 10% respondents are teachers in government schools and 36.25% respondents are employed in other government jobs.
23. 81.25% of respondents are satisfied with their jobs and only 18.75% of respondents are not satisfied by the nature of job. They face practical difficulties in their jobs like not getting transfer to their native place etc.

5.2 SUGGESTIONS

The Government is continuously in the efforts of providing the required facilities for Mudivaithanendal village but still there are few suggestions:

1. Children have to travel long distances to seek education as there is only one government school in the village and many children travel up to Thoothukudi town for good Higher Secondary schools. So, a greater number of Higher Secondary schools should be constructed nearer to the village. Also, colleges should be built for higher education.
2. Hospitals with all required facilities should be constructed in the village as in case of emergencies like accidents etc., they have to travel almost one hour to reach a hospital in Thoothukudi town or Government hospital or else they have to travel to the nearby villages like Pudukottai, Sawyerpuram etc. Also, medical shops should be constructed in the village.
3. Retail grocery shops, super markets should be build nearer to the village as it would be beneficial to the village people.
4. Good drinking water facilities should be made available to all the houses in the village. Also, proper drainage facilities should be provided by the government in this village.
5. Toilet and sanitation facilities should be provided to all the houses in the village.
6. In earlier days, this village had high agricultural production. But today due to reasons like lack of monsoon rains and other facilities, many people have migrated to urban areas in search of jobs. So, the government should take necessary measures to promote agricultural development in this village.

7. Small scale and Cottage industries can be promoted in this village in order to improve the rate of employment among women in this village. Women empowerment is highly needed in this village as girls after their basic education get married and don't have the idea of seeking a job or entering into a profession and get an identity of their own. So, the government could take initiative to promote women entrepreneurship in this village by creating awareness among the parents of the girl child.
8. Women folk in this village are not highly educated. Even though the majority of men in this village are government employees and many are in uniform services, in some unexpectable situations like death of husband etc., they face difficulties to run their family as they are not qualified to seek any job. So, the girl child should be motivated to pursue higher education. This will help a greater number of women to seek employment and this will help in improving their standard of living.
9. The pensioners of this village complain that sometimes they receive pension with little delay. So, this should be corrected.
10. Th government bus drivers have the opinion that they need at least 2 days holidays in a week. This would help to maintain their health conditions.

5.3 CONCLUSION

India lives in village. The majority of Indian population lives in villages. Most of the Indian people depend on agriculture. So, agricultural development should be encouraged and also the social entrepreneurship-based development is the solution to develop the rural cluster-based village settlement. It should be supported by the village natural capital of farm lands, water sources, flora and fauna, etc to help and sustain the agricultural economy. Hence the coherent efforts of Union government, state Government organizations, policy makers, stake holders in agriculture and volunteer participation of public is utmost important to promote the village.

ANNEXURE
BIBLIOGRAPHY
QUESTIONNAIRE
PHOTOS



BIBLIOGRAPHY

REFERENCES

1. Arti Fattepuria, Sukeshni Telgote, Hemali Choudhary (2015) Saving and Investment Pattern of Private School Teachers – A Study With Reference To Wardha City, Maharashtra, International Journal of Advance Research in Computer Science and Management Studies, ISSN: 2321-7782, Volume 3, Pp73-78.
2. Behn, Robert D. The Big Questions of Public Management, Public Administration Review, 1995; Vol. 55, No. 4, pp.313-324.
3. Bindu. T (2017), Savings and investment pattern of salaried employees in Palakkad District, Intercontinental Journal of Finance Research review ISSN: 2321-0354 - Online ISSN: 2347-1654 - Print - Impact Factor:4.236, Volume 5, Issue 6, June 2017.
4. Crewson, P.E. Public-Service Motivation: Building Empirical Evidence of Incidence and Effect, Journal of Public Administration Research and Theory, 1997;7 , 4 , 499 – 518 .
5. Deepak Sood, Dr. Navdeep Kaur, A study of saving and investment pattern of salaried class people with special reference to Chandigarh, International Journal of Research in Engineering, IT & Social Sciences, Volume 5, February 2015, ISSN 2250-0588, Pp 1-15.
6. Geethu Gopi, D. Priyanka and R. Preetha, International Journal of Pure and Applied Mathematics, Volume 118 No. 18, 2018, ISSN: 1314-3395, Pp 1347-1362.
7. Georgellis, Y, Lossa, E. & Tabvuma, V. Crowding out intrinsic motivation in the public service. Journal of Public Adminsitration Research Theory, 2011;21 (3), 473-493.
8. Jurkiewicz, C.L., T.K. Massey Jr and R.G. Brown. Motivation in Public and Private Organizations: A Comparative Study, Public Productivity and Management Review, 1998; 21, 3, 230–50.
9. L. Pandiyan, Dr. T. Aranganathan (2012), Savings and Investments Attitude of Salaried Class in Cuddalore District, IOSR Journal of Business and Management (IOSRJBM) ISSN: 2278-487X Volume 1, Issue 1 (May-June 2012), PP 40-49.
10. M. Nallakannu, Dr. V. M. Selvaraj (2018) Saving and Investment Pattern of College Teachers, International Journal of Management Studies, ISSN 2231-2528 Pp 13-18.
11. Mr. P. Arulmurugan, Dr. K. Balanagaguruthan, Ms. Mirudhubashini, A Study on Investment Behavior of Professors Towards Gold with Special Reference to Tamilnadu State- International Journal of Scientific Research, Vol.2 issue 2 Feb.2013.
12. Pattakos, A.N. The Search for Meaning in Government Service , Public Administration Review, 2004; 64 , 1 ,106 – 12.
13. Perry, James L. & Annie Hondeghe . Motivation in Public Management. The Call of Public Service. New York: Oxford University Press. 2008.
14. Srisvata, S.K. (2001). An empirical Study of job satisfaction and work adjustment in public sector personnels. Prestige Journal of Management and Research. 5 (2), 184–189.

15. Varsha Virani, Saving and Investment pattern of school teachers- A study with special reference to Rajkot City, Gujrat, Abhinav National Refereed journal of research in Commerce and Management 2(4) (2012), 2277-1166.
16. Wright, B.E. Role of Work Context in Work Motivation: A Public Sector Application of Goal and Social Cognitive Theories, Journal of Public Administration Research and Theory, 2004; 14, 1, 59 – 78.
17. <https://www.sociologydiscussion.com/village/village-community-in-india-characteristics-and-change-of-indian-villages/2274>)
18. Village -Wikipedia

QUESTIONNAIRE

A STUDY ON MUDIVAITHANENDAL VILLAGE OF THOOTHUKUDI DISTRICT WITH SPECIAL REFERENCE TO GOVERNMENT EMPLOYEES

1. Name :
2. Age :
3. Caste : BC/MBC/SC/OC
4. Religion : Hindu /Christian /Muslim
5. Sex : Male/Female
6. Marital status : Yes/No
7. Education : P/M/SSLC/Hr.Sec/Graduate/Others
8. Number of family members :
9. Type of family : Joint family /Nuclear family
10. Residential Position : Owned house /Rented house /Leased house
11. Housing Type : Hut /Tiles /Concrete /Mud
12. Basic facilities of housing : Electricity /Toilet /Drinking water /Drainage
13. Reason for choosing Government job?
14. Type of Government Job : Central/ State
15. Mention the job :
16. Monthly Income (In Rs) :
17. Monthly Expenditure : (In Rs.)

S. No	Items	Amount (Rs)
1.	Clothing	
2.	Food/wear	
3.	Education	

4.	Medicine	
5.	Transport	
6.	Electricity	
7.	Recreation	
8.	Miscellaneous	

18. Possession of luxury items :

S. No	Items	Yes /No
1.	Ac	
2.	Fridge	
3.	Two wheelers	
4.	Washing machine	
5.	Others (Mention)	

19. Saving Habits : Yes /No

20. Mode of Savings : (Post office/ Bank/ Others) Mention

21. What is your expectation from the government?

22. What about your opinion about your job?

23. Who motivated you to join this job?

24. Who guided you for government exams?

25. How did you prepare for government exams? Mention mode.

26. Do you own any land : Yes/No

27. If yes how much?

28. Live stock details : Goat /Cow /Hens/ Others

29. House wives : Working /Not working

30. Basic facilities of the study area. (Temples/ Churches/ PDS/ Post Office/ Banks/ Roads/
Drinking water / Others

31. Any difficulties in job? Mention the kind of difficulties.

32. Will you suggest government jobs for your children/ relatives? Yes/ No

33. If yes, give reason:

34. Suggestions (If any)







**PROBLEMS AND PROSPECTS OF URBAN WORKING WOMEN IN
THOOTHUKUDI CITY**

Project Report Submitted to the

DEPARTMENT OF ECONOMICS

ST. MARY'S COLLEGE (AUTONOMOUS) THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Tirunelveli

In partial fulfillment for the award of the Degree of

Bachelor of Arts in Economics

By

The Students of III B. A Economics

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DEPARTMENT OF ECONOMICS

St. Mary's college (Autonomous) Thoothukudi
(Re-accredited with "A +" Grade by NAAC)

May 2022

CERTIFICATE

This is to certify that the project report entitled "**PROBLEMS AND PROSPECTS OF URBAN WORKING WOMEN IN THOOTHUKUDI CITY**" is submitted to St. Mary's College (Autonomous) Thoothukudi, in partial fulfillment for the award of the degree of Bachelor of Arts in Economics and is a record of work done during the year 2021-2022 by the following students of III B.A Economics.

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CHAPTER I

INTRODUCTION



PROBLEMS AND PROSPECTS OF URBAN WORKING WOMEN IN THOOTHUKUDI CITY

CHAPTER I INTRODUCTION

1.1 INTRODUCTION

The life of women has been subject to considerable changes from the ancient to medieval and from medieval to the present times. In modern times Women are far more independent and are aware of their rights and duties. But, it is still confined to the urban areas only. In the rural areas a majority of women remain unaware of their rights and duties, so the empowerment of women in India is highly unbalanced and with huge gaps. Though the constitution of India has given right of equality, dignity, and freedom from discrimination to the women and she is given the right to get good education, work like men, enjoy high social status and equality in the society, but how far it has achieved in reality? The woman in India is continuously facing stiff challenges and social resistance even in the 21st century. No one can deny that Indian society is still patriarchal in nature, and men are still considered the sole “bread-winner of the family”. In this paper an attempt is made to find out the problems faced by urban working women in India. The main focus is confined to the middle- and lower-class working women as they are the great sufferers. Indian women though are putting her complete efforts to be like men, independent, educated, self-earning, joining hands with her partner everywhere but still she is a woman, a house maker, a cook and nothing else. All men now wish to have a working wife to share his responsibilities but he never wishes to share the responsibilities of his wife. Ultimately it is the women’s duty to take care of the entire family despite she is working like men. Hence, working women who constitute more than half of the world’s work force are facing wide problems. The emergence of middle-class women as working women is a recent phenomenon. The problems of working women are multidimensional and they differ from person to person. The women living in joint, nuclear, modern and orthodox families suffer from different problems. Her responsibilities and challenges have raised and toughened her life. Though she is multi-tasking, struggling between career, managing family, husband, house, society, maintaining personal health, dreams and desires, balancing between so many duties and challenges, a woman faces abundant troubles every day. In a nutshell working women can only work if she is strong enough to face all the challenges and without attending the useless talks of the people around.

STATUS OF WOMEN IN INDIA

In India, though rigid hierarchal structures existed and still exist, the role of women has been changing over the last century. Tremendous socio-economic and cultural changes have occurred mainly because of the spread of education. The economic participation of women in various productive activities is not a new phenomenon.

Rural and poor women have been engaged in outside labour from time immemorial. However, women of the upper and middle strata are not generally allowed to take part in economic activities outside the home; women were restricted to the roles of reproduction and home making only.

Yet poor women in rural areas have contributed significantly in the fields of agriculture and allied activities. But their contribution has not been recognized and accounted for in the GNP of the country. In this regard Bennholdt and Thomson (1988) write: "women do 2/3rd of the world's work; In exchange they receive 10 per cent of the world's income and own a mere one per cent of the world's means of production".

Historical records show that the position of women is culture specific in that it varies from society to society and from time to time, to quote Kumar (1990). In Europe, the percentage of women in the official paid labour force is above 40 per cent, while in Arab countries it is below 8 per cent.

World-wide variation reflects, in part, the level of a country's economic development. Dreze and Sen (1996) have pointed out that persistence of gender inequality and female depreciation are among India's most serious social failures. In urban areas, it is assumed that the cost of sending daughters for higher education is higher than for sons because for the daughter with educational expenditure marriage expenditure gets added.

Thus, there is a trade-off that is sons are sent for higher education and daughters are married off. The Indian society is yet to accept the fact that higher education for girls improves their productivity in their homes, reduces fertility, improves family health and nutrition and promotes a higher quality of education of children.

The contribution of women in general and even at home is yet to be recognized and accounted for. Monbubut Hag, principal author of UN development report 1995 says, "There is an unwitting conspiracy on a global scale to undervalue women's work and contribution to the society".

The sex ratio in India was almost normal during the phase of the years of independence, but thereafter it started showing gradual signs of decrease. The major cause of the decrease of the

female birth ratio in India is considered to be the violent treatments meted out to the girl child at the time of the birth.

It is also a matter of great concern that the sex ratio in the age group (0-6) years continues to widen since 1961 and stands at 914 to 1000 males in 2011. According to census 2011, there are 586.46 million females as compared to 623.72 million males giving a ratio of 940 females to 1000 males.

Trends of sex ratio in India during 1911-2011 are given in Table – 1.1.

TABLE – 1.1
TRENDS OF SEX RATIO IN INDIA

Year	Population (in millions)	Sex ratio (female per 1000 males)
1911	252.1	972
1921	251.3	964
1931	279.0	955
1941	318.7	950
1951	361.1	945
1961	439.2	946
1971	548.2	941
1981	683.3	930
1991	846.3	927
2001	1027.0	933
2011	1210.2	940

Source: Census reports

Women who number 586.5 million according to 2011 Census represented 48.5 percent of country's population of 1210.2 million. The sex ratio is 940 women per 1000 men as per 2011 Census. It shows the misuse of the prenatal diagnostic technique to do away with a female foetus. The declining sex ratio in India could reflect the son preference in the country.

Educational status of women

Education is vital for producing brain bestowed knowledge to give innovative ideas. Education has been constructed as a tool for empowerment of women. It has two aspects namely individual and social. From the point of view of the individual aspects, it helps man to make a deliberate and conscious effort to live comfortably and happily in his physical and social environment.

The social aspect is concerned with an appropriate social environment to develop physically, mentally and emotionally and to full fill their social obligations and has paid attention to the basic issues of women's equality. It is a well-established fact that educated women contribute towards demographic improvement by reducing fertility, by influencing the age of marriage, improvement in child health care and nutrition, improving preschool abilities of children and improvement of the economic status of the family by participating in income earning activities and thereby increasing household earnings¹.

It is land mark of women empowerment because it enables them to respond to opportunities, to challenge their traditional roles and to change their lives. It is understood as an on-going process of learning and empowerment which transcends mere literacy. Women education is particularly important to bring societal transformation, including small family, higher education and better healthcare for children².

Education is an important indicator of women's empowerment; it is closely linked with their status. Education has become necessary for women not only for marriage but also for economic independence. Even though women are the majority of the students and large number of women is employed in education, not many women make careers or get top positions in the field of education or research³.

Education as means of empowerment of women can bring about a positive attitudinal change. It is therefore, crucial for the socio-economic and political progress of India. The Constitution of India empowers the state to adopt affirmative measures for prompting ways and means to empower women. Education significantly makes difference in the lives of women.

Educational development among socially and economically weaker section, such as scheduled castes has been measured an imperative responsibility under the constitution. Articles 46 states that, the slat shall encourage with special essential the education and economic interest of the weaker section of the population and in particular of scheduled caste and shall protect them from social injustice and all forms of exploitation. Trends in Literacy rates are given in Table – 1.2.

¹ Ravikumar, S. (2006), Indian women, Jaipur: Mangal deep publications

² Abdul Kalam, A. P. J., & Sivathanu Pillai, (2004). Envisioning an empowered nation. New Delhi: Tata Mc Graw hill publishing

³ Usha Sharma. (2003). Women in South Asia employment empowerment and human development. Delhi: Authors press

TABLE – 1.2
LITERACY RATE IN INDIA

Year	Male	Female	Male-Female gap in literacy rate
1951	27.16	8.86	18.30
1961	40.4	15.35	25.05
1971	45.96	21.7	23.98
1981	56.38	29.76	26.62
1991	64.13	39.29	24.84
2001	75.26	53.67	21.59
2011	82.14	65.46	16.68

Source: Census reports

According to the Census of India 2011, female literacy rate is 65.46 percent, while literacy rate is 82.14 percent in the case of males. In 1951, the literacy rate of women was only 8.86 percent. By 2011 Census, it had raised manifold and went up to 65.46 percent. The gender gap between male and female literacy rate should be narrowed urgently.

Provision of employment is the basis of economic status. Though women work continuously throughout their lives, women who are in paid work are only 30.44 percent of the female population in 1991. The percentage share of men in total workforce was to the tune of 64.9 percent while it was 35.1 percent for women. Out of them, women who work in rural areas were 38.90 percent, while in urban areas they were only 18.7 percent.

During the same period, 60 percent of women were working as agricultural labourers, 35.1 percent as main workers and as high as 86.9 percent were marginal workers. All these statistics clearly show that the majority of women are finding their livelihood in unorganised sectors. Moreover, the majority of them are either agricultural labour or marginal workers. Thus, they find no guarantee for their jobs and income and have been marginalised in the society.

Education increases the economic, social and political opportunities available to women. It leads to direct economic benefits in the form of higher lifetime earnings for women. The society and community also benefit from the higher productivity of its labour force. Workforce participation rate in India is given in Table – 1.3.

TABLE – 1.3
DISTRIBUTION OF THE POPULATION BY WORKFORCE IN INDIA
(Percentage to total population)

Year	Total/ Rural/ Urban	Persons	Males	Females
1971	Total	33.08	52.61	12.11
	Rural	34.03	53.62	13.42
	Urban	29.34	48.82	6.68
1981	Total	36.70	52.62	19.67
	Rural	38.79	53.77	23.06
	Urban	29.99	49.06	8.31
1991	Total	37.50	51.61	22.27
	Rural	40.09	52.58	26.79
	Urban	30.16	48.92	9.19
2001	Total	39.10	51.68	25.63
	Rural	41.75	52.11	30.79
	Urban	32.25	50.60	11.88
2011	Total	39.8	53.3	25.5
	Rural	41.8	53.0	30.0
	Urban	35.3	53.8	15.4

Source: Office of the Registrar General, India.

It is evident from the table that in 2001, only about 25.63 percent of the total female population is working, while around 51.68 percent of the total male population is working. In the case of non-workers, female accounts for 74.3 percent of the total female population, while male accounts for only about 48 percent of the total male population in 2001.

In the case of 2011 census, about 25.5 percent of the total female population is working, while around 53.3 percent of the total male population is working. This shows the lower work participation of the women compared to male.

Status of women can be broadly defined as the degree of socio-economic equality and freedom enjoyed by women. Economic, social and cultural factors interplay for reinforcing the gender differences in ownership, control and access to land through inheritance, marriage or informal networks. Women's economic status in the household, depends on three levels of influence, viz., women acquired economic and social power, the socio-economic status of their households and the level of support and opportunities in the community.

Women's economic well-being is usually enhanced by women acquiring independent sources of income that begets increased self-esteem and improved conditions of their households and the overall level of development in their communities.

Women have been playing vital roles in households since ages. Now women are also recognized for their value in the workplace and are engaged in wide range of activities of work in addition to their routine domestic work. Building a society where women can breathe freely without fear of oppression, exploitation, and discrimination is the need of the hour, to ensure a better future for the next generation.

Thus, educational, economic and social changes have changed women's status, their roles and way of life. This role is very significant, as far as the art of maintaining a stable family life and thereby a stable society is concerned.

Health status of women in India

Health status is one of the crucial elements in the assessment of quality of life. Women health status is determined by many socio-economic factors, and it is one of the main determinants of health. Women health status affects their proportion in the population, working hours, income, and their overall contribution in the work place⁴.

Enjoyment of high standard of health is one of the fundamental rights of every human being. Improvement in health translates to substantial gains in economic performance and overall wellbeing of the women. To utilize the health resources in a better manner ensuring development of all family members and subsequently a better quality of family life.

Women's health is another important issue under Human Resource Development and also highest prioritized area in family welfare programs. India has 16 percent of the world's population, but only has 2.4 percent of its land, resulting in great pressures on its natural resources.

Over 70 percent of India's population currently derives their livelihood from land resources, which includes 84 percent of the economically active women. India is one of the few countries where males significantly outnumber females, and this imbalance has increased over time. India's maternal mortality rates in rural areas are among the world's highest. From a global perspective, Indian accounts for 19 percent of all life's births and 27 percent of all maternal deaths⁵.

⁴ Suguna, B., & Sandhya Rani, (2008), Health status of women welfare and empowerment in India (pp. 110-123), New Delhi: New century publication.

⁵ Das Gupta, Jashodhara (2006), "India: Including Women's Voices When Crafting Maternal Health Policies", Arrows for Change, 12 (2)

Among many Indian families, the largest share of food is usually given to the bread earner, the next to boys, to the old or sick and the last, to young girls and women in the household.⁶ It is customary in many households across the country that the women should eat last and eat the leftovers after the men folk have had their food.⁷ Girls are often neglected in matters of feeding and health care. Anaemia is a major health problem among India women. A recent population-based survey of pregnant had severe anaemia.

An analysis of the data from the referral hospital for the area revealed that severe anaemia contributed, directly or indirectly, to 35 percent of all in-hospital maternal. A women's nutrition and health status in adolescence, per-pregnancy and during pregnancy, childbirth and thereafter, as well as of prenatal and neonatal mortality and low birth weight, poor nutrition and health also levels of anaemia.⁸

Women in India, and especially those in rural areas, could not voice their concern over their reproductive, sexual and gynaecological health needs. Even something as obvious as menstruation is grossly neglected and this has serious consequences because many diseases in our country relate to blood loss, tuberculosis, malaria, kala-azar, hookworm and hence makes anaemia an extremely important concern for women's health which currently receives little attention⁹. Health indicators in India in the year 2011, shows in the table 1.4.

⁶ Nagla, Madhu (1999), *Sociology of Medical Profession*, New Delhi: Rawat Publication.

⁷ Dube L., on the construction of gender: Hindu girls in patrilineal India. In Karuna Channa (ed.) *Socialisation, Education and Women: Explorations in Gender Identity*. New Delhi: Orient Longman 166-192 (1988)

⁸ Srikontia, S.G. (1989), "Pattern of Growth and Development of Indian girls and Body Size of Adult Indian Women", in Gopalan and Suminder Kaur (eds.), *Women and Nutrition in Indian*, Nutrition Foundation of India, New Delhi.

⁹ Mukhopadhyay, Swapana (1998), *Women's Health Public Policy and Community Action*, New Delhi: Manohar.

TABLE – 1.4
HEALTH INDICATORS IN INDIA IN 2011

Health Indicators	India (per thousand)
Crude Birth Rate	20.97 birth/10,000 population
Crude Death Rate	7.48
Total Fertility Rate	2.62 Children born/women
Maternal mortality Rate	212
Infant Mortality Rate	53
Child Mortality Rate	2.54
Life Expectancy at Birth	66.71 Years

Source: Economic Survey: 2011

It is obvious from the table that, health indicators in India in the year 2011, shows crude birth rate at 20.97 per thousand, crude death rate 7.48 per thousand, total fertility rate 2.62 per thousand, maternal mortality rate 212 per thousand, infant mortality rate 53 per thousand and child materiality rate 2.54 per thousand respectively. Malnutrition among women is further exacerbated or compounded by heavy work demands, nutritional needs, eventually culminating into increased susceptibility to illness and consequent higher mortality¹⁰.

Nutritional status

In developing countries, where incomes are generally low, absolute poverty is reflected mainly in the inadequacy of food intake and malnourishment on a mass scale¹¹. Employment may upsurge women's status and power, and may support a woman's first choice to use her incomes on health and nutrition.

Education is one of the most important resources that enable women to provide appropriate care for their children, which is an important determinant of children's growth and development¹². Social neglect of women and girls are overlooked in most of the health programme.

¹⁰ Khan, M.E. (1996), "Involving Men in Safe Motherhood", Journal of Family Welfare, 43(2) June

¹¹ V.N. Dandekar and Nailakanth Rath (1971). "Poverty in India", Indian School of Political Economy, Bombay, p.29

¹² Engle, P.L., and P. Menon, 1996. Urbanization and care giving: Evidence from south and eastern Africa. San Luis, California: Department of Psychology and Human Development, California Polytechnic, Stat. University. pp 4-24.

The main nutritional problems are macro nutrient deficiency, iron deficiency for delayed growth and nutrition, magnified obstetric and reduced work capacity. Under nutrition persisting through child hood may have significant effect on cognitive development, school achievements and later health¹³.

Women's health and nutritional status is inextricably bound with social, cultural, and economic factors that influence all aspects of their lives, and it has consequences not only for the women themselves but also for the well-being of their children, the functioning of households and the distribution of resources¹⁴. Conversely, malnutrition makes people all the more vulnerable to disease and premature death¹⁵. It is a major contributor to the total global disease burden¹⁶.

Inadequate food is not the only cause of malnutrition in public health terms. There are other factors which have direct bearing on the nutritional profile which include purchasing power, educational level, health care etc.¹⁷ Poverty may be considered as a central cause of under nutrition¹⁸. Women of low socioeconomic group had poor growth status. Seventy five percent of the women suffer from protein energy malnutrition¹⁹. Poor nutritional intake of women is often correlated with poor economic status²⁰.

¹³ Uma Iyer, Kavita Sharma, Shonima Venugopal, & Shruti Shah, (2008), Adolescent nutrition women welfare and empowerment in India (pp.110-123), New Delhi: New century publication.

¹⁴ World Bank group, 1996, improving women's health in India, Report, 14-41.

¹⁵ ICMR, 2005. Resource material, Preconference workshop on epidemiological tools in assessment of nutritional status. Indian Council of Medical Research, NIN, Hyderabad. 1-18.

¹⁶ World development indicators 2008, The World Bank, Washington, DC.4-34

¹⁷ Deshpande, S. S. Mishra, A. and Mishra, M. 2001, Profile of expenditure pattern on food and non-food items for villages of Bhopal district in Madhya Pradesh, Indian Journal of Nutrition and Dietetics, 38: 45-58.

¹⁸ World Bank Report, 2008, World development indicators 2008, The World Bank, Washington, DC.4-34.

¹⁹ Kotwal, N. Gupta, N. Manhas, S. 2008, Impact of work and environment on women living in urban slums of Jammu city, Study Home Community Science, 2, 2:93-97.

²⁰ Sidramshettar, S. C. 2004. Health status of women in Karnataka: Problems and future needs. Journal of Human Ecology, 50, 2:48-54.

Nutritional status was also found to be positively related with education of respondent, education of husband, household standard of living²¹. A better occupational pattern of respondent's husbands also resulted in a better nutritional status of the women²². Women need the nutrition at all stages of the life cycle and its status is lower in the lowest socio- economic group.

Drinking Water and Sanitation

Sanitation is critical for health and sustainable socio-economic development²³. The quality of human life, directly or indirectly, depends upon accessibility to better sanitation. In the post globalization scenario, water and sanitation have become important agendas for developing countries, not truly reflected in rural areas²⁴. Cleanliness and hygiene are important from not only the public health point of view, but also socio and economic development of the family. There is no doubt to say in this era sanitation dictates the human life²⁵.

The awareness resulted in many young women refusing to marry unless the bridegroom furnishes their future home with a bathroom, freeing them from the inconvenience and embarrassment of using community toilets or squatting in fields²⁶.

Sanitation and water combined are important factors in improving health, so it is only then that people are able to function efficiently in both education and work, and we can move on to livelihoods²⁷. For the 2.6 billion people who have to defecate behind bushes, in plastic bags or buckets, along railway tracks or in roadside ditches, human dignity is under daily assault²⁸.

²¹ NFHS-3, 2006. Key Findings, International Institute for population sciences Deonar, Mumbai, Ministry of health and family welfare, Govt of India.

²² Rout, N. R. 2009. Slum growth in Bhubaneswar: a problem or solution. ITPI Journal, 5: 4, 59-64.

²³ UNICEF: Supporting government schemes on rural sanitation. (2012, October 1). UN news, 8, 14.

²⁴ Rural Water Supply and Sanitation. (2008). New Delhi: Ministry of Rural Development.

²⁵ Sanitation 2008. (2008, January 1), UN Water Factsheet No. 3, 4, 6.

²⁶ Dietvorst, C. D. (n.d.). dietvorst | Sanitation Updates. Sanitation Updates | News, Opinions and Resources for Sanitation for All. Retrieved May 12, 2010, from <http://sanitationupdates.wordpress.com/author/dietvorst/>

²⁷ Eleventh Five-Year Plan - A Document. (2007). New Delhi: Planning Commission of India.

²⁸ Ecological Sanitation. (2008, April 9). ESA UN. Retrieved February 5, 2010, from http://esa.un.org/iys/docs/1%20fact-sheet_health.pdf

Special attention should be needed in the provision of safe drinking water, sewage disposal, toilet facilities and sanitation within accessible reach of households, especially in rural and urban areas. Unfavourable health environment caused by inadequate water and sanitation can increase the probability of infectious diseases and indirectly cause certain types of malnutrition²⁹.

Housing and Shelter

All human being needs a good shelter thus women need special attention for providing adequate and safe housing and accommodation. Planning for housing for the poor is a part and parcel of planning for overall economic and social development³⁰.

The bulk of the houseless population in rural areas belongs to economically weaker sections as well as socially exploited groups. As it has been observed, in the case of the scheduled castes, the problem is more acute on account of their poor financial position and the prevailing social prejudices³¹.

The concept of the "Human Right to Housing" needs to be enlarged so that it should be addressed within the wider context of the empowerment of deprived people³². Empowerment, therefore, holds the key to housing rights³³. Social sector planning ensures that appropriate policies and programmes are formulated and adequate investments are made by the state is that order of the poor and vulnerable segments of the population can have access to essential facilities based on their needs rather than ability to pay³⁴.

In rural areas, a woman spends almost 16-18 hours a day in and around the house to fulfil the economic, productive, protective, social, psychological, cultural and religious needs of the family. For her, a house has a wider meaning in the abovementioned roles and thus women's

²⁹ Engle, P.L. 1992, Care and child nutrition, Theme paper for the international conference on nutrition (ICN): Paper prepared for nutrition section, UNICEF, New York

³⁰ K.D. Gaur (1996), "Housing for the Rural Poor". Kurukshetra, May-June, p.90

³¹ Report of the Commission for Scheduled Castes and Scheduled Tribes (1974-75), 23rd Report, Ministry of Home Affairs, Government of India, New Delhi, p. 168

³² S.K. Sharma (1996), "Human Right to Housing processes", Kurukshetra, May to June, p. 13

³³ *ibid*, p.13

³⁴ Government of India, Ninth Five Year Plan (1997-2002), Vol. II, Planning Commission, New Delhi, p.5

efficiency and health are linked to the quality of housing. Since they are in effect, the primary users of housing, women must have a role to play in decision making regarding the house design³⁵.

Environmental protection and women

Women have traditionally been responsible for subsistence and survival tasks like providing food and water, fuel and fodder collection. It has been proved time and again that women have a special relationship with the environment in many other ways as they are often the custodians of indigenous knowledge and promoters of biodiversity and environment friendly management. The consequences of disaster as degradation of water quality, water scarcity, food, shelter, sanitation problem adversely affect health of women and children again increase the responsibility of mothers to shelter children safe³⁶.

Women as mothers are more conscious about environment protection and better environment for their children. As mothers these women have the obligation to feed, clothe, house and nurture their families and communities.³⁷ Considering the impact of environmental factors on their livelihoods, women participation will be ensured in the conservation and preservation of the environment and control of environmental degradation.

Women have always played a significant role in the growing international realization that pollution and environmental damage are problems on a world scale. Women have been playing a major role in protecting the environment long before the first Earth Day in 1970.³⁸

Violence against women

The violence against women has become integral to the everyday life of India, both within homes and outside³⁹. In a recent survey, India has been placed as one of the worst countries with regard to violence against women, even below Saudi Arabia, which is perceived as a country that

³⁵ K.D. Gaur (1996), op. cit., p.91

³⁶ Halvorson, Sarah J. (2004). 'Womens' Management of the Household Health Environment: Responding to Childhood Diarrheal Disease in the Northern Areas, Pakistan', *Health and Place*, 10(1): 43–58.

³⁷ Kaplan, Temma (2001). *Uncommon Women and the Common Good: Women and Environmental Protest*. In Sheila Rowbotham & Stephanie Linkogle (eds) *Women Resist Globalization: Mobilizing for Livelihood and Rights*, (28-45). London: Zed Book.

³⁸ Costle, Douglas M., 'Women and Environment', *EPA Journal*, Nov-Dec., 1978

³⁹ Sahoo and Pradhan (2009), *Who is Human and Who is Right?* Uday India: The Weekly That Empowers, (Accessed on 06 April, 2014).

curtails the freedom of women significantly through law, while Canada is presented as the best country in protecting women's wellbeing and basic freedoms⁴⁰.

The problem of domestic violence against women has serious consequences on women's socio-economic security, physical health, sexual and reproductive rights. It also significantly reduces women's contribution to the Gross Domestic Product⁴¹. The increasing level of addiction to drugs and liquor is seen as another important reason for increasing violence against women within homes⁴².

Violence against women is a global problem that occurs from the instilling fear and insecurity in many women lives and it is invisible. Most of these violence's are recognised as a violation of basic human right⁴³. Social inequality is the major cause of the violence against women it cut across all racial, cultural, economic, political and religious spectrums. There are also a number of international organizations who work painstakingly to provide a safe and secure environment for women in all societies without any discrimination⁴⁴.

STATUS OF WOMEN IN INDIA (Statistical Information)

Population

- As per Census 2011, India's population was 121.06 Cr and the females constituted 48.5% of it.
- In 2011, the sex ratio (number of females per 1000 males) at all India level was 943 and the same for rural and urban areas are 949 and 929 respectively. The sex ratio for 0 - 19 age group was 908 while that of 60+ age group was 1033. The sex ratio in the economically active age group (15 - 59 years) was 944.
- Sex ratio in the age group 0 - 6 years has increased in rural from 906 in 2001 to 923 in 2011. However, the ratio has a decline in urban area in the same period.

⁴⁰ Baldwin, K. (2012), "Canada best G-20 country to be a woman, India worst - Trust Law poll." Thomson Reuters, online, (Accessed on 3 Aug. 2013)

⁴¹ Oxfam Briefing Paper, (2004). Towards Ending Violence against Women in South Asia (Accessed on 20 March, 2014).

⁴² Kaur, G. (1984). "Violence against Women: The State of Punjab-Part V." online, (Accessed on 15 Aug. 2013).

⁴³ Singh, K. (2007), Women issues empowerment and gender discrimination, Delhi: Vista international publishing house.

⁴⁴ Bohra, N., Indira Sharma, Shruti Srivastava, M. S. Bhatia, Uday Chaudhuri, Sonia Parial, Avdesh Sharma, and Dinesh Kataria, (2015), "Violence against women," Indian J Psychiatry, 57 (2): S333-S338.

- The women's mean age at marriage in 2017 at all India level was 22.1 years and the same in rural and urban areas are 21.7 years and 23.1 years respectively.
- As per National Sample Survey (July 2011 - June 2012), 11.5% households in rural areas and 12.4 % households in urban areas are female headed households.

Health

- In 2017, highest age fertility rate is recorded for the females belonging to the age group 25- 29 years at 157.1, while the age specific fertility rate stands at 137.1 for the age group of 20- 24 years. It also showed the age specific fertility rate for the age group of 20-24 years had decreased from 174.9 to 137.1 during 2014 to 2017.
- The Crude Birth Rate (CBR) in 2017 was 20.2 (Rural - 21.8 and Urban - 16.8) and General Fertility Rate (GFR) of 72.4 at all India level.
- In 2017, the Total Fertility Rate (TFR) was 2.2. TFR in rural was 2.4 and in urban 1.7. TFR was high for illiterate women both in rural and urban areas, higher among rural illiterate women and statistics reveal that improvement in educational level lowers the TFR.
- The life expectancy at birth for females during 2016-20 is projected to be 71.46 and for males - 68.37.
- The Maternal Mortality Ratio (MMR) has declined from 167 in 2011-13 to 122 in 2015-17.
- In 2017, the Infant Mortality (IMR) of females was 34 while that of males was 32. The rate of decline in the IMR of females was faster than that of IMR among males.
- In 2017, urban mothers received more medical attention at the time of delivery as compared to rural mothers (urban: 94.4%, rural:77.4%).
- As per the NFHS 2015-16 (NFHS-4), the percentage of women who had at least four Antenatal Care (ANC) visits during their pregnancy is lowest in Bihar (14.4%) and highest in Andaman & Nicobar Islands (92%) followed by Kerala (90%).
- As per NFHS-4, female sterilization remains the most popular modern contraceptive method. Among currently married women age 15-49, 36 percent use female sterilization, followed by male condoms (5.6%) and pills (4.1%).
- As per the NFHS 2015-16 (NFHS-4), 3% of males and 5.1% of females in the age group 15-49 years were found to be obese.
- As per NSS 75th round (July 2017- June 2018) on Household social consumption on Health, the percentage of persons that reported as ailing (PPRA) in last 15-days period is 13.5% (Female) and 10.1% (Male) in urban areas, while the same percentage is 9.9% (Female) & 8.0% (Male) in rural areas.

Literacy and Education

- As per Census 2011, the literacy rate at all India level was 72.98% and the literacy rate for females and males are 64.63% and 80.9% respectively. During the last decade, the highest improvement in literacy rate was observed for rural females (24%).
- As per NSS 75th Round (July, 2017- June, 18) the literacy rate for persons of age 7 years and above is observed as 73.5 and 87.7 in rural and urban areas respectively. The gender gap in rural is 16.5 while this gender gap is 9.4 in urban areas.
- As per NSS 75th Round (July, 2017- June, 18), 41.2 % of females in the age group 3 to 35 years are currently attending education and this percentage for males is 46.2 %. In the age group 3 to 35 years, 16.6 % females are never enrolled while 11.0 % males are not enrolled.
- During 2017-18, the Gross Enrolment Ratio (GER) at Primary level for females and males are 95.4 and 93.1 respectively; at upper primary level the corresponding figures are 95.9 and 86.6.
- In 2015-16, there are 93 girls per 100 boys in primary class, 95 in upper primary class, 91 in secondary class and 90 in senior secondary class.
- As per NSS 75th Round (July, 2017- June, 18), only 8.3% of the females of age 15 years & above by highest level of education have successfully completed graduation and above level of courses. While 12.8 % of males of age 15 years and above by highest level of education, have successfully completed graduation and above level of courses.
- As per NSS 75th Round (July, 2017- June, 18), only 4.5 % males and 3.1 % females are pursuing technical/professional courses. In urban, 8.3 % of male and 6.3 % females are pursuing technical/professional courses.
- The number of females per 100 males in University education in major disciplines was highest in Medicine (157.1), followed by Arts and Social Sciences (111.6), Science (89.1), commerce (85.9) and Engineering & technical (38.7).

Participation in the Economy

- Periodic Labour Force Survey (PLFS) results indicate that the worker population ratio for females in rural sector was 17.5 and 51.7 for males in 2017-18. In Urban sector, the ratio is 14.2 for females and 53.0 for males. In both rural and urban areas, WPRs for females were considerably lower than WPRs for males.
- As per PLFS (2017-18), the unemployment rate for women in rural area was 3.8 as against 5.7 for men whereas it was 10.8 and 6.9 for women and men in urban areas in the age group of 15 years and above.

- Average wage/salary earnings received by female workers of regular wage/salary employees is still lagging behind the average earnings received by male workers in both rural and urban areas. Similar trend was also observed in average earnings received per day by casual labourers engaged in works other than public works.
- As per the data of Basic Statistical Returns of Scheduled Commercial Banks in India, in rural area 37.03 percent of the bank accounts are held by female population while in Semi Urban, Urban and Metropolitan areas, the percentage is around 34%. However, the proportion of amount held therein is greater in case of metropolitan females at 32.77% than that of female population of other areas.

Participation in Decision Making

- The percentage of women representation in Central Council of Ministers has decreased from 17.8 % in 2015 to 10.5 % in 2019
- There were 437.8 million women electors in Seventeenth Lok Sabha Election (2019) which had increased from 397.0 million in sixteenth Lok Sabha Elections (2014).
- In the 17th Lok Sabha, 14% of the total members are women (78 out of total seats).
- At all India level, the women participation in the State Assemblies was 11% against the total elected representatives in the State Assemblies.
- The highest number of female judges is 9 each in Madras, Bombay and Punjab & Haryana High Court. Only 9% of judges in Supreme Court are females.
- In March 2018, at all India level 44.37% of the elected representatives in Panchayati Raj Institutions are women.
- Percentage of Female Police Officers in India is a meagre 7.02.

EMPOWERMENT – MEANING AND DEFINITION

The underlying principle of empowerment is to give somebody the power or authority to act. Empowerment is dependent upon the goodwill or self-interest of the person with the power which for whatever reason decides just that power will be transferred, and also the quantum and type of power to the transferred. The logic of empowerment implies passivity on the part of the person being empowered⁴⁵.

⁴⁵ Syed, Abzal Peerzade and Prema Paranda “Economic Empowerment Women”, *Southern Economist*, March 2005, Vol.43. No.21, p.7-8.

Empowerment is a process, which challenges traditional power equations and relations. It seeks abolition of gender-based discrimination on all institutions and structures of society. Empowerment in the broad sense covers control over material and intellectual resources.

Empowerment has become a fashionable buzzword. It essentially means de-centralization of authority and power. It aims at ensuring participation of the deprived sector of the people in the decision-making process. Activists want government to empower poor people including women by legislative measure and welfare programmes. Unless the necessary capacity is developed among the marginalized groups, especially women, they will not be able to reap the benefits of the government sponsored programmes. Empowerment may mean equal status to men and women and by implication could provide opportunity and freedom to develop them⁴⁶.

Empowerment of woman is defined as the process by which women take control, and ownership of their lives through the expansion of their choices. Thus, it is the process of acquiring the ability to make strategic life choices in a context where this ability had previously been defined as an agency, awareness of gender power, structures self-esteem and self-confidence. Empowerment can take place by providing encouraging factors and removing inhibiting factors⁴⁷.

Certain vital processes have been identified as important for empowerment. The first is social mobilization and collective agency, as poor women often lack the basic capabilities and self-confidence to counter and challenge existing disparities and barriers against them. Second, the process of social mobilization needs to be accompanied and complemented by concerted steps against economic deprivation and livelihood insecurity. Social mobilization and economic security are vital to empowerment. Micro finance programmes have played a variable role in reducing inherent vulnerability. Asset creation and income increase are the most significant results of micro finance schemes.

Women Empowerment

Women empowerment perspective envisages increase in women's power to achieve equality or equity. The term empowerment may lead one to presuppose the primacy of power over other dimensions.

The women empowerment perspective shifts the emphasis from equality to equity. Equity means special treatment for women in the form of provisions of affirmative action. Equity is about fairness and compensatory justice. It is about enabling provisions in the law to affect parity in

⁴⁶ <http://www.genfinance.empowerment.htm>

⁴⁷ Ibid.,

gender relations. Empowerment perspective also refers to capacity buildings among women to deal as effectively with the social sphere as they have been doing in the domestic sphere.

Empowering of women put the spotlight on their education and employment. The role of education in the achievement of social justice and liberation of women has been well recognized for well over a century. Various studies in India reveal that the status of women is significantly related to opportunities for their education and employment. Education affects employment opportunities and decision-making role is influenced by both education and employment of women. In other words, decision-making power increases in proportion to education and employment⁴⁸.

The development of women amounts to the development of the entire society. If we educate a man, we are educating an individual, if we educate a woman, we are educating the whole family and the society. There is a close linkage between women's development and education. Education particularly affects women's employment, political participation, legal awareness, attitudinal change, the socialization process, demographic variables, fertility, mortality etc.

Women's employment similarly has a positive association with a higher educational level, higher per capita income, small educational level, small family norm, higher life expectancy etc. Therefore, it will not be wrong to say that unless, Indian women are educated and provided with gainful employment they will not be able to enjoy their status of equality.

Self-Help programmes combined with micro finance can transform women's lives. Empowerment is a process by which women take control of their lives through the expansion of their choices.

ECONOMIC EMPOWERMENT OF WOMEN

Women, as a group, have been fighting against dowry, sale of girls, domestic violence, and child marriages etc.⁴⁹ Women can attain better familial, societal and economic status and can fight against the numerous carnages if some policies are taken to empower them. This necessitates the formation of an environment in which the distribution of power and resources, the opportunity to involve in productive work, chance of access to education, employment, medical care and health services etc. can move in favour of women population.

⁴⁸ <http://www.un.org.in/gender/microcredit>

⁴⁹ A. Bhoomika (2001), 'Vismaya: A new approach to Women's Empowerment Programme', A Feminist Magazine. pp. 54-56.

To quest for the appropriate policies for empowering women it is essential to find out the responsible influences of women empowerment and their importance to improve empowerment. Augmented level of empowerment among women increases the significance of women in their family and in the society.

During the last six decades, development planning for women straddled theories as disparate as welfare, development, equality, efficiency & empowerment⁵⁰. Though women constitute half of world population, they are the largest group which is excluded from the benefits of social and economic development⁵¹.

Empowerment is a way of acquiring the ability and opportunity to participate in decision making and implementation of decisions with proper knowledge of self-dignity and self-confidence.⁵² Empowerment of women is nothing but women who live their own life in which they think appropriate, on the basis of their condition of family circumstances, qualities and capabilities of those things, and consider themselves as the best judges⁵³.

Economic empowerment of women, including reduction of female poverty require programmes that focus on identifying, developing and promoting alternative approaches to increase women's access to and control over the means of making a living on a sustainable and long-term basis⁵⁴. Empowerment is a process that could enable women to get enough strength to challenge their submissive social condition⁵⁵. Strategies are to be designed to enhance the capacity of women and empower them to meet the negative social and economic impacts, which may flow from the globalization process⁵⁶.

⁵⁰ Sujaya, CP., Women's Rights and Development Policies in India, The Administrator, Vol. XL, July-Sept., 1995.

⁵¹ Sharma K.C., "Micro Financing through SHGs", Indian Journal of Agriculture Economics, vol.56, No.3, 2001

⁵² Manimehalai, N., Impact of Micro Financing in promoting Women Micro Entrepreneurship – An analysis, Women Empowerment Issues and Challenges, Souvenir, 2006.

⁵³ Meenakshi, R., Role of Information and communication Technology (ICTs) in Empowering Women, Women Empowerment Issues and Challenges, Souvenir, 2006.

⁵⁴ Srivastava, S.P., Gender Justice and Human Rights of Women, In Gender Equality Through Women's Empowerment By (ed.) Surendra Singh And S.P. Srivastava, Opit, Bharat Book Co., Lucknow, 2002.

⁵⁵ Dorienna Rowan, Development with Womem, rural publications, New Delhi, 2006

⁵⁶ Chetne kalbagh, Women and Development, Discovery Publishing House, New Delhi, 1992.

Different indicators of human development show that women have lesser access to property, resource, education, health facilities, medical care and lower percentage in earned income and finally lower participation in job market, if not least, in decision making power also⁵⁷. Empowerment is the power of decision making i.e., autonomy⁵⁸.

The empowerment of women include making awareness and consciousness about circumstances of women, discrimination of women, rights of women, chances to the women and importance of gender equality; organizing a group collectively, group individuality and group pressure; capacity building and skill development – capability to plan, to decide, to organize, aptitude to manage, capacity to carry out activities, ability to transaction with people and institutions in the world around them; participation in decision making at home, in the community and in the society; and access and control over resources, over means of productivity and over distribution. Empowerment of women encompasses many aspects such as economic opportunity, property rights, political representation, social equality, personal rights and so on.

Characteristics of Women Empowerment

Women empowerment processes certain characteristics, they are the following: -

1. Women empowerment is giving power to women; it is making women better off.
2. Women empowerment enables a greater degree of self-confidence and sense of independence among women.
3. Women empowerment is a process of acquiring power for women in order to understand her rights and to perform her responsibilities towards oneself and others in a most effective way.
4. Women empowerment gives the capacity or power to resist discrimination imposed by the male dominated society.
5. Women empowerment enables women to organize themselves to increase their self-reliance.
6. Women empowerment provides greater economy to women.
7. Women empowerment means women's control over material assets, intellectual resources and ideology.
8. Women empowerment challenges traditional power equations and relations.

⁵⁷ World Bank (2001), 'World Development Report, 2000/2001, Attacking Poverty', Oxford University Press, New York

⁵⁸ Jejeebhoy, S. J. (1995), 'Women's Education, Autonomy, and Reproductive Behaviour: Experience from Four Developing Countries', International Studies in Demography, IUSSP, Oxford: Clarendon Press

9. Women empowerment abolishes all gender-based discrimination in all institutions and structure of society.
10. Women empowerment means participation of women in policy and decision-making process at domestic and public levels.
11. Women empowerment means exposing the oppressive power of existing gender and social relations.
12. Empowerment of women makes them more powerful to face the challenges of life, to overcome the disabilities, handicaps and inequalities.
13. Empowerment of women enables women to realize their full identity and power in all spheres of life.
14. Empowerment also means equal status to women.
15. Empowerment also means providing greater access to knowledge and resources, greater autonomy in decision making, greater ability to plan their lives and freedom from the shackles imposed on them by custom belief and practice.
16. Women empowerment occurs within sociological, psychological, political, cultural, familiar and economic spheres and various levels such as individual, group and community.
17. Empowerment of women is an ongoing dynamic process which enhances women's abilities to change the structures and ideologies that keep them subordinate.
18. Women empowerment is a process of creating awareness and capacity building.

Goals and Objectives of Women Empowerment

- i. Creating an environment through positive economic and social policies for full development of women to enable them to realize their full potential.
- ii. The de-jure and de-facto enjoyment of all human rights and fundamental freedom by women on an equal basis with men in all spheres - political, economic, social cultural and civil.
- iii. Equal access to participation and decision making of women in social, political and economic life of the nation.
- iv. Equal access to women to health care, quality education at all levels, career and vocational guidance, employment, equal remuneration, occupational health and safety, social security and public office etc.
- v. Strengthening legal systems aimed at the elimination of all forms of discrimination against women

- vi. Changing societal attitudes and community practices by active participation and involvement of both men and women.
- vii. Mainstreaming a gender perspective in the development process.
- viii. Elimination of discrimination and all forms of violence against women and the girl child; and
- ix. Building and strengthening partnerships with civil society particularly women's organizations.

SOCIAL OBSTACLES IN WOMEN'S EMPOWERMENT

- Share of Cruelty by Husband or his Relatives has reduced from 35% in 2015 to 27% in 2018. Out of total crime committed against women in 2018, 60% cases reported for Cruelty by Husband and Relatives (27%), Assault on women with intent to outrage her modesty (24%) and Kidnapping & Abduction (19%).
- In 2018, 66 % of the investigated cases of crime against women were disposed of by the police.
- As per the survey on Disability conducted by M/o Statistics & Programme Implementation, percentage of differently-abled person is higher for male than females at 2% in rural as well as urban areas. The highest percentage of type of disability found in females was locomotors disability.

EMPLOYMENT TRENDS FOR WOMEN IN INDIA

The rise in female employment is a significant trend in women's employment. This has coincided with rises in the labour force and workforce, particularly among urban women, despite the fact that rural women workers account for the majority of participation rates and overall magnitude.

The growing engagement of women in the labour force, as well as their major contribution to household income and GDP, necessitates some policy attention to the gender dimensions of employment. For the first time in Indian planning history, the eleventh Five Year Plan text recognises women as "agents of sustained socio-economic growth and transformation," not just as equal citizens.

Women's issues, such as the supply of fundamental entitlements and the building of institutional structures, are addressed through a multi-pronged strategy. Female workers appear to have experienced a considerably greater increase in employment growth than male workers.

Given the rate of population expansion throughout time, even where the proportion of working women as indicated in the female work participation rate is modest, the absolute numbers have climbed dramatically. The number of job openings increased by 9.3 million every year in the early years of the new millennium (from 1999-2000 to 2004-05).

Women's participation has also benefited from the increase in employment growth from 1.25 percent per year (1993-94 to 1999-2000) to 2.62 percent per year (1999-2000 to 2004-05) (GOI, 2008). Nearly 15 million women joined the workforce between 1999-2000 and 2004-05, out of 46 million job possibilities created (compared to 24 million in the previous period, 1993-94 to 1999-2000).

Women employees grew from 9 to 12 million in urban regions and virtually doubled in rural ones. This favourable shift is particularly pronounced in urban areas, where the necessary educational inputs and current thinking about women's work are becoming more apparent. Over four-fifths of rural women work in agriculture. This is especially important given the shrinking proportion of male workers (from 74 per cent in 1993-94 to 66 per cent in 2004-05).

Women in rural areas, it appears, are finding it more difficult to leave agriculture. Women work as cultivators/farmers and agricultural labourers in agriculture. Women's share of agricultural labourers has decreased slightly, while their share among cultivators has risen.

Women have been able to expand their share of manufacturing work in metropolitan regions, particularly after 1999-2000. (from 24 per cent to over 28 per cent in 2004-05). As a result, female workers in manufacturing have increased significantly in metropolitan areas, whereas male workers have remained unchanged. Women have acquired work in the services sector as well, particularly in the category of domestic and personal services.

Since India gained independence in 1947, the country's economy has seen significant changes. Agriculture today accounts for only one-third of GDP, down from 59 percent in 1950, and there is a diverse range of modern businesses and support services. Despite these shifts, agriculture still employs two-thirds of the workforce. The Persian Gulf Crisis aggravated India's economic troubles in the late 1980s and early 1990s.

India started liberalising its trade policies in 1992. The economy has grown—annual GDP growth rates varied from 5% to 7% over the period—and significant progress has been achieved in relaxing government regulations, particularly those affecting private firms. Diverse economic sectors have had different reactions to reforms. In a country like India, gainful employment is critical to reducing poverty and achieving social equality.

However, the outcomes of unrestricted market forces are not always egalitarian, particularly in India, where globalisation is likely to hurt some groups. One such group is women.

Women have been sidelined in economic activities as a result of technical inputs introduced by globalisation, whilst men have typically been given new learning and training opportunities.

As a result, more women than ever before are working in the informal sector or on a contract basis. While new rice technology has boosted the utilisation of female labour, the increasing workload for women is in unrecorded and frequently unpaid operations that fall under the category of home production activities. Physical care is denied to the weaker groups, particularly women.

As a result, the majority of Indian women have little ability to perform useful tasks; the "ability" to pick among options is apparent by its lack. In India, the majority of women work and contribute to the economy in some way, yet much of their labour is not documented or accounted for in official statistics.

Women work on farms ploughing fields and harvesting crops, in household businesses weaving and making handicrafts, in the informal economy selling food and gathering wood. Furthermore, traditionally, women have been in charge of home responsibilities (e.g., cooking, fetching water, and looking after children).

Women are still not as free as males to participate in the formal economy, despite the fact that cultural limitations are shifting. Previously, cultural barriers to female employment were the main obstructions; currently, however, a nationwide labour shortage leads to low female employment.

Workers are classified as "major" or "marginal" in the Indian census. People who worked for six months or more during the year are classified as main workers, whereas those who worked for less than six months are classified as marginal workers.

Agricultural labourers make up a large portion of this group. Unpaid agricultural and family enterprise workers should be classified as either major or marginal workers. Despite the fact that the number of female major workers has grown faster than that of their male counterparts in recent years, women make up a small share of the formal Indian labour force.

WOMEN IN THE WORKPLACE

Wages and salaries for women in the working are a recent phenomenon that arose at the same time as paid employment for males; yet, women have faced discrimination in the workplace. Women are social beings. It is unjust to keep her in captive, denying her access to job, money, and contact with the outside world.

Women's economic, social, and political empowerment are critical to every society's progress. Working women are critical to society's growth, therefore women's empowerment is

critical to their economic, social, and political advancement. Women have always been the underdogs in society, with fewer rights and lower living standards than men.

The degree of socioeconomic equality and freedom enjoyed by women can be characterised broadly as their status. Through inheritance, marriage, and informal networks, economic, social, and cultural factors interact to reinforce gender inequalities in land ownership, control, and access.

Women's economic standing in the home is influenced by three factors: their acquired economic and social power, the socio-economic status of their households, and the level of support and possibilities available in the community. Women's economic well-being is frequently improved when they have independent sources of income, which leads to increased self-esteem, better household conditions, and overall community growth. The largest contributor to the gender disparity in women's economic well-being, social standing, and empowerment is the gender gap in property ownership and control.

Since ancient times, women have had an important role in the home. Women are now valued at work as well as at home, and they participate in a diverse range of activities. To ensure a brighter future for future generations, we must create a society where women can breathe freely without fear of oppression, exploitation, or prejudice.

SOCIAL AND FAMILY PROBLEMS

Working women, or those who labour for a living, confront difficulties at work just because they are female. The law lags far behind social attitudes of women's roles. Those who recruit employees are prejudiced because of the attitude that women are only suitable for certain jobs. As a result, women have little difficulty finding work as nurses, doctors, teachers, secretaries, or assembly line workers. Even when there are qualified women available, a male candidate with the same qualifications is given preference. The recruitment process is hampered by gender bias. Although the law declares equal pay for equal work, this is not always the case. The ingrained belief that women are incapable of doing difficult work and are less effective than males have an impact on the payment of differential salaries and compensation for the same job. However, her pay is usually given to her father, spouse, or in-laws in most families.

As a result, in many women's circumstances, the primary motivation for looking for work is to achieve economic independence. When technological innovation leads in employee retrenchment, women in the industrial sector face gender bias issues. Women in India suffer far greater difficulties than women in other countries.

Despite years of struggle, the female sector of society continues to be disadvantaged in comparison to the male section. In her own family, they are not prioritised in social and financial decisions. Women perform 67 percent of the world's work, according to a UNDP estimate, but they are still socially and economically disadvantaged. They barely get 10% of universal income and 1% of global assets. In the unorganised sector, discrimination still exists.

Women workers in the informal sector do not receive the same pay as males for the same type of labour and hours worked. At work, they are abused. There are certain laws, such as the Unorganized Workers Social Security Act of 2008 and the Domestic Workers Welfare and Social Security Act of 2010, however due to their ineffective implementation, women workers are forced to labour in the unorganised sector and live in deplorable conditions.

In India, women are primarily responsible for home tasks such as cooking, cleaning, doing dishes, washing clothes, and caring for children, whereas men are largely absent from these tasks. Men are in charge of outside work. Women must work harder now than ever before to provide for their families.

Women workers must deal with harassment at work and sometimes simply overlook issues in order to keep their jobs safe. Many Indian families, including their parents and in-laws, continue to live as joint families. This increases their anxiety even more because they must please her husband's entire family. Pay attention to their complaints about her and ignore them, and so on. In India, the majority of women hope that things would improve.

PROBLEMS FACED BY WORKING WOMEN IN INDIA

Occupational problems as stress

Workplace stress is a type of stress. Women's lives revolve around two things: work and family. In many nations, balancing work and family obligations has become a major personal and family concern. Working mothers' lives are complicated by a variety of factors. On a daily basis, they deal with challenges at home and with their families, as well as job stress.

Reasons of occupational stress

Occupational stress is caused by an unbalanced work-family life. A variety of variables contribute to the imbalance of work and home life. Several elements are at work.

1. Psychological abuse

Women are traditionally thought to be less capable and efficient workers than men. Women are held back by a mindset that believes they are unsuited for certain vocations. Gender bias presents barriers to their recruitment, despite constitutional provisions. Furthermore, the same mindset drives the unfairness of different pay for the same job. Even after 61 years of independence, full

equality has not yet been established. Working in such settings puts women under more strain than males, making them less enthusiastic about their careers.

2. Sexual harassment

Today, practically all working women, regardless of their rank, personal qualities, or types of employment, are subjected to sexual harassment. They are sexually harassed on public transportation, at work, in schools and hospitals, at home, and even when filing complaints at police stations. Women's modesty is being violated and outraged by law enforcers, which is alarming. The majority of women are concentrated in low-wage service jobs, whilst men are in direct leadership positions, allowing them to exploit their female subordinates.

3. Workplace Discrimination

However, at work, Indian women continue to confront open prejudice. They are frequently denied promotions and opportunities for advancement at work, but this is not true of all working women. The Equal Remuneration Act of 1976 continues to deny the majority of working women their right to equal pay, and they are paid less than their male counterparts. In most manufacturing and labor-intensive businesses, this is the case.

4. Working women's safety on the road

In India, the traditional mindset makes it difficult for working women to strike a balance between their personal and professional lives. Working after six o'clock may be considered unacceptable in some families. Families who tolerate these working hours may worry about a woman's safety while travelling on a daily basis. Because she is tightly protected or watched by her family and society, a working woman is affected by a wide range of challenges.

5. Inadequate support from family

Another issue that working women face is a lack of adequate family support. The family may not always encourage women to work outside the home. They also oppose women working late in the office, which hurts women's performance and impedes their advancement.

6. Maternity Leaves are Inadequate

Working mothers must also contend with little maternity leave. This has a negative impact not just on women's professional performance, but also on their personal lives.

7. Uncertainty about one's job

Unrealistic expectations, particularly during business reorganisations, can be a huge source of stress and suffering for employees. Increased workloads, lengthy work hours, and high expectations to perform at peak levels all the time for the same salary can physically and mentally exhaust a person. Excessive travel and time away from family are also sources of stress for employees.

8. Adjusting the Workplace

Whether you're in a new firm or not, adjusting to the culture can be a difficult process. Adapting to different parts of workplace culture, such as the boss's and coworkers' communication patterns, can be a life lesson. Workplace culture misalignments can lead to subtle disagreements with coworkers or even supervisors. Office politics and gossip can be significant stressors in many circumstances.

9. Additional Reasons

Personal characteristics such as age, level of education, marital status, number of children, personal income, and the number of jobs you have currently where you work for pay, as well as work situation characteristics such as job tenure, size of employing organisation, and hours worked per week are included.

Fogarty and Rapoport (1971)⁵⁹ in their study on the family and working life of qualified women in top jobs found the following dilemmas.

- 1) Dilemmas arising from sheer overload.
- 2) Dilemmas produced by conflicts in relations due to expectations.
- 3) Dilemmas due to demands of different relations at different times.
- 4) Dilemmas caused by conflicts within ourselves to be a good mother, good wife, good daughter and so on.

Promilla Kapur (1974)⁶⁰ in her study, found that the problems are of 3 types.

Environmental, social and psychological. In each of them the problems arise due to strained situations at home and at workplace. In turn, they are due to two factors; one is the concern, and other is the practical difficulty of combining the dual commitment.

The author broadly divided the problems faced by working women into two spheres:

(a) Problems at home.

(b) Problems at work place.

(a) PROBLEMS AT HOME

Women is considered equivalent to men in the constitution of India. The contributions of women to the nation and the society cannot be measured in figures. The urban working women all over the country have excelled men in all the spheres. Despite the fact they are discriminated

⁵⁹ Fogarty, M. and Rapoport, R. (1971). Sex, career and family, California: Sage publication.

⁶⁰ Promila Kapur, (1974). The changing Status of Working Women in India, New Delhi, Vikas publication

everywhere. Today in the world of inflation, it is very difficult for men to provide basic facilities and to fulfill the desires of the family single handed. He always needs a helping hand from her partner to support him. So, he prefers to have a working partner to live a comfortable life. Moreover, Life is a precious gift given to humans by God so the utilization of one's life lies in his or her own hands. All the creatures have been made special by the creator only we have to search our talent and make the best use of it. As women are not inferior to men so today every woman wants to excel like men, but she forgets that first she is a woman. The double income does liberate financial constraints and self-denial but creates many problems too. So, the basic problems of working women start from her own home.

(i) Dual Responsibility: The major problems for working women arise out of the dual responsibility. She has to take care of all the house work and at the same time be careful in office work too. Though the employment of women is accepted but the duties of the women at home are not totally ignored. The household people didn't want to share her duties. So right from the morning till night she is busy with all the household works like preparing breakfast, packing lunch, dressing the children, taking care of other household works etc. and at last she is free to move to the office. In the evening again, it is her duty to prepare tea, attend her children and other family members, prepare dinner and again ready for the morning schedule. In the meantime, other rubbish talks from the in-law's family, their demands, expectations and many more. All this unhealthy environment of ego, interference and jealousy are the major issues that really cause a great depression in the life of a woman. If the husband is helping and feeling sympathy with his wife, he is blamed as a "henpecked" husband (**Urmila Patel, 1988**)⁶¹. The rude behavior of the family with their own son creates a great chaos and ultimately affects the married life. Women all over the world have to face problem of adjustment among their varied role expectations. Due to the dual demands of home and work they are liable to face adjustment problems. These types of circumstances require the redefinition of duties, roles and expectations. Moreover, both the husband and wife have to take their personal decisions by introspecting the circumstances of their life. A woman can only perform the dual responsibility well if she will get cooperation from the family otherwise the problems will definitely become worse.

(ii) Dual Role Demand: A woman has to perform dual roles at different places. The workplace treats all employees at equal state and the demands and expectation at the workplace are according

⁶¹ Urmila Patel, (1988), Problems of Working Women in India, New Delhi: Vikas publication.

to the profile at which one is working. They are least bothered about the gender whether men or women. So, to perform duties according to the desired position one has to be efficient, courageous, firm, independent, confident, competitive, and hard too to meet the targets she is expected to behave like an officer straight forward and non-sentimental. In addition to all this a woman is expected to be soft, tender, gentle, non-commanding, adjusting, not too intelligent and Domestic. So, a kind of conflict arises while performing the duties at two different places. Further religious rituals and customary practices are expected to be preserved and perpetuated by the women **(Krishna Chakraborty, 1978)⁶²**. The typical women though she has move out to earn like men but it is very difficult for them to adjust life by balancing the both. It is always a life of compromise. The two roles, the role of employee and of a home-maker, are distinct and different in nature. So, the solution to this problem is the maintenance of balance between the two roles. Every working women who will perform both the duties at different places with the required features patiently can live a stress-free life otherwise conflicts can never be solved as she is living in the male dominated society.

(iii) Children: Children always have to face many problems in life if the mother is working. The crucial state of the women is at the time of her pregnancy, baby birth time and early time of the growth and development. During her pregnancy, if she is not feeling well she will take a leave without pay and deduction in salary again creates stress. Moreover, the problems before & after delivery also creates tension. Once you give birth to a child that is the most amazing time you wish to enjoy that period. Than a small baby never allows you to enjoy that period. Than a small baby needs her mother all the time. where working women can't afford so takes the help of some family member, maid or crèche. So, all the decisions are taken only and only under compulsion. The children are taken by moms from the crèche or other places in the evening. When she is fully exhaust from the workplace and again her duties start. If the children are grown up then getting up early with mothers. Taking breakfast in Tiffin and lunch and sometimes even the dinner is packed in the morning itself. So those children prefer to go for out snacks which really spoils the health of children. So, the women have to take right them from her duties towards children and it can only be done by taking a sour sip. But to the inner soul of a mother always hurts one as to hear it and adjust to the situation. The children whose mother are working can't enjoy those facilities as compare to the house mothers. It is also seen in many cases that a hired mother has not that efficiency and patience in the evening to spent time with her children where now she is burdened

⁶² Krishna Chakraborty (1978), *The Conflicting Worlds of Working Mothers*, Calcutta: Progressive Publishers.

with the household work. So, all those situations create a feeling of guilty, anxiety, depression and health problems due to dual concern and commitment.

(iv) Restriction of Movements: One of the problems faced by married working women is that they cannot travel or go on tours without having to answer uncomfortable questions by most of their friends and family. This is especially true for married women, who also have a flourishing career. Their professional obligations often depend on the support and understanding of family members. A married man can go on long official tours outside his home city, without raising eyebrows and questions from his family members and peers, but his equally successful wife would face disapproval. As a result, women often have to opt out of jobs than involve travel or settle for not being promoted as a result.

(v) Time Problem: The working Women always faces the shortage of time. She always lacks time for her relaxation, amusement and entertainment. She is a multi-tasker. I have often seen working women watching TV while washing clothes or by working in the kitchen. She lacks time to take care of herself. She even does not have time to spent with her relatives and friends. Sometimes she is helpless when she is not even able to spare time for her loving ones at the time of their illness, occasions, ceremonies etc. **(Anil Dutta Mishra, 1994:51)**⁶³ All this leads to health issues, mental Stress, Depression and at last early ageing. So, it is difficult for working women to find time for herself growth and development too.

(b) PROBLEMS AT WORKPLACE

The atmosphere at the workplace, attitude of the fellow workers, kind of work, timings of work, distance from the house are the key factors that creates a lot of problems in the lives of working women **(Ibid, 56)**⁶⁴

(i) Relationship with colleagues: The efficiency of a working woman is always suspected especially in the upper-class cadres, even though other qualifications are equal, men are preferred. The authorities are doubtful whether she would be able to handle male subordinates, take independent decisions, cope with crisis and manage her duties. Even though she has proved her efficiency, they think twice before promoting her. Even if she is given a chance, there is always a remark that she has been taken because she is a woman. The male co-workers in the office cannot mentally accept the superiority of the woman's work. They take extra pains to ridicule her. In this

⁶³ Anil Dutta Mishra, (1994), Problems and Prospects of working Women in Urban India, New Delhi: Mittal Publications, Pp. 51,56.

⁶⁴ (Ibid, 56)

situation she feels helpless and often breaks down. This further leads to the misconception that women are not fit for outside work.

(ii) Office and family: There are another type of problem which arises when a woman has to work over-time to complete her work. In certain Govt. jobs the woman employee also faces transfers; she finds it difficult to go, having the family behind. If she is married, she cannot go leaving her husband and children. In such a situation, generally she has to give up the job. If she is unmarried, the parents would not permit her to go alone. If she is married and working, she has to leave the job if her in-laws do not approve of her working. In some cases, Women have to leave the job, When the children are too young and there is nobody in the family to look after them. Unfortunately, in our country the system of part time jobs has not developed yet.

(iii) Not much choice: Another notable problem for the working woman is that they do not get jobs in the fields of their interest. They have to accept the work they get. The professional woman has their own problems. As she is professionally trained, she aspires to utilize her skills, to put up the best performance and to earn a proper income. But the in-laws do not accept her working. In this way many women Doctors, Engineers and Technicians leave their profession after marriage or do work for limited hours for pleasures only. The composition of staff at the work place also creates problems. Some traditional families in India, for example, would like their women to be posted exclusively in a girl's college or school.

(iv) Problem of transport: The present transport system is far from satisfactory; generally, women have to suffer the worst due to misconduct or eve teasing by co-passengers. Sometimes they have to wait for hours on the bus stop to board a bus. Even when the bus comes, due to it being over-crowded she is not able to catch it. Even in the train the position is not good. At the present there is only one ladies' compartment in local trains in cities like Bombay and Delhi, and that too, is often occupied by men. In short, the above-mentioned problems are the major problems which are faced by urban working women in India.

Effects of Urbanisation on the Status of Women in India

Status of women in urban areas is higher than that of women in rural areas. Urban women are comparatively more educated and liberal. Against 25.1 per cent literate women in rural areas, there are 54 per cent literate women in urban areas according to the census of 1991. Some of them are working too. (16.5% urban women belonged to the labour force in 1993- 94; Manpower Profile, India, 1998:129). As such, they are not only aware of their economic, social and political rights but they also use these rights to save themselves from being humiliated and exploited. The average age of girls at marriage in cities is also higher than the corresponding age in villages.

However, in the labour market, women are still in a disadvantaged situation. The labour market discriminates against women and is opposed to equality of opportunity understood in a comprehensive sense to include equality of employment, training and promotional opportunities.

In this sense, change is not possible in the sex segregated labour market whose structures ensure that the career patterns of women will normally be marked by discontinuity, unlike the normal male career patterns which assume continuity. Because of the constraints of the sex segregated labour market, women tend to cluster in a limited range of occupations, which have low status and are poorly paid.

Women normally prefer teaching, nursing, social work, secretarial and clerical jobs—all of which have low status and low remuneration. Even those women who have surmounted the hurdles to professional education are disadvantaged as they find it difficult to harmonise competing demands of a professional career and home.

Generally speaking, it is difficult for a woman to remain single or to combine marriage with career. Apart from the general expectation that all wives must be housewives, it has been noted that women are called upon to sacrifice their career when the need arises, thereby subordinating their own career to that of their husbands. This often creates frustration among women, leading even to psychotic illness in a few cases. Rural women, however, do not have to face such problems.

It has been further found that in the cities of India, high level education among girls is significantly associated with smaller family size. Though education of women has raised the age of marriage and lowered birth rate, it has not brought about any radical change in the traditional pattern of arranged marriages with dowry.

Margaret Cormack found in her study of 500 university students that girls were ready to go to college and mix with boys but they wanted their parents to arrange their marriage. Women want new opportunities but demand old securities as well. They enjoy their newly found freedom but at the same time wish to carry on with old values.

Divorce and remarriage are new phenomena we find among urban women. Today, women take more initiative to break their marriages legally if they find adjustment after marriage impossible. In Delhi alone, 20 couples file cases every week seeking divorce from their spouses. About 2,000 divorce cases were filed in Delhi courts in five months between January and May, 1999 (The Hindustan Times, June 12, 1999). Surprisingly, a large number of divorces are sought by women on the grounds of incompatibility and mental torture.

Politically also, urban women are more active today. The number of women contesting elections has increased at every level. They hold important political positions and also possess independent political ideologies. It may, thus, be concluded that while rural women continue to be dependent on men both economically and socially, urban women are comparatively independent and enjoy greater freedom.

Thus, it may be said that though we may accept the views of scholars like Ashis Nandy (1975) who have talked about new aspects of urban social organisation which have replaced traditional ties, yet we cannot reject the prevalence of traditional aspects in the functioning of family, caste, kinship, and religion in urban settings.

WOMEN AND DEVELOPMENT

The UNDP (United Nations Development Programme) human development report of 1995 states “Investing in women’s capabilities and empowering them to exercise their choices is not only valuable in itself but is also the surest way to contribute to economic growth and overall development. There cannot be educated people without educated women.

Yet, for various social and economic reasons, education of women did not receive the required attention in the past. In India, the university Grants commission in 1948-49 themselves made certain recommendation for the spread of women’s education.

Later in 1959, the national committee for women’s education was set up under the chairmanship for Education was set up which laid emphasis on women’s education and the need for empowerment of women. Government plans and programmes at the state and central level also emphasized it. The constitution of free India proclaimed equal status of women and a series of legislative enactments has been passed like the marriage acts, dowry prohibition act, medical termination of pregnancy act and equal wages act etc.

Women’s Development in the Five-Year Plans

Women’s development began mainly as welfare-oriented programmes in the First Five Year Plan (1951-56). The Central Social Welfare Board was set up in the year 1953, and it undertook a number of welfare measures through the voluntary sector.

The Second Five-Year Plan (1956-61) had organised women into Mahila Mandals to act as the local centers at the grass root levels for the development of women.

The Third and the Fourth Five-Year Plans had accorded a high priority to the education of women and had introduced measures to improve the material and the child health services, including the supplementary feeding for children and for the nursing mothers (Murugan, B., 2000).

The Fifth Five-Year Plan (1974-78) had made a shift in the approach to women's development from 'welfare' to 'development', to cope with the several problems of the family and the role of women. The new approach aimed at an integration of the welfare activities with that of the development services.

The Sixth Five-Year Plan (1980-85) had made a landmark in the history of women's development by including a separate chapter in the plan document and by adopting a multi-disciplinary approach with a thrust on health, education and employment.

In the Seventh Five-Year Plan (1985-90) the developmental programmes for women were continued with the main objective of raising their economic and social status to bring them into the mainstream of national development. A significant step in this direction was to identify and promote the beneficiary-oriented programmes for women in the different developmental sectors, which extended direct benefits to women.

The Eighth Five-Year Plan (1992-97) which was launched in the year 1992 had made a shift from 'development' to the 'empowerment' approach. It promised to ensure that the benefits of development in the different sectors did not bypass women and women should be enabled to function as equal partners and participants in the developmental process.

The Ninth Five-Year Plan (1997-2002) was a progressive extension of the Eighth Five-Year Plan. Some major steps towards gender justice and empowerment of women had been taken. This approach of the plan was to create an enabling environment where women could freely exercise their rights both within and outside the home as equal partners along with men. This plan was an attempt at the convergence of the existing services, resources, infrastructure and manpower available in both women specific and women-related sectors. It had suggested that a special vigil should be kept in the flow of the earmarked funds or benefits through an effective mechanism to ensure that the proposed strategy brought forth a comprehensive approach towards empowering women.

In Tenth Five Year plan (2002 – 2007) over the year's poverty alleviation programmes of various types have expanded in size with the provision of rural development⁶⁵.

⁶⁵ Sathyaprabha.S.K., "Role of self-help groups in the empowerment of women in Thoothukudi District-A Study", August 2006.

Several evaluations of the Integrated Rural Development Programme (IRDP) show that the projects undertaken under the programmes suffer from numerous defects including especially sub-critical investment levels; unviable projects, lack of technological and institutional capabilities in designing and executing projects utilizing local resources and expertise, illiterate and unskilled beneficiaries with no experience in managing an enterprise, indifferent delivery of credit by banks (high transaction cost, complex procedure corruption, one – time credit, poor recovery), absence of linkage between different components of the IRDP, rising indebtedness and scale of IRDP outstripped capacity of government and banks.

Women Empowerment Schemes of the Government of India

Empowering women is critical to the socio-economic progress of the community and bringing women engaged in income generation activity under SGSY women into the mainstream of national development has, therefore, been a major concern of the government.

The ministry of rural development has special components for women in its programmes and funds are earmarked as “Women’s component to ensure the flow of adequate resources for the same”.

The major schemes, having women’s development, include the Swarnjayanti Gram Swarozgar Yojana (SGSY), the Indira Awas Yojana (IAY), the National Social Assistance Programme (NASP), the Restructured century Rural Sanitation Programme, the Accelerated Rural Water Supply Programme (RCRSP), the Integrated Rural Development Programme (IRDP) the Development of Women and Children in Rural areas (DWCRA) and the Jawahar Rozgar Yojana (JRY).

1.2 OBJECTIVES OF THE STUDY

The following are the objectives of the study:

1. To study and analyse the socio-economic conditions of Urban working women in Thoothukudi City.
2. To find out the various problems and challenges faced by urban working women in the study area.
3. To analyse the health issues faced by urban working women in Thoothukudi city.
4. To suggest remedial measures to solve the problems of the urban working women in the study area.

1.3 METHODOLOGY AND SURVEY DESIGN

In this study we have used simple random sampling method and selected 75 respondents who are the urban working women from Thoothukudi City. We have used direct interview method for the collection of information from the urban working women from both Government and private sectors which includes women working in Banks, Post offices, hospitals, sales girls in Textile shops, medical stores, xerox & print out shops, stationary stores, hotels and Pizza corners, Ice cream parlours, super markets, jewellery shops etc., all over Thoothukudi City. We have also used primary and secondary sources to collect the data with structural development perspective. Statistical tools like averages, percentages and arithmetic mean have been used in the study. The period of study is from February 2022 to April 2022.

Sources of information

- 1) Primary resources: To collect the primary information we used self-prepared questionnaire on developmental perspective for interview and then information is collected from 75 respondents.
- 2) Secondary resources: we have collected information through various articles, journals, library, newspapers and websites.

1.4 SIGNIFICANCE OF THE STUDY

Educated urban women are assumed to be more aware of the prospects and problems of the office, or to understand their duties and limitations in the workplace, and to be courageous enough to develop their own identities, with or without parental assistance. For a better understanding of workplace dynamics relating to women, an assessment of the difficulties and issues confronting metropolitan working women is required.

There were certain man-made barriers for women in the past, but women currently play important roles in various fields. Women nowadays are breaking through that barrier and balancing both personal and professional lives, thereby raising their societal stature.

The dual obligations of working women - domestic chores and office job - are the source of the majority of problems for working women. Despite the fact that an increasing number of women are seeking paid work and their families require their money, attitudes toward women and their position in the family have not changed significantly.

Women are still considered inferior, weak, and second-class citizens. Even today, it is widely assumed that the man's primary role is to look after his family and children. Accept that, as more women enter the workforce, there is no longer a strong family support system at home.

Women continue to be the primary caregivers and juggle household responsibilities. Because working women are expected to carry out the obligation for family services while still being able to fulfil their professional tasks, gender is viewed as a primary driver of unfavorable employment spill-over.

This is compounded by the phenomena of shame felt by women who have a general sense of duty, particularly toward their own children. It causes a sense of failure of responsibility when they are unable to regulate the demands placed on them from various aspects of their lives.

Women, simply by virtue of their gender, confront challenges. If they work, the problems get exponentially worse. Women who work for a living are referred to as working women. The law lags far behind social attitudes of women's roles. This mindset, which considers women suitable for certain tasks but not for others, has an impact on people in charge of female employee recruiting.

Women in India have long been subjected to patriarchal oppression and dominance, and they have faced several problems and hardships. Through the socialisation process, women were educated to accept their status and to follow all laws and regulations created specifically for women, including their "initiation rites."

They are taught to be obedient wives and sisters who respect their elders, as well as manners such as how to walk, talk, sit, and work at home, among other things. They are not thought of as persons with distinct personalities or a personal life. They are taught that a guy can marry multiple women, and they passively accept it, blaming it on their own fate.

Polygamy, early marriage, and illiteracy, as well as years of oppression, have all contributed to women's inferior positions in traditional Indian culture. Many of these customs can still be present in some parts of the country today.

Because males believe that women are incapable of making effective decisions, women's participation in prominent decision-making roles is restricted by significant cultural and social restraints. Women confront difficulties all around the world, and these difficulties are sometimes context-specific.

Women continue to try to contribute to their quality of life and that of their families, and thus to the economies of various countries, through work. As a result, the literature on the challenges and problems women face at work is not limited to women in unorganised sectors, but also in formal organisations.

Women are more likely than men to be unemployed or work on a temporary basis. The majority of female workers do not have access to social security or health insurance.

As a result, work-related ailments, such as mental stress and other health issues, go unnoticed.

According to available studies, many female workers experience frequent headaches, back pain, circulatory diseases, exhaustion, and emotional and mental issues as a result of their employment. Women who work in certain industries, factories, banks, and hospitals, for example, worry about not having enough time to care for and look after their children.

Most individuals, especially their male counterparts, are suspicious of a working woman's efficiency. Men are often chosen in the upper-class cadres, despite the fact that all qualifications are similar. Authorities are skeptical about women's ability to supervise male employees, make independent judgments, handle crises, and appropriately manage their responsibilities.

Even when women demonstrate their efficiency, authorities are hesitant to promote them, and even when they are, the statement that they were given the job because they were women is always made. Another important issue for working women is sexual harassment. Whether they work in the organised or unorganised sector, whether they are illiterate, low-wage employees or highly educated, high-wage executives, a huge majority of working women suffer sexual harassment at work at some point.

This usually comes from their coworkers or bosses. Despite having appropriate ability to undertake higher-level occupations, women are more likely to hold lower-level positions than males. The purpose of this research is to find out if women face problems in the workplace, what those problems are, and what credible solutions and coping mechanisms can be offered to help them lessen those problems, so that women can understand their own worth and ability to deal with problems in various ways.

1.4 STATEMENT OF THE PROBLEM

Urban working women in the modern India are well-educated, independent, employed, alert and far more energetic. They are marching ahead to men in all the fields. Though they are struggling high by maintaining a balance between the duties and obligations, but still a question always comes to my mind that how far in reality a woman has achieved gender equality and empowerment? In our daily routine, we come across different situations where a woman is well educated, settled, sincere and dutiful but still she faces numerous challenges and problems in life due to the dual responsibilities and expectations. In some of the cases practically witnessed by us, we really feel sorry for the creator of the world-The lady. Hence, this paper tried to pen down the problems and issues faced by urban working women in Thoothukudi city. The objective also includes the key attributes and the factors that have made the life of a woman, so miserable. A

mixed approach is used for the research like self- experiences face to face interviews, daily discussions, news headlines etc. At the end the paper provides certain solutions that can reduce the challenges and conflict in the life of a working women.

1.5 LIMITATIONS OF THE STUDY

This study suffers from the following limitations:

1. This study is confined to only Urban working women in Thoothukudi City.
2. The field study has been made in the selected areas only.
3. Some data are not 100% accurate.
4. Lack of sufficient time is one of the drawbacks of the study.
5. Condition and pattern of work varies according to sector and nature of job. Hence, it is not easy to measure and analyse the problems accurately in relation to their socioeconomic status.

1.7 CHAPTER SCHEME

The present study on “**PROBLEMS AND PROSPECTS OF URBAN WORKING WOMEN IN THOOTHUKUDI CITY**” is organised in to five chapters.

Chapter I deals with Introduction about life of working women, Status of Women in India , Trends of sex ratio in India, Literacy rate in India, distribution of population by workforce in India, Health status and indicators related to women in India, Environmental Protection and violence against women, Statistical Information regarding status of women in India, Women Empowerment, Characteristics, goals, objectives, economic Empowerment of women, Social obstacles to Women Empowerment, employment Trends for women in India, Women at workplace, their social and family problems, Effects of Urbanisation on the status of women, Women Development under Five Year Plans, Government Schemes for Women empowerment.

This chapter also includes Objectives of the study, Methodology, Significance of the Study, Statement of the problem, Limitation of the Study and Chapter Scheme.

Chapter II deals with the Review of Literature and Concepts.

Chapter III deals with the Profile of the Study Area.

Chapter IV deals with Analysis and Interpretation of the data.

Chapter V deals with Findings, Suggestions and Conclusion.

CHAPTER II

REVIEW OF LITERATURE AND CONCEPTS



CHAPTER II

REVIEW OF LITERATURE AND CONCEPTS

2.1 REVIEW OF LITERATURE

According to **Maheswar Panda (2001)**⁶⁶, there was no noticeable difference in job satisfaction between government and non-government college lecturers.

According to **Abbas Madandar Aran and Parvin Abbas**⁶⁷, all six categories of teacher job satisfaction have a significant relationship: work itself, working environment, co-workers, job security, life quality, policy, and school atmosphere motivation (2004). The study discovered that the climate of the school has a bigger impact on teachers' job satisfaction in India than in Iran. Women can develop assets and raise their standard of living, according to **Kumar D. and Clement (2005)**, resulting in progress while maintaining gender equality.

Another barrier, according to **Rustagi Okolo (2010)**⁶⁸, is the paucity of executive female role models as a result of their rarity in high management roles. Similarly, when a woman has already acquired access to organisational hierarchies, this study discovered that there is no gender difference in organisational hierarchies. "Women's lack of influence may be due to survival traits that have made them immune to the effects of men's hierarchies." A men-only hierarchy may have an impact on the election of a management board, but its power after that is limited."

Managerial support, salary, and progression opportunities, according to **Ch'ng H.K. et al. (2010)**⁶⁹, all influence job satisfaction. It was also revealed that the amount of time spent working has a significant impact on the link between management support and job satisfaction of selected Penang private college professors (US).

⁶⁶ Maheswar Panda, Job Satisfaction of College Teachers in the Context of Type of Management, Journal of Educational Research and Extension, Volume: 38, Number: 2, April 2001, pp. 9 – 15.

⁶⁷ Abbas Madandar Aran and Parvin Abbas, Relationship between Secondary School Teachers Job Satisfaction and School organisational climate Iran and India, Pakistan Journal of Psychologic Research, Volume: 19, Number: 2, June 2004, pp. 37 – 49.

⁶⁸ Rustagi,P (2010) Employment trend for women in India. International labor organization Asia Pacific working paper series. (1), PP 1-40.

⁶⁹ Ch'ng H.K.et.The Satisfaction Level of Penang Private Colleges Lecturers, International Journal of Trade, Economics and Finance, Volume: 1, Number: 2, August 2010, pp. 168 – 172.

Malarvizhi M. (2010)⁷⁰ proposed that the government regularise Faculty Improvement Program leaves for pursuing a PhD for self-financing women's Arts and Science college professors, and the UGC agreed (FIP).

Employee satisfaction was averaged at 26.19 percent, according to **Bala Pronay (2011)**⁷¹ According to the findings, certain existing regulations should be amended, and some obsolete rules should be replaced in the event of promotion, while maintaining equal justice in the promotion and pay determination system.

Instructors working in Salem's art institutions are dissatisfied with their jobs, according to **Kayalvizhi S and K. Chokkanathan (2011)**⁷² Recognition, the work itself, and the possibility of progress were extrinsic motivators, while the institution's low pay and perks were dissatisfying extrinsic factors.

These instructors are dissatisfied with their jobs, according to **Archana Bhatia (2012)**⁷³, and officials in Indian higher education should take their concerns into account. The Indian government, the University Grants Commission (UGC), and the management committees of educational institutions should take strong steps to boost teacher morale and, as a result, education quality.

Teaching staff at Arts and Science Colleges who have greater educational qualifications are more satisfied with their professions, according to **Joseph S. Xavier et al. (2012)**⁷⁴ The findings revealed that access to outside options had a greater impact on respondents' job happiness.

⁷⁰ Malarvizhi M., Women's Labour Turnover in Self - Financing Colleges, Southern Economist, Volume: 49, Number: 2, May 15, 2010, pp. 43 – 44.

⁷¹ Bala Pronay, Job Satisfaction of Non-Government College Teachers in Bangladesh, Journal of Education and Practice, Volume: 2, Number: 4, November 2011, pp. 87 – 91

⁷² Kayalvizhi S. and K.Chokkanathan, A Study on Factors Influencing the Job Satisfaction of Lecturers Employed in Self - Financing Arts Colleges, South India, International Journal of Research in Commerce and Management, Volume: 2, Issue: 5, May 2011, pp. 34 – 37.

⁷³ Archana Bhatia, Emergence of SFS Lecturers in Indian Higher Education and their Job Satisfaction, International Journal of in Multidisciplinary and Academic Research (SSIJMAR), Volume:1, No:2, July-Aug 2012, pp. 1 - 11.

⁷⁴ Joseph S. Xavier et al., A study on Job Satisfaction among the Academicians across the Self - Financing Arts and Science Colleges in Thirucirappalli South Tamilnadu, India, International Journal of Management Research and Review, Volume: 2, Issue: 10, Oct 2012, pp. 1764 – 1776.

Government college professors are happier than private college teachers, according to **Imrankhan (2012)**⁷⁵ Gender, marital status, and the type of college attended had little bearing on happiness.

Lecturers are more prone than other professionals to have high levels of occupational stress, according to **Sudalaimuthu S. and B.Angamuthu (2013)**⁷⁶ Gender or marital status had no statistically significant effect on workplace stress. Workplace stress levels were found to be substantially related to age, education, job title, monthly income, work experience, low pay, and lengthy work hours.

Dashora Sophia (2013)⁷⁷ "investigated the barriers to women's advancement in the workplace." She discovered that the majority of female employees were dissatisfied with their career development programmes, and that women were discriminated against in terms of professional advancement chances. According to the findings, companies should make every effort to guarantee that professional development programmes are designed to help women advance in their careers. Women's professional development should be prioritised by top management, and businesses should take affirmative action to solve this issue."

Due to her societal structure, which is still more dominant, **Kumari (2014)**⁷⁸ demonstrated that women's dual responsibilities produce friction and conflict. She found that "traditional authoritarian set up of Hindu social structure remains essentially the same and so women suffer problem of role conflict" in her research of working women in Delhi.

⁷⁵ Imran Khan, Job Satisfaction among College Teachers, VSRD International Journal of Business Management Research, Volume: 2, Number: 12, December 2012, pp. 585 – 587.

⁷⁶ Sudalaimuthu S. and B. Angamuthu, A Study on Occupational Stress of Lectures Employees in Self – Financing Arts and Science Colleges, Wide Spectrum, Volume: 1, Number: 7, May 2013, pp. 19 – 25.

⁷⁷ Dashora, (2013) Problems Faced by Working Women in India. International Journal of Advanced Research in Management and Social Sciences, 2(8), PP (82-94).

⁷⁸ Kumari, V. (2014). Problems and Challenges Faced by Urban Working Women in India. A Dissertation Submitted to the Department of Humanities and Social Sciences, (1)

2.2 CONCEPTS

Gender

Gender is the range of characteristics pertaining to femininity and masculinity and differentiating between them. Depending on the context, this may include sex-based social structures and gender identity.

Age

Age of a respondent is defined as the span of life and is operationally measured by the number of years from his/her birth to the time of interviewing.

Caste

Caste is a form of social stratification characterised by endogamy, hereditary transmission of a style of life which often includes an occupation, ritual status in a hierarchy, and customary social interaction and exclusion based on cultural notions of purity and pollution.

Religion

Religion is usually defined as a social-cultural system of designated behaviors and practices, morals, beliefs, worldviews, texts, sanctified places, prophecies, ethics, or organizations, that generally.

Educational Level

Educational Level is usually thought to mean the highest level of formal schooling a person has completed. Education refers to the discipline that is concerned with methods of teaching and learning in schooling or school like environments as opposed to various nonformal and informal means of socialization.

Family size

Family size refers to the number of member including the respondent himself / herself, his/her wife/ husband children and other permanent dependents, who live and live together in a family unit.

Income

It is the flow of money of an individual or group of individuals or a firm over some period of time. It may originate from the sale of productive services. It may be in the form of wages, profits, rent or interest.

Income Distribution

Total income generated in the economy is shared by individuals (or) by factors of production. Income distribution can be classified as size distribution or (personal income distribution) and functional income distribution.

Wages

Wages are remuneration given to a worker for his contribution in production. Wages are a monetary reward for mental and physical exertion of labour.

Expenditure

Expenditure refers to the total purchase price of a good or service or it is the money spent on something.

Consumption Expenditure

Consumption expenditure comprises of all expenditures incurred by the households exclusively on domestic accounts.

Luxury Item

In economics, a luxury good is a good for which demand increases more than what is proportional as income rises, so that expenditures on the good become a greater proportion of overall spending. Luxury goods are in contrast to necessity goods, where demand increases proportionally less than income.

Savings

Savings is the amount of money left over after spending and other obligations are deducted from earnings. Savings represent money that is otherwise idle and not being put at risk with investments or spent on consumption.

Borrowings

Money borrowed at interest for a specific period of time, it has to be repaid within the stipulated time period else people will get into high debt condition.

Loan

A loan is a form of debt incurred by an individual or other entity. The lender usually a corporation, financial institution, or government advances a sum of money to the borrower. In return, the borrower agrees to a certain set of terms, including any finance charges, interest, repayment date, and other conditions.

Debt

Amount of money borrowed by one person or party from another.

Investment

Investment or investing means that an asset is bought, or that money is put into a bank to get a future interest from it. It is the total amount of money spent by a shareholder in buying shares of a company. In economic management sciences, investments mean longer-term savings.

Banks

A bank is a financial institution licensed to receive deposits and make loans. There are two types of banks; commercial/retail banks and investment banks. In most countries, banks are regulated by the national government or central bank.

Credit

A wide term which has been used in connection with operation of state involving lending, generally for short-term. To give credit is to finance directly, the expenditure of others against future repayment.

Bonus

Bonus is given to employees in various occasions. It may be a Diwali bonus, profit sharing bonus, service bonus, waste elimination bonus or year-end bonus etc.

Chit Funds

A chit Fund is all in one financial instrument. Chit Funds are saving cum borrowing schemes, where member or subscriber agrees to contribute fixed amount every month for the fixed period. The total amount contributed by subscribers shall be auctioned and given as prize money to the needy subscriber every month.

Self –Help Groups

Self-Help group (SHG) is a small voluntary association of poor people, preferably from the same socio-economic background. They come together for the purpose of solving their common problems through self-help and mutual help. The SHG promotes small savings among its members. The savings are kept with a bank.

Standard of living

Standard of living generally refers to the level of wealth, comfort, material goods and

necessities available to a certain geographic area. An evaluation of standard of living commonly includes the following factors: income, quality and availability of employment.

Labour

Labour means all human efforts of body or mind that is undertaken not for pleasure but for securing a reward. It can be productive or unproductive.

Labour Welfare

It refers to all such services, facilities and amenities which adequately contain rest and recreation facilities, sanitary and medical facilities, arrangement for travelling to and from, providing accommodation to workers employed and facilities including social security measures.

Socio Economic Conditions

Socioeconomic status is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education and occupation. If at the current level of output or income could be redistributed equally among all the people, the conditions of the poorest segments would no doubt improve materially.

Poverty

Poverty is associated with per capita income; minimum calorie intake; income level and consumption level. The cutoff point indicating some minimum level of calorie intake food, income level and consumption level is denoted as poverty line and all people lying below it are clubbed together as the poor masses.

Unemployment

Unemployment is a phenomenon that occurs when a person who is actively searching for employment is unable to find work.

Occupation

Any activity by which one earns one's livelihood; a trade, profession or business, employment.

Health

Health is prevention of disease and injury. The health of the cashew nut workers depends on many complex factors such as working conditions, living conditions and diet etc.,

Medical facilities

A health facility is, in general, any location where healthcare is provided. Health facilities range from small clinics and doctor's offices to urgent care centers and large hospitals with elaborate emergency rooms and trauma centers.

Urban

An urban area, or built-up area, is a human settlement with a high population density and infrastructure of built environment. Urban areas are created through urbanization and are categorized by urban morphology as cities, towns, conurbations or suburbs. The creation of early predecessors of urban areas during the urban revolution led to the creation of human civilization with modern urban planning, which along with other human activities such as exploitation of natural resources led to a human impact on the environment.

Promotion

In terms of a career, promotion refers to advancing an employee's rank or position in a hierarchical structure. In marketing, promotion refers to a different sort of advancement.

Character

It refers to the mental and moral qualities distinctive to an individual. It is the group of qualities that make a person, group or thing different from others.

Reputation

Reputation is overall quality or character as seen or judged by people in general. It means a recognition by other people of some characteristic or ability.

Reputation is a ubiquitous, spontaneous, and highly efficient mechanism of social control in natural societies. It is a subject of study in social, management and technological sciences. The concept of reputation is considered important in business, politics, education, online communities, and many other fields, and it may be considered as a reflection of that social entity's identity.

Attitude

Attitude is said to define the personality of a human. Naturally, this falls under two categories, the good and the bad. Attitude is a small thing that makes a big difference. If you are willing to perfect yourself, then you should watch your attitude. One of the best things that bring a big change in a man or a woman's attitude is positive thinking. If you are willing to make yourself

good in front of other people, then the attitude will be one of the determining factors. The best thing about this simple attitude thing is that it can make you look like a winner or a runner at the same time. According to most people, the energetic and positive mindset combination can be said to be one of the best attitudes for all people out there.

Sexual Harassment

It is a type of harassment involving the use of explicit or implicit sexual overtones, including the unwelcome and inappropriate promises of rewards in exchange for sexual favours. It includes arrange of actions from verbal transgressions to sexual abuse or assault. It is unlawful to harass a person (an applicant or employee) because of that person's sex.

Harassment does not have to be of a sexual nature, however, and can include offensive remarks about a person's sex. For example, it is illegal to harass a woman by making offensive comments about women in general.

Depression

Everyone experiences sadness or low mood from time to time, but these feelings generally fade with time. Depression is distinct from a major depressive disorder or clinical depression. It can produce severe symptoms that impair how you feel, think, and handle everyday tasks like sleeping, eating, and working. If you are experiencing any symptoms of depression get yourself checked.

Mental pressure

Stress is a feeling of emotional or physical tension. It can come from any event or thought that makes you feel frustrated, angry, or nervous.

Stress is your body's reaction to a challenge or demand. In short bursts, stress can be positive, such as when it helps you avoid danger or meet a deadline. But when stress lasts for a long time, it may harm your health.

Gender discrimination

Gender discrimination is unequal or disadvantageous treatment of an individual or group of individuals based on gender. Sexual harassment is a form of illegal gender discrimination.

Gender inequality is the social phenomenon in which men and women are not treated equally. The treatment may arise from distinctions regarding biology, psychology, or cultural norms prevalent in the society. Studies show the different experiences of genders across many domains

including education, life expectancy, personality, interests, family life, careers, and political affiliation. Gender inequality is experienced differently across different cultures and also affects non-binary people.

Spouse

A husband or wife, considered in relation to their partner.

Colleagues

A colleague is someone you work with or someone who's in the same profession as you, especially a peer within that profession.

Colleague can be a synonym for co-worker, which is someone who has the same employer as you. But it also used to refer to people who have different employers but who work in the same or a very similar profession, especially when they regularly interact or share knowledge.

Stress

A state of mental or emotional strain or tension resulting from adverse or demanding circumstances.

Migraine

A recurrent throbbing headache that typically affects one side of the head and is often accompanied by nausea and disturbed vision.

Hypertension

Also known as high blood pressure (HBP), is a long-term medical condition in which the blood pressure in the arteries is persistently elevated. High blood pressure usually does not cause symptoms.

Dizziness

A sudden internal or external spinning sensation, often triggered by moving head too quickly.

CHAPTER III

PROFILE OF THE STUDY AREA



CHAPTER III

PROFILE OF THE STUDY AREA

Profile of the study Area – Thoothukudi District

Thoothukudi is a port on situated in Gulf Manner about 125Km. Thoothukudi is part of the pearl Fisheries Coast and it is known for Pearl Fishing and Ship Building industries. The major labour of Thoothukudi is well known fishing centre. It is one of the oldest seaports in the world and was the seaport of the Pandian Kingdom after Korkai near Palayakayal it was later taken over by the Portuguese in 1548 capture by the batch in 1658 and coded to British in 1825. The light built in 1842 marked the beginning of the history harbour development in the city. Thoothukudi was established as a municipality 1866 with Roche Victoria as its First chairman it attained than status of Corporation on August 5th 2008 after 142 years of being a municipality.

Thoothukudi district has given India many great Freedom Fighters like the great poet Subramaniya Bharathi, V.O.Chidambaram Pillai, Veerapandia Kattapomman, Vellaiyathevar, Sundharalingam etc.,

Geography

Thoothukudi District is situated in the extreme South-Eastern corner of Tamilnadu. It is bounded on the east and south-east by the Gulf of manner and on the west and south east by Tirunelveli district. The total area of the district is 4621Km, the administrative headquarters within. Thoothukudi district was derived from Tirunelveli district in 1986.

Thoothukudi was a part of Tirunelveli Loksabha till 2009. Thoothukudi was separated from Tirunelveli Loksabha constituency comprises the whole of Thoothukudi District, which includes Vilathikulam, Thoorhukudi, Tiruchendur, Srivaikundam, Ottapidaram and Kovilpatti.

Notable People

1. Subramanya Bharathi, Freedom fighter, poet, journalist, Indian Independence activist and social reformer.
2. V.O.Chidambaram Pillai, also known as Kappalottiya Tamilan.
3. Shiva Nadar, Indian industrialist and philanthropist. He is the founder and chairman of HCL Technologies.
4. Veerapandia Kattabomman.
5. Oomathurai.
6. AlagumuthuKane.
7. Veeran Sundharalingam was from the district.
8. Ramanichandran, a prolific Tamil romance novelist, and presently the best-selling author in the Tamil language

Water bodies

There are no large reservoirs in this district so the papanasam and Manimutharadams located in the Tirunelveli district in Thamirabarani River's flow are the main sources of irrigation. Other than the Thamirabarani River, the river Vaipar in Vilathikulam taluk, the river Karumeni which traverses through Sathankulam and Tiruchendur taluks, Palayakayal are all sources

Population

According to the 2011 census Population of India is 1,278,119,445 (1.27 billion) Tamil Nadu has a population of 76,656,206 and Thoothukudi population is 1,756,176. This gives it a ranking of 277th in India (out of the total area of 640)

Industry

Major industries such as SPIC< Chemical Industries, Heavy water plant and Thermal plant are located here. SIPCOT has rendered fruitful services to the state by identifying, developing, maintaining industrial areas in backward and most backward taluqs of the state, which had potential to grow. SIPCOT's role in assisting The industrialization in the state is not only quantitative but also qualitative SIPCOT has

created industrial complexes, Parks, growth centers in various strategically located places which occupy a place in Tamilnadu's industrial map.

The Thoothukudi city has Five Arts College, One Government Polytechnic, One Fisheries College, One Government Medical College, Two Training Colleges and Fourteen Higher Secondary Schools, Six Primary Schools, Nine Middle Schools. There is no adult literacy centre, once reorganized short hand writing and twenty-one Vocational Training institution and four Public Libraries.

Medical Facilities

There are also many hospitals including one District College Hospital and many private Hospitals with all facilities. They are Sundaram Arulraj Hospital, AVM Hospital, City Hospital and the Sacred Heart Hospital (American Hospital) and there are so many clinical laboratories and few x-rays centres that are saving the people of Thoothukudi.

Airport

Thoothukudi airport is at Vagaikulam 14km from the heart of the city. It was for some year closed to commercial traffic but reopened in April 2006. The state government plans to extend the runway and modernize the airport to handle more traffic and bigger aircraft. There was also a proposal in 2009 for a green field airport. Kingfisher & Spice Jet are operating flights daily.

Rail ways

Thoothukudi city railway station is one of the oldest stations in India and south Indian Railway began Madras-Thoothukudi service connecting with the beat to Ceylon in 1899. The station was declared a modal station in 2007 and several Developments are in process. There is also another station, known as Thoothukudi Melur.

Roads

Thoothukudi city is well connected by road. The major Highways are;

- Thoothukudi – Madurai – Trichy (NH45-B)
- Thoothukudi – Palayamkottai (NH7-A)

- Thoothukudi – Palayamkayal – Thiruchendur (State Highway)
- Thoothukudi – Ramanathapuram (State Highway) we recently upgraded as part of the East Coast Road (ECR) project which will soon connect Thoothukudi with through coastal line.

Geology

Being a hinter town most of the land has sandy surface. The southern part of the town has gravel soil. A channel is running through the town towards east and confluence with the sea.

Climate and Temperature

The climate is generally hot and drier in the district except in coastal area. The mean maximum temperature varies from 18°C to 26.7°C. The highest temperature was recorded between the months of May and August and the two lowest during December and January.

Tourism

Apart from being a commercial center, this is an exotic tourist attraction for its sunny and pristine sandy beaches. Sea sports like surfing and paragliding facilities are also available. There are lot religious and historically important places around Tuticorin. The district headquarter is well connected by road, rail, air and sea. People of the district hope to generate significant revenue from developing tourism sector.

- Kulasekharapatnam Beach.
- Lord Subramanya Temple, Thiruchendur.
- Holy Cross Church, Manapad.
- Harbour Beach, Tuticorin.
- Roche Park, Tuticorin.
- Pearl Beach, Tuticorin.

THOOTHUKUDI DISTRICT



CHAPTER IV

ANALYSIS & INTERPRETATION



CHAPTER IV

ANALYSIS AND INTERPRETATION

In the present study, the socio-economic profile of the selected paddy cultivators such as age, education, caste, type of family, marital status, family size, number of earning members, professional background, personal income, family income, family expenditure and saving have been discussed.

TABLE 4.1
Age-wise classification of the Respondents

Sl. No	Age group	No. of Respondents	Percentage
1.	18-20	20	25
2.	21-30	33	44
3.	31-40	8	10
4.	41-50	4	5
5.	51-60	5	8
6.	61-70	5	8
	TOTAL	75	100

Source: Survey data

From table 4.1, it has been revealed that the majority of the urban working women i.e. 44% are in the age group of 21-30 years, 25% of the respondents are in the age group of 18-20 years, 10% respondents are in the age group of 31-40 years, 8% are in the age group of 51-60 years and 61-70 years and 5% are in the age group of 41-50 years.

Figure 4.1

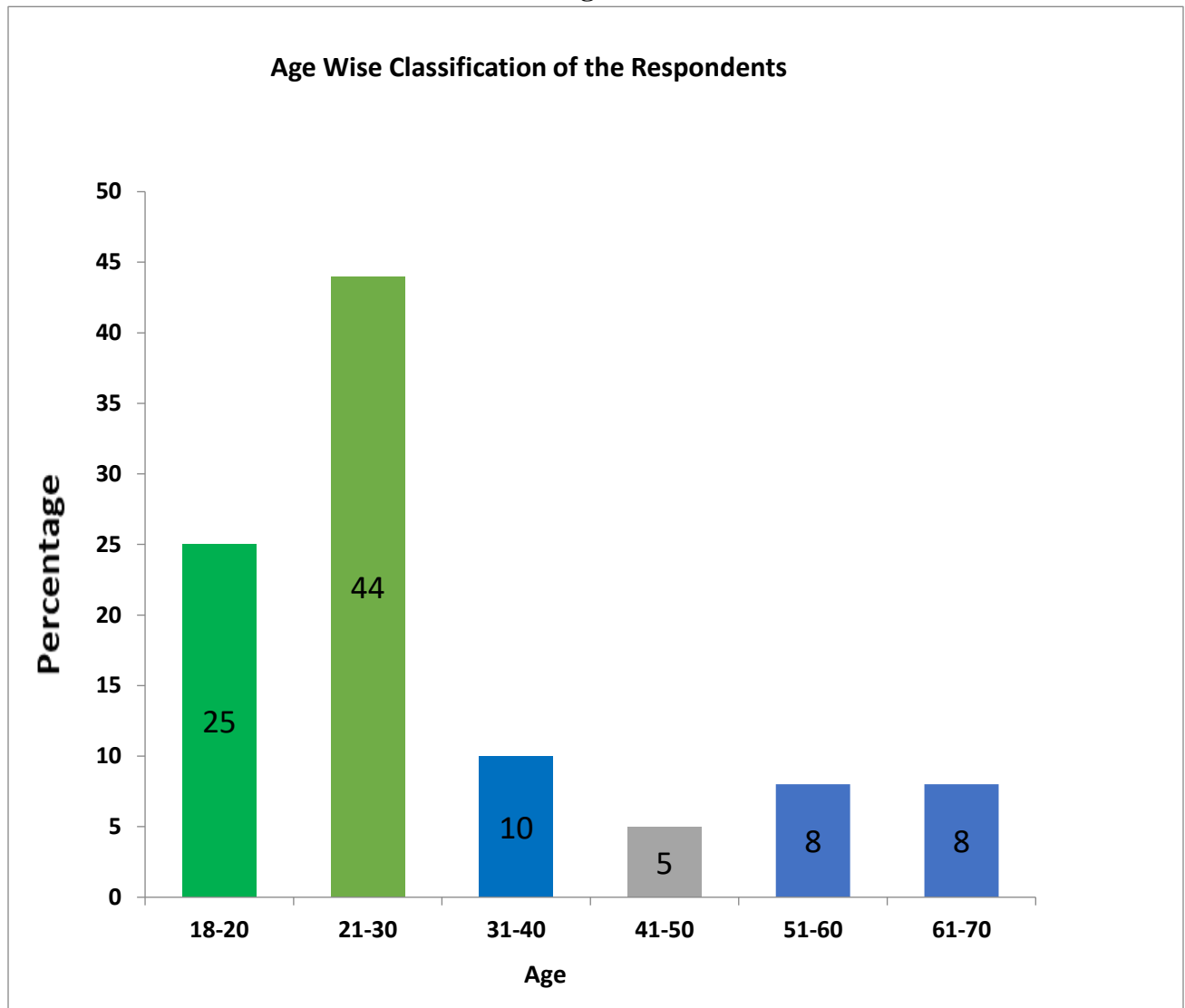


TABLE 4.2
Marital status of the Respondents

S. No	Marital status	No. of Respondents	Percentage
1.	Married	29	39
2.	Unmarried	46	61
	TOTAL	75	100

Source: survey data

Table 4.2 reveals that out of 75 respondents, a maximum of 61% of urban working women are unmarried, while 39 % urban working women are married.

Figure 4.2

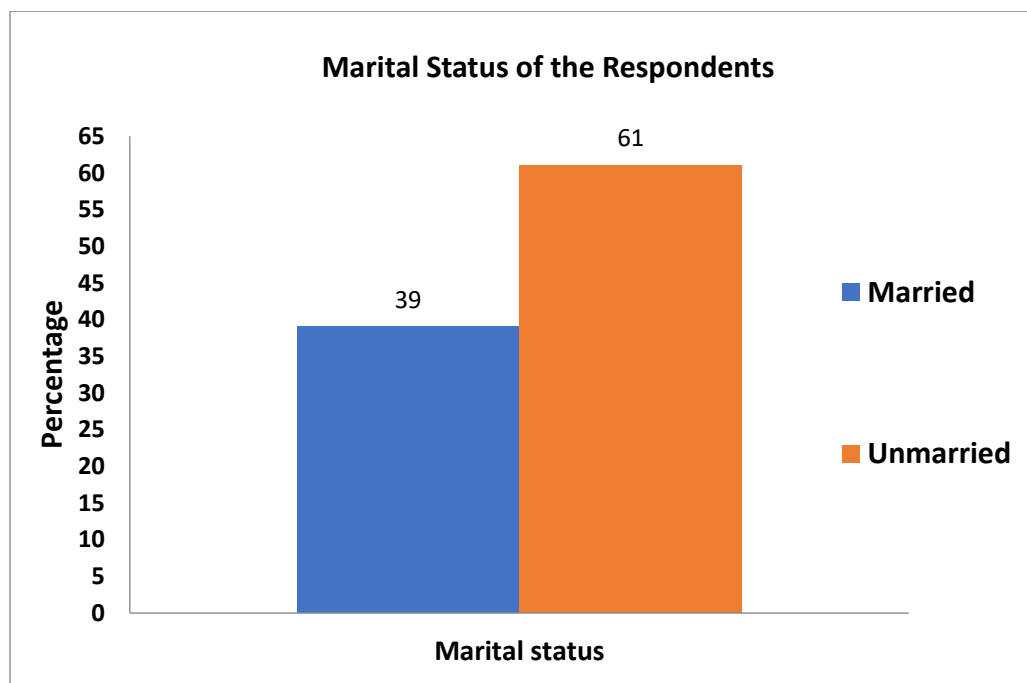


TABLE 4.3**Caste-wise classification of the Respondents**

S. No	Caste	No. of Respondents	Percentage
1.	BC	45	60
2.	MBC	10	13
3.	OC	5	7
3.	DNC	6	8
4.	SC/ST	9	12
	TOTAL	75	100

Source: Survey data

From table 4.3 it has been observed that out of 75 sample urban working women, 60% of the respondents belong to BC, 13% of the respondents belong to MBC, 8% of the respondents belong to DNC, 12% of the respondents belong to SC/ST and 7% of the respondents belong to OC.

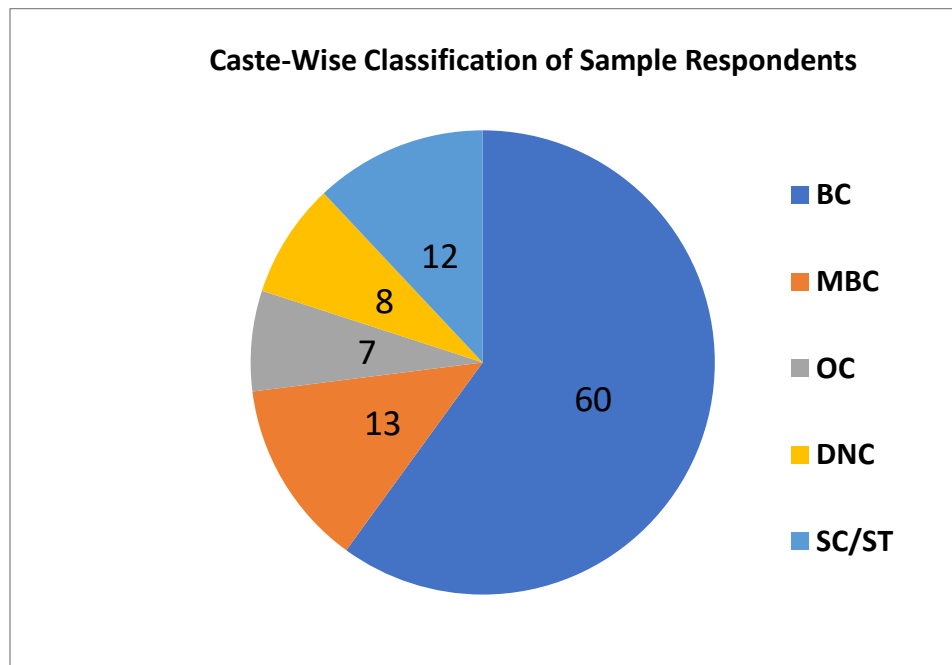
Figure 4.3

TABLE 4.4
Religion of the Respondents

S. No	Religion	No. of. Respondents	Percentage
1.	Hindus	56	75
2.	Muslims	2	3
3.	Christians	17	22
	TOTAL	75	100

Source: survey data

The study showed that majority of the respondents i.e. 75% are Hindus, 22% of the respondents are Christians and only 3% of the respondents are Muslims.

Figure 4.4

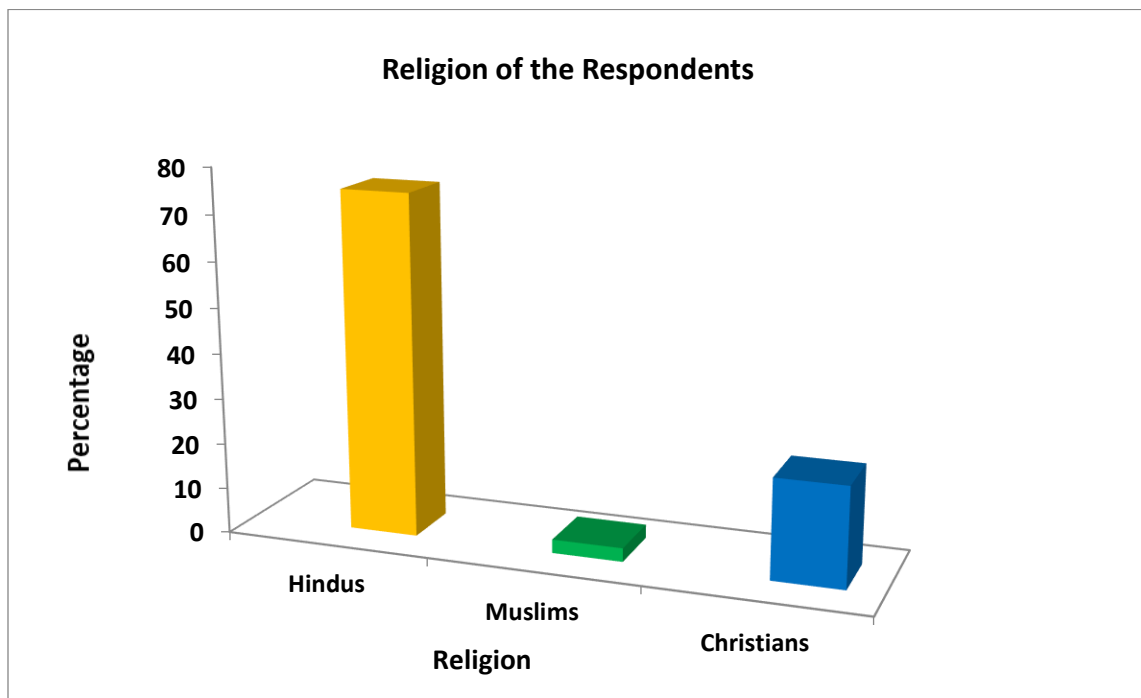


TABLE 4.5
Educational Qualification of the Respondents

S. No	Education	No. of Respondents	Percentage
1.	High school	24	32
2.	Higher Secondary	30	40
3.	Graduate/ Post Graduate	21	28
	TOTAL	75	100

Source: survey data

It has been inferred from table 4.5 that a maximum of 40% of the respondents have attained education up to Higher Secondary level, 32% of the respondents have completed high school and 28% of the respondents are Graduates and Post Graduates.

Figure 4.5

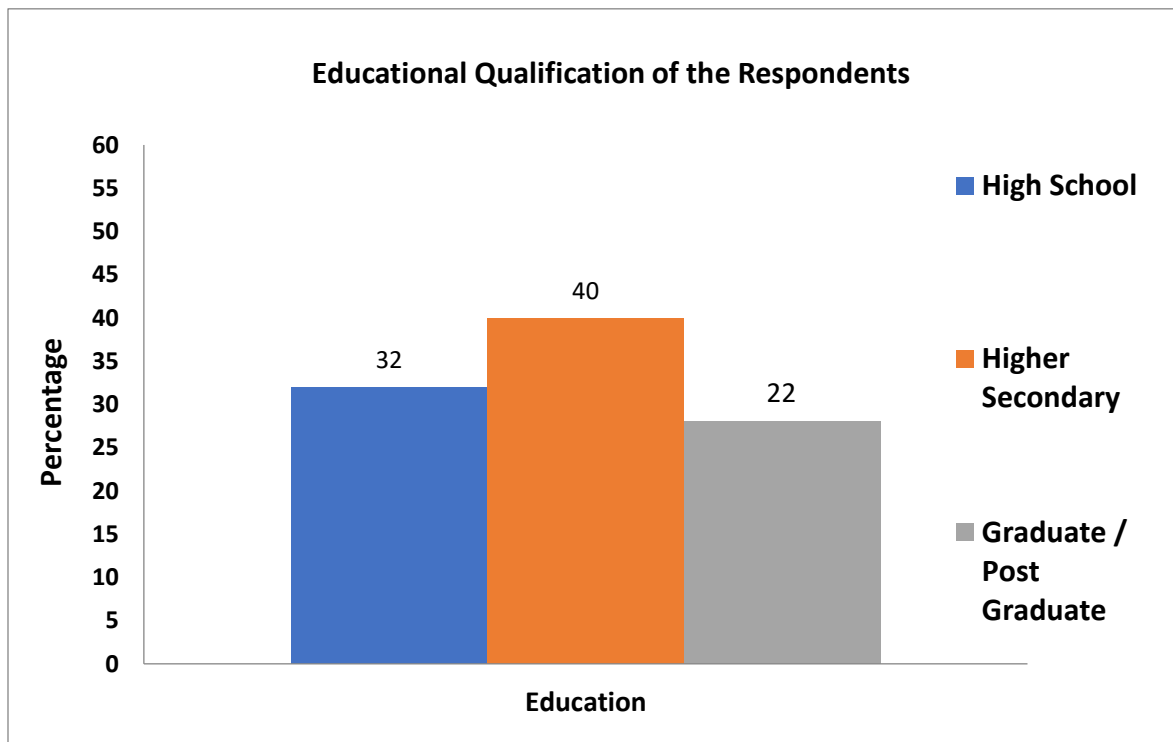


TABLE 4.6
Type of Family

S. No	Type of family	Number of Respondents	Percentage
1	Nuclear family	45	60
2	Joint family	30	40
	TOTAL	75	100

Source: Survey data

It has been inferred from table 4.6 that out of 75 sample urban working women, 60% of the respondents belong to Nuclear family and 40% of the respondents live in Joint family.

Figure 4.6

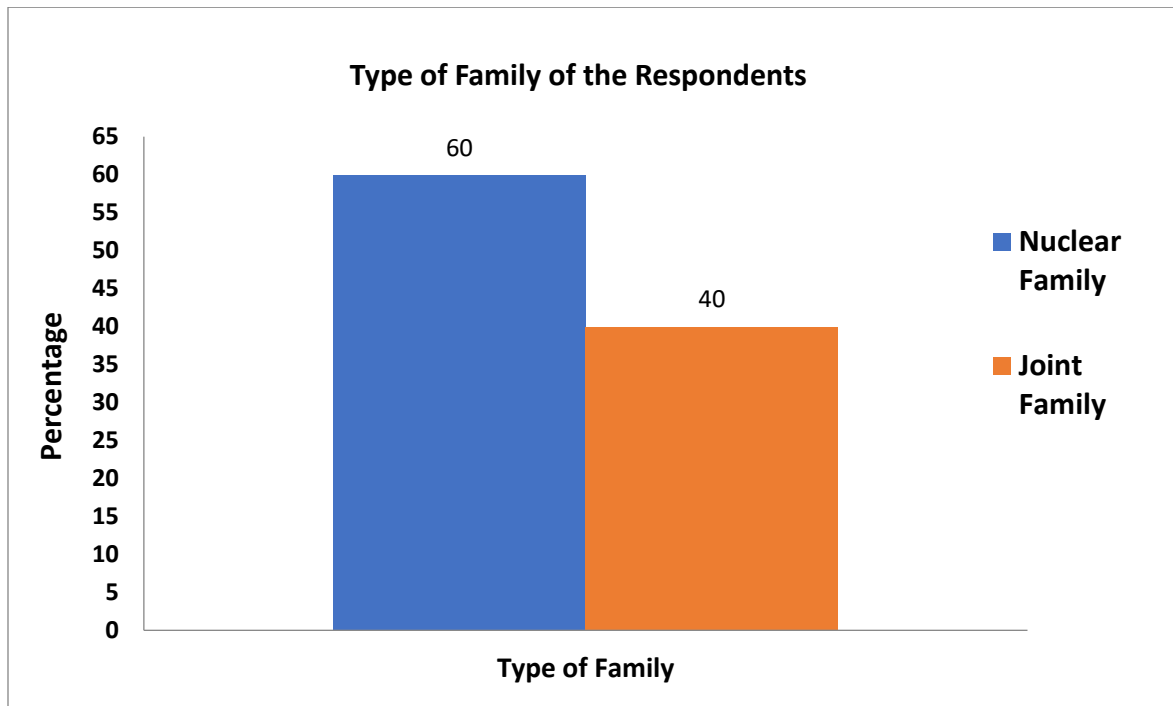


TABLE 4.7

Family Members of the Respondents

S. No	Family Size	Numbers of Respondents	Percentage
1	Below 3	15	20
2	3-5	50	66
3	Above 5	10	14
	TOTAL	75	100

Source: survey data

A maximum number of respondents i.e. 66% have family members ranging from to 3-5, 20% of the respondents have family members below 3 and 14% of the respondents have family members above 5.

Figure 4.7

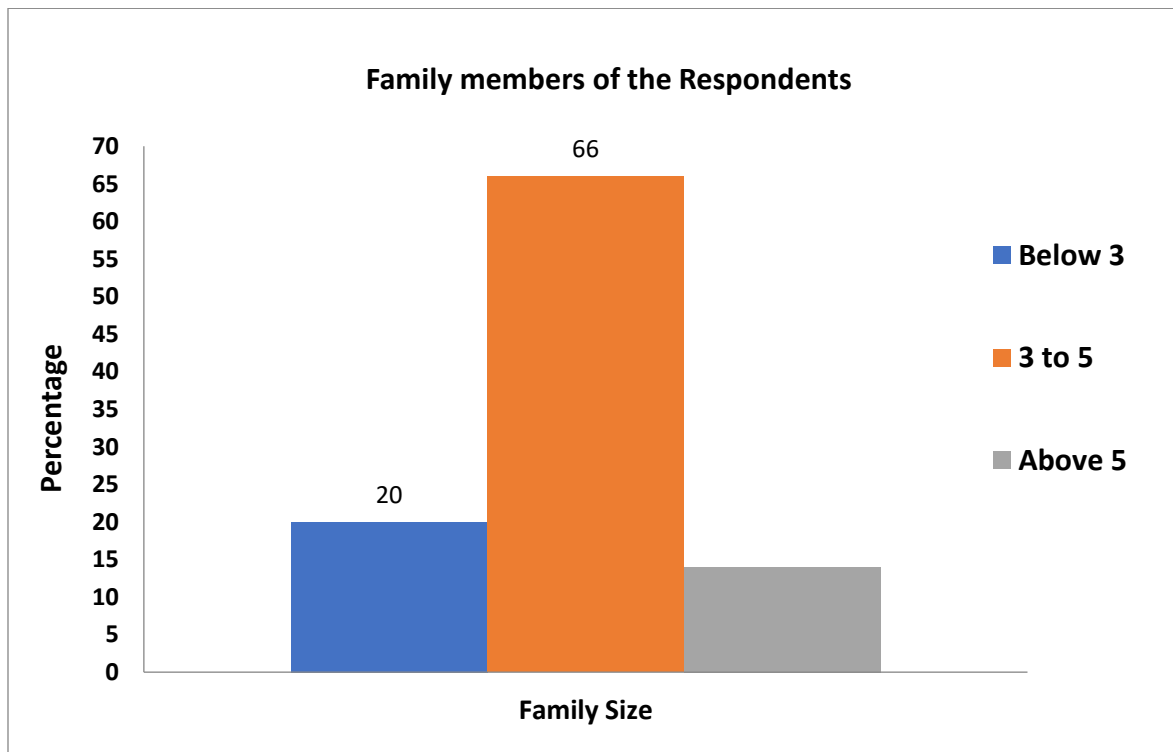


TABLE 4.8
Nature of House

S. No	Nature of House	Number of Respondents	Percentage
1	Owned	40	54
2	Rented	35	46
	TOTAL	75	100

Source: survey data

From table 4.8 it has been conferred that out of 75 sample urban working women 54% of the respondents live in their own house 46% of the respondents live in rented house.

Figure 4.8

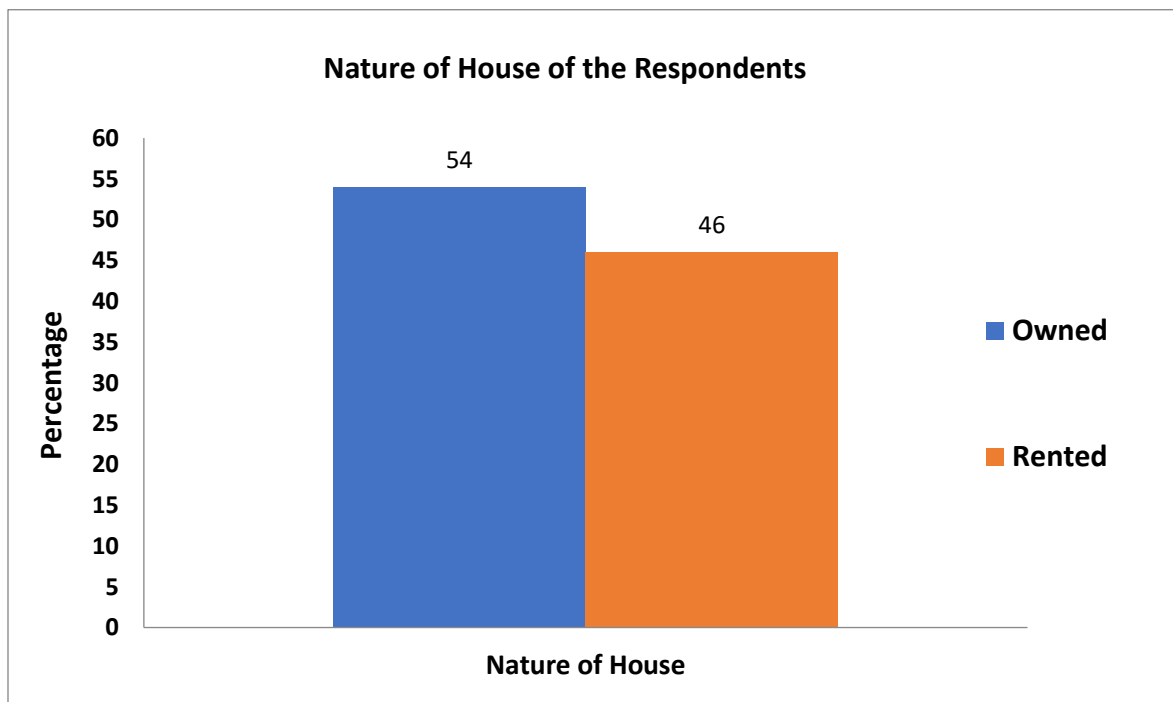


TABLE 4.9
Nature of job

S. No	Nature of Job	No. of Respondents	Percentage
1.	Central	9	12
2.	State	5	7
3.	Private	61	81
	Total	75	100

Source: Survey data

Form the table, it is clear that out of 75 sample urban working women, 81% of the respondents are in private jobs, 12% of the respondents work in Central government and 7% of the respondents are in state government jobs.

Figure 4.9

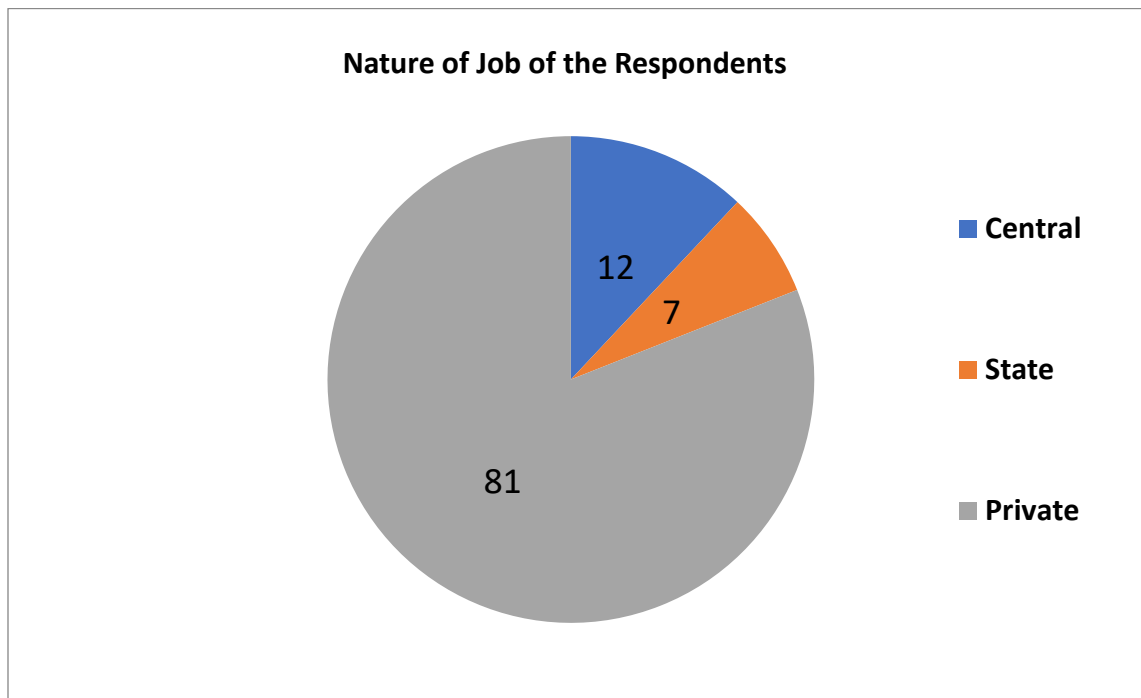


TABLE 4.10
Years of Experience

S. No	Experience	Number. of Respondents	Percentage
1	Below 3 years	28	37
2	3-6 years	19	25
3	7-10 years	12	16
4	11-14 years	9	13
5	15 years &above	7	9
	TOTAL	75	100

Source: Survey data

The above table shows that 37% of the respondents have below 3 years of experience, 25% of the respondents have 3-6 years of experience, 16% of the respondents have 7-10 years of experience, 13 % respondents have 11 to 14 years of experience and 9 % have experience of above 15 years.

Figure 4.10

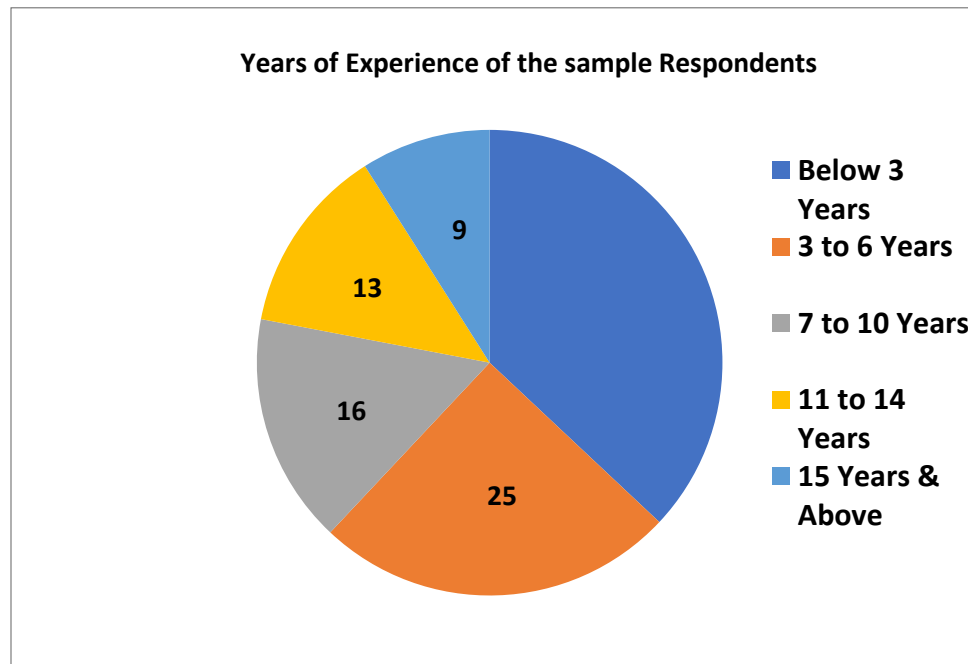


TABLE 4.11**Monthly Income of the Respondents**

S. No	Monthly Income (In Rs.)	Number of Respondents	Percentage
1	2000 - 5000	16	21
2	6000 -10,000	24	32
3	11,000 -15,000	11	15
4	16,000- 20,000	8	11
5	21,000 -25,000	10	13
6	26,000-30,000	6	8
	TOTAL	75	100

Source: survey data

The above table shows that 32% of the respondent's monthly income is in the range of Rs.6,000 -Rs, 10,000, 21% of the respondents earn Rs.2000- Rs, 5000, 15% of the respondents earn between Rs.11,000-Rs.15,000, 13% of the respondents earn between Rs. 21,000-Rs. 25,000, 11% respondents earn Rs.16,000-Rs. 20,000 and 8% earn between Rs. 26,000 -Rs.30,000.

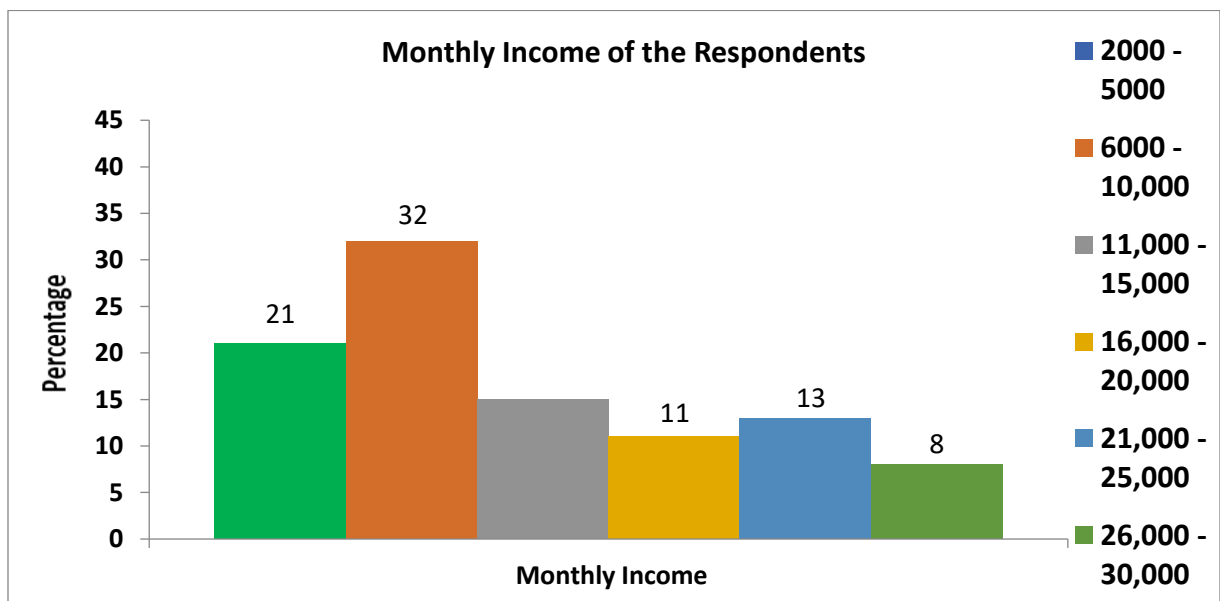
Figure 4.11

TABLE 4.11.1**Average Monthly Income of the Respondents**

S. No	Income	Mind-Point(m)	Frequency ($\sum f$) No. of Respondents	$\sum fm$
1.	2000 – 5000	3,500	16	56,000
2	6000 – 10,000	8,000	24	1,92,000
3	11,000 – 15,000	13,000	11	1,43,000
4	16,000 – 20,000	18,000	8	1,44,000
5	21,000 – 25,000	23,000	10	2,30,000
6	26,000 – 30,000	28,000	6	1,68,000
	Total		75	9,33,000

Source: Survey data & Analysis

$$AM = \sum fm / \sum f$$

$$9,33,000 / 75 = 12,440.$$

From the above table it has been calculated that the average monthly income of the Urban working women is Rs. 12,440

TABLE 4.12

Monthly Family Expenditure of the Respondents

S. No	Monthly Family Expenditure	No. of Respondents	Percentage
1	Less than Rs.5000	25	35
2	Rs.5000 – Rs.8000	10	13
3	Rs.8000 – Rs11000	10	13
4	Rs.11000 – Rs. 14000	20	26
5	Above Rs.14000	10	13
	TOTAL	75	100

Source: survey data

The above table shows that 35% of the respondents have family expenditure less than Rs.5000, 26% of the respondents spend between Rs.11,000- Rs.14,000 13% of the respondents spend Rs.5000-Rs.8000. Again 13 % respondents spend Rs.8000-Rs11000 and another 13 % spend above Rs.14000.

Figure 4.12

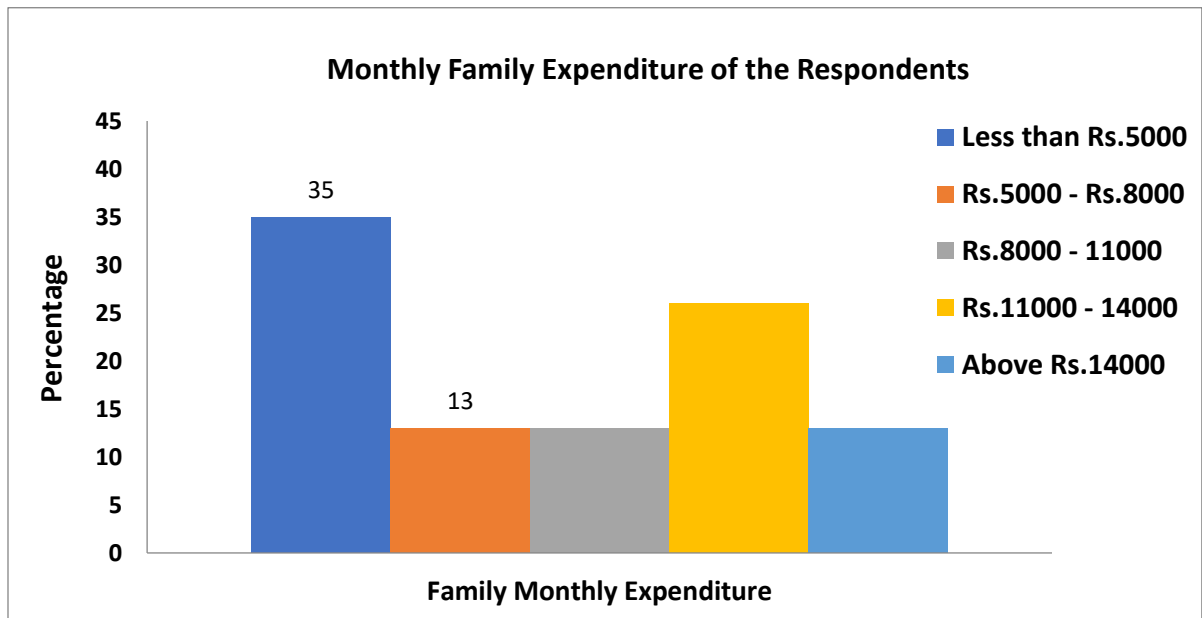


TABLE 4.13

Savings Habit of the Respondents

S. No	Savings Habit	No. of Respondents	Percentage
1.	Yes	65	87
2.	No	10	13
	Total	75	100

Source: Survey data

From the above the table it is clear that 87% of the respondents have the habit of savings and 13% of the respondents don't have the habit of savings.

Figure 4.13

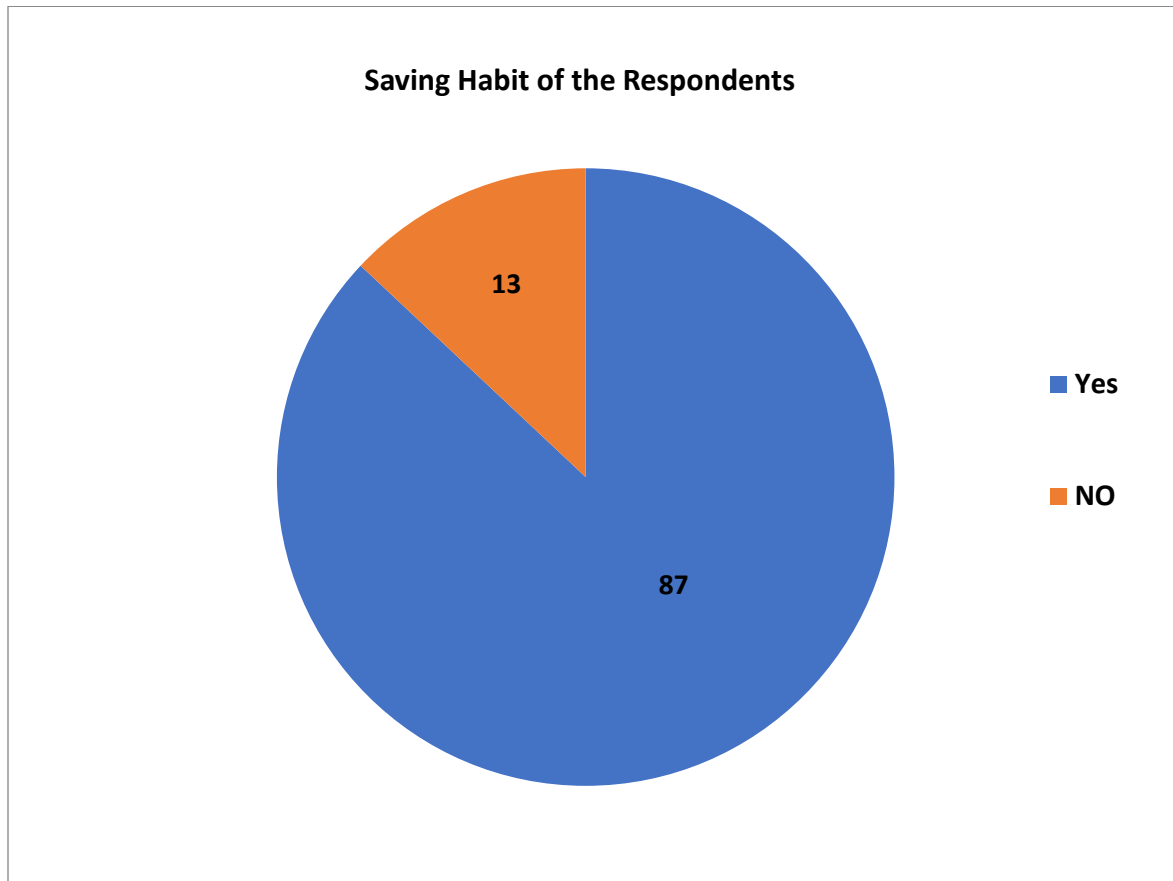


TABLE 4.14
Mode of Savings

S. No	Mode of saving	No. of Respondents	Percentage
1.	Bank	36	48
2.	Post office	22	29
3.	Chit Fund	9	12
4.	Others	8	11
	Total	75	100

Source: survey data

From the above the table 4.14 it has been found out that out of 75 sample urban working women 48% of the respondents save through Banks, 29 % of the respondents save through post office, 12% of the respondents save through Chit funds and 11% save through other mode of saving.

Figure 4.14

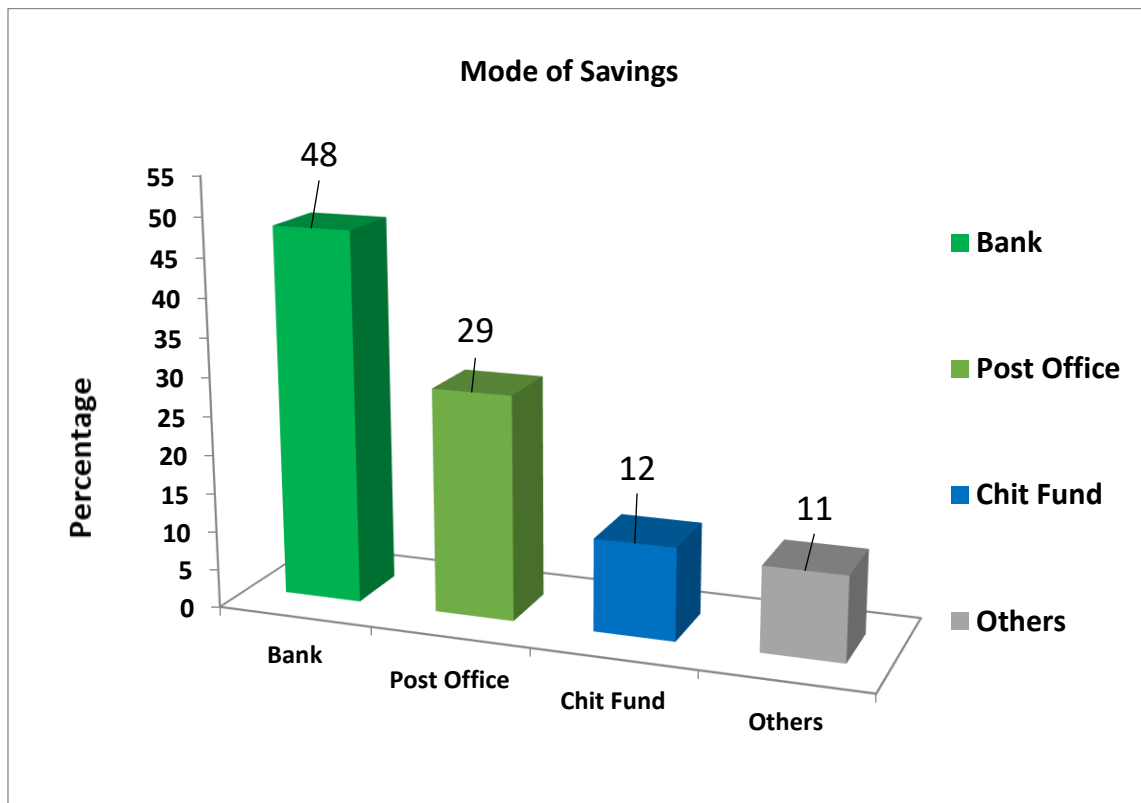


TABLE 4.15

Loan Condition of the Respondents

S. No	Loan Condition	No. of Respondents	Percentage
1.	Yes	70	93
2.	No	5	7
	Total	75	100

Source: survey data

From the above table it is identified that 93% of the respondents have taken loan and 7% of the respondents don't have any loan.

Figure 4.15

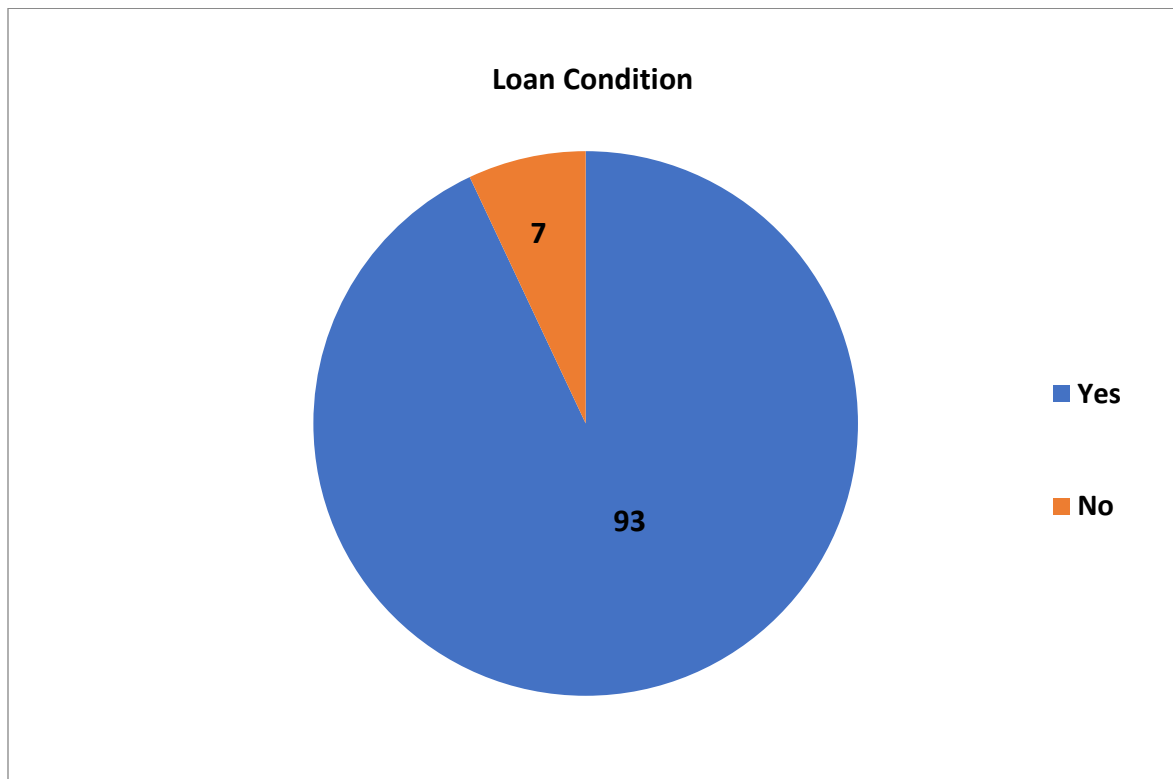


TABLE 4.16

Mode of Loan

S. No	Mode of loan	No. of Respondents	Percentage
1.	Bank	52	69
2.	Post office	8	11
3.	Chit funds	5	6
4.	Others	10	14
	Total	75	100

Source: survey data

From above the table it is identified that 69% of the respondents have taken loan from Banks, 11% of the respondents have taken loans from post office, 6 % of the respondents have loans through chit funds, and 14% of the respondents to have taken loan from others like SHG's, Money lenders etc.

Figure 4.16

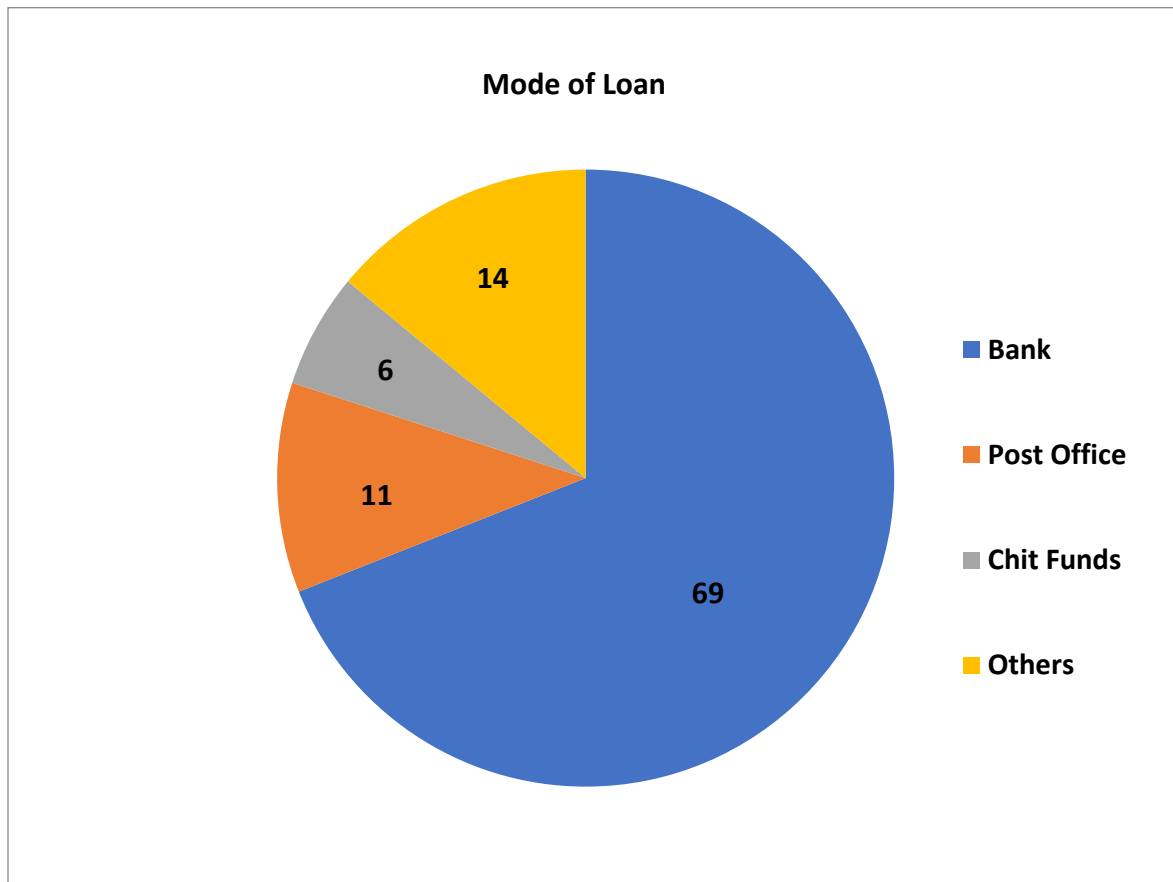


TABLE 4.17

Time taken for promotion in comparison with Male colleagues

S. No	Time taken for promotion	No. of Respondents	Percentage
1.	Equal time	15	20
2.	Longer than male colleagues	50	66
3.	Earlier	10	14
	Total	75	100

Source: survey data

It has been found out that 66% of the respondents believe that it takes longer time to get promoted than male colleagues, 20 % say that it takes equal time to get promoted and 14% say that they get promotion earlier than male colleagues.

Figure 4.17

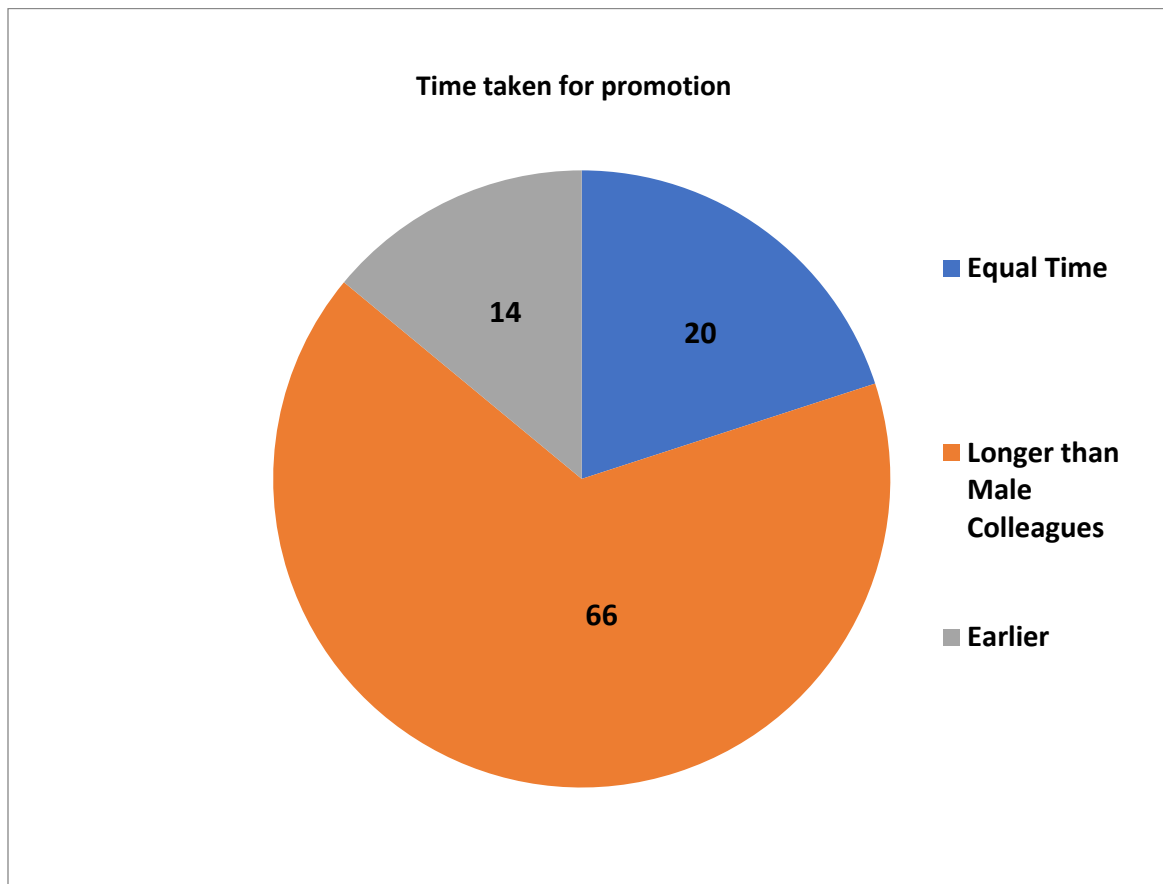


TABLE 4.18

Getting promotion on the basis of Merit

S. No	Getting promotion on the basic of Merit	No. of Respondents	Percentage
1.	Yes	30	40
2.	No	15	20
3.	Can't say	30	40
	Total	75	100

Source: survey data

It has been found that 40% of the respondents agree that they get promotion on the basis of merit and 20% disagree with the opinion and 40% don't wish to respond to the opinion.

Figure 4.18

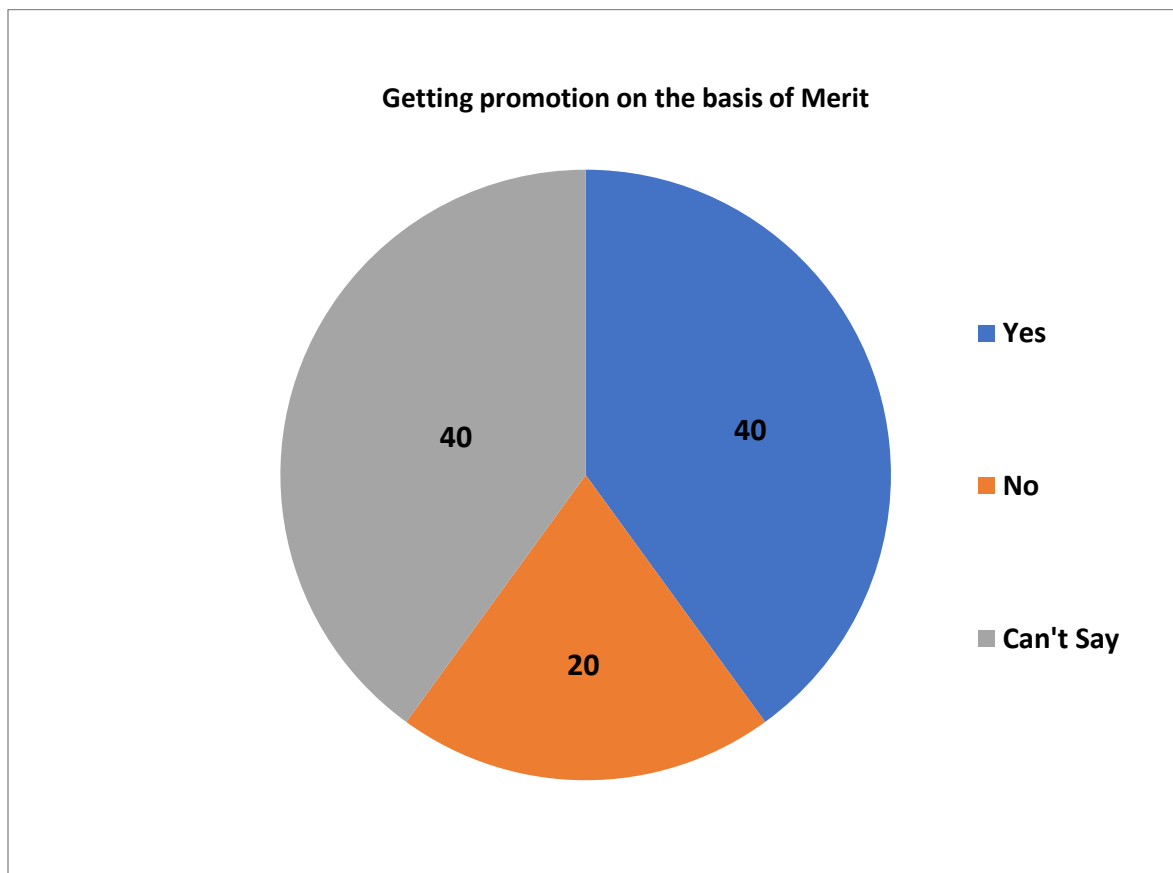


TABLE 4.19
Opinion on Equal Working Hours (only private employees)

S. No	Opinion on Equal working Hours	No. of Respondents	Percentage
1.	Less than male employees	23	38
2.	Equal to male employees	38	62
	Total	61	100

Source: survey data

From table 4.19 it has been found that 38% of the respondents have fewer working hours compared to male colleagues and 62% of respondents have equal working hours in comparison to male colleagues.

Figure 4.19

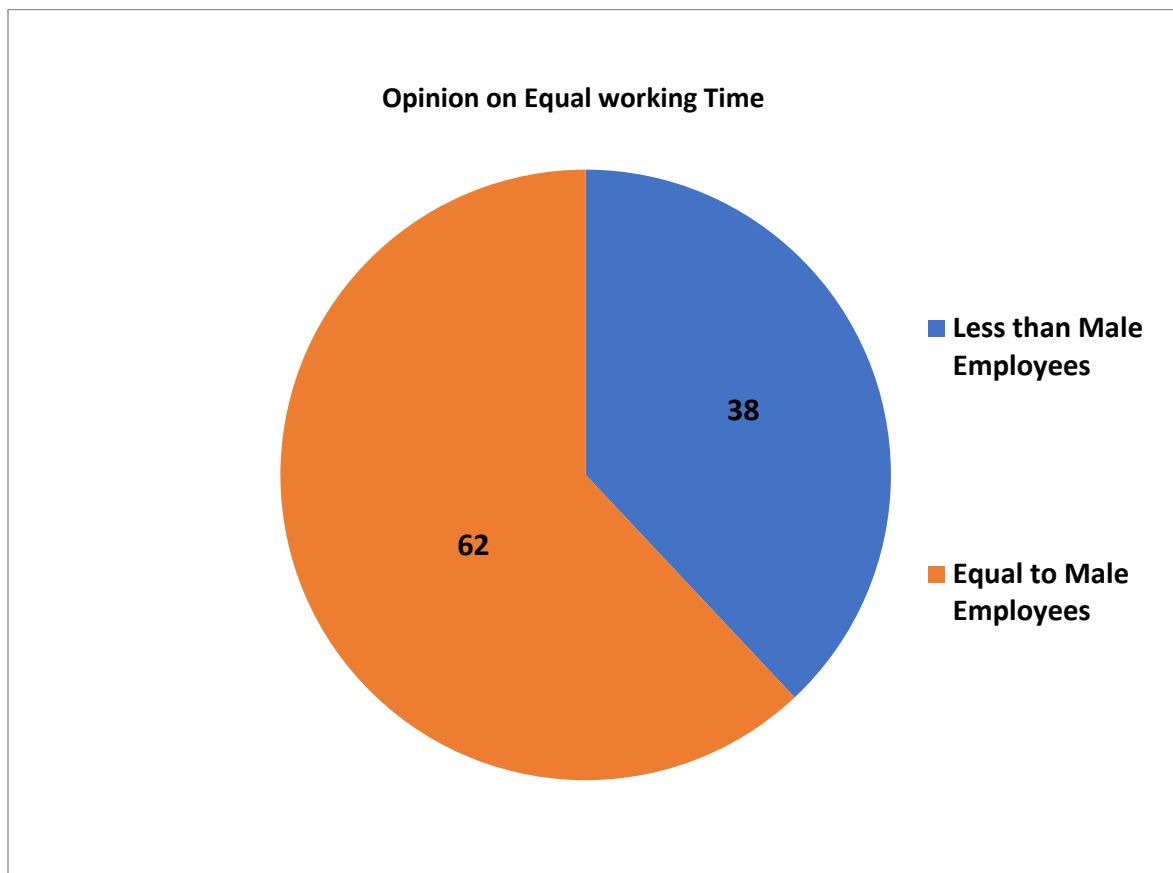


TABLE 4.20

Attitude of Higher Officials Towards Female Employees

S. No	Attitude of Higher Officials	No. of Respondents	Percentage
1.	Co-operative	44	59
2.	Neutral	26	35
3.	Abusive	5	6
	Total	75	100

Source: Survey data

As per the above table, 59 % of the respondents feel that the attitude of the higher officials towards them is Co-operative, 35% of the respondents feel that its neutral and 6% of the respondents feel that the attitude of higher officials towards female employees is abusive.

Figure 4.20

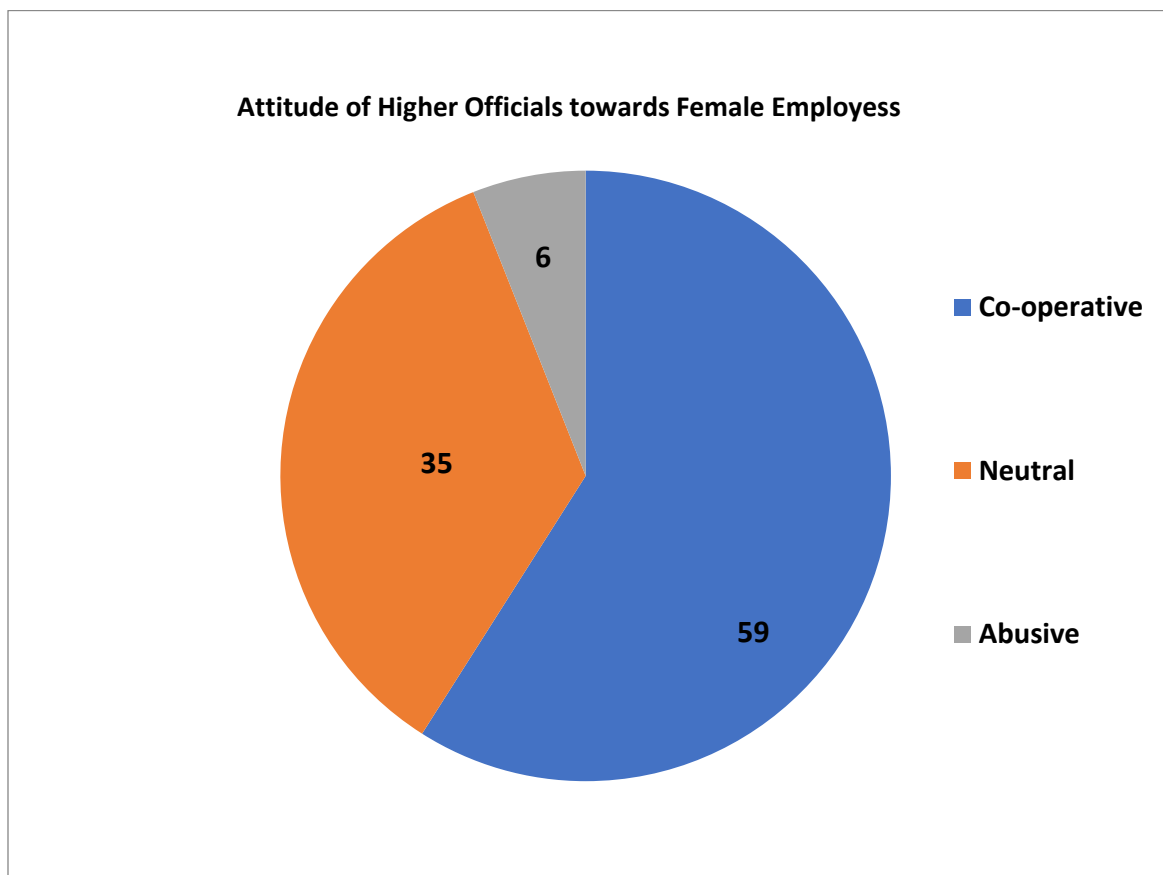


TABLE 4.21

Feel Hesitant to work with Male Colleagues

S. No	Feel hesitant to work with male colleagues	No. of Respondents	Percentage
1.	Yes	30	40
2.	No	45	60
	Total	75	100

Source: survey data

From above the table it has been found that out of 75 sample urban working women, 40% of the respondents hesitate to work with male colleagues and 60 % of respondents do not hesitate to work with their male colleagues.

Figure 4.21

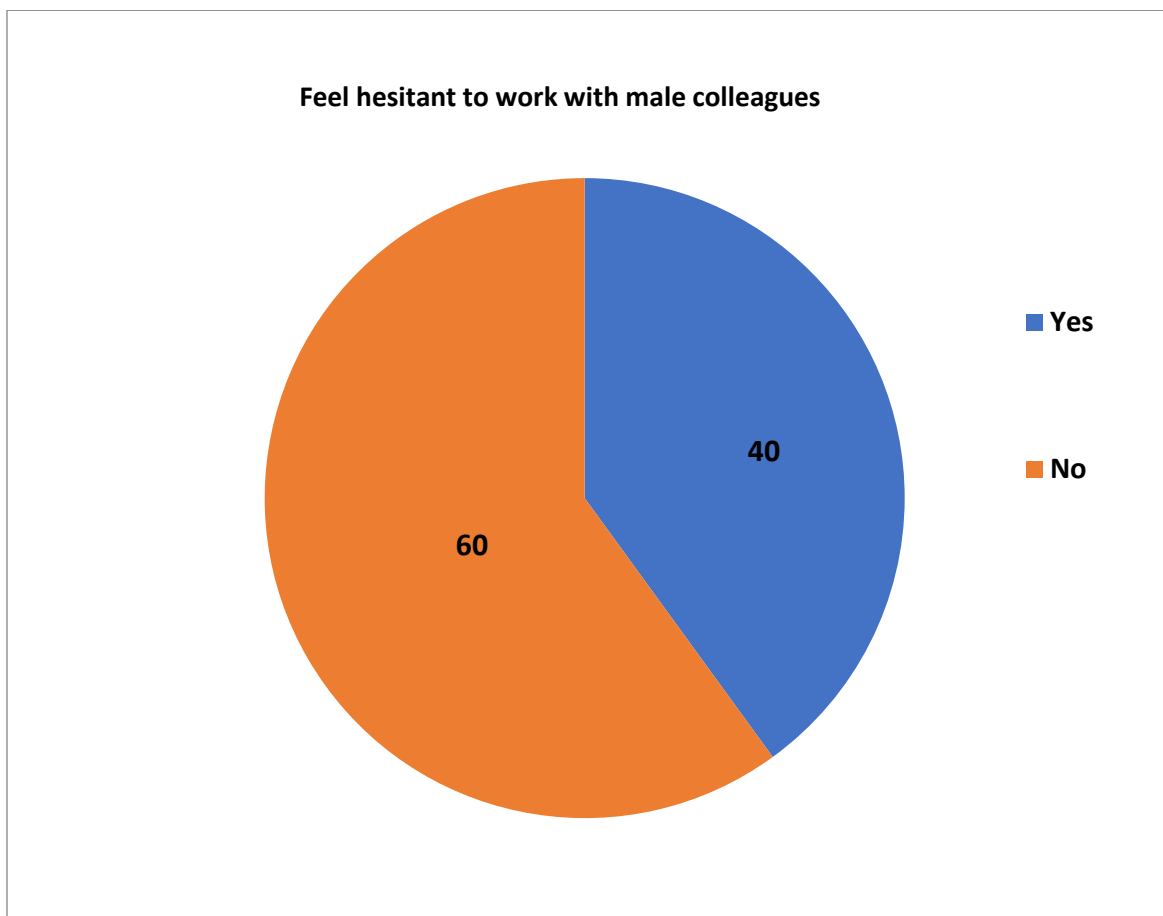


TABLE 4.22

People Drawing Conclusion about Character of Working Women

S. No	People drawing conclusion about character of working women	No. of Respondent	Percentage
1.	Yes	6	8
2.	No	28	37
3.	Can't say	41	55
	Total	75	100

Source: survey data

As per the above table, 8% of the respondents feel that people draw conclusion about their character, 37% respondents say 'NO' to the statement and 55% respondents don't want to comment on the statement.

Figure 4.22

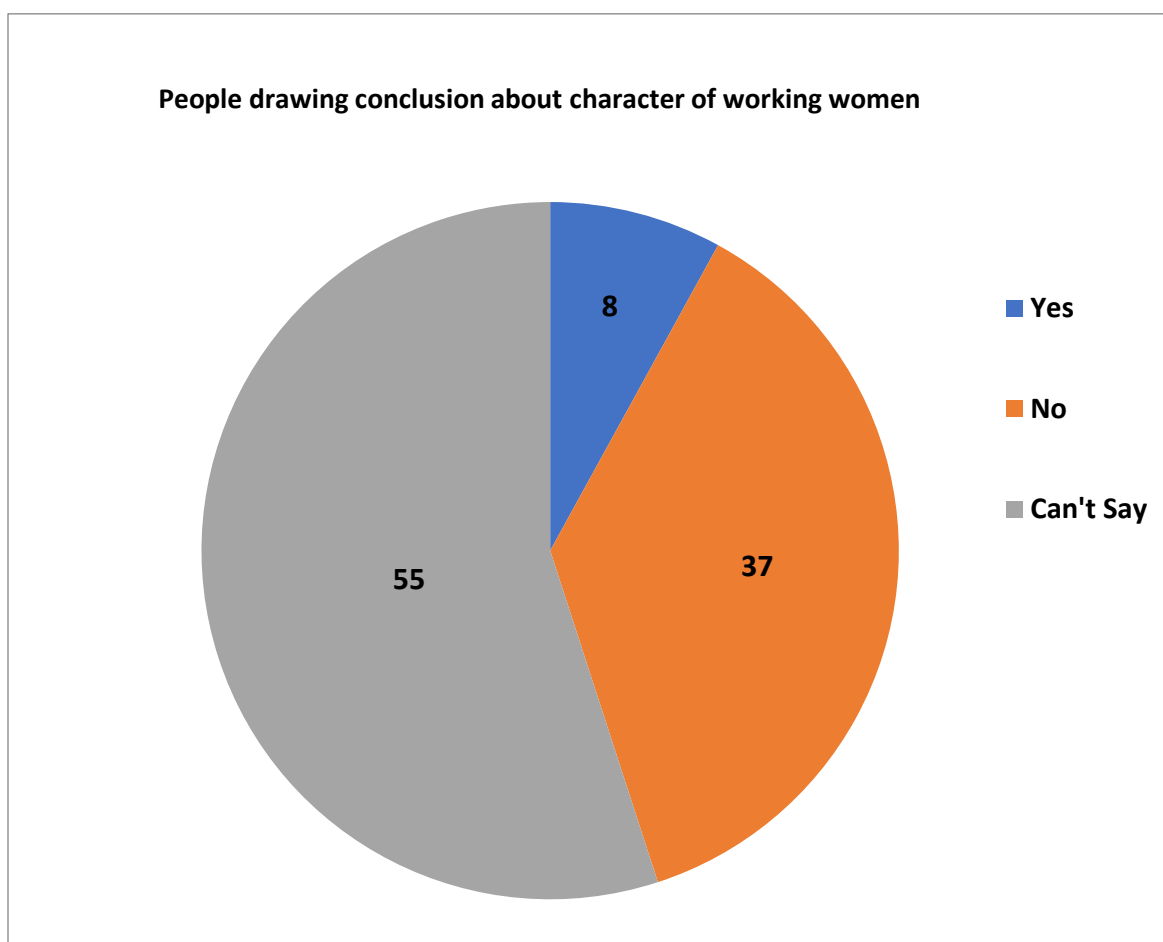


TABLE 4.23

Facing Sexual Abuse at Workplace

S. No	Facing sexual abuse at workplace	No. of Respondents	Percentage
1.	Yes	3	4
2.	No	72	96
	Total	75	100

Source: Survey data

It is revealed that 96% of the respondents say that they haven't faced any sexual abuse at their work place and only 4 % say that they faced sexual abuse and harassment at their workplace.

Figure 4.23

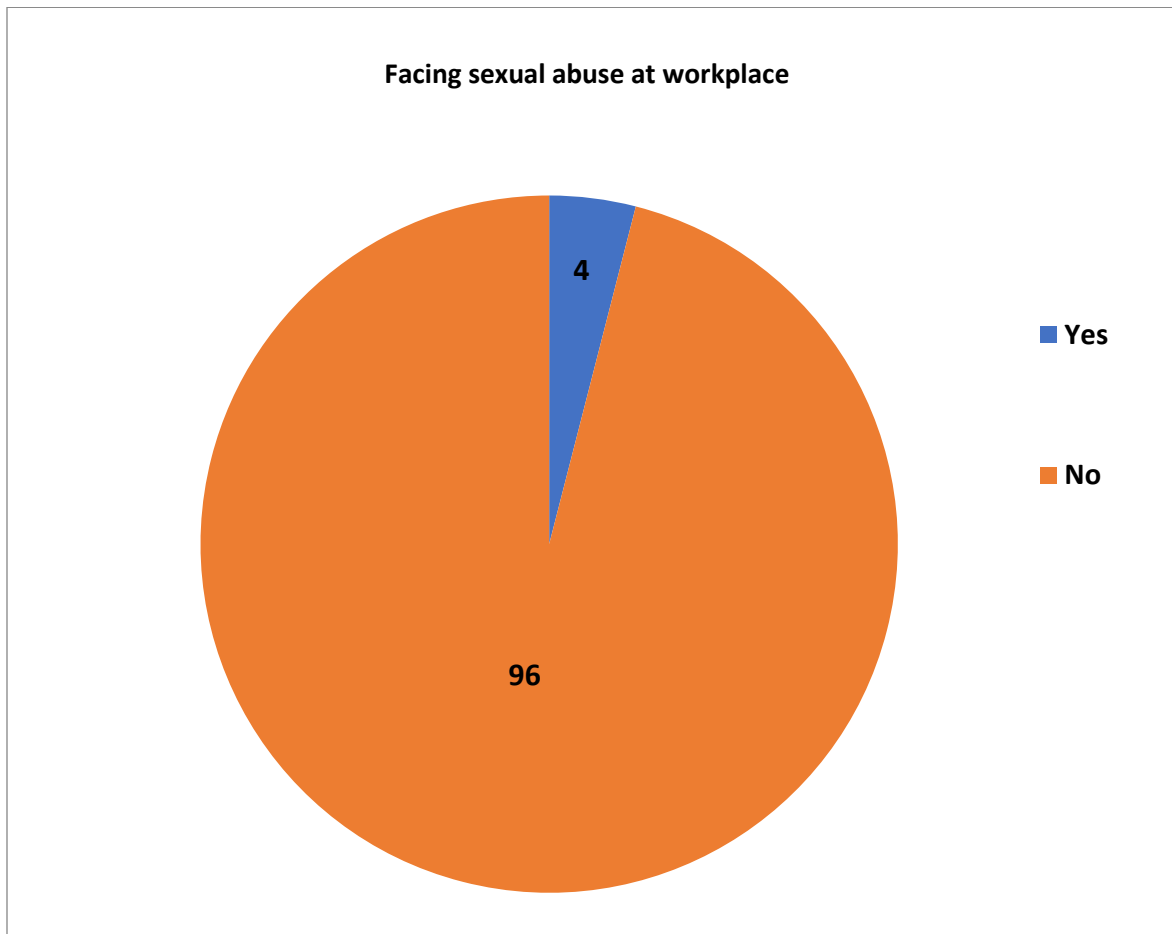


TABLE 4.24

Action taken by Office Authorities in fair manner on the Accused person

S. No	Action taken by office authorities in fair manner on the accused person	No. of Respondents	Percentage
1.	Yes	8	10
2.	No	35	47
3.	Can't say	32	43
	Total	75	100

Source: Survey data

According to the table, 47% of the respondents feel that the office authorities don't take fair action on the accused person, 10% believe that the action taken is in fair manner whereas 43 % don't want to comment on this issue.

Figure 4.24

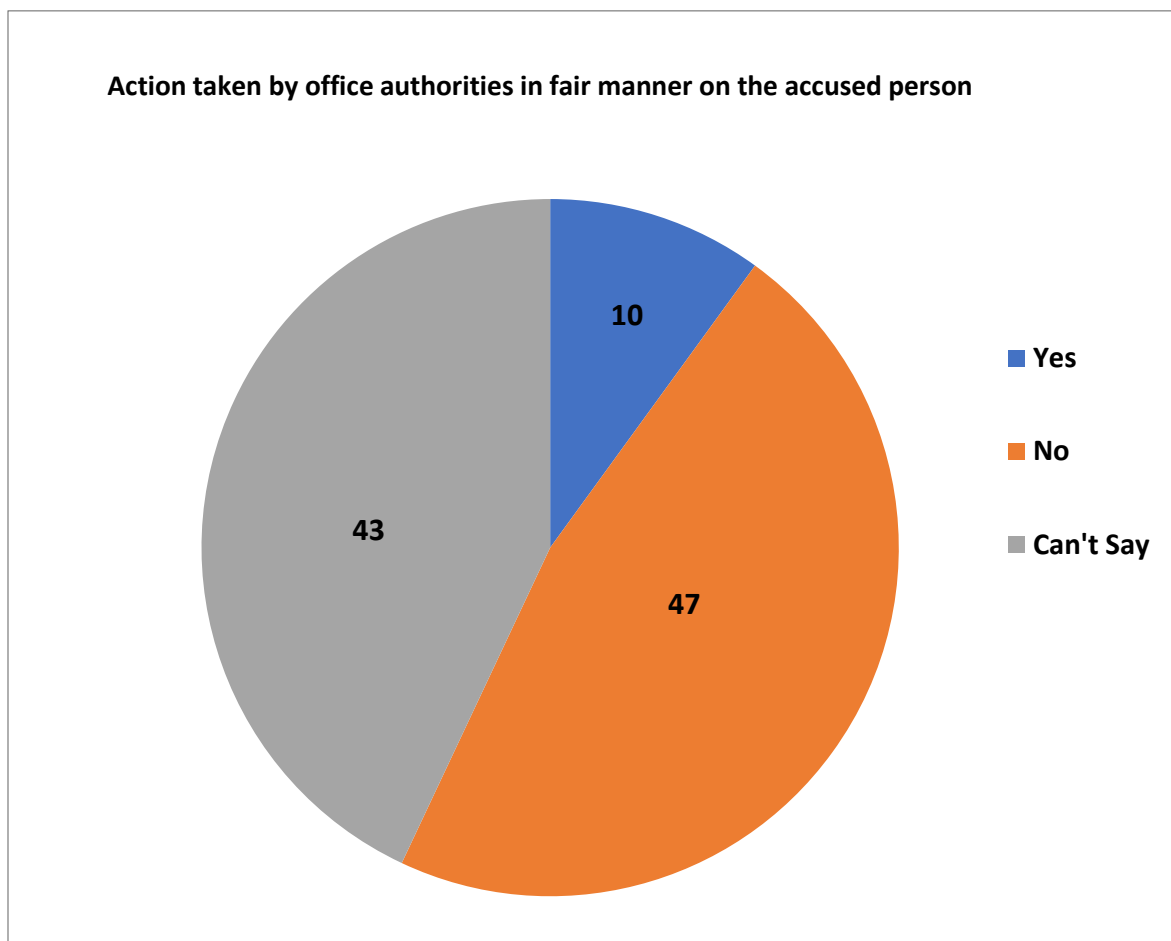


TABLE 4.25
HEALTH COMPLICATIONS

S. No	Health Complications	No. of Respondents	Percentage
1.	Yes	61	82
2.	No	10	13
3.	Can't say	4	5
	Total	7	100

Source: Survey data

It is stated that 82% of the respondents face health complications and 13% respondents have no health issues and 5% respondents don't want to say anything about this.

Figure 4.25

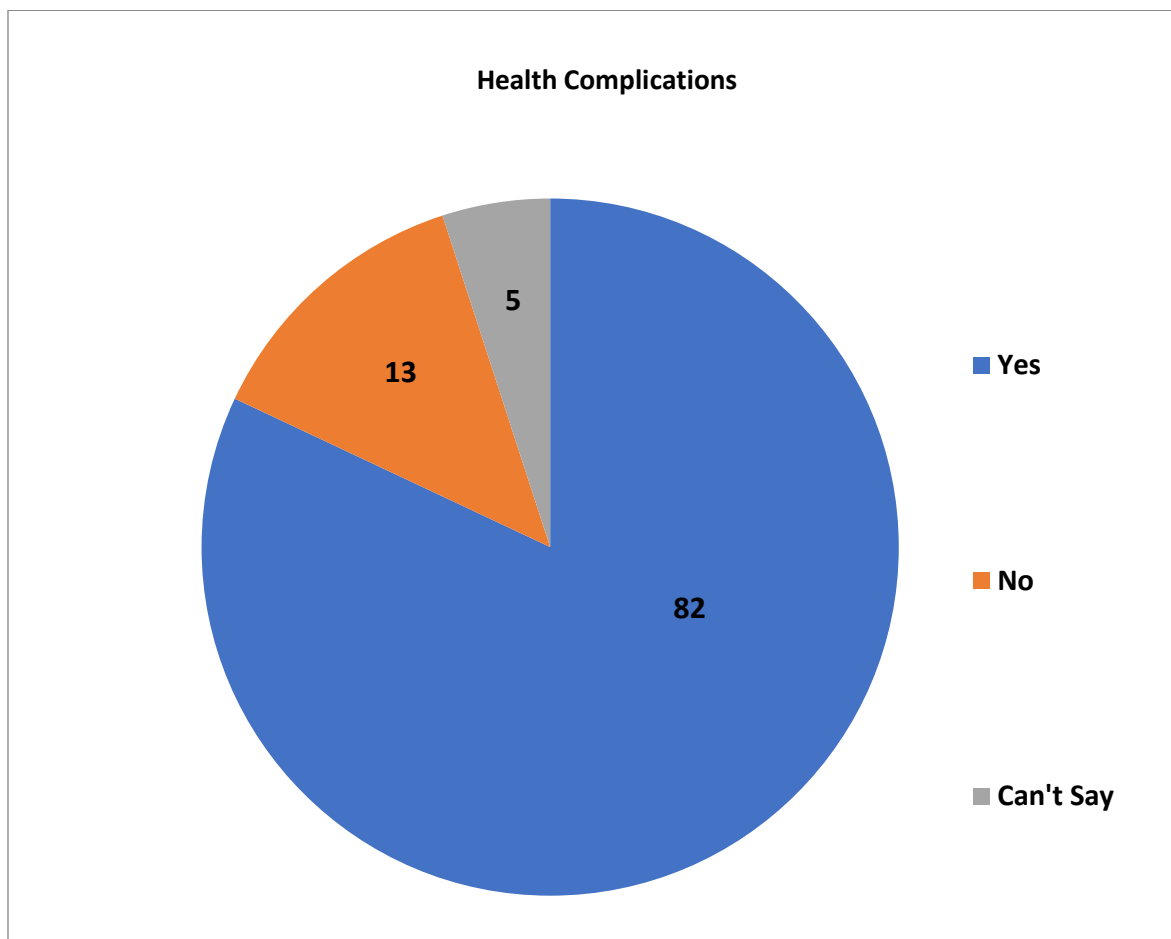


TABLE 4.26

Health issue of Female Workers due to Problems at work place

S. No	Health issue of female worker due to problems in work place	No. of Respondents	percentage
1.	Depression	47	63
2.	Lack of concentration in work	8	10
3.	Other health issue	20	27
	Total	75	100

Source: Survey data

It is revealed that 63% of the respondents face depression, 10% lack concentration in work and 27% of the respondents have other health issues due to problems at workplace.

Figure 4.26

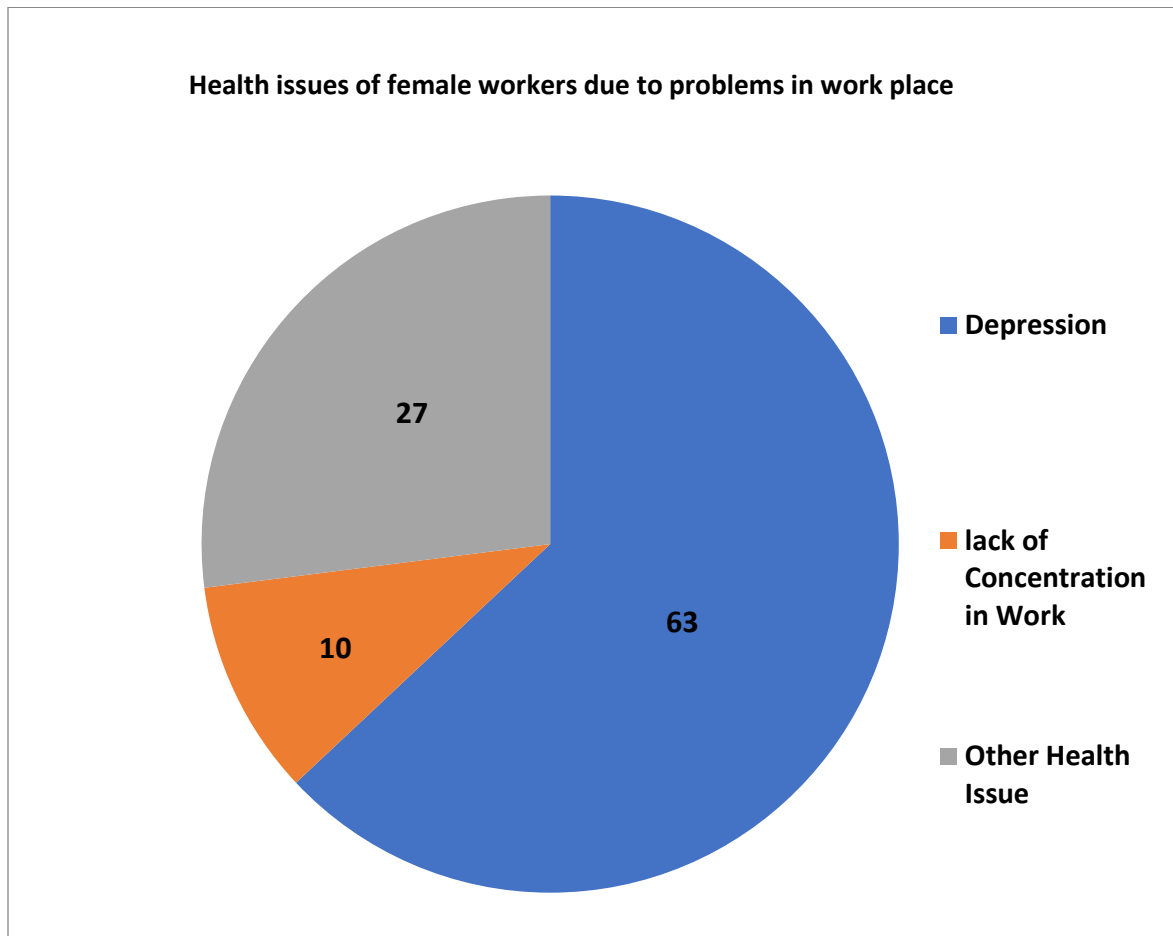


TABLE 4.27

Perception of women to behave when faced with sexual harassment or gender discrimination

S. No	Perception of women to behave when faced with sexual harassment or gender discrimination	No. of Respondents	Percentage
1.	Suffer in silence	3	4
2.	Quit job	55	73
3.	Fights against	13	17
4.	Can't say	4	5
	Total	75	100

Source: Survey data

As per the table, 73% of the respondents want to quit job due to sexual harassment or gender discrimination, 17% of the respondents want to fights against the injustice, 5% of the respondents don't want to comment on this issue and 4% of the respondents feel that it's better to Suffer in silence but to a limit only.

Figure 4.27

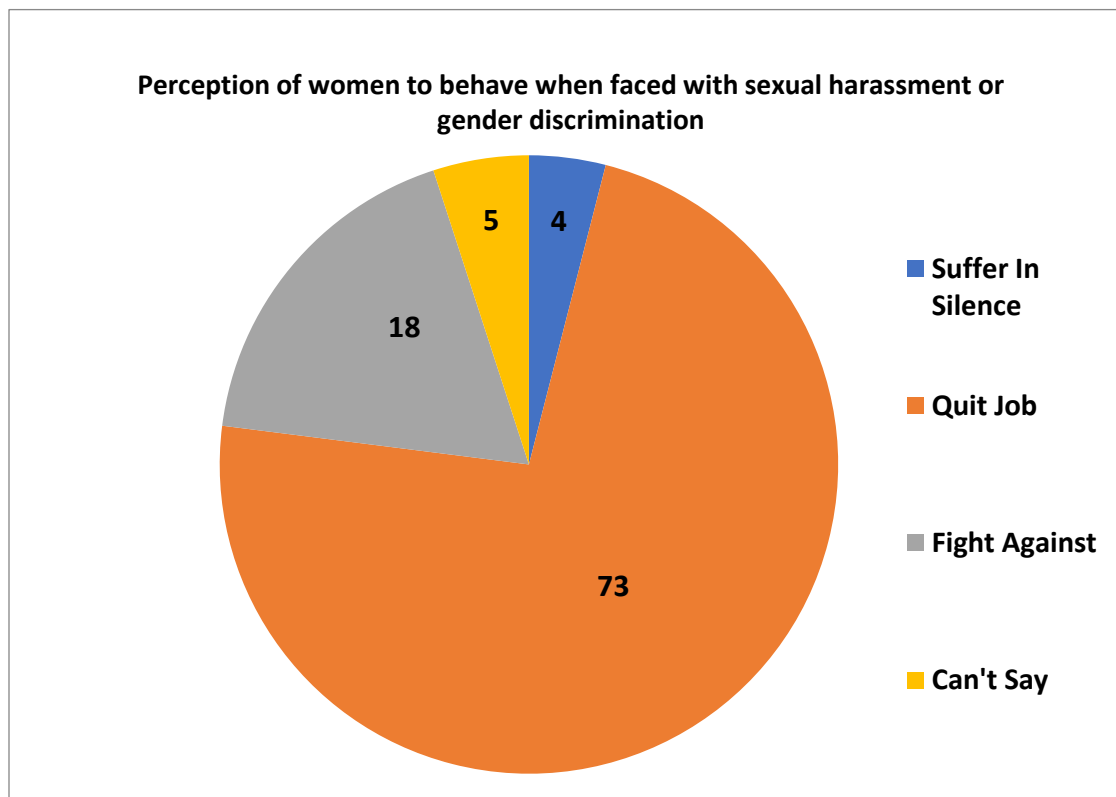


TABLE 4.28

Easier job compared to Male Workers

S. No	Easier job compared to male workers	No. of Respondents	Percentage
1.	Yes	25	34
2.	No	50	66
	Total	75	100

Source: Survey data

The table reveals that 66% of the respondents say that they are not given easier jobs compared to male workers and 34% say that they are given easier jobs compared to male.

Figure 4.28

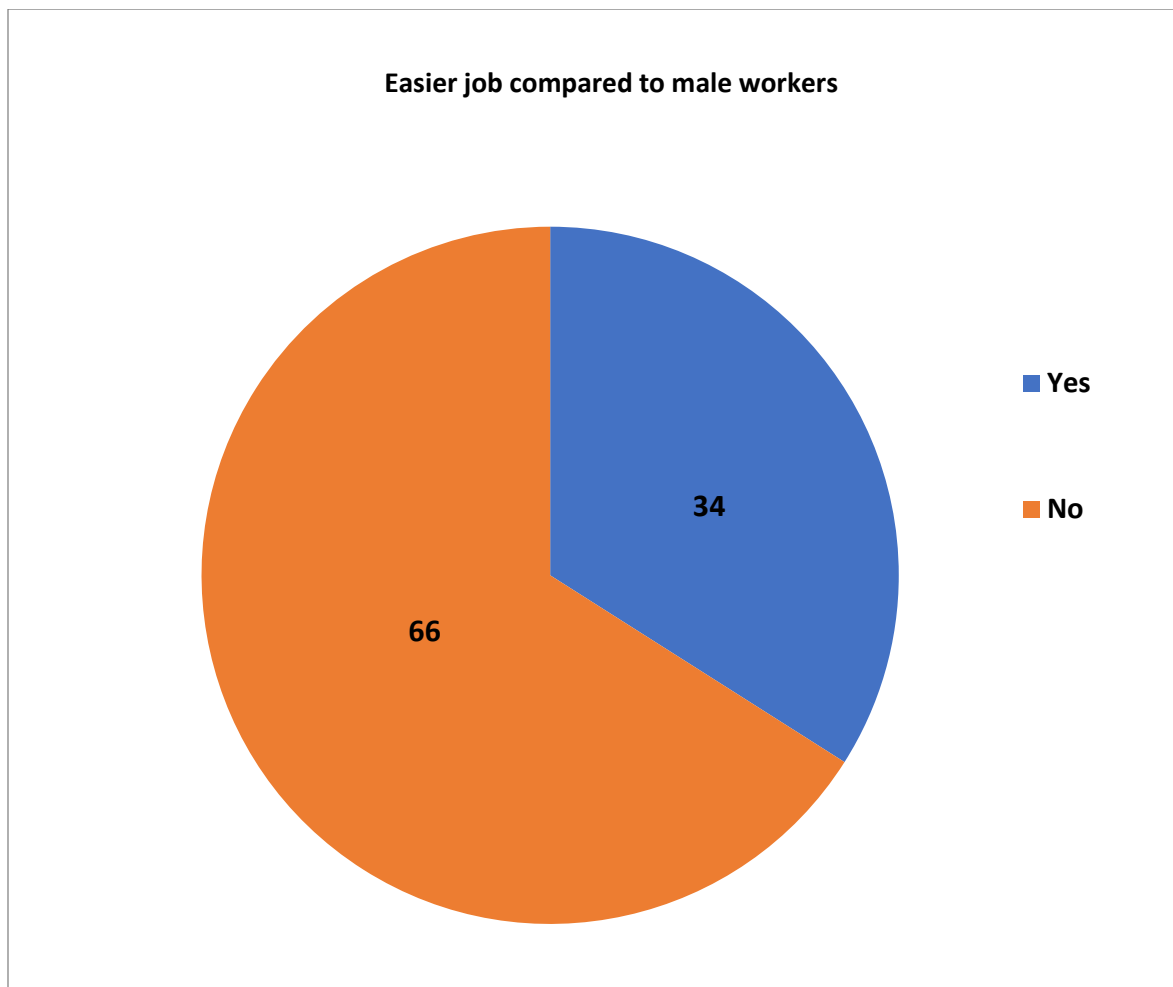


TABLE 4.29

Equal Respect at Work Place

S. No	Equal respect at work place	No. Of. Respondents	Percentage
1.	Yes	8	11
2.	No	67	89
	Total	75	100

Source: Survey data

It is shown that 89% of the respondents don't get equal respect at work place and only 11% respondents say that they have equal rights at work place.

Figure 4.29

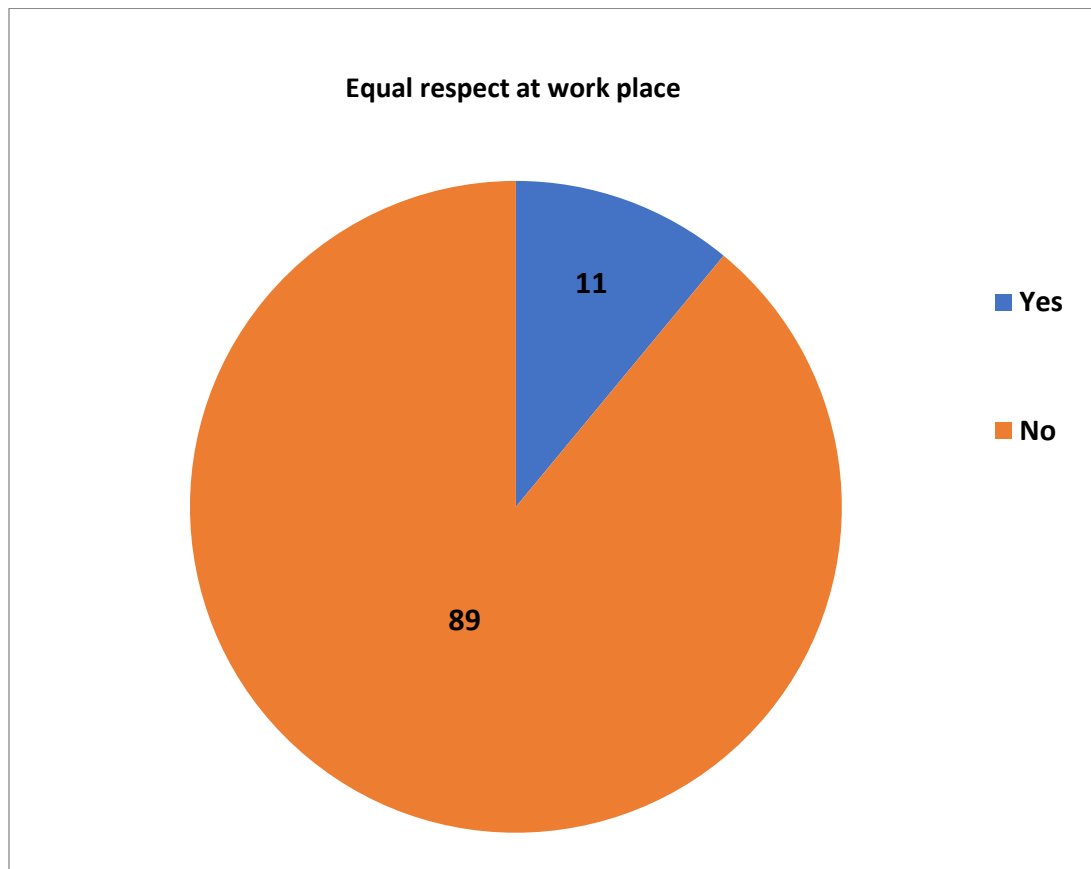


TABLE 4.30**Most Important problem faced by urban working Women**

S. No	Most important problem faced by urban working women	No. of Respondents	Percentage
1.	Depression	39	52
2.	Mental pressure	18	24
3.	Gender discrimination	10	14
4.	Sexual harassment	4	5
5.	Other	4	5
	Total	75	100

Source: Survey data

Out of 75 sample urban working women, 52% of the respondents face depression, 24% of the respondents face mental pressure, 14% of the respondents face gender discrimination, 5% of the respondents faced Sexual harassment and 5% have no health issues.

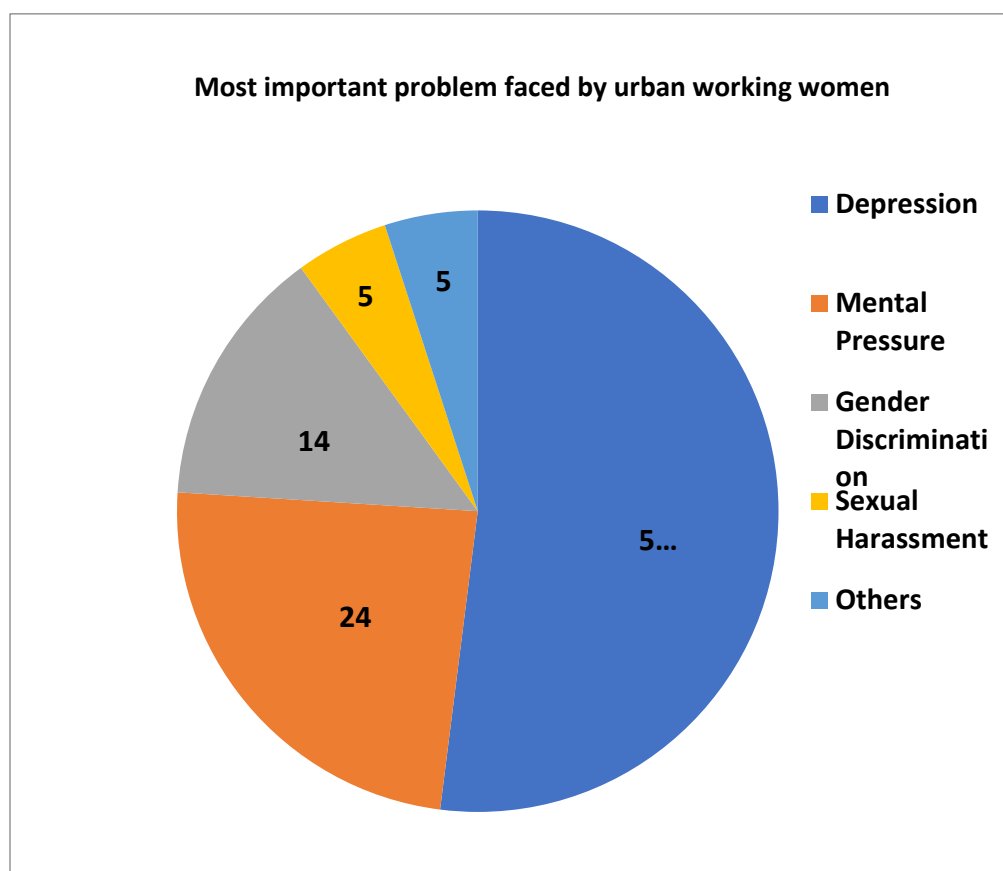
Figure 4.30

TABLE 4.31

Opinion on Difficulties in work-life Balance

S. No	Opinion on Difficulties in workers-life balance	No. of Respondents	Percentage
1.	Yes	35	47
2.	No	40	53
	Total	75	100

Source: survey data

According to the table, 53% of the respondents have no difficulties in work-life balance and 47% of the respondents say that they feel difficulties in work-life balance.

Figure 4.31

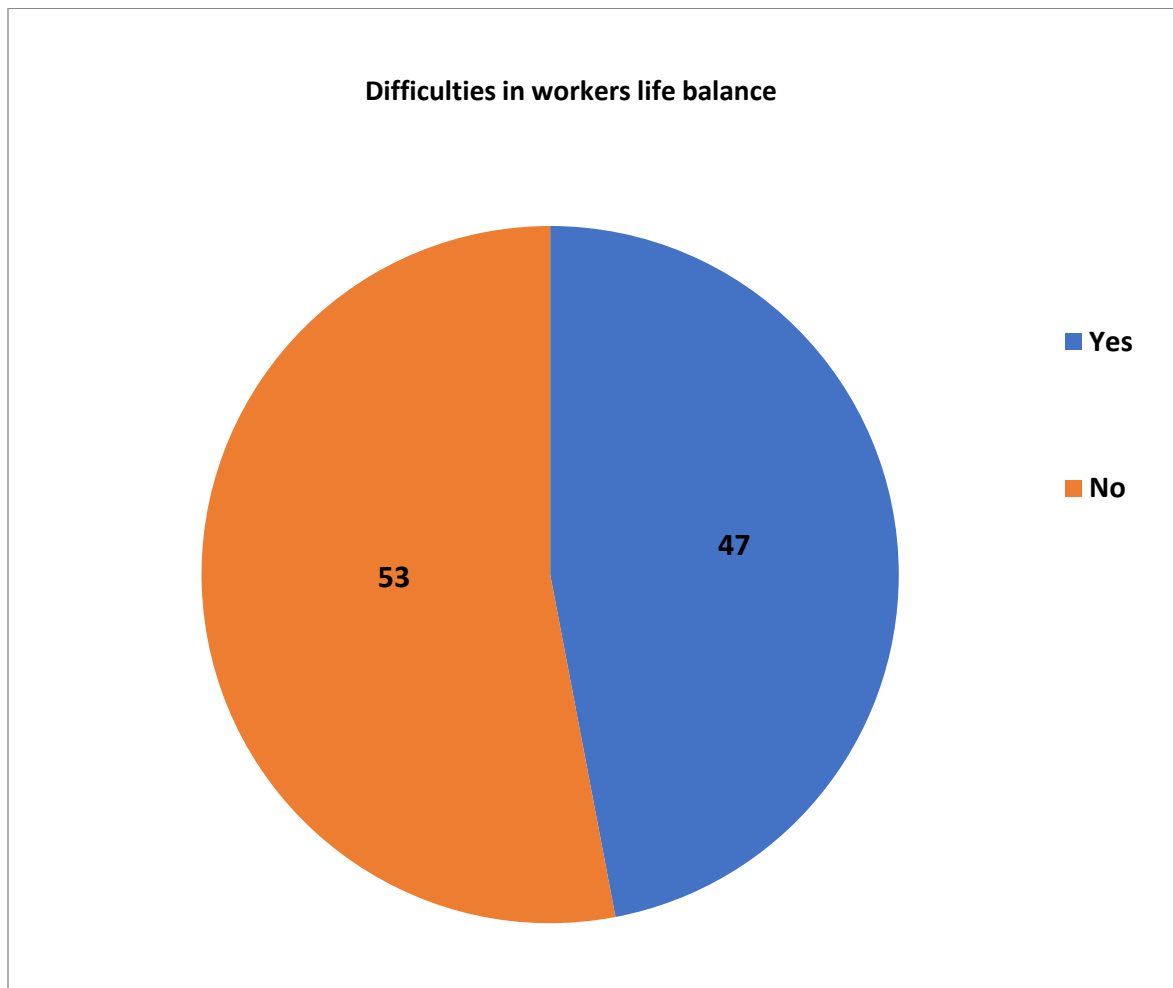


TABLE 4.32**Support for Balance between Work and Family**

S. No	Support for balance between work and family	No. of Respondents	Percentage
1.	Spouse/partner	27	36
2.	Friends	20	27
3.	Other family members	17	23
4.	Others	11	14
	Total	75	100

Source: survey data

As per the table, 36% of the respondents get support from their Spouse/partner, 27% of the respondents get support from friends, 23% of the respondents are supported by other members of their family and 14 % of the respondents get support from others.

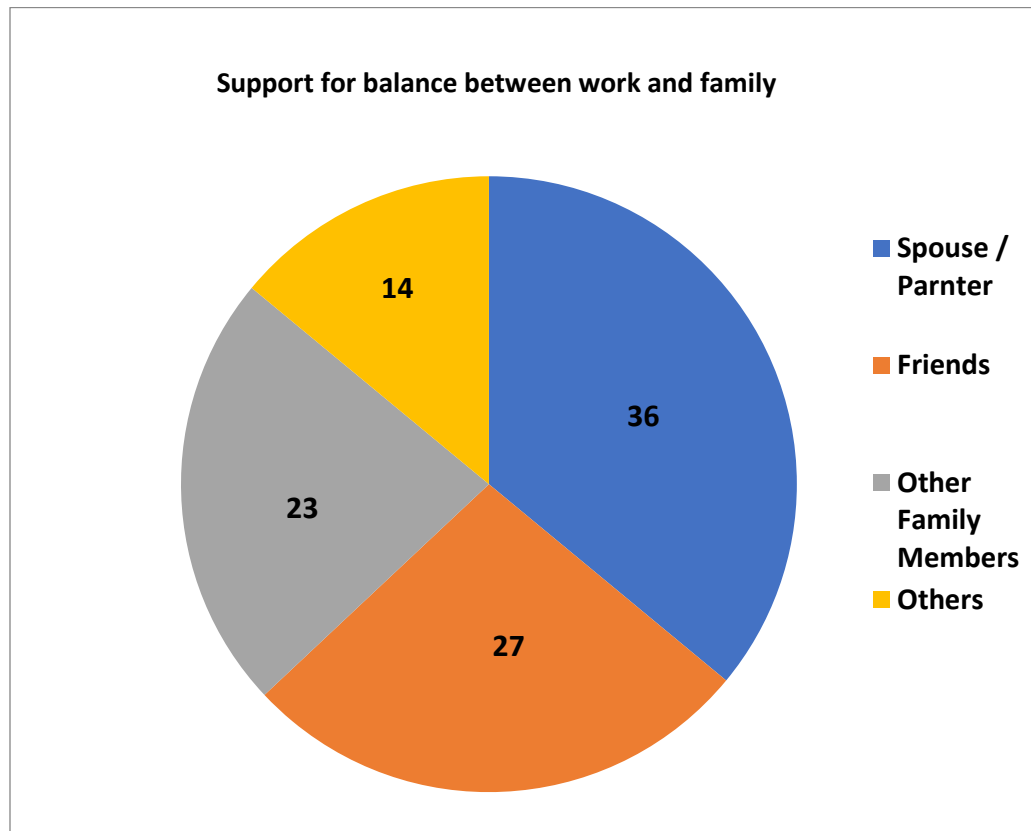
Figure 4.32

TABLE 4.33

Perception of Financial Independence giving more Respect in Society

S. No	Perception of financial independence giving more respect in society	No. of Respondents	Percentage
1.	Yes	53	70
2.	No	22	30
	Total	75	100

Source: survey data

As per the table, 70% of the respondents say that financial independence gives them more respect in their society whereas 30% of the respondents feel the other way.

Figure 4.33

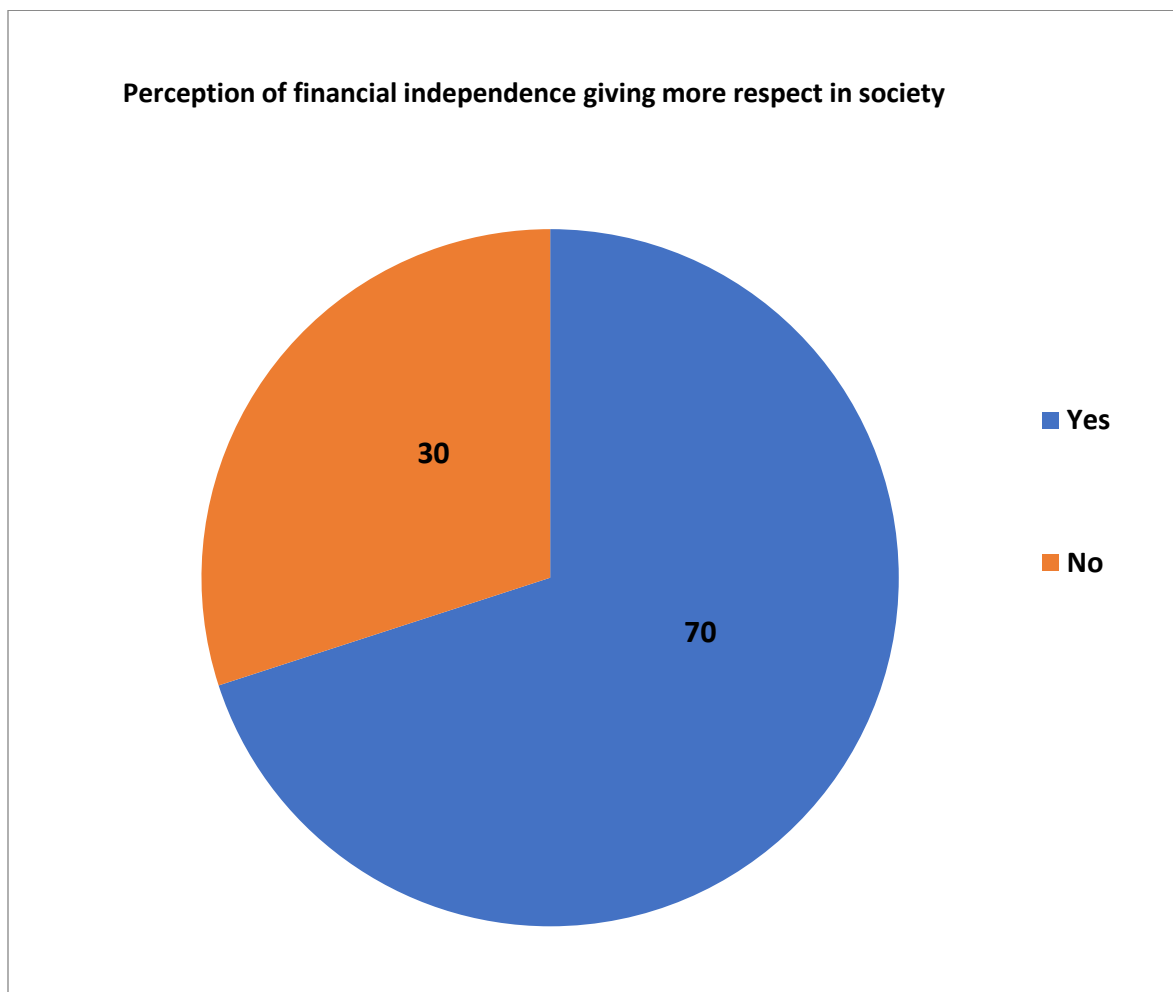


TABLE 4.34

Opinion of Quitting the job or Shifting to another Job

S. No	Opinion of quitting the job or shifting to another job	No. of Respondents	Percentage
1.	Yes	57	76
2.	No	18	24
	Total	75	100

Source: survey data

Form table 4.34 it is revealed that 76% of the respondents want to quit their job or shift to other new job due to the problems at work-place and 24 % say that they don't have any such idea.

Figure 4.35

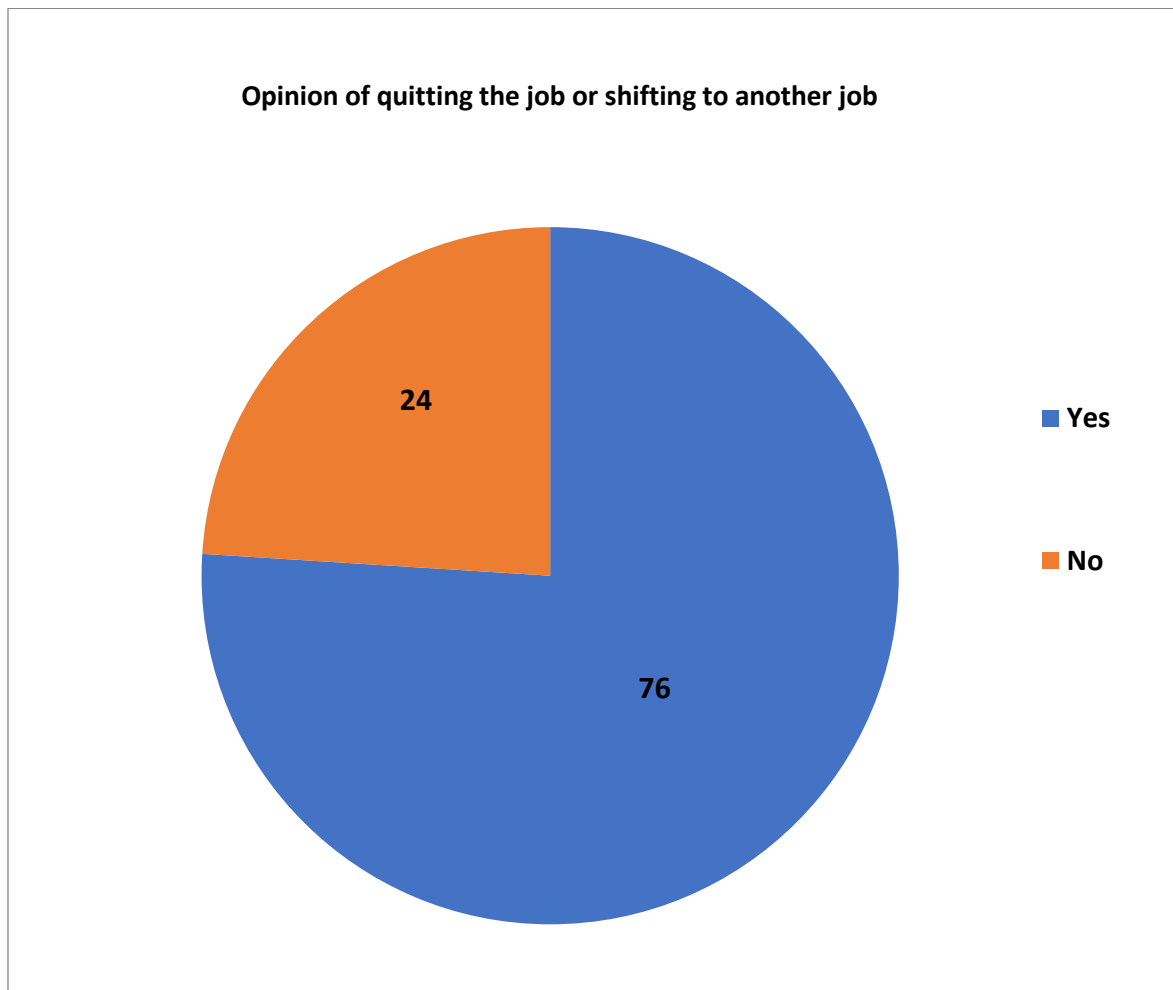


TABLE 4.35

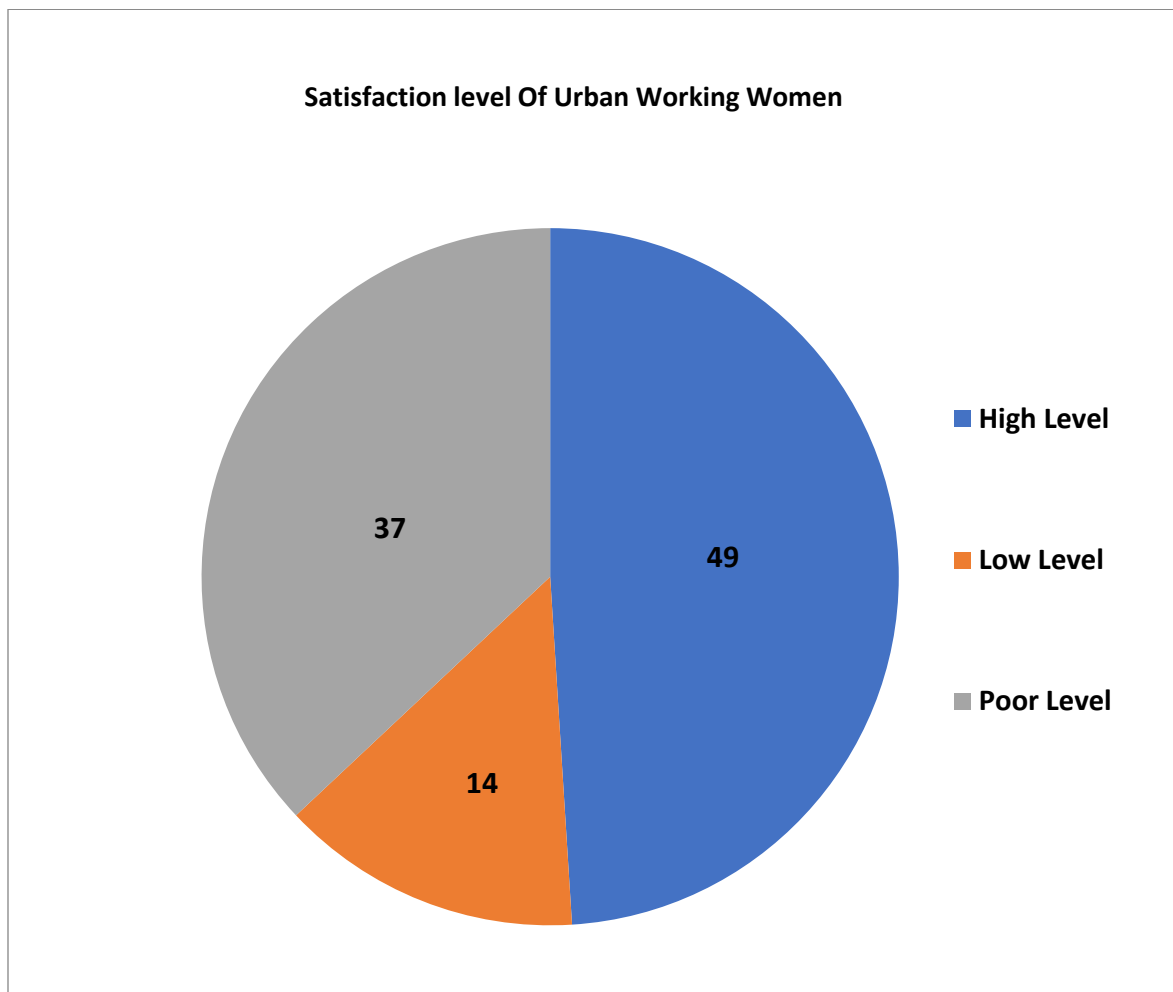
Satisfaction Level of Urban Working Women

S. No	Satisfaction level	No. of Respondents	Percentage
1.	High Level	37	49
2.	Average Level	10	14
3.	Low Level	28	37
	Total	75	100

Source: survey data

The above table reveals that 49% respondents are highly satisfied by their job, 14% receive average level of satisfaction and 37% receive low level of satisfaction.

Figure 4.35



CHAPTER V

FINDINGS, SUGGESTIONS & CONCLUSION



CHAPTER V

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS

1. 44% are in the age group of 21-30 years, 25% of the respondents are in the age group of 18-20 years, 10% respondents are in the age group of 31-40 years, 8% are in the age group of 51-60 years and 61-70 years and 5% are in the age group of 41-50 years.
2. A maximum of 61% of urban working women are unmarried, while 39 % urban working women are married.
3. 60% of the respondents belong to BC, 13% of the respondents belong to MBC, 8% of the respondents belong to DNC, 12% of the respondents belong to SC/ST and 7% of the respondents belong to OC.
4. 75% are Hindus, 22% of the respondents are Christians and only 3% of the respondents are Muslims.
5. A maximum of 40% of the respondents have attained education up to Higher Secondary level, 32% of the respondents have completed high school and 28% of the respondents are Graduates and Post Graduates.
6. 60% of the respondents belong to Nuclear family and 40% of the respondents live in Joint family.
7. 66% have family members ranging from to 3-5, 20% of the respondents have family members below 3and 14% of the respondents have family members above 5.
8. 54% of the respondents live in their own house 46% of the respondents live in rented house.
9. 81% of the respondents are in private jobs, 12% of the respondents work in Central government and 7% of the respondents are in state government jobs.
10. 37% of the respondents have below 3 years of experience, 25% of the respondents have 3-6 years of experience, 16% of the respondents have 7-10 years of experience, 13 % respondents have 11 to 14 years of experience and 9 % have experience of above 15 years.
11. 32% of the respondent's monthly income is in the range of Rs.6,000 -Rs, 10,000, 21% of the respondents earn Rs.2000- Rs, 5000, 15% of the respondents earn between Rs.11,000-Rs.15,000, 13% of the respondents earn between Rs. 21,000-Rs. 25,000,

- 11% respondents earn Rs.16,000-Rs. 20,000 and 8% earn between Rs. 26,000 - Rs.30,000.
12. The average monthly income of the Urban working women has been calculated to be Rs. 12,440
13. 35% of the respondents have family expenditure less than Rs.5000, 26% of the respondents spend between Rs.11,000- Rs.14,000 13% of the respondents spend Rs.5000-Rs.8000. Again 13 % respondents spend Rs.8000-Rs11000 and another 13 % spend above Rs.14000.
14. 87% of the respondents have the habit of savings and 13% of the respondents don't have the habit of savings.
15. 48% of the respondents save through Banks, 29 % of the respondents save through post office, 12% of the respondents save through Chit funds and 11% save through other mode of saving.
16. 93% of the respondents have taken loan and 7% of the respondents don't have any loan.
17. 69% of the respondents have taken loan from Banks, 11% of the respondents have taken loans from post office, 6 % of the respondents have loans through chit funds, and 14% of the respondents to have taken loan from others like SHG's, Money lenders etc.
18. 66% of the respondents believe that it takes longer time to get promoted than male colleagues, 20 % say that it takes equal time to get promoted and 14% say that they get promotion earlier than male colleagues.
19. 40% of the respondents agree that they get promotion on the basis of merit and 20% disagree with the opinion and 40% don't wish to respond to the opinion.
20. 38% of the respondents have fewer working hours compared to male colleagues and 62% of respondents have equal working hours in comparison to male colleagues.
21. 59 % of the respondents feel that the attitude of the higher officials towards them is Co-operative, 35% of the respondents feel that its neutral and 6% of the respondents feel that the attitude of higher officials towards female employees is abusive.
22. 40% of the respondents hesitate to work with male colleagues and 60 % of respondents do not hesitate to work with their male colleagues.
23. 8% of the respondents feel that people draw conclusion about their character, 37% respondents say 'NO' to the statement and 55% respondents don't want to comment on the statement.

24. 96% of the respondents say that they haven't faced any sexual abuse at their work place and only 4 % say that they faced sexual abuse and harassment at their workplace.
25. 47% of the respondents feel that the office authorities don't take fair action on the accused person, 10% believe that the action taken is in fair manner whereas 43 % don't want to comment on this issue.
26. 82% of the respondents face health complications and 13% respondents have no health issues and 5% respondents don't want to say anything about this.
27. 63% of the respondents face depression, 10% lack concentration in work and 27% of the respondents have other health issues due to problems at workplace.
28. 73% of the respondents want to quit job due to sexual harassment or gender discrimination, 17% of the respondents want to fight against the injustice, 5% of the respondents don't want to comment on this issue and 4% of the respondents feel that it's better to Suffer in silence but to a limit only.
29. 66% of the respondents say that they are not given easier jobs compared to male workers and 34% say that they are given easier jobs compared to male.
30. 89% of the respondents don't get equal respect at work place and only 11% respondents say that they have equal rights at work place.
31. 52% of the respondents face depression, 24% of the respondents face mental pressure, 14% of the respondents face gender discrimination, 5% of the respondents faced Sexual harassment and 5% have no health issues.
32. 53% of the respondents have no difficulties in work-life balance and 47% of the respondents say that they feel difficulties in work-life balance.
33. 36% of the respondents get support from their Spouse/partner, 27% of the respondents get support from friends, 23% of the respondents are supported by other members of their family and 14 % of the respondents get support from others.
34. 70% of the respondents say that financial independence gives them more respect in their society whereas 30% of the respondents feel the other way.
35. 76% of the respondents want to quit their job or shift to other new job due to the problems at work-place and 24 % say that they don't have any such idea.
36. 49% respondents are highly satisfied by their job, 14% receive average level of satisfaction and 37% receive low level of satisfaction.

5.2 SUGGESTIONS

1. Primarily the key to strengthening the social status of a working woman lies in her own hands. Women need to be more assertive and aware of their own rights at home as well as at work place. Unless woman decides to raise voice against her exploitation, whether at economic, social or sexual level, the goal of women's empowerment cannot be achieved.
2. Secondly, Implementation of the policy must be monitored closely, and the data of the women's participation in the organization must be reviewed regularly. This will ensure that the top management remains informed about any gender disparities within the organization, and measure can be taken accordingly to close such gaps.
3. The society and the family are two crucial institutions that can put its effort to raise the status of the Working Women. The husband and other family members need to be supportive to the woman who works outside the home. They need to share the household responsibilities to give opportunity to utilize her skills beyond the home.
4. The respondents have suggested some valuable suggestions in the study area that comprise of points like maternity allowance and child care facilities should be improved, there should be more security for women at the workplace, i.e. CCTV cameras must be installed at main places, security guard should be ensured by the authority, common facilities like washroom, canteen, transport facilities, should be ensured in all jobs especially in unorganised sector jobs. Family support, colleague's participation, proper evaluation for promotion and increasing women participation and respecting women work force.

5.3 CONCLUSION

It is thus concluded that the working women, married or unmarried, belonging to middle class, face varied types of problems at home and work places. Almost all of these problems are not of her own creations at all. Much of it is based on the continuing notions of the society, its patriarchal values as internalized by men and women, and their expectations of the women's contribution to homework. Her notions of duty for the children, are borne out of the values and expectations built into her from childhood. The responsibility of solving them, hence, should belong to the men and society though the working often tends to believe herself to be responsible. The need of the hour is that the man should come forward and give up their male ego and should make women free from exploitations.

ANNEXURE

BIBLIOGRAPHY

QUESTIONNAIRE

PHOTOS



BIBLIOGRAPHY

REFERENCES

1. Ravikumar, S. (2006), Indian women, Jaipur: Mangal deep publications
2. Abdul Kalam, A. P. J., & Sivathanu Pillai, (2004). Envisioning an empowered nation. New Delhi: Tata Mc Graw hill publishing
3. Usha Sharma. (2003). Women in South Asia employment empowerment and human development. Delhi: Authors press
4. Suguna, B., & Sandhya Rani, (2008), Health status of women welfare and empowerment in India (pp. 110-123), New Delhi: New century publication.
5. Das Gupta, Jashodhara (2006), "India: Including Women's Voices When Crafting Maternal Health Policies", Arrows for Change, 12 (2)
6. Nagla, Madhu (1999), Sociology of Medical Profession, New Delhi: Rawat Publication.
7. Dube L., on the construction of gender: Hindu girls in patrilineal India. In Karuna Channa (ed.) Socialisation, Education and Women: Explorations in Gender Identity. New Delhi: Orient Longman 166-192 (1988)
8. Srikontia, S.G. (1989), "Pattern of Growth and Development of Indian girls and Body Size of Adult Indian Women", in Gopalan and Suminder Kaur (eds.), Women and Nutrition in Indian, Nutrition Foundation of India, New Delhi.
9. Mukhopadhyay, Swapana (1998), Women's Health Public Policy and Community Action, New Delhi: Manohar.
10. Khan, M.E. (1996), "Involving Men in Safe Motherhood", Journal of Family Welfare, 43(2) June
11. V.N. Dandekar and Nailakanth Rath (1971). "Poverty in India", Indian School of Political Economy, Bombay, p.29
12. Engle, P.L., and P. Menon, 1996. Urbanization and care giving: Evidence from south and eastern Africa. San Luis, California: Department of Psychology and Human Development, California Polytechnic, Stat. University. pp 4-24.
13. Uma Iyer, Kavita Sharma, Shonima Venugopal, & Shruti Shah, (2008), Adolescent nutrition women welfare and empowerment in India (pp.110-123), New Delhi: New century publication.
14. World Bank group, 1996, improving women's health in India, Report, 14-41.
15. ICMR, 2005. Resource material, Preconference workshop on epidemiological tools in assessment of nutritional status. Indian Council of Medical Research, NIN, Hyderabad. 1-18.
16. World development indicators 2008, The World Bank, Washington, DC.4-34
17. Deshpande, S. S. Mishra, A. and Mishra, M. 2001, Profile of expenditure pattern on food and non-food items for villages of Bhopal district in Madhya Pradesh, Indian Journal of Nutrition and Dietetics, 38: 45-58.
18. World Bank Report, 2008, World development indicators 2008, The World Bank, Washington, DC.4-34.
19. Kotwal, N. Gupta, N. Manhas, S. 2008, Impact of work and environment on women living in urban slums of Jammu city, Study Home Community Science, 2, 2:93-97.

20. Sidramshettar, S. C. 2004. Health status of women in Karnataka: Problems and future needs. *Journal of Human Ecology*, 50, 2:48-54.
21. NFHS-3, 2006. Key Findings, International Institute for population sciences Deonar, Mumbai, Ministry of health and family welfare, Govt of India.
22. Rout, N. R. 2009. Slum growth in Bhubaneswar: a problem or solution. *ITPI Journal*, 5: 4, 59- 64.
23. UNICEF: Supporting government schemes on rural sanitation. (2012, October 1). *UN news*, 8, 14.
24. Rural Water Supply and Sanitation. (2008). New Delhi: Ministry of Rural Development.
25. Sanitation 2008. (2008, January 1), UN Water Factsheet No. 3, 4, 6.
26. Dietvorst, C. D. (n.d.). dietvorst | Sanitation Updates. Sanitation Updates | News, Opinions and Resources for Sanitation for All. Retrieved May 12, 2010, from <http://sanitationupdates.wordpress.com/author/dietvorst/>
27. Eleventh Five-Year Plan - A Document. (2007). New Delhi: Planning Commission of India.
28. Ecological Sanitation. (2008, April 9). ESA UN. Retrieved February 5, 2010, from http://esa.un.org/iys/docs/1%20fact-sheet_health.pdf
29. Engle, P.L. 1992, Care and child nutrition, Theme paper for the international conference on nutrition (ICN): Paper prepared for nutrition section, UNICEF, New York
30. K.D. Gaur (1996), "Housing for the Rural Poor". *Kurukshetra*, May-June, p.90
31. Report of the Commission for Scheduled Castes and Scheduled Tribes (1974-75), 23rd Report, Ministry of Home Affairs, Government of India, New Delhi, p. 168
32. S.K. Sharma (1996), "Human Right to Housing processes", *Kurukshetra*, May to June, p. 13¹
33. Government of India, Ninth Five Year Plan (1997-2002), Vol. II, Planning Commission, New Delhi, p.5
34. K.D. Gaur (1996), *op. cit.*, p.91
35. Halvorson, Sarah J. (2004). 'Womens' Management of the Household Health Environment: Responding to Childhood Diarrheal Disease in the Northern Areas, Pakistan', *Health and Place*, 10(1): 43-58.
36. Kaplan, Temma (2001). Uncommon Women and the Common Good: Women and Environmental Protest. In Sheila Rowbotham & Stephanie Linkogle (eds) *Women Resist Globalization: Mobilizing for Livelihood and Rights*, (28-45). London: Zed Book.
37. Costle, Douglas M., 'Women and Environment', *EPA Journal*, Nov-Dec., 1978
38. Sahoo and Pradhan (2009), Who is Human and Who is Right? *Uday India: The Weekly That Empowers*, (Accessed on 06 April, 2014).
39. Baldwin, K. (2012), "Canada best G-20 country to be a woman, India worst - Trust Law poll." Thomson Reuters, online, (Accessed on 3 Aug. 2013)
40. Oxfam Briefing Paper, (2004). Towards Ending Violence against Women in South Asia (Accessed on 20 March, 2014).
41. Kaur, G. (1984). "Violence against Women: The State of Punjab-Part V." online, (Accessed on 15 Aug. 2013).

42. Singh, K. (2007), Women issues empowerment and gender discrimination, Delhi: Vista international publishing house.
43. Bohra, N., Indira Sharma, Shruti Srivastava, M. S. Bhatia, Uday Chaudhuri, Sonia Parial, Avdesh Sharma, and Dinesh Kataria, (2015), "Violence against women," Indian J Psychiatry, 57 (2): S333-S338.
44. Syed, Abzal Peerzade and Prema Paranda "Economic Empowerment Women", *Southern Economist*, March 2005, Vol.43. No.21, p.7-8.
45. <http://www.genfinance.empowerment.htm>
46. <http://www.un.org.in/gender/microcredit>
47. A. Bhoomika (2001), 'Vismaya: A new approach to Women's Empowerment Programme', A Feminist Magazine. pp. 54-56.
48. Sujaya, CP., Women's Rights and Development Policies in India, The Administrator, Vol. XL, July-Sept., 1995.
49. Sharma K.C., "Micro Financing through SHGs", Indian Journal of Agriculture Economics, vol.56, No.3, 2001
50. Manimehalai, N., Impact of Micro Financing in promoting Women Micro Entrepreneurship – An analysis, Women Empowerment Issues and Challenges, Souvenir, 2006.
51. Meenakshi, R., Role of Information and communication Technology (ICTs) in Empowering Women, Women Empowerment Issues and Challenges, Souvenir, 2006.
52. Srivastava, S.P., Gender Justice and Human Rights of Women, In Gender Equality Through Women's Empowerment By (ed.) Surendra Singh And S.P. Srivastava, Opit, Bharat Book Co., Lucknow, 2002.
53. Dorienna Rowan, Development with Womem, rural publications, New Delhi, 2006
54. Chetne kalbagh, Women and Development, Discovery Publishing House, New Delhi, 1992.
55. World Bank (2001), 'World Development Report, 2000/2001, Attacking Poverty', Oxford University Press, New York
56. Jejeebhoy, S. J. (1995), 'Women's Education, Autonomy, and Reproductive Behaviour: Experience from Four Developing Countries', International Studies in Demography, IUSSP, Oxford: Clarendon Press
57. Fogarty, M. and Rapoport, R. (1971). Sex, career and family, California: Sage publication.
58. Promila Kapur, (1974). The changing Status of Working Women in India, New Delhi, Vikas publication
59. Urmila Patel, (1988), Problems of Working Women in India, New Delhi: Vikas publication.
60. Krishna Chakraborty (1978), The Conflicting Worlds of Working Mothers, Calcutta: Progressive Publishers.
61. Anil Dutta Mishra, (1994), Problems and Prospects of working Women in Urban India, New Delhi: Mittal Publications, Pp. 51,56.
62. Sathyaprabha.S.K., "Role of self-help groups in the empowerment of women in Thoothukudi District-A Study", August 2006.
63. Abbas Madandar Aran and Parvin Abbas, Relationship between Secondary School Teachers Job Satisfaction and School organisational climate Iran and India, Pakistan Journal of Psychologic Research, Volume: 19, Number: 2, June 2004, pp. 37 – 49.

64. Archana Bhatia, Emergence of SFS Lecturers in Indian Higher Education and their Job Satisfaction, International Journal of in Multidisciplinary and Academic Research (SSIJMAR), Volume:1, No:2, July-Aug 2012, pp. 1 - 11.
65. Bala Pronay, Job Satisfaction of Non-Government College Teachers in Bangladesh, Journal of Education and Practice, Volume: 2, Number: 4, November 2011, pp. 87 – 91
66. Ch'ng H.K.et.The Satisfaction Level of Penang Private Colleges Lecturers, International Journal of Trade, Economics and Finance, Volume: 1, Number: 2, August 2010, pp. 168 – 172.
67. Dashora, (2013) Problems Faced by Working Women in India.International Journal of Advanced Research in Management and Social Sciences, 2(8), PP (82-94).
68. Imran Khan, Job Satisfaction among College Teachers, VSRD International Journal of Business Management Research, Volume: 2, Number: 12, December 2012, pp. 585 – 587.
69. Joseph S. Xavier et al., A study on Job Satisfaction among the Academicians across the Self - Financing Arts and Science Colleges in Thirucirappalli South Tamilnadu, India, International Journal of Management Research and Review, Volume: 2, Issue: 10, Oct 2012, pp. 1764 – 1776.
70. Kayalvizhi S. and K.Chokkanathan, A Study on Factors Influencing the Job Satisfaction of Lecturers Employed in Self - Financing Arts Colleges, South India, International Journal of Research in Commerce and Management, Volume: 2, Issue: 5, May 2011, pp. 34 – 37.
71. Kumar D. and R. George Clement, Working Women in India, Kissan World, Volume: 32, Number: 6, June 2005, pp. 17 – 18.
72. Kumari,V. (2014).Problems and Challenges Faced by Urban Worming Women in India. A Dissertation Submitted to the Department of Humanities and Social Sciences, (1)
73. Maheswar Panda, Job Satisfaction of College Teachers in the Context of Type of Management, Journal of Educational Research and Extension, Volume: 38, Number: 2, April 2001, pp. 9 – 15.
74. Malarvizhi M., Women's Labour Turnover in Self - Financing Colleges, Southern Economist, Volume: 49, Number: 2, May 15, 2010, pp. 43 – 44.
75. Rustagi,P (2010) Employment trend for women in India. International labor organization Asia Pacific working paper series. (1), PP 1-40.
76. Sudalaimuthu S. and B. Angamuthu, A Study on Occupational Stress of Lectures Employees in Self – Financing Arts and Science Colleges, Wide Spectrum, Volume: 1, Number: 7, May 2013, pp. 19 – 25.
77. <https://www.yourarticlelibrary.com/essay/effects-of-urbanisation-on-the-status-of-women-in-india/39373>
78. <https://vikaspedia.in/social-welfare/women-and-child-development/women-development-1/status-of-women-in-india>

**PROBLEMS AND PROSPECTS OF URBAN WORKING WOMEN IN
THOOTHUKUDI CITY**

QUESTIONNAIRE

1. Name
2. Age
3. Address
4. Email ID (If any)
5. Marital status
6. Educational Qualification
7. Community
8. Religion
9. Type of family
10. No. of members in the family
11. Nature of House
12. Type of House
13. Basic Facilities in your house: Water/ Electricity/ Toilet/others
14. Possession of luxury items: Mixer/ Grinder/ Gas stove/ Refrigerator
15. Where are you working? Mention the job and place
16. Nature of job: government/ Private sector/ Other
17. Why did you choose this job? Mention reason:
18. Full time (or) part time
19. Hours of work
20. No. of years of Experience
21. Monthly Income of the family
22. Do you have the habit of savings? Yes/ No
23. If yes mention the mode of savings: Post Office / Banks/ Chit funds/ Others
24. Monthly Expenditure: (In Rs.)
25. Mention the expenditure categories: Household / Education/ Medical/ Others

26. Do you get loans from anywhere? If yes mention it. Banks/ Chitfunds/ SHGs/ Others
27. Mode of transport used to reach the working place
28. Amount of travel Expenses
29. Mode of Payment (Daily/Weekly/Monthly) Others
30. Do you work for over time? Yes/ No
31. Do you have pension in the job? Yes/ No
32. Do men and women have the equal salary here?
33. How long did it take for you to get promoted in comparison to male colleagues of the same position?
(Equal time/ Longer/ Earlier)
34. Did you get your promotion on merit basis or you offered a promotion based on favoritism or any other indecent proposal? (Yes/ No/can't say)
35. Do you work as much as your male colleagues or are you required to work less than male?
(Yes/ No/ Can't say)
36. How is the attitude of your boss to-wards you?
(Co-operative/ Neutral/ Abusive)
37. Do you sometime feel hesitant to work with male colleagues because they may sexually harass or underestimate you on the basis of gender? Yes/ No
38. Do you think people draw conclusions about your character, reputation and attitude the way they like? (Yes/No/ Can't say)
39. Have you faced sexual abuse of any kind in your workplace? (Yes/ No)
40. If yes, did the office authorities take any strict measures against the accused persons?
(Yes/ No/ Can't say)
41. If No, do you think the office authorities act in a fair manner if you face sexual harassment?
(Yes/ No/ Can't say)
42. Do you suffer from any health complications like mood swings, depression, concentration problems due to problems at workplace? (Yes/ No / Can't say)
43. What according to your opinion is more convenient when faced with the situation of harassment based on gender discrimination? (Suffer in silence/ Quit job/ Fight against injustice/ can't say)
44. Are you given easier jobs at work as compared with male candidates? (Yes/ No/ Can't say)
45. Do your seniors/ colleagues / male working members/ others respect you? (Yes/ No/ Can't say)
46. Which among these problems is most important problem faced by women in the working place?

(Depression/ Mental pressure/ Gender discrimination/ sexual harassment/ Others)

47. Support for balance between work and non-work activities given by
(Spouse, partner/friends/other family members/ encouragement to use paid & unpaid
leave/Others)

48. Are you involved in any kind of activities in the workplace, community and society? Yes/
No

49. Do you think you are treated differently by your colleagues/ seniors/boss/other members
because you are a woman?

50. Are you facing any difficulties/ problems related to your professional life & family life?

51. Do you feel that financial independence gives you more respect in the society? Explain
how?_____

52. Do you have any Leisure time? If yes how much time?

53. Do you have additional payment for any reason?

54. Working days per week.

55. Do you have holidays? If yes when?

56. Can you take leave for emergencies? If yes how many days?

57. Do you get bonus during festival seasons? If yes, how much?

58. Do you have any health issues by doing this job or in general? Yes/ No
If yes, mention

59. Do you face any other challenges/ problems in your job or at work place? Yes/ No
If yes, mention it.

60. Are you satisfied with this job? Yes/ No

(A) Reason for Satisfaction:

(B) Reason for non-satisfaction:

61. Have you ever thought of quitting this job and shifting to another one? Yes/ No

If yes, give

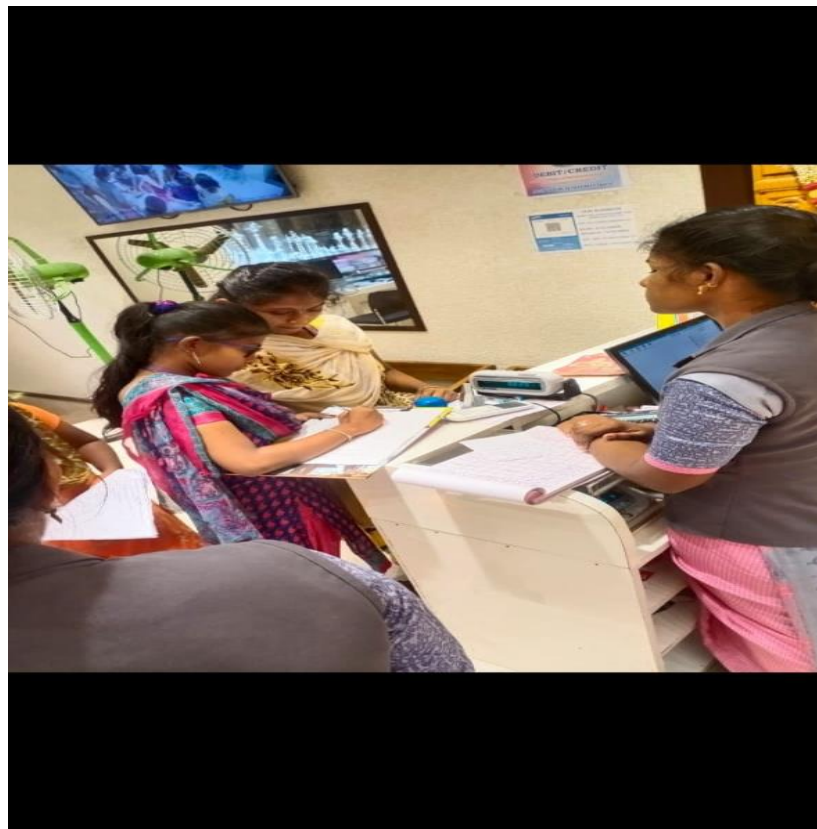
reason_____

62. Do you expect anything from government with relation to your job?

63. Do you have any additional comments about your fears/ frustration/ wants /needs/ career/
boss/team/workplace & workplace environment etc., Please elaborate

64. Suggestions if any:

PHOTOS





**A STUDY ON LIVING CONDITIONS OF PALMYRAH TREE CLIMBERS IN
KULATHUR VILLAGE OF THOOTHUKUDI DISTRICT**

Project Report Submitted to the

DEPARTMENT OF ECONOMICS

ST. MARY'S COLLEGE (AUTONOMOUS) THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Tirunelveli

In partial fulfillment for the award of the Degree of

Bachelor of Arts in Economics

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May 2022

CERTIFICATE

This is to certify that the project report entitled "A STUDY ON LIVING CONDITIONS OF PALMYRAH TREE CLIMBERS IN KULATHUR VILLAGE OF THOOTHUKUDI DISTRICT" is submitted to St. Mary's College (Autonomous) Thoothukudi, in partial fulfillment for the award of the degree of Bachelor of Arts in Economics and is a record of work done during the year 2021-2022 by the following students of III B.A Economics.

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CHAPTER I

INTRODUCTION



A STUDY ON LIVING CONDITIONS OF PALMYRAH TREE CLIMBERS IN KULATHUR VILLAGE OF THOOTHUKUDI DISTRICT

CHAPTER I

INTRODUCTION

1.1 INTRODUCTION

Palms are thought to be among the world's oldest flowering plants (Redhead 1989)¹. Many palm species have been tapped for fresh juice (sweet toddy), fermented drinks (toddy, wine, arak), syrup ("honey"), brown sugar (jaggery), or refined sugar for centuries throughout the tropical world. *Arenga pinnata* was most likely one of humanity's first sources of sugar (Redhead 1989). Around 4,000 years ago, Hindus discovered how to extract it (Ferguson 1888, cited by Fox 1977)². Palm sugar is made from the sap of plants belonging to the Arecaceae family, one of which includes palm trees (*Arenga pinnata*) [Soeseno, 1995]³

Palm sugar is made by tapping palm juice and then reducing the water content to make it solid. Palm sugar is sold in the form of sugar with a coconut shell imprinted on it [Soeseno, 2000]⁴. The use of palm trees, particularly for the production of palm sugar, is still very open and not breathing down, and the demand for palm sugar has always increased during this time, especially in the days leading up to Eid or Christmas [Rumokoy, 2000]⁵.

¹ Redhead J 1989, Utilization of tropical foods: trees. In: FAO Food and Nutrition Paper No 47: 3. FAO, Rome, pp. 52.

² Fox J F 1977, Harvest of the Palm, Ecological Change in Eastern Indonesia. Harvard University Press, Cambridge, Massachusetts, and London, England. pp. 290.

³ Soeseno. S, Palm Cultivation, Penebar Swadaya, Jakarta, 1995

⁴ Soeseno, S., Sugar Farming. P.T. Diffuser Organization, Jakarta. 2000

⁵ Rumokoy, M. M. M, Benefits of Sugar Crop (*Arenga pinnata* Merr) Bulletin Baluka, 2000

Since antiquity, jaggery and treacle made from *Caryota urens* sap have been a major source of sugar in Sri Lanka (Dissanayake, 1977)⁶. The main traditional use of palm sap in Africa is to make wine. Early navigators on the Guinea coast in the 15th century reported it in Egypt (date palm) long before Christ's birth (Barreveld, 1993)⁷. (Sodah Ayernor and Matthews, 1971)⁸.

Arunachalam in Tamil Nadu composed a Tamil classical poem (Tala Vilasam) that is entirely dedicated to the glory of this tree and lists 801 articles made from its various parts (Rangaswami 1977⁹; Kovoov, 1983)¹⁰. In India, this tree is known as the "Tree of Heaven," "Mankind's Greatest Provider in the Tropics," "Tree of Life," and other names (Rangaswami, 1977). Almost all palms have a sugary solution that can be obtained by removing the meristem (Tuley, 1965a)¹¹. Essentially, the trunk's starch reserves are converted to sugar and transported upwards toward the stem apex (Fox 1977). One of the main reasons for the decline in palm sugar production is the scarcity of fuelwood and the rising cost of it. For 100 to 120 kg of sugar, 2-3 m³ wood is required from *Arenga pinnata* (Mogea et al, 1991)¹².

⁶ Dissanayake B W 1977, Use of *Caryota urens* in Sri Lanka. In: First International Sago Symposium. The Equatorial Swamp as a Natural Resource. Ed. Tan K. Sarawak, East Malaysia, Kuching 1976. Kuala Lumpur. pp. 84-90.

⁷ Barreveld W H 1993, Date palms products. FAO Agricultural Services Bulletin No 101. FAO, Rome. pp. 262.

⁸ Sodah Ayernor G K and Matthews J S 1971, The Sap of the Palm *Elaeis guineensis* Jacq. as Raw Material for Alcoholic Fermentation in Ghana. Tropical Science. XIII (1): 71-83.

⁹ Rangaswami G 1977, Palm tree crops in India. Outlook-on-Agriculture (UK). 9(4): 167-173.

¹⁰ Kovoov A 1983, The palmyrah palm: potential and perspectives. FAO Plant Production and Protection Paper No 52. FAO, Rome. pp. 77.

¹¹ Tuley P 1965a, Studies on the production of wine from the oil palm. J. Nigerian Inst. Oil Palm Res. 4: 284-289.

¹² Mogea J, Seibert B and Smits W 1991, Multipurpose palms: the sugar palm. Agroforestry Systems 13: 111-129.

With excellent farmer income, it is understandable that if they can meet their basic needs of food, clothing, shelter, health, education, and social welfare, the success of the tapper farmers can improve the socio-economic welfare of farm families palm tapper [Bank Indonesia, 2008]¹³. To determine the socio-economic conditions of farming families' welfare, palm tappers will be shown with a subsistence level that includes food, clothing, shelter, education, health, and social [National Population and Family Planning, 2000]¹⁴.

THE PROCESS INVOLVED IN PALMYRAH TAPPING (PALMYRAH TREE CLIMBING)

Tapping palmyrah is a challenging task. Palmyrah tappers must have the stamina and determination to devote their entire being to their difficult occupation. For them, no moment is too early or too late. They prepare for the duty by getting up early in the morning, around 2 or 3 a.m. They return home by 8 a.m. and are generally confined to their homes. Their afternoon job begins at or after 2:00 p.m. and continues until 7:00 p.m.

They drink a heavy quantity of toddy to replenish their strength and vigour because the labour is so exhausting. Climbing over and above these causes horrific marks on the palmyrah tappers' legs and arms. No amount of plastic surgery will ever be able to eliminate these everlasting marks. As a result, palmyrah tapping is one of the most challenging jobs known to man.

The palmyrah trees' fruits are gathered in stages. The first is the nongu stage, which occurs before the fruits ripen. It has a jelly-like consistency and appeals to the taste buds of everybody, whether an Indian or a foreigner. However, it is also inexpensive. As a result, the nongu is frequently claimed to be able to conquer the plates of both

¹³ Bank Indonesia, The Pattern of Business Financing Palm Sugar, Jakarta, 2008

¹⁴ The National Population and Family Planning. Welfare Index, Jakarta, 2000

young and old. During the summer, most of the streets and roads in Thoothukudi district are lined with nongu vendors.

The majority of passers-by, travellers, or tourists come to a halt in front of them to savour a cup of the luscious, jelly-like nongu. There are no negative effects from using Nongu. It can appeal to both the young and the elderly, as well as the sick and the healthy. Even chronic sugar sufferers are allowed to consume it. When nongu, a jelly-like substance, is mixed with palmyrah juice, pathaneer, or neera in a cup, it has an exhilarating impact on everyone. As a result, throughout the summer, the palmyrah pathaneer nongu combo is one of the most popular health drinks.

PALMYRAH PRODUCTS

Palmyrah is also known as Kalpagaviruksham, and palmyrah juice, also known as pathaneer, is a natural gift. It is a nutrient-dense food. Every morning, working-class people consume it as a health drink. Tappers provide palmyrah juice free of charge to any passer-by who is hungry or thirsty, according to the district's custom. Palmyrah juice can be used to make a variety of different items. Jaggery, spicy jiggery, value-added palm candy, and toddy are among them.

Jaggery

Jaggery is a palmyrah substance with a lot of therapeutic potential. Coffee with jaggery has a lot of health benefits. When you have a cold, jaggery-coffee with some dried ginger added to it can be used as a throat lozenge. Villagers drink jaggery-coffee throughout the year. People who work in the fields under the hot sun take jaggery and water to relieve physical exhaustion. Jaggery was one of the substances utilised by the ancient Siddhas in the manufacture of herbal medicines to treat disease. Jaggery comes in a variety of shapes and sizes.

Jaggery with spices

Spiced jaggery is made out of a generous amount of various spices and a certain amount of jaggery. Small boxes made of palmyrah leaves are usually used to pack it. They can be found in tourist centres, sweet stores, bakeries, and supermarkets.

Tourists from all over the world, as well as those from the north Indian states, are drawn to it.

Value-added Candy Palms

The palmyrah juice collected by the palmyrah tapper is filtered for contaminants and cooked to 40°C to 60°C in a pan. At this point, the water is delimed and then filtered again to eliminate any sediments that have accumulated throughout the process. Palm syrup is made by boiling the filtered neera until it reaches a temperature of 108°C.

The syrup is placed in crystallizers and stored in a vibration-free environment. After 40 days, jaggery crystals are created and collected. Palm candy is the name for jaggery crystals. The residual syrup is heated and placed into crystallizers for two more cycles after harvesting palm candy. The crystals are gathered, cleaned, dried, graded, and packaged for sale.

Palm candy is used as a throat lozenge by people who have a persistent cough. It has a flavour that is superior to sugar. Palm candy is more expensive than jaggery because of the added value created by using innovative processing methods. PWDS established value-added palm candy manufacture as a community-based venture among palmyrah tapper families.

In Thoothukudi district, ten similar units were established with the cooperation of all palmyrah tapper families. These businesses manufactured high-quality sweets and profited from it. Any casual reader will be able to comprehend what it generally looks like by looking at the accompanying exhibit.

Toddy

Toddy is a type of domestic intoxicant that is available in Kerala's Thoothukudi district. Toddy production and marketing are completely unrestricted in Kerala. Toddy shops can be found all across Kerala. Toddy was a popular culinary dish in ancient India. The mixture of toddy, tapioca, and fish was thought to be an unstoppable energy source.

Toddy production and marketing have been outlawed in Tamil Nadu in recent years. Archeological evidence suggests that palmyrah juice was used for construction

during the reigns of the ancient Chera, Chola, and Pandia kings. The construction of palaces and forts will be strengthened by lime mortar mixed with a small amount of palmyrah juice. Even dwellings were constructed using lime mortar made from palmyrah juice. As a result, the palmyrah tree, according to its name, is immensely beneficial to mankind's development at the bottom of the social ladder.

THE ENVIRONMENTAL IMPORTANCE OF PALMYRAH TREES

Palmyrah trees were an important source of income for the people of Thoothukudi's rural areas. Apart from that, they were a major supplier of raw materials for a number of small businesses in and around Thoothukudi. Despite the fact that these businesses are gradually fading as a result of a shift in people's attitudes, it is critical to delve deeply into their heydays. This point will be made evident in the debate that follows.

The Palmyrah Plantation and the Umbrella Manufacturing Industry

Umbrellas of the modern sort were not in use long before the establishment of the English government. India was backward in terms of industry, culture, and economy at the time. As a result of the circumstances, individuals are forced to wear umbrellas made of palmyrah leaves. There were two types of umbrellas available. The first one resembled a cap. It was two to three feet in diameter. There was a cap-like connector in the middle. People used to wear it on their heads and roam around during particularly hot seasons or rainy days. It provided good rain and sun protection. The second style of umbrella resembled a modern umbrella in appearance. Despite the fact that it had a holder, it could not be folded due to its lack of flexibility. Children and women used to avoid it since it was too heavy to carry. There is historical evidence that the umbrella manufacturing industry was thriving and that the craftspeople who made them were doing brisk business. However, with the arrival of

modern civilization and trendy umbrellas, the umbrella industry has nearly vanished from the Indian economy in general, and the Thoothukudi area in particular.

The Mat Industry

Mats made of palmyrah leaves are used by people for numerous purposes. The most popular among them would include:

- For drying food grains
- For roofing purposes
- For people to comfortably sleep and sit on and,
- For packaging purposes.

The mats used for sitting and sleeping purposes are bit expensive. They are made with specially cut out and colored palmyrah leaves. Such mats are reported to be extremely good for health.

Basket Making Industry

The baskets which are in everyday use produced out of palmyrah leaves are of different shapes and size. There are about 5 types of baskets. They are:

- Baskets used for carrying loads.
- Baskets used for preserving eatables.
- Baskets used for storing grains.
- Baskets used for shopping purposes
- Baskets used for business purposes

In villages farmers and petty traders even today use the first type of baskets for carrying farm products such as coconuts, banana, tapioca and vegetable items. They are available in different shapes and size. Basket makers charge as much as Rs.500/- for making an optimum size basket. The cost of a medium size basket is around Rs.250/-. Smaller baskets costs about Rs.100/-. Very small baskets used for collecting grains and vegetable items are sold for prices ranging from Rs.10 to Rs.15/-. These baskets are in very great demands.

Muram

Muram is otherwise known as sieves. It is used for separating grain from chaff or for removing dust and particles of stones or clay. Their popularity is on the wane due to the advent of readymade flour and quality tested and scientifically packaged with ISI marking rice, black gram green gram and wheat. But those who still depend on the conventional methods of cooking, cannot do without these muram. The cost of the muram varies from Rs.150/- to Rs.200/.

Brush Making

Palmyrah fibre is used to make brushes for cleaning toilets and floors. Palmyrah fibre is derived from the palmyrah leaves' stalks. The bottom portion of these stalks is normally chopped off, and then they are exposed to a machine crushing procedure in order to extract the fibre. These brushes come in a variety of sizes.

Despite increased rivalry, the brush manufacturing business has made significant improvement over the years. As a result, it is clear that the palmyrah tree has been an important supplier of inputs for a variety of sectors. The Palmyrah Tapping Industry and Garbage Pollution Garbage pollution posed a severe health risk to people living in rural areas.

Mosquitoes, toxic bacteria, and deadly reptiles breed in the collection of agricultural waste, the accumulation of dried leaves around trees, and the fast-growing prickly shrubs. The streets and areas around the villages get cleaner as palmyrah tappers use this rubbish as fuel for creating palmyrah products such as jaggery. Mosquitoes and flies are attracted to the smoke emanating from residential hearths. As a result, they help to keep the environment clean.

PALM TREE IN TAMILNADU

The palm tree originated in Africa and moved eastward to India and other Asian countries. Africa, Asia, South America, and Australia are all home to this species. In India, there are approximately 7 to 8 crore palm trees, half of which are found in Tamil Nadu, which has designated this species as its state tree.

For thousands of years, the palm tree has played an important role in agriculture and handicraft in India, particularly in the south. Each component of the plant, from the root to the pith to the delicate leaves, is quite useful. The 801 applications of this tree are depicted in a Tamil poem called 'Thalavilasam' authored by Thirukudanthai Arunachalam, demonstrating how extensively this tree influenced ancient India.

The palm tree provides a lifeline for the people of Tamil Nadu's south-eastern region. Nathakulam, my hometown, is a small village in the Ramanathapuram District. Our village's boon is the palm tree. The palm tree's goods provide the inhabitants with all they need to survive. Specifically, in Ramanathapuram, one of Tamil Nadu's districts, there are numerous Palm tree plantations. Palm trees require a sandy region where their roots can freely penetrate the soil.

The tree may also thrive for several years without rain. This tree's roots reach the subsurface water table and absorb water from there, allowing it to thrive in a drought-like situation. It takes about 10-15 years for a palm tree to reach full maturity. When you consider all of the benefits of a palm tree, it's easy to see why the people of Tamil Nadu's southeastern region refer to it as their lifeline. They subsist on the palm tree's products. A village's economy is entirely dependent on the number of trees it has. It also depends on how they invest their time and effort in extracting the products of a palm tree in order to make money. By working as hard as they can in the hamlet, a family can earn roughly \$200-300 each day.

Table 1.1 shows the quantity of crude palm oil (CPO) produced by each state under the oil palm development programme (OPDP).

TABLE 1.1
State-wise Quantity of Crude Palm Oil (CPO) under Oil Palm
Development Programme(OPDP) (metric tonnes)

State	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Andhra Pradesh	15,729.00	18,974.00	18,960.00	21,457.00	23,905.00	43,500.00	35,509.00	58,000.00	43,593.00	57,402.00
Karnataka	731.97	573.58	606.64	646.00	681.01	793.00	974.00	1037.46	1203.00	1165.00
Tamil Nadu	86.06	—	—	—	110.49	178.26	248.66	272.72	365.51	364.62
Gujarat	3.56	2.94	2.94	3.00	—	—	—	—	—	—
Orissa	42.35	—	—	—	—	—	—	—	1.65	641.00
Goa	207.75	243.00	330.85	324.00	348.93	379.00	345.00	360.83	392.76	311.00
Tripura	20.64	—	—	—	—	—	—	—	—	—
Kerala	6667.26	980.00	6572.00	6387.00	5792.94	6478.00	6888.00	5732.40	7370.50	6604.50
Andaman & Nicobar	1800.76	1840.32	1696.00	—	—	—	—	—	—	—
Total	25,289.35	22,613.84	28,168.43	28,817.00	30,838.37	51,328.26	43,964.66	45,403.41	52,926.42	66,488.12

SOCIAL ISSUES AND PROBLEMS FACED BY PALMYRAH TAPPERS

The palmyrah tappers had far too many social problems. Palmyrah tapping, as previously said, is a very difficult task. Climbing up and down palmyrah trees with heights varying from 40 to 100 feet twice a day is no simple chore. It leaves its tiresome traces on the palmyrah tappers' legs, forearms, palms, and chest. They can't be hidden from view, and they can't be removed with surgery. Wherever they go, these scars reveal their true identity.

They are essentially despised by the general public because of their obnoxious trademarks, which have ruined their image. Furthermore, no amount of dips with the local channels and tanks can simply erase the stark of neera. On top of that, they are unable to miss work under any circumstances. Families' deaths, marriages, and illnesses cannot be used as an excuse to skip palmyrah tapping. Failure to complete the work even once a day will have a significant impact on the palmyrah tree's yield. To put it another way, palmyrah tappers should take their profession seriously on a daily basis. For them, there is no such thing as too early or too late. The social stigma they face has been passed down from generation to generation. Another significant point to note in this context is that the wives and children of palmyrah tappers are under-clothed and under-nourished; until the introduction of the Public Works Department, changes in civilization and culture had little impact on them. The pleasures of childhood were denied to the children of palmyrah tappers. The Public Works Department determined that social transformation among palmyrah tappers and their families was critical.

PALMYRAH TREES IN THOOTHUKUDI DISTRICT

Palmyrah trees are noted for their natural climate flexibility. It is, in general, the only crop that can thrive in tropical climates. It can survive in locations that are prone to drought. Tropical palmyrah trees were employed as boundary trees in dry land farming in the past. Along the banks of streams and rivers, a luxuriant growth of them may be discovered.

It is commonly grown in the southernmost parts of Tamil Nadu. According to a 1981 estimate, it was farmed on around 533 acres in the Thoothukudi area. As a result, by the 1980s, palmyrah farming had reached its peak. It has been on the decrease since then, with the size shrinking to about 120 acres in 2010.

The palmyrah trees are unusual in that they are the tallest of all trees. Their height varies between 40 feet and 100 feet. They constantly maintain an upright posture. They become vulnerable victims of thunderstorms throughout the rainy season. They can be classified as male or female trees. Cross pollination produces fruit on the female trees. Palmyrah trees are monocotyledon in botanical terms. The leaves resemble a fan.

They can be used to make baskets, mats, and thatch homes when they are still green. Palmyrah leaves were utilised for note-taking and record-keeping in India when there was no paper available. They were known as 'OLAI SWADDI' in Tamil, which means palm leaf manuscript. Olai Swaddis are still scientifically preserved in archives and museums today.

Only the Olai Swaddis could provide valuable historical evidence concerning the accomplishments of India's ancient monarchs. Astrologers only documented astrological calculations and guesses regarding the life of any kid upon its birth in Olai Swaddis in India, where astrologers are held in high regard. On top of that, Olai Swaddis recorded the discoveries and innovations of ancient sages, hermits, and Siddhas in the field of herbal medicine.

Students pursuing a course in Siddha medicine or Indian medicine still utilise them nowadays. The leaf stem, or petiole, has a knife edge. To be more specific, it resembles a hacksaw blade. The section of the stalk that is directly under the knife edge can be gently cut and utilised to make cots, baskets, and ropes. It is utilised as an easily accessible binding material in communities. Jute yarn, coir yarn, and polyethylene fibre yarns have effectively replaced them.

Palmyrah trees were employed for construction projects in the past. Tile roofing frames constructed of palmyrah wood are widely utilised in both large and small

dwellings. Under normal conditions, frames with proper care can last up to 100 years. Palmyrah wood may be used to make furniture if it was carefully cut out, sculpted, and polished.

There was a period when a person's wealth was measured by the number of palmyrah trees he owned and the amount of jaggery he produced. When it comes to palmyrah tree upkeep, it can be said with confidence that it costs next to nothing. There is historical proof that man, whatever his inventiveness, will never be able to produce dwarf palmyrah tree kinds. This argument can be illustrated using just one example.

At Srivilliputhur, the Tamil Nadu Agriculture University has a research centre. It was given the duty of performing research to see if dwarf palmyrah trees might be produced. These attempts, however, proved to be a waste of time. As a result, the research centre was shut down. All of this demonstrates that palmyrah trees are meant to grow to unrivalled heights by nature.

Export of palm fibre and palm leaf

The Tamil Nadu State Palmgur and Fibre Marketing Cooperative Federation and exporters from Thoothukudi in Tamil Nadu export palm fibre to nations such as America, England, Belgium, the Philippines, Japan, Germany, Australia, and the Netherlands. In Manapad in Thoothukudi district, Pulicat in Tiruvallur district, Adukkamparai in Vellore district, and Manamadurai in Sivagangai district, women artisans produce elegant palm leaf goods.

PROGRAMMES OF THE GOVERNMENT

(i) Evergreen Revolution:

Palm seeds plantation programme has been formulated under the wasteland development programme of the agriculture department.

(ii) Food Security

Neera and palm jaggery are consumed as natural vitamin food. Awareness has been created among the public about the nutritious value of these edible palm products.

(iii) Livelihood Security

Further steps will be taken in the matters of providing training to artisans and the technical know-how of the research made on the preservation of palmyrah nungu to palmgur artisans and also in exporting palmyrah nungu, palm fibre and palm leaf articles to foreign countries.

(iv) Ecological Security

The palm products are free from environmental pollution and eco-friendly. Hence, programmes have been formulated with a long-term view to grow and protect palmyrah trees, to create awareness among the public, to develop and fully utilise palm products industry for the improvement of the standard of living of the rural palm products artisans.

Women artisans are engaged in the production of excellent palm leaf articles in Manapad in Thoothukudi district, Pulicat in Thiruvallur district, Adukkamparai in Vellore district and Manamadurai in Sivagangai district. These products are being exported to America, London, France, Germany, Switzerland, Canada, Japan and Netherlands through agencies.

ROLE OF TAMILNADU PALM PRODUCTS DEVELOPMENT BOARD

The Tamilnadu Palm Products Development Board was established in 1995 based at Egmore, Chennai. Though the Tamil Nadu Palm Products Development Board is not directly involved in trading activities, it promotes production and trade through 996 Primary Palm Jaggery Cooperative Societies (including Palm Leaf Workers Cooperative Societies), 8 District Palmgur Marketing Cooperative Federations and one Tamil Nadu State Palmgur and Fibre Marketing Co-operative Federation.

Range of Production

The edible Palm products such as Neera, Palm Jaggery, Palm Sugar, Palm Candy, Preserved Nungu, Palm Fruit Jam, Palm Chocolate varieties and non-edible products such as Palm Leaf articles, Palm Naar articles, Palm Fibre and Brush varieties, Date Palm Baskets and other Handmade palm Products are produced.

Export of palm fibre and palm leaf articles

Palm Fibre is being exported to foreign countries such as America, England, Belgium, Philippines, Japan, German, Australia and Netherlands by the Tamil Nadu State Palmgur and Fibre Marketing Cooperative Federation and exporters from Thoothukudi in Tamil Nadu.

Employment

Employment opportunities have been provided to about 6 lakhs artisans in palm products industry both directly and indirectly.

Training

Training is being offered to the rural artisans at the Regional Palm Products Training Centre of Tamil Nadu State Palmgur and Fibre Marketing Cooperative Federation at Cuddalore.

Research

Palm Neera is fully utilised and converted as value added product of Palm Candy by a traditional method, which takes nearly 45 days to form candy crystals with low yield. Due to research conducted by Anna University, it has been reduced to 25 days to form crystals with good quality and increased yield of palm candy. The technical know-how of the improved method in the production of palm candy has been provided to the palmgur artisans.

Research on the preservation of Palmyrah Nungu and Palmyrah Fruit Jam has been completed, and the technical know-how has been provided to the Tamil Nadu State Palmgur and Fibre Marketing Cooperative Federation. This would create awareness among the Self-Help Groups and other individuals interested in Palm Products Industry to produce and market these products.

1.2 OBJECTIVES OF THE STUDY

The following are the objectives of the study:

1. To study and analyse the socio-economic conditions of Palm tree climbers in Kulathur village of Thoothukudi District.
2. To find out the health issues and other problems of these Palm Tree climbers.
3. To suggest remedial measures to solve the problems of the palm tree climbers.

1.3 METHODOLOGY AND SURVEY DESIGN

In this study we have used simple random sampling method and selected 50 respondents. We have used direct interview method for the collection of information from Palm tree climbers in Kulathur village of Thoothukudi district. We have also used primary and secondary sources to collect the data with structural development perspective. Statistical tools like averages, percentages and arithmetic mean have been used in the study. The period of study is February 2022 to April 2022.

Sources of information

- 1) Primary resources: - To collect the primary information we used self-prepared questionnaire on developmental perspective for interview and then information is collected from 50 respondents.
- 2) Secondary resources: -we have collected information through various articles, journals, library, newspapers and websites.

1.4 SIGNIFICANCE OF THE STUDY

The Palmyrah tree protects natural resources by preventing soil erosion. Consumers prefer palm sugar to other sugar products because it is made from palm tree sap. As a result, the palm sugar industry is a viable option for improving community welfare because processing is still done with very little capital. The use of palm trees, particularly for the production of palm sugar, has a lot of potential.

Commodity demand is not breathing, and there are still unmet needs during this downturn. Consumers prefer palm sugar to other sugar products because it is made from palm tree sap. According to him, the palm sugar home industry is a viable option for improving the well-being of sap farmers because processing is simple and requires little capital.

Palmyrah juice can be used to make a variety of different products. Jaggery, spiced jiggery, value-added palm candy, and toddy are among them. During the summer, the palmyrah pathaneer nongu combination is one of the most popular and sought-after health beverages. Palmyrah fibre is used to make brushes for cleaning toilets and floors. Palmyrah fibre is extracted from the palmyrah leaves' stalks. Palmyrah leaves are commonly used to thatch rural huts and create separate apartments within them. Tuticorin port exported a large quantity of palm-leaf-based artefacts to European countries.

Palmyrah trees are primarily grown in the Tuticorin district's Tiruchendur, Srivaikundam, Sattankulam, and Vilathikulam taluks. Jaggery is made from palmyrah juice, and it is the main source of income for the people of Tiruchendur and Sattankulam taluks. There are 312 crores of palmyrah trees in Thoothukudi that are about to be harvested. The government can receive Rs.100 per tree as revenue ($3,50,00,000 \times 100 = 350,00,000$).

In Tamil Nadu, there are eight crores of palmyrah trees ($100 \times 8,00,00,000 = 800,00,000$). The annual income from toddy for the government is $800,000,000 \times 3 = 2400,0000,000$. Foreign liquor generates a total revenue of \$50,000,00,000. It is a good source of money for both the government and the unnoticed palmyrah tappers. The goal of this research is to determine the socioeconomic and living conditions of palmyrah tappers in Tamilnadu's Tuticorin area.

1.4 STATEMENT OF THE PROBLEM

Our research aims to determine the current state of the palmyrah tapping palm in Kulathur village, Thoothukudi district. This location was chosen since it is where the palmyrah grows the most in Kulathur village. Palmyrah tappers in India are on the edge of becoming impoverished. They are bound by an occupation that places them on the outskirts of the landmass, the tapping reeling in extreme poverty and a caste society's degraded status.

The Khadi and Village Industries Commission (KVIC) is marketing 'neera,' a palmyrah tree extract, as a health drink to help the economically downtrodden toddy tappers. Apart from being sweet and delicious, Neera has a lower calorific value. "Neera is superior than mineral water," according to medical research. The issue is a lack of initiative on the part of both the government and private growers, as well as the lack of a strong marketing network.

The palmyrah is both perilous and hazardous to climb. Every year, many climbers, no matter how skilled, fall from the trees, dying or becoming paralysed for the rest of their lives. Climbing the tree, the climber clasps the trunk with joined hands, supporting his weight with the soles of his feet, which bend inward like clutching hands, held together by a short span of rope. The climber then ascends the tree as quickly as a man might walk a distance of similar length in a series of springs in which both hands and feet move together.

After years of climbing, the tapper's physique becomes twisted, his muscular chest scarred, and his hands and feet like the colossal paws of a beast. The season in which palmyrah sap flows is only six months long, and the production varies according on rainfall. Tapping is one of the most dangerous jobs in the planet.

Their lives are an odd mix of superstition, exploitation, apathy, and life-threatening situations. In terms of socioeconomic and cultural advancement, they have been at their lowest ebb. Despite several union and state government efforts to enhance

tappers' living standards, their economic and social security has not improved significantly.

This has added a new dimension to studying palmyrah tappers' living situations from a different perspective, namely their income and expenditure patterns. A thorough examination of their income and expenditure patterns, as well as a subsequent examination of their impact, would reveal the true economic factors affecting their standard of life.

The empirical findings of this study could serve as a fresh foundation for developing new policies and reviewing existing policies aimed at improving the lives of a large number of palmyrah tappers. Despite the government's many welfare programmes, the majority of palmyrah tappers in Tuticorin district's Kulathur hamlet live in abject poverty.

They are anomalies in the traditional development process. Housing, sanitation, and drinking water amenities are all severely lacking. The literacy rate is insufficient. This low living quality is reminiscent of tribal culture. As a result, the socio-economic-cultural backwardness of Kulathur village palmyrah tappers in Tuticorin district should be examined from a new perspective, namely, their income and expenditure patterns, which, among other things, play an important part in the lives of palmyrah tappers.

In the study area also, the socio-economic conditions of Palm tree climbers is poor. They face various problems related to their health issues and indebtedness etc., Thus a need arises to study the conditions of the palm tree climbers in Kulathur Village in Thoothukudi District.

1.5 LIMITATIONS OF THE STUDY

This study suffers from the following limitations:

1. This study is confined to Palm tree climbers in Kulathur village of Thoothukudi District Village only.
2. The field study has been made in the selected areas only.

3. Some data are not 100% accurate.
4. Lack of sufficient time is one of the drawbacks of the study.
5. Labour efficiency varies from work to work, person to person. Hence, it is not easy to measure the efficiency of labour in relation to their socioeconomic status.

1.7 CHAPTER SCHEME

The present study on **“A STUDY ON LIVING CONDITIONS OF PALM TREE CLIMBERS IN KULATHUR VILLAGE OF THOOTHUKUDI DISTRICT”** is organised in to five chapters.

Chapter I deals with Introduction about Palm Tree and Palmyrah Tree climbers, The process involved in Palmyrah tapping (Palmyrah Tree climbing), Palmyrah products, the environmental importance of palmyrah trees, Palm tree in Tamilnadu, Social issues and problems faced by palmyrah tappers, Palmyrah trees in Thoothukudi district, Programmes of the Government, Role of Tamilnadu Palm Products Development Board etc.

This chapter also includes Objectives of the study, Methodology, Significance of the Study, Statement of the problem, Limitation of the Study and Chapter Scheme.

Chapter II deals with the Review of Literature and Concepts.

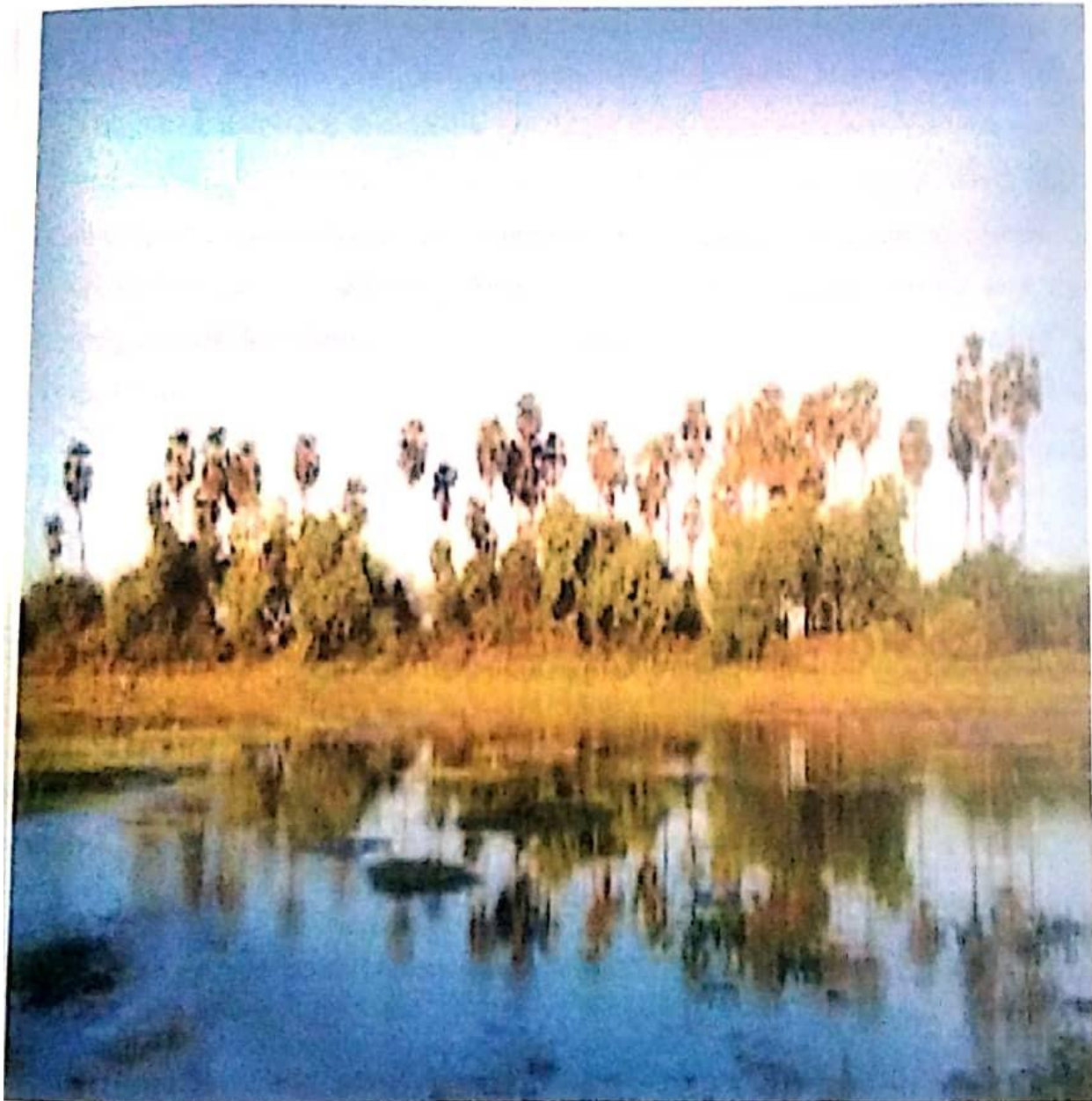
Chapter III deals with the Profile of the Study Area.

Chapter IV deals with Analysis and Interpretation of the data.

Chapter V deals with Findings, Suggestions and Conclusion.

CHAPTER II

REVIEW OF LITERATURE



CHAPTER II

REVIEW OF LITERATURE AND CONCEPTS

2.1 REVIEW OF LITERATURE

Sooryamoorthy (2000)¹⁵ recounts the Public Works Department's grassroots interventions among palmyrah workers and other socially and economically disadvantaged rural people over the course of 25 years (1975-2000). He points out that the Public Works Department's initial efforts were aimed at bringing up the palmyrah workers in Kanyakumari district and Neyyattinkara taluk in Thiruvananthapuram district by providing them with prospects for socioeconomic emancipation. The palmyrah workers' socio-economic conditions were improved through the establishment of a community organisation programme, a savings and credit scheme, a community health programme, awareness raising and training programmes for capacity building, a pre-school programme, skill training, and a shelter programme. Workers in Palmyrah were encouraged to send their children to school, practise proper health care, instil a saving attitude, and train their men and women to take on new jobs.

J.N. Anaglo, S.D. Boateng, and F.K.M. Sawzy (2014)¹⁶ looked at how enhanced palm production practises affected palm farmers' livelihood assets in Ghana's Kwaebibirem district. A total of 120 palm producers from across the region were chosen at random. This area was chosen since it is the country's largest producer

¹⁵ Sooryamoorthy, R., (2000), *Climbing Up: The Story of Palmyrah Workers Development Society*, PWDs, Marthandam, Tamil Nadu, 2000.

¹⁶ Anaglo, J.N., Boateng, S.D., and Swazy, K.M. (2014). The Influence of Adoption of Improved Palm Production Practices on the Livelihood Assets of Palm Farmers in Kwaebibirem District of Ghana. *Journal of Biology, Agriculture and Healthcare*, Vol.4, No.1, 88-94.

of palm oil. These were small-scale farmers who began planting palm trees in the year 2000.

R. Anwar, R.P. Sitorus, A.M. Fauzi, and Widiatmaka (2014)¹⁷ investigated the technical culture and productivity of five palm firms in East Kalimantan Province. Primary data was gathered by observation and measurement, while secondary data was gathered through reporting on the firms' economic activity. A total of 10 percent of the five plantations were examined and measured. Nursery, immature plants, and mature plants were the three types of agronomy technical applications. The study discovered that critical technical culture treatments at the nursery stage did not adhere to prescribed technical standards, resulting in a 15% yield loss in a year. The average productivity of the plantations was found to be 12.66 tons/ha/ye, or 78.96% of the possible baseline productivity, according to the productivity study.

In Dekina local government area of Kogi State, Nigeria, **Ibitoye and S. Jimoh (2014)¹⁸** evaluated the economic analysis of palm marketing. One hundred twenty-five palm dealers were chosen at random from five large markets. To gather data for analysis, a questionnaire was used. Simple means, frequency, and percentages were utilised as statistical tools for data analysis. In addition, the Shepherd Futrel model, bivariate correlation, gross margin, and a five-point Likert scale were employed. Tables were used to present these data. Females made up the bulk of palm sellers (96 percent), and the palm market was mostly integrated, according to the report. Palm provided a good return on investment.

¹⁷ Anwar, R., Sitorus, R.P., Fauzi, A.M. & Widiatmaka, W. (2014). Technical culture and productivity of palm in several plantations in East Kalimantan. *International Journal of Latest Research in Science and Technology*, Vol. 3(2), 19-24.

¹⁸ Ibitoye & Jimoh, S. (2014). Economic analysis of palm marketing in Dekina local government area of Kogi state, Nigeria, *Asian Journal of Social Sciences, Arts and Humanities*, Vol. 2(1), 1-19.

The goal of the workshop, according to **A.U. Santosa (2014)¹⁹**, was to increase broad understanding and awareness of the palm sector's supply chain and its effects in Indonesia. It aims to identify the best practises and initiatives for halting deforestation in the palm sector, as well as highlighting existing policy, economic, and technical barriers and identifying potential collaborative solutions that government, business, and civil society can work on in order to create a sustainable and productive palm sector that can meet rapidly growing demand and promote sustainable economic growth that benefits people while also preventing further deforestation.

Palm has become one of the fastest-growing crops, according to **S. Mingorria, G. Gamboa, B. Lopez, and E. Corbera (2014)²⁰**. Palm planting is becoming popular as a rural development approach in many nations, with the goal of creating jobs and producing both export commodities and biofuels. Based on a study in Guatemala's Polochic Valley, they looked at the socioeconomic consequences of palm cultivation. Participants were observed, semi structured interviews were conducted, and a land-time budget analysis was performed to collect data. Palm cultivation boosts rural income while lowering maize yield, according to the study. Despite the reduction in maize production, it still provides higher levels of food security, and palm growers continue to eat it. While money from palm planting might be lucrative, the study found that essential supplies for a good life, food security, freedom of choice, and social ties can all be harmed.

¹⁹ Santosa, A.U. (2014). Towards Sustainable & Productive Palm Oil Sector of Indonesia. Kontan Online, Jakarta, Indonesia.

²⁰ Mingorria, S., Gamboa, G., Martin-Lopez, B., & Corbera, E. (2014). The oil palm boom: socio-economic implications for Q'eqchi' households in the Polochic valley, Guatemala. *Environmental Development Sustainability*, Vol. 16, 841– 871.

Interventions to boost smallholder palm and their socioeconomic growth were discussed by **Z. Zen, C. Barlow, and Gondowarsito (2016)²¹** in Indonesia. According to them, the Indonesian government has prioritised palm farming as a means of improving rural socioeconomic conditions. They also drew attention to some of the process's flaws and difficulties. Smallholders of palm enjoyed direct control of their property and a competitive advantage under the prior regime. By using smallholders as plantation labourers, the impact on the smallholders was reduced. Large-scale plantations can increase productivity, but the majority of the profits go to corporations and the government, leaving smallholders in poverty.

The adoption of sustainable palm methods by smallholder farmers in Indonesia was described by **Ernah, P. Parvathi, and H. Waibel (2016)²²**. According to them, the Indonesian Sustainable Palm Organization (ISPO) was established in the country, and all large-scale palm farmers are required to use it. Despite the fact that smallholder farmers are not required to follow ISPO recommendations, some of their cropping methods did. A study of smallholders in the Merangin district of the province of Jambi, Sumatra, was done in this regard. ISPO adoption on a wide scale could serve as a bridge to international recognition for sustainable palm agriculture.

In Indonesia, **Potter (2016)²³** talked about various smallholder palm growth paths. The goal of this study is to find smallholder-friendly technologies and

²¹ Zen, Z., Barlow, C., & Gondowarsito, R. (2016). Oil palm in Indonesian socioeconomic improvement: a review of options. *Oil Palm Industry Economic Journal*, Vol. 6, 18–29.

²² Ernah, Parvathi, P., & Waibel, H. (2016). Adoption of Sustainable Palm Oil Practices by Indonesian Smallholder Farmers. *Journal of Southeast Asian Economies*, Vol. 33 (3), 291-316.

²³ Potter, L.M. (2016). Alternative Pathways for Smallholder oil palm in Indonesia, *International Comparisons*,. In R. Cramb & J.F. MC Carthy (Eds.), *The oil palm complex: Smallholders, Agribusiness and the state in Indonesia and Malaysia*, (pp 78-108). Nus Press, Singapore.

techniques that may be applied in Indonesia. The state of smallholder palm in Indonesia is deteriorating, and regulatory bodies such as the Roundtable on Sustainable Palm are increasingly applying to smallholders in the certification of palm goods. Alternative approaches to improve the independent smallholder in Indonesia were given, even though methods and techniques employed in other locations are not easily transportable.

S.S. Maesaroh, A.I. Suroso, and I.I. Pahan (2017)²⁴ conducted research to find out what elements influence the moratorium policy and how it affects national palm oil production. A purposive sampling strategy was used to pick 14 experts for the interview. The data was collected through in-depth interviews and a pairwise comparison questionnaire. The success of the moratorium is influenced by aspects such as law enforcement, sustainability, dispute resolution, deforestation, and land conversion, according to the report.

²⁴ Maesaroh, S.S., Suroso, A.I., & Pahan, I. (2017). Moratorium on oil palm: Ecological recovery or economic slowdown? *Journal of Applied Management*, Vol. 16(1), 148-155.

2.2 CONCEPTS

Agriculture

Agriculture means not only the production of crops by the cultivation of the soil, but also the rearing livestock. Thus milk, meat and wool are agricultural products as wheat, rice and cotton. Agriculture is a basic and important occupation as it provides not only food stuff, but also essential raw materials for industry. Nearly two –thirds of the population of the world is dependent on agriculture for its livelihood.

Agricultural Worker

A person who is employed in agriculture, usually a manual worker. The livelihood of thousands of agricultural workers depend on these enterprises.

Agricultural labour

The census of India defines an agriculture labour as a person who works on another person's land only as a labour without exercising any supervisor or direction in cultivation for wage in cash kind or share such as share to produce.

Land

In Economics, land means the resource that encompass the natural resources used in production. In Classical Economics, there are three factors of production, i.e. land, labour, capital. Land was considered to be the original and inexhaustible gift of nature.

Labour

Labour means all human efforts of body or mind that is undertaken not for pleasure but for securing a reward. It can be productive or unproductive.

Labour Welfare

It refers to all such services, facilities and amenities which adequately contain rest and recreation facilities, sanitary and medical facilities, arrangement for

travelling to and from, providing accommodation to workers employed and facilities including social security measures.

Irrigation

The act or process of irrigation or the state of being irrigated, the operation of causing water to flow over lands for nourishing and nursing plants.

Gender

Gender is the range of characteristics pertaining to femininity and masculinity and differentiating between them. Depending on the context, this may include sex-based social structures and gender identity.

Age

Age of a respondent is defined as the span of life and is operationally measured by the number of years from his/her birth to the time of interviewing.

Caste

Caste is a form of social stratification characterised by endogamy, hereditary transmission of a style of life which often includes an occupation, ritual status in a hierarchy, and customary social interaction and exclusion based on cultural notions of purity and pollution.

Religion

Religion is usually defined as a social-cultural system of designated behaviors and practices, morals, beliefs, worldviews, texts, sanctified places, prophecies, ethics, or organizations, that generally.

Educational Level

Educational Level is usually thought to mean the highest level of formal schooling a person has completed. Education refers to the discipline that is concerned with methods of teaching and learning in schooling or school like environments as opposed to various nonformal and informal means of socialization.

Family size

Family size refers to the number of member including the respondent himself / herself, his / her wife / husband children and other permanent dependents, who live and live together in a family unit.

Income

It is the flow of money of an individual or group of individuals or a firm over some period of time. It may originate from the sale of productive services. It may be in the form of wages, profits, rent or interest.

Income Distribution

Total income generated in the economy is shared by individuals (or) by factors of production. Income distribution can be classified as size distribution or (personal income distribution) and functional income distribution.

Wages

Wages are remuneration given to a worker for his contribution in production. Wages are a monetary reward for mental and physical exertion of labour.

Expenditure

Expenditure refers to the total purchase price of a good or service or it is the money spent on something.

Consumption Expenditure

Consumption expenditure comprises of all expenditures incurred by the households exclusively on domestic accounts.

Luxury Item

In economics, a luxury good is a good for which demand increases more than what is proportional as income rises, so that expenditures on the good become a greater proportion of overall spending. Luxury goods are in contrast to necessity goods, where demand increases proportionally less than income.

Savings

Savings is the amount of money left over after spending and other obligations are deducted from earnings. Savings represent money that is otherwise idle and not being put at risk with investments or spent on consumption.

Borrowings

Money borrowed at interest for a specific period of time, It has to be repaid within the stipulated time period else people will get into high debt condition.

Debt

Amount of money borrowed by one person or party from another.

Investment

Investment or investing means that an asset is bought, or that money is put into a bank to get a future interest from it. It is the total amount of money spent by a shareholder in buying shares of a company. In economic management sciences, investments mean longer-term savings.

Banks

A bank is a financial institution licensed to receive deposits and make loans. There are two types of banks; commercial/retail banks and investment banks. In most countries, banks are regulated by the national government or central bank.

Credit

A wide term which has been used in connection with operation of state involving lending, generally for short-term. To give credit is to finance directly, the expenditure of others against future repayment.

Bonus

Bonus is given to employees in various occasions. It may be a Diwali bonus, profit sharing bonus, service bonus, waste elimination bonus or year-end bonus etc.

Chit Funds

A chit Fund is all in one financial instrument. Chit Funds are saving cum borrowing schemes, where member or subscriber agrees to contribute fixed amount every month for the fixed period. The total amount contributed by subscribers shall be auctioned and given as prize money to the needy subscriber every month.

Self-Help Groups

Self-Help group (SHG) is a small voluntary association of poor people, preferably from the same socio-economic background. They come together for the purpose of solving their common problems through self-help and mutual help. The SHG promotes small savings among its members. The savings are kept with a bank.

Standard of living

Standard of living generally refers to the level of wealth, comfort, material goods and necessities available to a certain geographic area. An evaluation of standard of living commonly includes the following factors: income, quality and availability of employment.

Socio Economic Conditions

Socioeconomic status is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education and occupation. If at the current level of output or income could be redistributed equally among all the people, the conditions of the poorest segments would no doubt improve materially.

Poverty

Poverty is associated with per capita income; minimum calorie intake; income level and consumption level. The cutoff point indicating some minimum level of calorie intake food, income level and consumption level is denoted as poverty line and all people lying below it are clubbed together as the poor masses.

Unemployment

Unemployment is a phenomenon that occurs when a person who is actively searching for employment is unable to find work.

Occupation

Any activity by which one earns one's livelihood; a trade, profession or business, employment.

Palmyra tree

Borassus flabellifer, commonly known as doub palm, palmyra palm, tala or tal palm, toddy palm, wine palm or ice apple is native to the South Asia and Southeast Asia. It is reportedly naturalized in Socotra and parts of China.

Jaggery

Jaggery is a traditional non-centrifugal cane sugar consumed in the Indian Subcontinent, Southeast Asia, and Africa. It is a concentrated product of cane juice and often date or palm sap without separation of the molasses and crystals, and can vary from golden brown to dark brown in colour.

Sweet toddy

Palm wine, known by several local names, is an alcoholic beverage created from the sap of various species of palm tree such as the palmyra date palms, and coconut palms. The sweet sap from any of several tropical trees fermented to make an alcoholic drink.

Palm sugar

Palm sugar is a sweetener derived from any variety of palm tree. Palm sugar is sometimes qualified by the type of palm, as in coconut palm sugar. While sugars from different palms may have slightly different compositions, all are processed similarly and can be used interchangeably.

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palm candy

Palm candy is a nutrient-rich, low-glycemic crystalline sweetener that looks, tastes, dissolves and melts almost exactly like sugar, but it is completely natural and unrefined.

Health

Health is prevention of disease and injury. The health of the cashew nut workers depends on many complex factors such as working conditions, living conditions and diet etc.,

Stress

A state of mental or emotional strain or tension resulting from adverse or demanding circumstances.

Migraine

A recurrent throbbing headache that typically affects one side of the head and is often accompanied by nausea and distributed vision.

Hypertension

Also known as high blood pressure (HBP), is a long term medical condition in which the blood pressure in the arteries is persistently elevated. High blood pressure usually does not cause symptoms.

Dizziness

A sudden internal or external spinning sensation, often triggered by moving head too quickly.

Medical facilities

A health facility is, in general, any location where healthcare is provided. Health facilities range from small clinics and doctor's offices to urgent care centers and large hospitals with elaborate emergency rooms and trauma centers.

CHAPTER III

PROFILE OF THE STUDY AREA



CHAPTER III

PROFILE OF THE STUDY AREA

Profile of the study Area – Thoothukudi District

Thoothukudi is a port on situated in Gulf Manner about 125Km. Thoothukudi is part of the pearl Fisheries Coast and it is known for Pearl Fishing and Ship Building industries. The major labour of Thoothukudi is well known fishing centre. It is one of the oldest seaports in the world and was the seaport of the Pandian Kingdom after Korkai near Palayakayal it was later taken over by the Portuguese in 1548 capture by the batch in 1658 and coded to British in 1825. The light built in 1842 marked the beginning of the history harbour development in the city. Thoothukudi was established as a municipality 1866 with Roche Victoria as its First chairman it attained than status of Corporation on August 5th 2008 after 142 years of being a municipality.

Thoothukudi district has given India many great Freedom Fighters like the great poet Subramaniya Bharathi, V.O.Chidambaram Pillai, Veerapandia Kattapomman, Vellaiyathevar, Sundharalingam etc.,

Geography

Thoothukudi District is situated in the extreme South-Eastern corner of Tamilnadu. It is bounded on the east and south-east by the Gulf of manner and on the west and south east by Tirunelveli district. The total area of the district is 4621Km, the administrative headquarters within. Thoothukudi district was derived from Tirunelveli district in 1986.

Thoothukudi was a part of Tirunelveli Loksabha till 2009. Thoothukudi was separated from Tirunelveli Loksabha consistency comprises the whole of Thoothukudi District, which includes Vilathikulam, Thoorhukudi, Tiruchendur, Srivaikundam, Ottapidaram and Kovilpatti.

Notable People

1. Subramanya Bharathi, Freedom fighter, poet, journalist, Indian Independence activist and social reformer.
2. V.O.Chidambaram Pillai, also known as Kappakottaya Thevar.
3. Shiva Nadar, Indian industrialist and philanthropist. He is the founder and chairman of HCL Technologies.
4. Veerapandia Kattabomman.
5. Oomathurai.
6. AlagumuthuKane.
7. Veeran Sundharalingam was from the district.
8. Ramachandran, a prolific Tamil romance novelist, and presently the best-selling author in the Tamil language

Water bodies

There are no large reservoirs in this district so the papanasams and Manimutharadams located in the Tirunelveli district in Thamirabarani River's flow are the main sources of irrigation. Other than the Thamirabarani River, the river Vaipar in Vilathikulam taluk, the river Karumeni which traverses through Sathankulam and Tiruchendur taluks, Palayakayal are all sources

Population

According to the 2011 census Population of India is 1,278,119,445 (1.27 billion) Tamil Nadu has a population of 76,656,206 and Thoothukudi population is 1,756,176. This gives it a ranking of 277th in India (out of the total area of 640)

Industry

Major industries such as SPIC< Chemical Industries, Heavy water plant and Thermal plant are located here. SIPCOT has rendered fruitful services to the

state by identifying, developing, maintaining industrial areas in backward and most backward talucks of the state, which had potential to grow. SIPCOT's role in assisting The industrialization in the state is not only quantitative but also qualitative SIPCOT has created industrial complexes, Parks, growth centers in various strategically located places which occupy a place in Tamilnadu's industrial map.

The Thoothukudi city has Five Arts College, One Government Polytechnic, One Fisheries College, One Government Medical College, Two Training Colleges and Fourteen Higher Secondary Schools, Six Primary Schools, Nine Middle Schools. There is no adult literacy centre, once reorganized short hand writing and twenty one Vocational Training institution and four Public Libraries.

Medical Facilities

There are also many hospitals including one District College Hospital and many private Hospitals with all facilities. They are Sundaram Arulraj Hospital, AVM Hospital, City Hospital and the Sacred Heart Hospital (American Hospital) and there are so many clinical laboratories and few x-rays centres that are saving the people of Thoothukudi.

Airport

Thoothukudi airport is at Vagaikulam 14km from the heart of the city. It was for come year closed to commercial traffic but reopened in April 2006. The state government plants to extend the runway and modernize the airport to handle more traffic and bigger aircraft. There was also a proposal in 2009 for a green fielt airport. Kingfisher & Spice Jet are operating flights daily.

Rail ways

Thoothukudi city railway station is one of the oldest stations in India and south Indian Railway began Madras-Thoothukudi service connecting with the beat to Ceylon in 1899. The station was declared a modal station in 2007 and several Developments are in process. There is also another station, known as Thoothukudi Melur.

Roads

Thoothukudi city is well connected by road. The major Highways are;

- Thoothukudi – Madurai – Trichy (NH45-B)
- Thoothukudi – Palayamkottai (NH7-A)
- Thoothukudi – Palayamkayal – Thiruchendur (State Highway)
- Thoothukudi – Ramanathapuram (State Highway) we recently upgraded as part of the East Coast Road (ECR) project which will soon connect Thoothukudi with through coastal line.

Geology

Being a hinder town most of the land has sandy surface. The southern part of the town has gravel soil. A channel is running through the town towards east and confluence with the sea.

Climate and Temperature

The climate is generally not and dries in the district except in coastal area. The mean maximum temperature varies from 18.C 26.7 C. The highest temperature was recorded between the months of May and August and the two wests during December and January.

Tourism

Apart from being a commercial Center, this is an exotic tourist attraction for its sunny and pristine sandy beaches. Sea sports like surfing and paragliding facilities are also available. There are lot religious and historically important places around Tuticorin. The district headquarter is well connected by road, rail, air and sea. People of the district hope to generate significant revenue from developing tourism sector.

- Kulasekharapatnam Beach.
- Lord Subramanya Temple, Thiruchendur.
- Holy Cross Church, Manapad.
- Harbour Beach, Tutucorin.
- Roche Park, Tuticorin.
- Pearl Beach, Tuticorin.

Kulathur Village in Thoothukudi District

Alternate Village Name : Koothalurani , Koothalur

Kulathur is a Village in Vilathikulam Block in Tuticorin District of Tamil Nadu State, India. It is located 28 KM towards North from District headquarters Thoothukudi. 10 KM from Vilathikulam. 587 KM from State capital Chennai. Kulathur Pin code is 628903 and postal head office is Kulathur (TVL).

Poosanur (4 KM) , Inamvedapatti (5 KM) , Keela Vaippar (5 KM) , Virusampatti (6 KM) , Vaippar (6 KM) are the nearby Villages to Kulathur. Kulathur is surrounded by Ottapidaram Block towards west, Thoothukkudi Block towards South, Pudur Block towards North, Tuticorin Block towards South

Thoothukudi , Sattur , Aruppukkottai , Tiruchendur are the nearby Cities to Kulathur.

It is near to bay of bengal. There is a chance of humidity in the weather. Tamil is the Local Language here.

Nearby Railway Stations

Tuti Melur- 27 KM

Tuticorin- 27 KM

Milavittan- 29 KM

Tattapparai- 32 KM

Places near Kulathur

Tuticorin- 33 KM

Thiruchendur- 65 KM

Sivakasi- 72 KM

Sattur- 53 KM

Aruppukkottai- 63 KM

Tirunelveli- 74 KM

Madurai- 111 KM

Taluks

Vilathikulam- 15 KM

Thoothukkudi- 27 KM

Tuticorin- 28 KM

Ottapidaram- 29 KM

Airports

Tuticorin Airport- 42 KM

Madurai Airport- 102 KM

Trivandrum International Airport- 171 KM

Civil Airport- 225 KM

District Head Quarters

Tuticorin- 28 KM

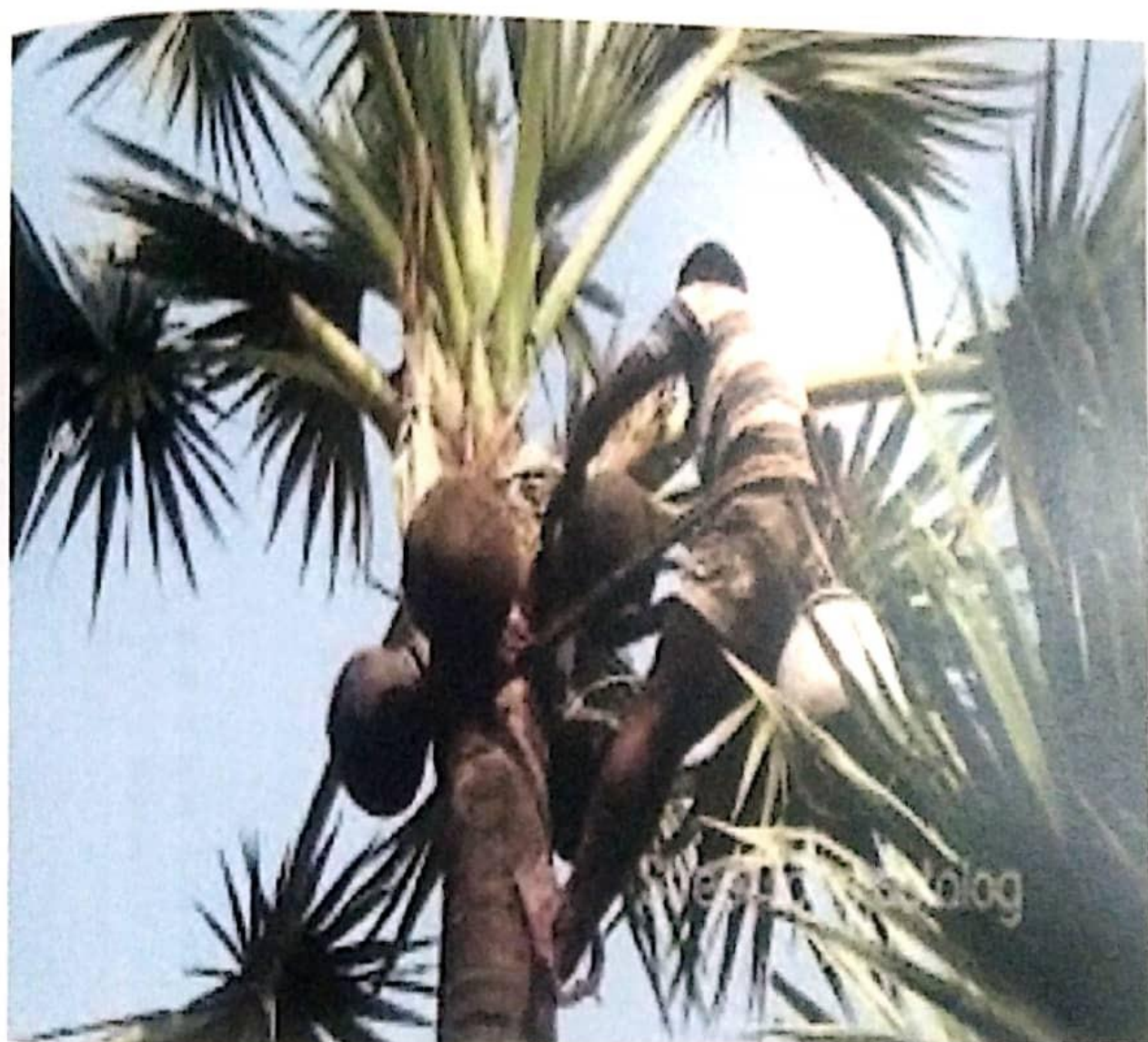
Tirunelveli- 74 KM

Virudhunagar- 76 KM

Ramanathapuram- 81 KM

CHAPTER IV

ANALYSIS & INTERPRETATION



CHAPTER IV

ANALYSIS AND INTERPRETATION

This chapter deals with "Living conditions of Palmyra Tree climbers in Kulathur village, THOOTHUKUDI District. The data collected are analysed and tabulated for easy understanding and good presentation. Tables, percentage and diagram assist to analyse the data efficiently.

TABLE 4.1
AGE WISE CLASSIFICATION OF THE RESPONDENTS

S. No	Age	Respondents	Percentage
1	Below 20	2	4
2	21-30	4	8
3.	31-40	15	30
4	41-50	18	36
5	Above 50	11	22
6	Total	50	100

Source: Survey Data

The above table shows that 4% of the respondents are in the age group of below 20 years, 8% of the respondents are in the age group of 21-30 years, 30% of the respondents are in the group of 31-40 years, 36% are in the age group of 41-50 years and 22% of the respondents are above 50 years.

Figure 4.1

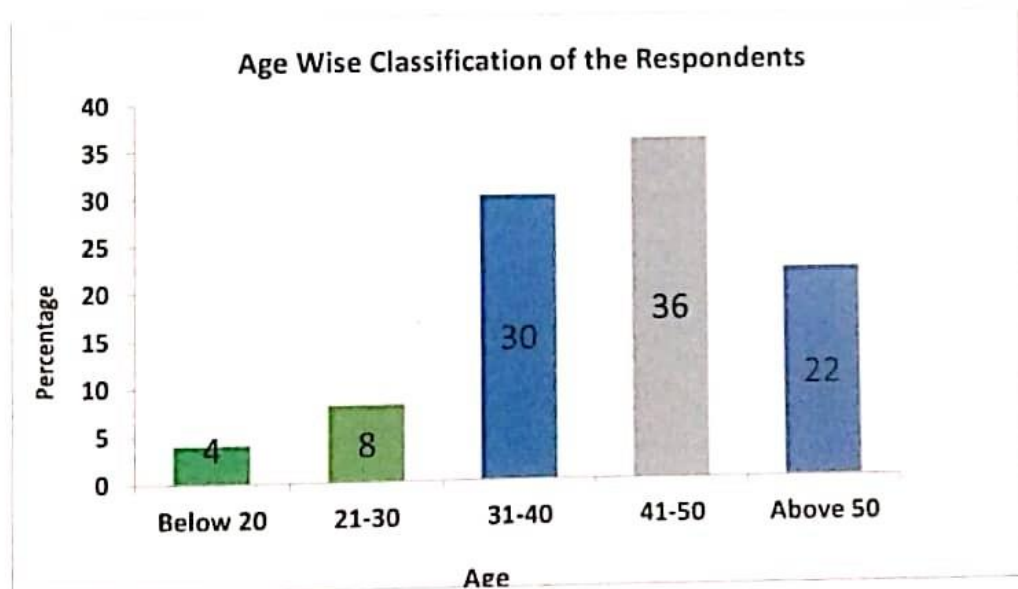


TABLE 4.2
CASTE WISE CLASSIFICATION OF THE RESPONDENTS

S. No	Caste	Respondents	Percentage
1	FC	8	16
2	BC	28	56
3	MBC	2	4
4	SC	12	24
	Total	50	100

Source: Survey Data

Above table shows that 16% of the respondents belong to FC (Forward Community), 56% of the respondents belong to BC (Backward Community) 4% of the respondents belong to MBC (Most Backward Community) and 24% of the respondents belong to SC (Scheduled Caste)

Figure 4.2

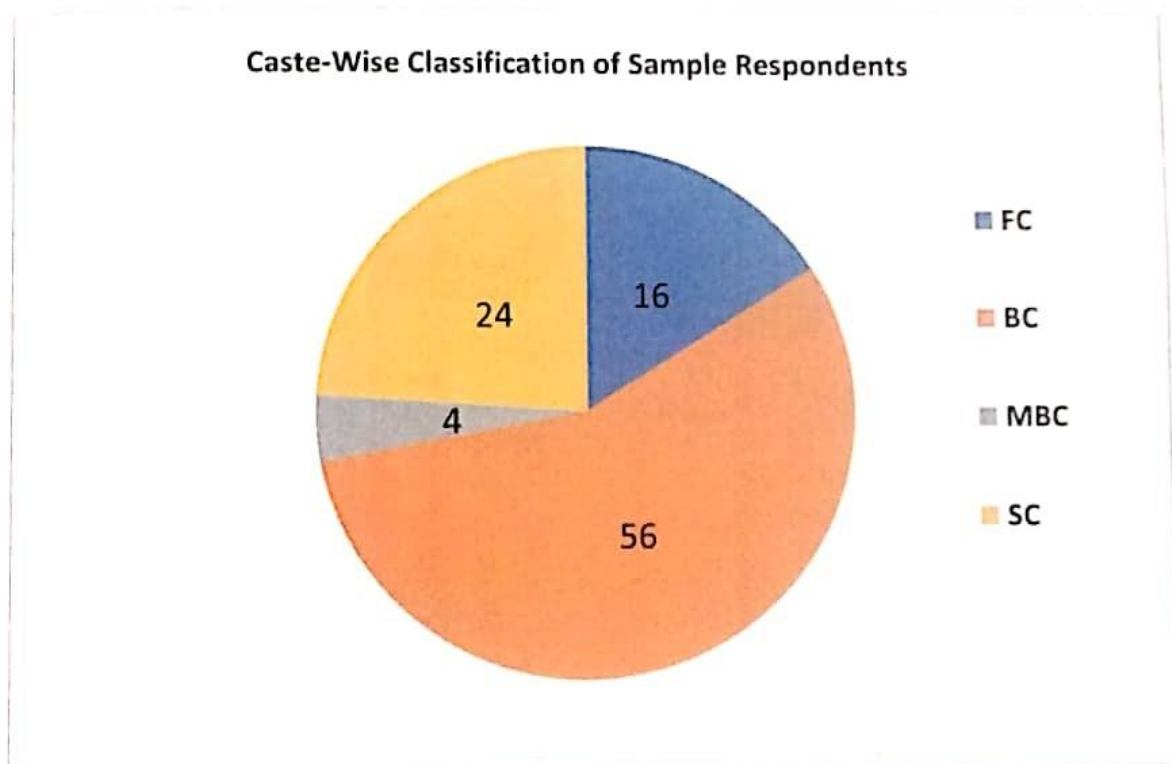


TABLE 4.3
RELIGION OF THE RESPONDENTS

Sl. No	Religion	No. of respondents	Percentage
1	Christians	37	74
2	Hindus	13	26
	Total	50	100

Source: Survey Data

The above table reveals that 74% of the workers are Christians, 26% of the respondents are Hindus.

Figure 4.3

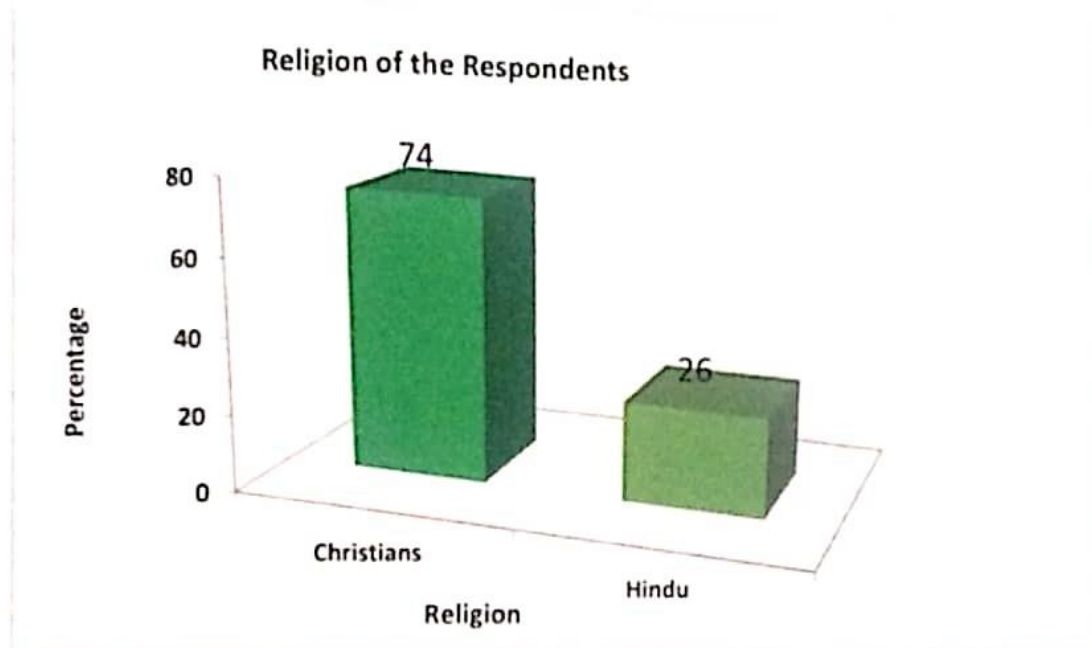


TABLE 4.4
MARITAL STATUS OF THE RESPONDENTS

S. NO	Marital status	No of sample Respondents	Percentage
1	Married	36	72
2	Unmarried	14	28
	Total	50	100

Source: Survey Data

The table shows that 72% of workers are married and 28% of them are unmarried.

Figure 4.4

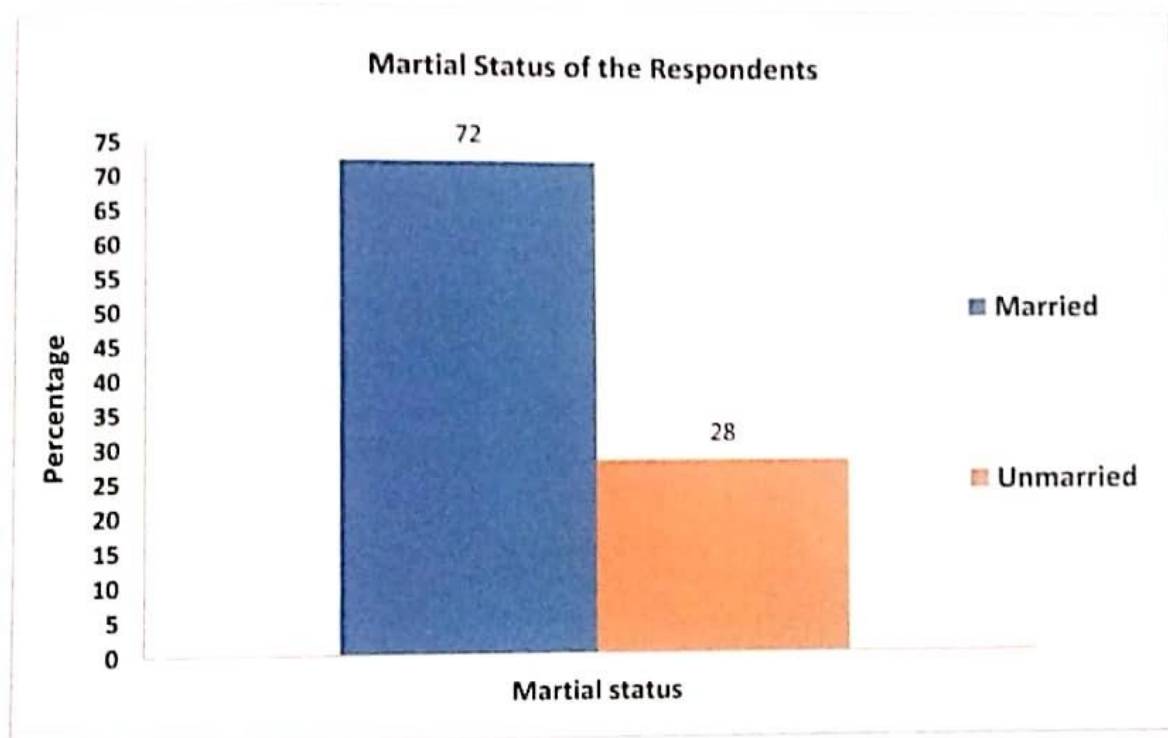


TABLE 4.5
EDUCATIONAL LEVEL OF THE RESPONDENTS

S. No	Level of Education	Respondents	Percentage
1	Illiterate	26	52
2	Primary	13	26
3	Middle	11	22
	Total	50	100

Source: Survey Data

The table shows that 52% of the respondents are illiterate, 26% have attained primary level of education and only 22% have completed middle school of education.

Figure 4.5

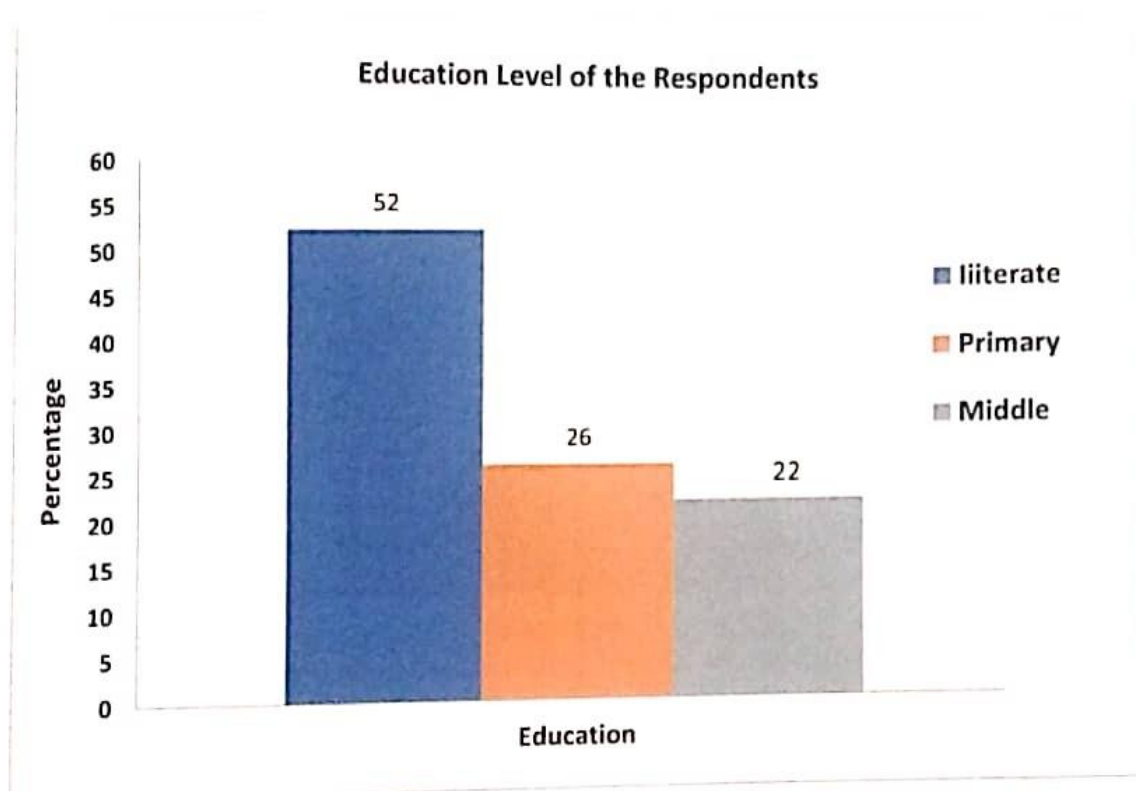


TABLE 4.6
TYPE OF FAMILY OF THE RESPONDENTS

S. NO	Family Type	No. of Sample Respondents	Percentage
1	Joint family	29	58
2	Nuclear family	21	42
	Total	50	100

Source: Survey Data

From the table it is the very clear that 58% of the workers are living in joint family and 42% of them are living in nuclear family system.

Figure 4.6

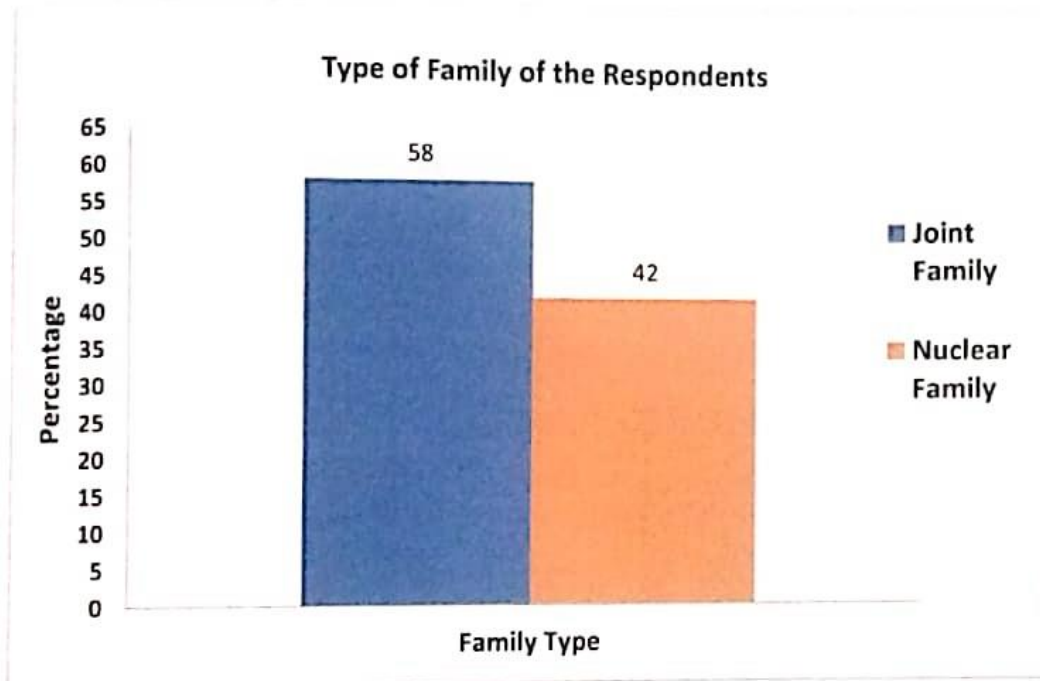


TABLE 4.7
FAMILY SIZE DISTRIBUTION OF RESPONDENTS

S. No	Family size	No. of sample Respondents	Percentage
1	2-3	18	36
2	4-5	11	22
3	Above 6	21	42
	Total	50	100

Source: Survey Data

The above table shows that 42% of the workers family size is more than above 6 members, 36% of respondents have the family size of 2-3 members, 22% of the are having the family size of 4-5 members.

Figure 4.7

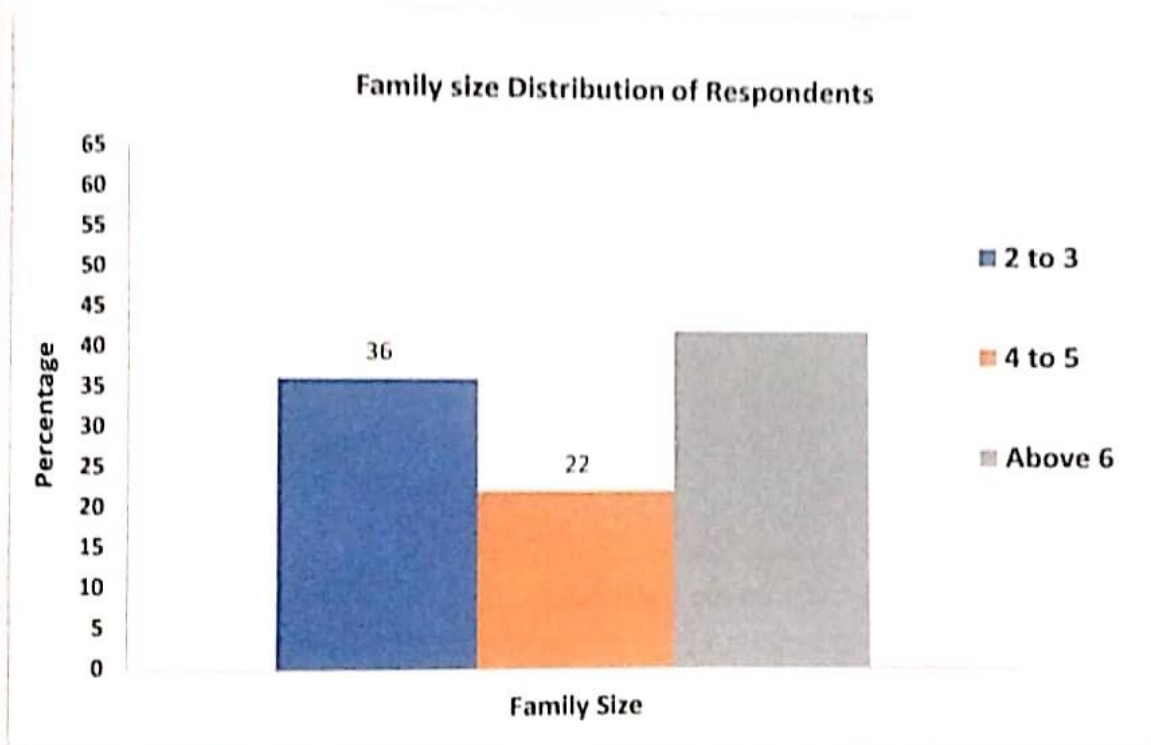


TABLE 4.8
RESIDENTIAL POSITION OF THE RESPONDENTS

S.NO	Residential position	No. of Respondents	Percentage
1	Owned house	7	14
2	Rented	43	86
	Total	50	100

Source: Survey Data

The above table reveals that 14% of the workers are having their own house and 86% of them are living in rented house.

Figure 4.8

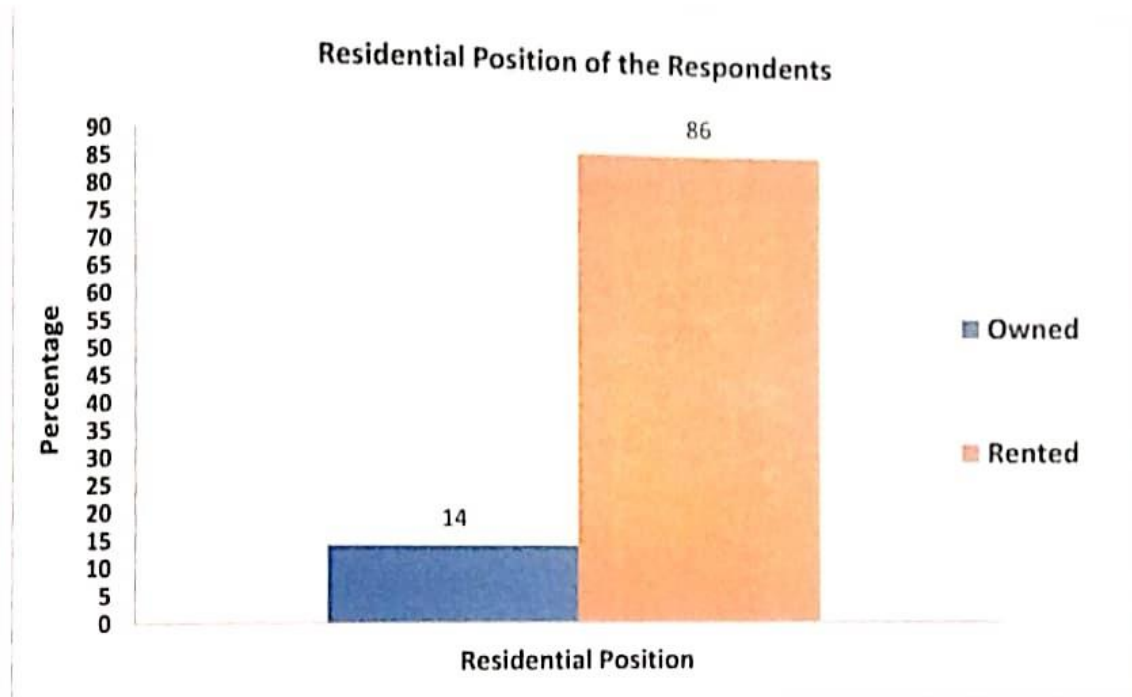


TABLE 4.9
TYPE OF HOUSES

S. No	Types of Houses	No. of Respondents	Percentage
1	Hut	9	18
2	Mud	14	28
3	Concrete	27	54
	Total	50	100

Source: Survey Data

The table shows that 18% of the sample respondents live in hut and 28% of the sample respondents live in mud houses and 54% of the respondents live in concrete houses.

Figure 4.9

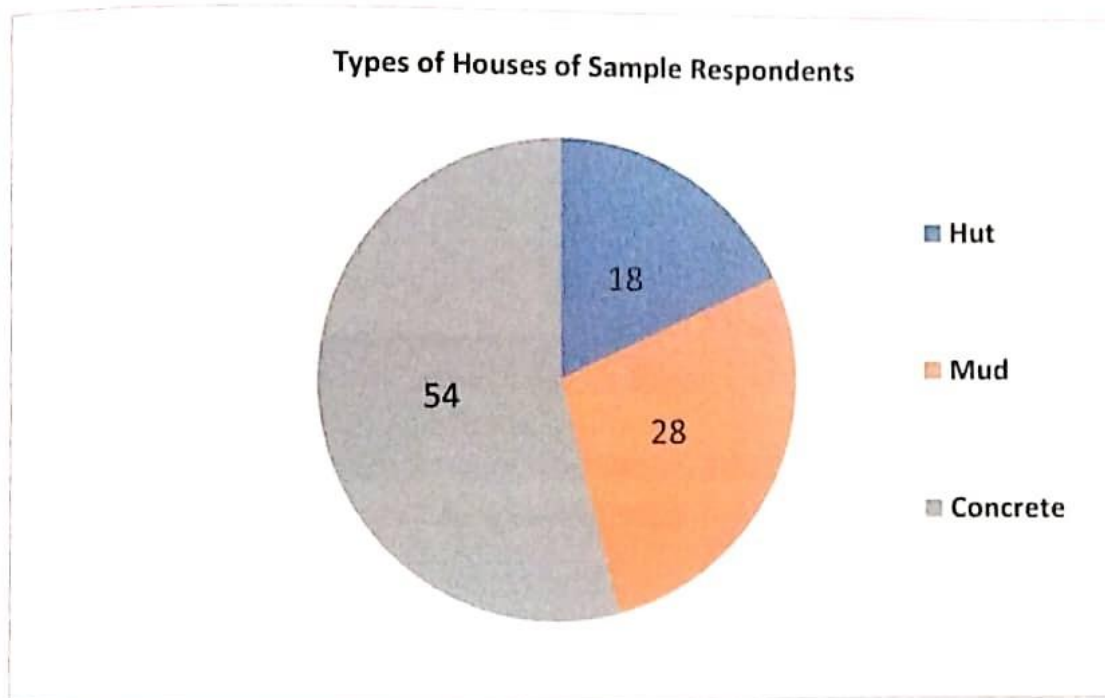


TABLE 4.10
TOTAL WORKING HOURS PER DAY

S.NO	Total working hours per day	Numbers of Respondents	Percentage
1	Below 8 hours	12	24
2	More the 8 hours	38	76
	Total	50	100

Source: Survey Data

From the above table it is understood that 24% of respondents work for 8 hours below daily, 76% of respondents work above 8 hours.

Figure 4.10

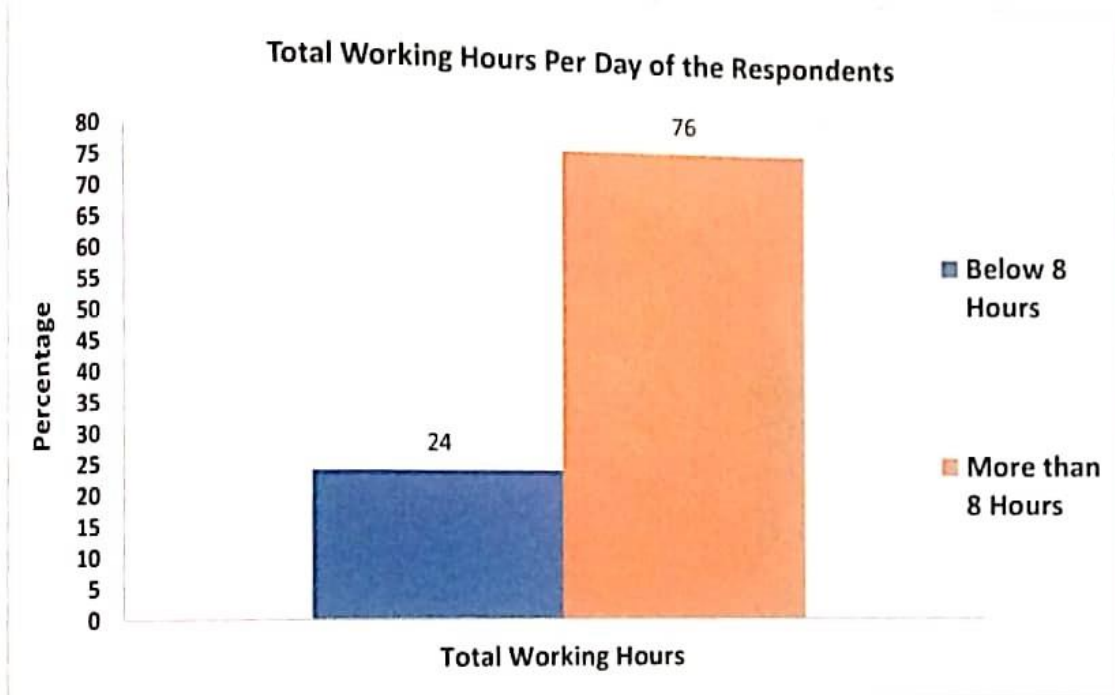


TABLE 4.11
YEARS OF EXPERIENCE

S. No	Experiences	No. of Respondents	Percentage
1	3-6	13	26
2	7-9	25	50
3	10-11	12	24
	Total	50	100

Source: Survey Data

The above table shows that 26% respondents have experience of 3-6 years, 50% respondents have 7-9 years of experience, 24% respondents have 10-11 years of experience.

Figure 4.11

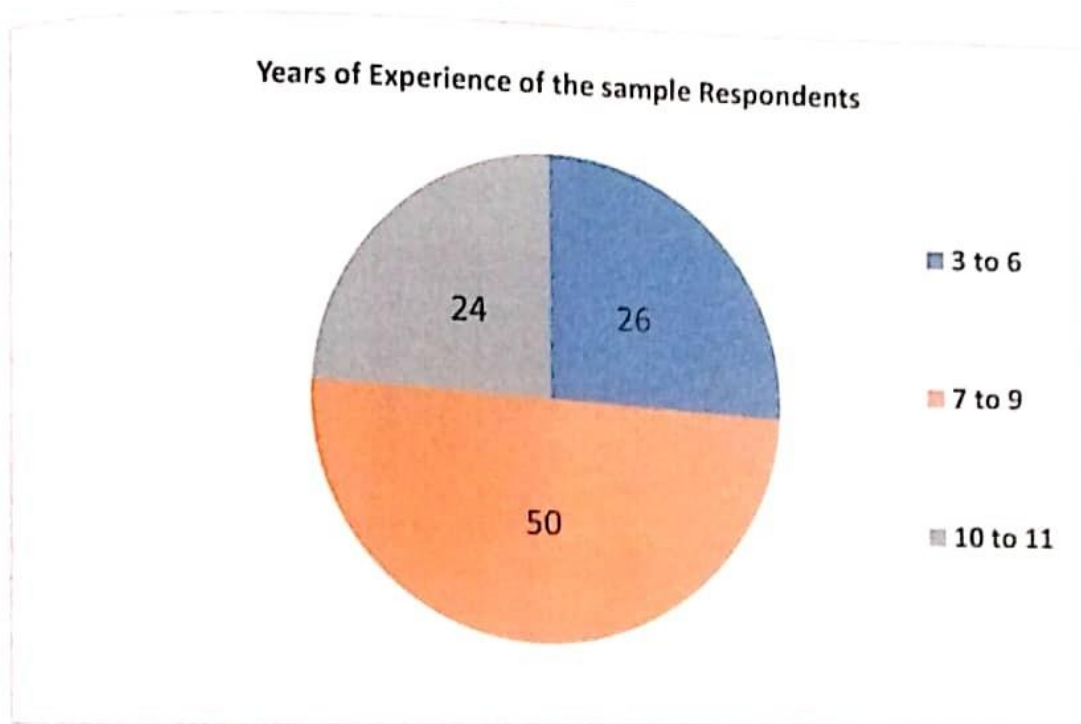


TABLE 4.12
MONTHLY INCOME OF THE RESPONDENTS

S. No	Monthly Income (In Rs)	No. of Respondents	Percentage
1	6000-8000	7	14
2	8001-10,000	23	46
3	10001-12,000	11	22
4	12001-15000	9	18
	Total	50	100

Source: Survey Data

The above table reveals that 14% of respondents earn an income of Rs 6000-Rs. 8000, 46% of respondents earn around Rs. 8000-Rs.10,000, 22% of respondents earn Rs. 10001-Rs.12,000 and 18% respondents earn Rs. 12,001 – Rs. 15,000

Figure 4.12

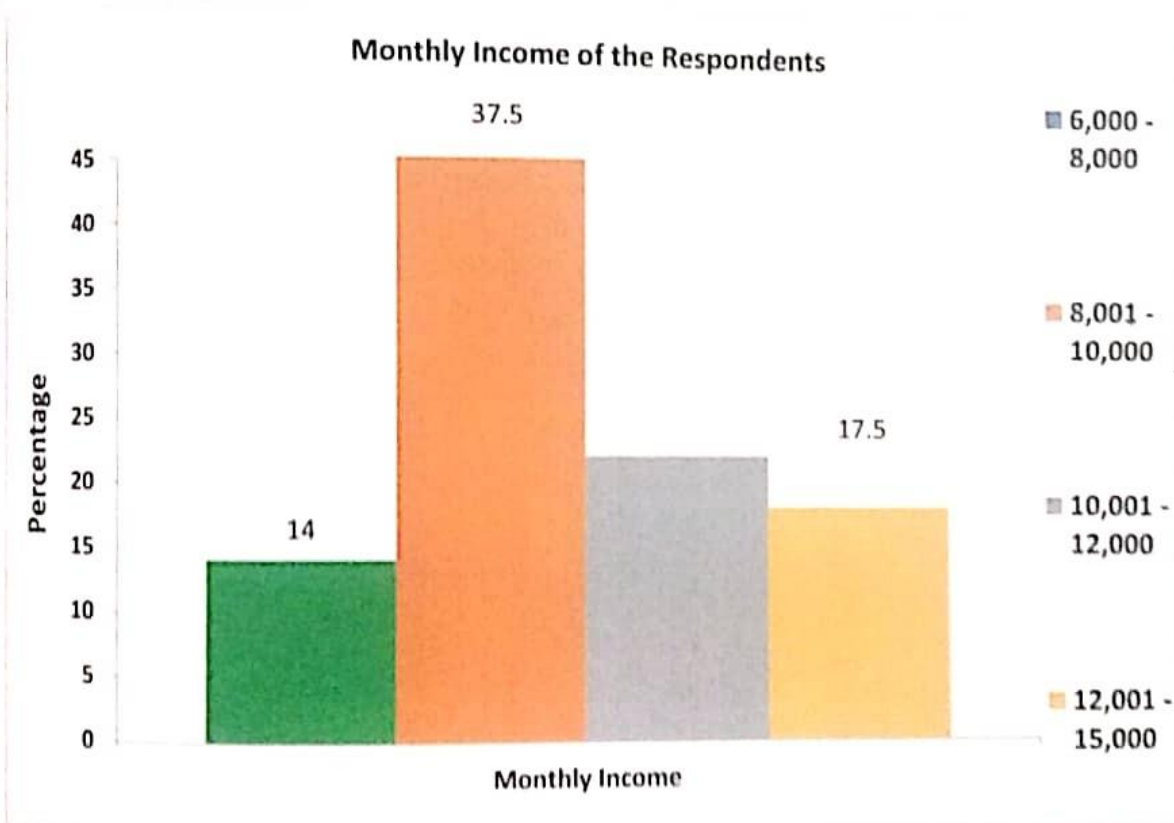


TABLE 4.13
FAMILY MONTHLY INCOME OF THE RESPONDENTS

S. No	Monthly Income (In Rs)	No. of Respondents	Percentage
1	5000-10000	14	28
2	11000-15000	9	18
3	16000-20000	16	32
4	21000-25000	5	10
5	26000-30000	6	12
	Total	50	100

Source: Survey Data

The table shows that 28% of them are earning the family monthly income of Rs. 5000-10000, 18% of them earn family income between Rs.11000-15000, 32% of them earn between Rs.16000-20000, 10% of them earn between Rs. 21000-25000, and only 12%earn Rs.26000-30000.

Figure 4.13

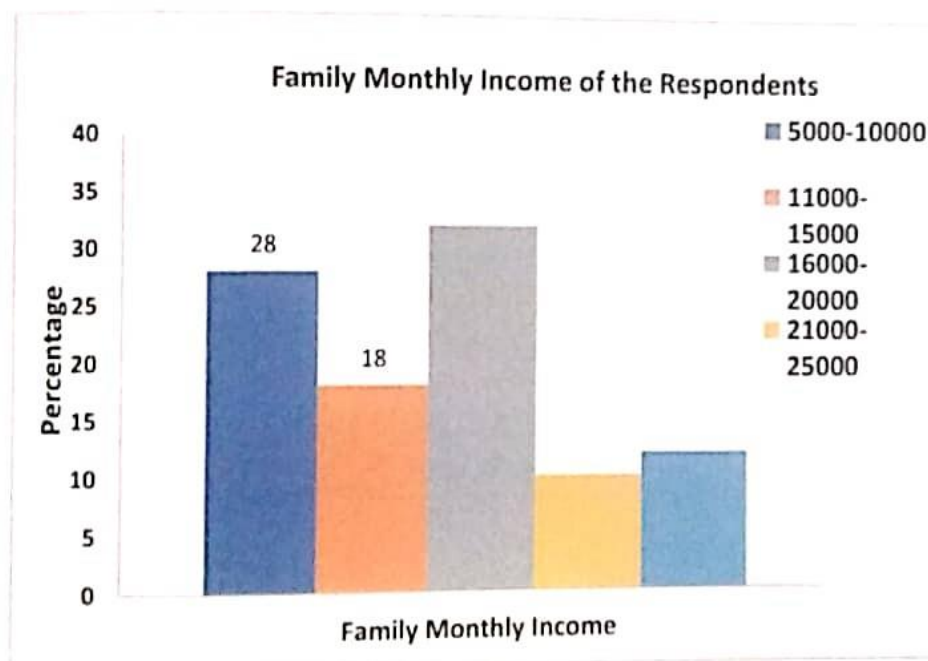


TABLE 4.13.1
AVERAGE FAMILY MONTHLY INCOME OF THE RESPONDENTS

S. No	Monthly Income (In Rs.)	Mind-Point(m)	Frequency ($\sum f$) No. of Respondents	Percentage $\sum fm$
1	5000-10000	7,500	14	1,05,000
2	11000-15000	13,000	9	1,17,000
3	16000-20000	18,000	16	2,88,000
4	21000-25000	23,000	5	1,15,000
5	26000-30000	28,000	6	1,68,000
	Total		50	7,93,000

Source: Survey Data & Analysis

$$AM = \sum fm / \sum f$$

$$7,93,000 / 50 = 15,860$$

Thus, the average family monthly income of the palm tree workers is Rs.15,860

TABLE 4.14

FAMILY MONTHLY EXPENDITURE OF RESPONDENTS

S. No	Monthly expenditure (In RS)	No. of Respondents	Respondents
1	Below 5000	20	40
2	5001-10000	24	48
3	10001-15000	6	12
	Total	50	100

Source: Survey Data

The above table shows that 40% of the workers family expenditure is Rs. Below 5000, 24% of them spend Rs. 5001-10000 and 60% of them spend Rs.10001-15000.

Figure 4.14

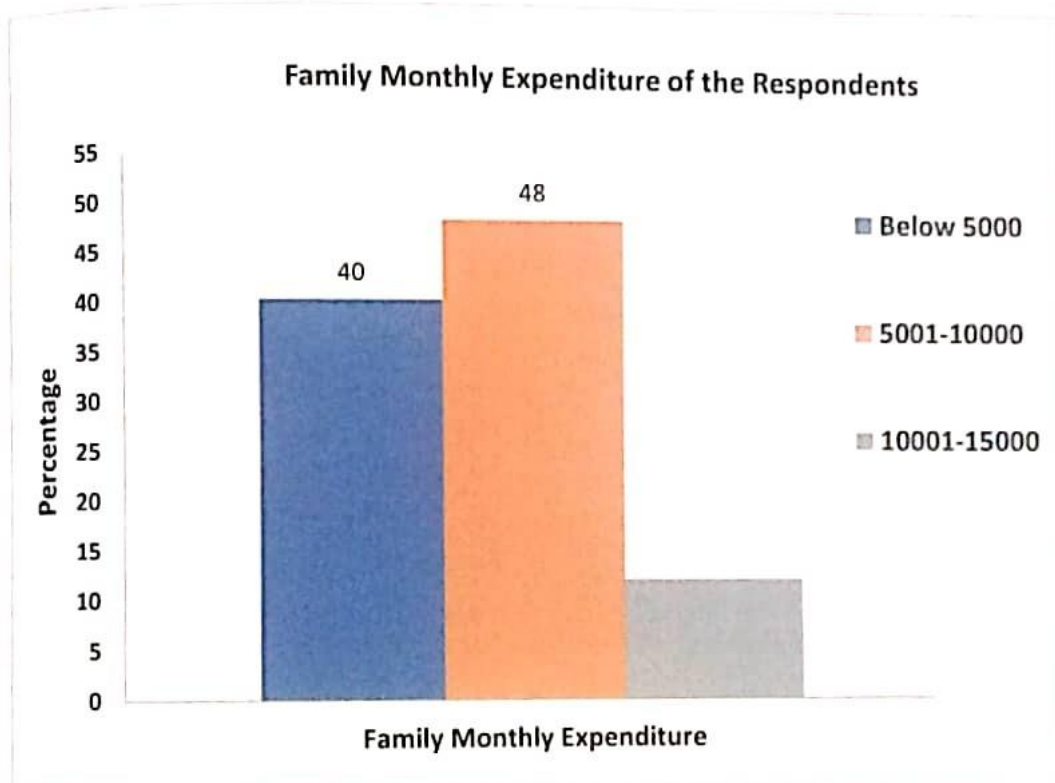


TABLE 4.15
SAVINGS OF THE RESPONDENTS

S. No	Savings per Month	No. of Respondents	Percentage
1	Less than Rs 3000	18	36
2	3001-4000	11	22
3	4001-5000	11	22
4	Above 5000	10	20
	Total	50	100

Source: Survey Data

The above table shows that 36% of the respondents save below Rs. 3000, 22% of the respondents save between Rs. 3001-4000 another 22% of the respondents save between Rs 4001-5000 and 20% of the respondents save above Rs. 5000.

Figure 4.15

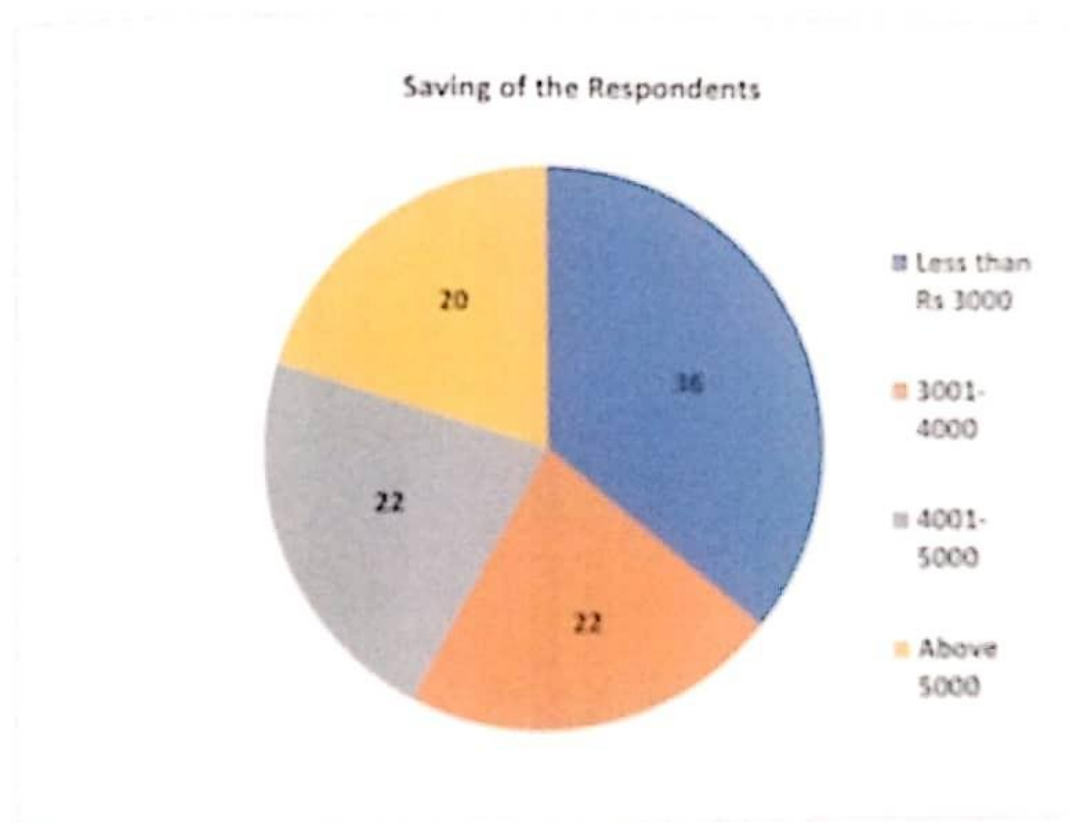


TABLE 4.16

REASON FOR CHOOSING PALM TREE CLIMBING OCCUPATION

S. No	Cultivation	No. of Respondents	percentage
1	Family occupation	44	88
2	Lack of suitable job	4	8
3	Better Income	2	4
	Total	50	100

Source: Survey Data

The table shows that 88% of the respondents have chosen this occupation because it is their family occupation, 8% of them are doing this occupation due to lack of suitable job and 4% of them are in this occupation because of better income.

Figure 4.16

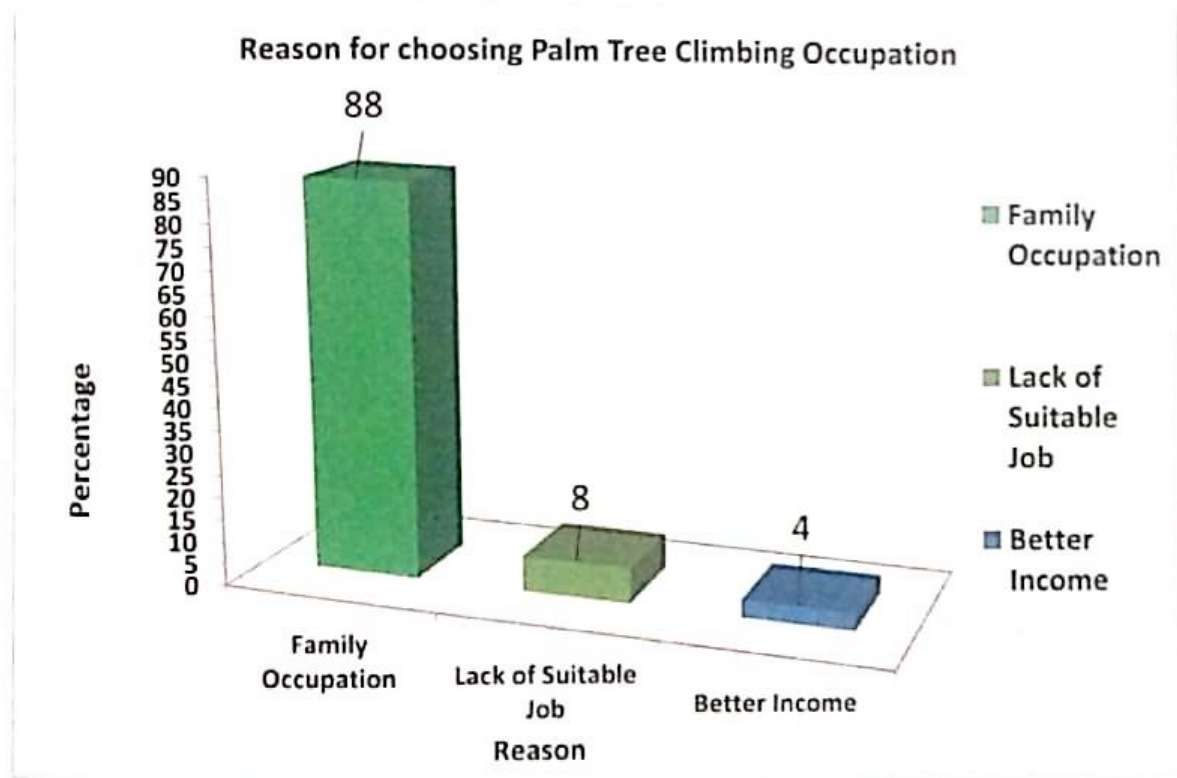


TABLE 4.17
MEMBER IN UNION

S. No	Union Member	No. of the Respondents	Percentage
1	Yes	22	44
2	No	28	56
	Total	50	100

Source: Survey Data

From the above table it is clear that only 44% of them are members in union and 56% of them not members in union.

Figure 4.17

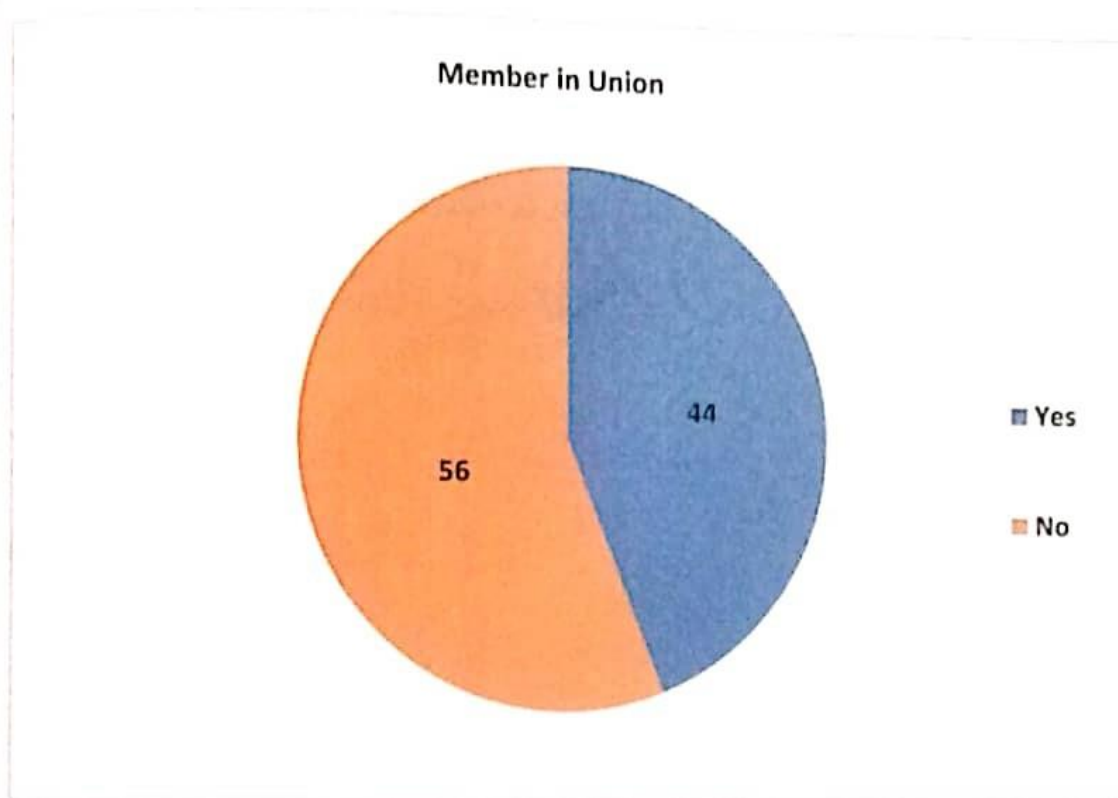


TABLE 4.18
NATURE OF WORK DURING OFF-SEASON

S. No	Nature of Work	No. of Respondents	Percentage
1	Construction Work	16	32
2	Fishing	25	50
3	Other works	9	18
	Total	50	100

Source: Survey Data

The table reveals that 32% respondents earn income through construction works, 50 % respondents go for fishing and 18% respondents engage in other works like coolie, welding works etc.,

Figure 4.18

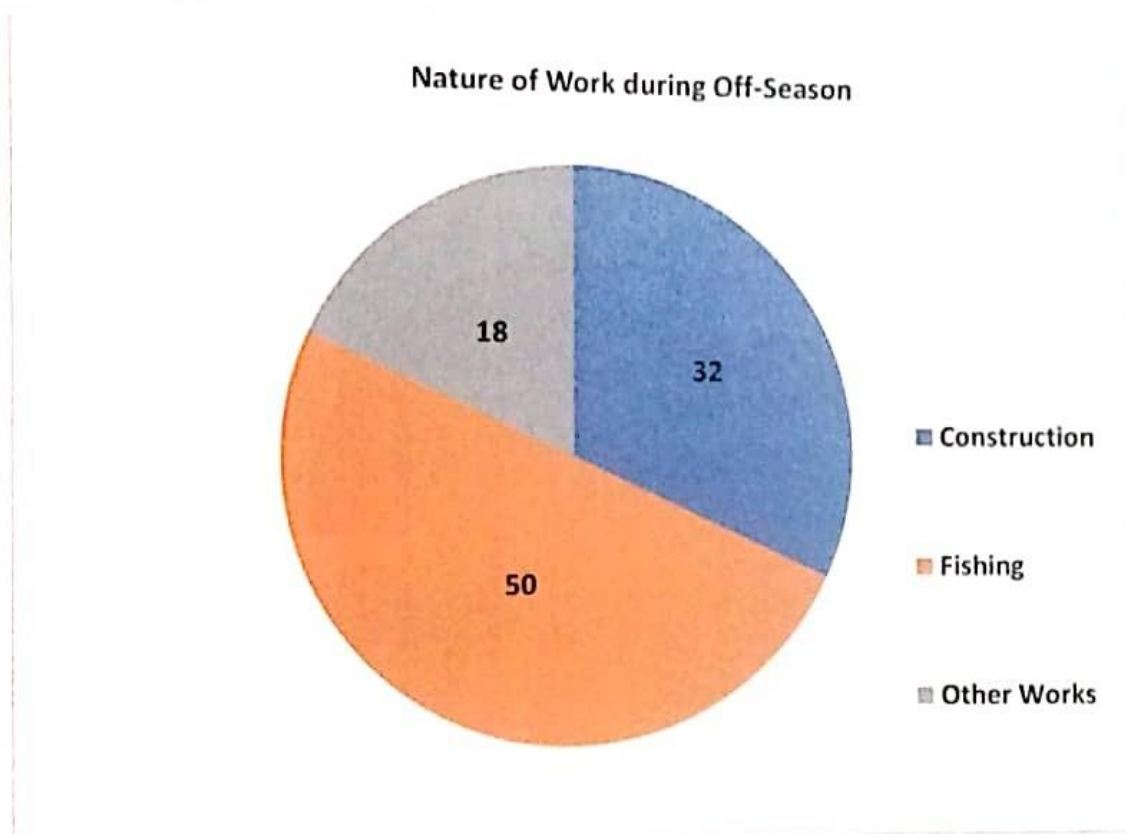


TABLE 4.19

HEALTH HAZARDS FACED BY THE RESPONDENTS

S. No	Health Hazards	No. of Respondents	Percentage
1	Headache (Migraine)	10	20
2	Back Pain & leg Pain	20	40
3	Dizziness	6	12
4	Breathing problems	14	28
	Total	50	100

Source: Survey Data

The above table shows the health issues related to the palm tree climbers. 40% of respondents suffer from back pain and leg pain. 28% have breathing problems. 20% respondents have general headache and migraine problems. 12% of respondents have dizziness problems.

Figure 4.19

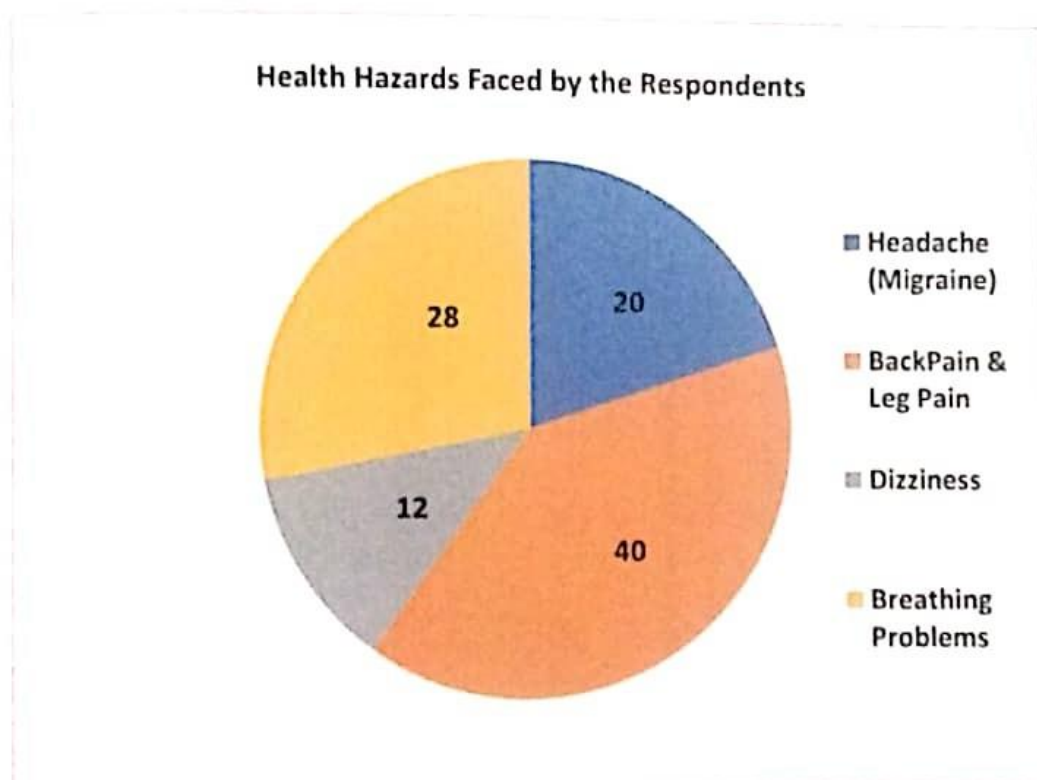


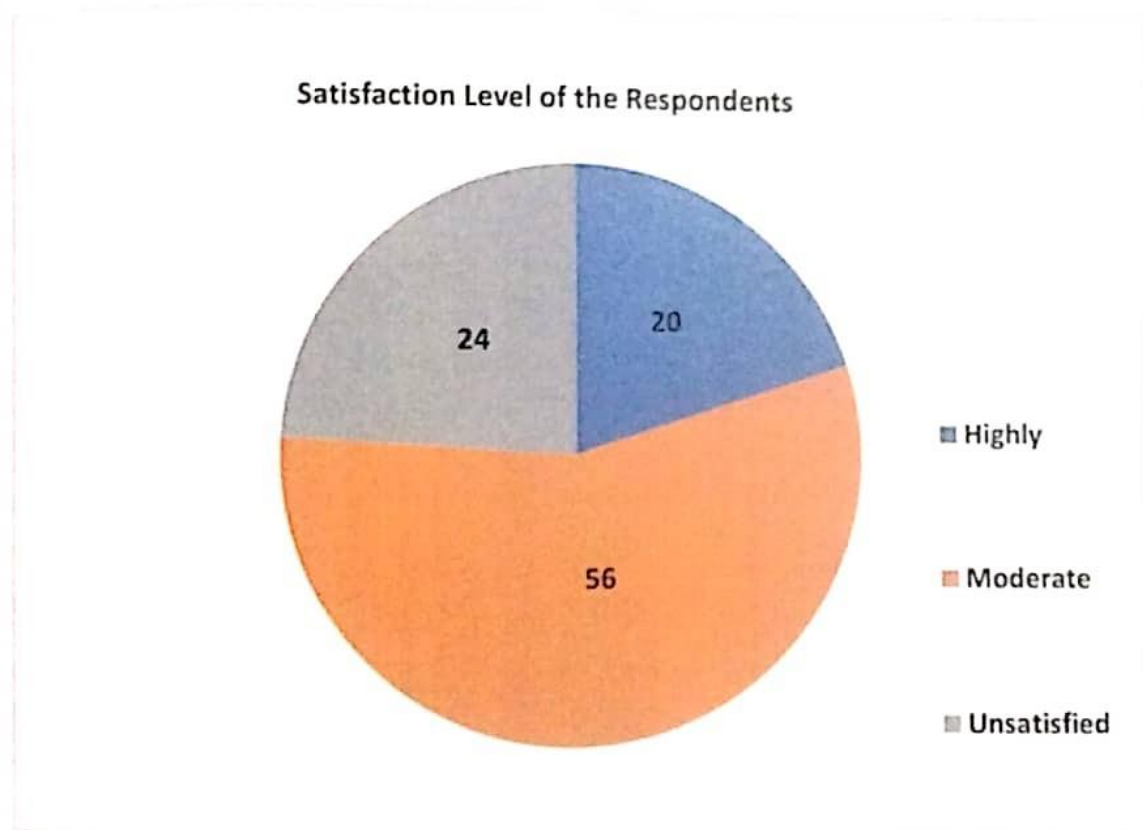
TABLE 4.20
SATISFACTION LEVEL OF RESPONDENTS

S. No	Satisfaction Level	No. of Respondents	Percentage
1	Highly Satisfaction	10	20
2	Moderate	28	56
3	Unsatisfied	12	24
	Total	50	100

Source: Survey Data

The above table reveals that 20% of the workers are highly satisfied by their occupation, 56% are moderately satisfied and 24% workers are unsatisfied with their occupation.

Figure 4.20



CHAPTER V

FINDINGS, SUGGESTIONS & CONCLUSION



CHAPTER V

FINDINGS, SUGGESTIONS AND CONCLUSION

5. FINDINGS

1. 4% of the respondents are in the age group of below 20 years, 8% of the respondents are in the age group of 21-30 years, 30% of the respondents are in the group of 31-40 years, 36% are in the age group of 41-50 years and 22% of the respondents are above 50 years.
2. 16% of the respondents belong to FC (Forward Community), 56% of the respondents belong to BC (Backward Community) 4% of the respondents belong to MBC (Most Backward Community) and 24% of the respondents belong to SC (Scheduled Caste)
3. 74% of the workers are Christians, 26% of the respondents are Hindus.
4. 72% of workers are married and 28% of them are unmarried.
5. 52% of the respondents are illiterate, 26% have attained primary level of education and only 22% have completed middle school of education.
6. 58% of the workers are living in joint family and 42% of them are living in nuclear family system.
7. 42% of the workers family size is more than above 6 members, 36% of respondents have the family size of 2-3 members, 22% of the are having the family size of 4-5 members.
8. 14% of the workers are having their own house and 86% of them are living in rented house.
9. 18% of the sample respondents live in hut and 28% of the sample respondents live in mud houses and 54% of the respondents live in concrete houses.
10. 24% of respondents work for 8 hours below daily, 76% of respondents work above 8 hours.

11. 26% respondents have experience of 3-6 years, 50% respondents have 7-9 years of experience, 24% respondents have 10-11 years of experience.
12. 14% of respondents earn an income of Rs 6000-Rs. 8000, 46% of respondents earn around Rs. 8000-Rs.10,000, 22% of respondents earn Rs. 10001-Rs.12,000 and 18% respondents earn Rs. 12,001 – Rs. 15,000
13. 28% of them are earning the family monthly income of Rs. 5000-10000, 18% of them earn family income between Rs.11000-15000, 32% of them earn between Rs.16000-20000, 10% of them earn between Rs. 21000-25000, and only 12%earn Rs.26000-30000.
14. The average family monthly income of the palm tree workers is calculated to be Rs.15,860
15. 40% of the workers family expenditure is Rs. Below 5000, 24% of them spend Rs. 5001-10000 and 60% of them spend Rs.10001-15000.
- 16.36% of the respondents save below Rs. 3000, 22% of the respondents save between Rs. 3001-4000 another 22% of the respondents save between Rs 4001-5000 and 20% of the respondents save above Rs. 5000.
- 17.88% of the respondents have chosen this occupation because it is their family occupation, 8% of them are doing this occupation due to lack of suitable job and 4% of them are in this occupation because of better income.
18. 44% of them are members in union and 56% of them not members in union.
19. 32% respondents earn income through construction works, 50 % respondents go for fishing and 18% respondents engage in other works like coolie, welding works etc.,

20. 40% of respondents suffer from back pain and leg pain. 28% have breathing problems. 20% respondents have general headache and migraine problems. 12% of respondents have dizziness problems.
21. 20% of the workers are highly satisfied by their occupation, 56% are moderately satisfied and 24% workers are unsatisfied with their occupation.

5.2 SUGGESTIONS

According to this study nearly 88% of the respondents are involved in Palmyrah tree climbing as it is their family occupation and also because of their poor level of education, they are unable to find a suitable job. So, education of the children of the tapping community up to higher secondary level should be made compulsory so that they can be motivated for higher studies, by enabling them at least a few of them to leap onto government or private sector employment. This will definitely enhance the socio-economic status of the family but also avoid their dependence on tapping as the only source of livelihood.

Moreover, Palmyrah tree climbing is a very tough and tedious job which needs a lot of physical strength. Hence, certain alternative solutions are suggested for Palmyrah tree climbing which includes: Ropeways for closely packed trees, Pliers for better grip and increased leap, Rope and pulley block for mechanical advantage, tube for draining juice and powered ladder for climbing. This will help the tapping community to be away from certain specific health issues occurring due to Palmyrah tree climbing.

During off seasons the Palmyrah tree climbers are unable to earn a good income due to lack of jobs. So, the government should focus on providing alternative job

opportunities to the tapping community so that they can earn a regular income for their family. Moreover, the women (housewives of the palm tappers) should be empowered by providing training through various self-Help groups and NGOs for making a wide variety of eco-friendly palm leaf products like baskets, boxes, trays, stationary items and assorted items like laundry bins, purses, coaster, rattle, toy box, bottle holder and variety of kitchen wares, disposable tableware and many other attractive and artistic items, so that they can also earn a good income for their family. This will help in improving their socio-economic conditions. Government policies and programme should be oriented towards human resource development, which in turn includes education, healthcare, nutrition and economics empowerment.

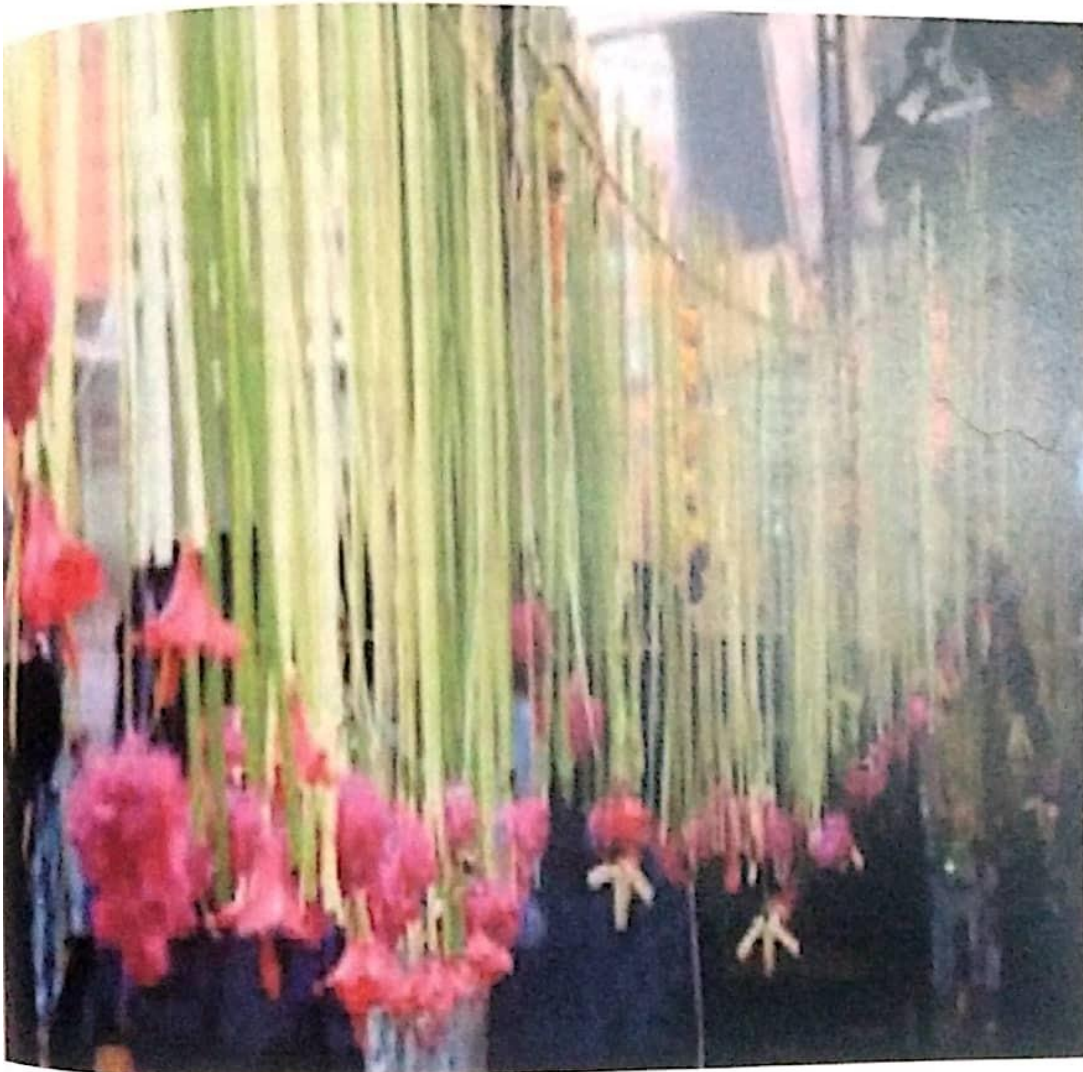
5.3 CONCLUSION

The study gives a clear idea of income and expenditure pattern of the household of Palmyrah tree climbers in Kulathur villager of Tuticorin district and brings to light the various causes for socio-economic backwardness of the tapper's community. It is hoped that the suggestion made in the study, will serve as a decision in solving many problems of tappers who, for centuries, have been basically poor and downtrodden.

The Palmyrah tappers have poor socio-economic condition. The challenge facing scientists, researchers, extension workers and famers in the next millennium is to find appropriate ways of utilizing the earth's resources to feed the predicted doubling of the human population while at the same time improving the living standard of rural people.

Directly, it provides employment to the toddy tappers, indirectly a significant section of people who lives in the rural segment get livelihood through the abundant source of Palmyrah palm by marketing the products and products of the tree. In addition, it is a tree of eco-friendly and ultimately most economical one.

ANNEXURE
BIBLIOGRAPHY
QUESTIONNAIRE
PHOTOS



BIBLIOGRAPHY

REFERENCES

1. Bank Indonesia, The Pattern of Business Financing Palm Sugar, Jakarta, 2008
2. Barreveld W H 1993, Date palms products. FAO Agricultural Services Bulletin No 101. FAO, Rome. pp. 262.
3. Dissanayake B W 1977, Use of *Caryota urens* in Sri Lanka. In: First International Sago Symposium. The Equatorial Swamp as a Natural Resource. Ed. Tan K. Sarawak, East Malaysia, Kuching 1976. Kuala Lumpur. pp. 84-90.
4. Fox J F 1977, Harvest of the Palm, Ecological Change in Eastern Indonesia. Harvard University Press, Cambridge, Massachusetts, and London, England. pp. 290.
5. Kovoov A 1983, The palmyrah palm: potential and perspectives. FAO Plant Production and Protection Paper No 52. FAO, Rome. pp. 77.
6. Mogea J, Seibert B and Smits W 1991, Multipurpose palms: the sugar palm. Agroforestry Systems 13: 111-129.
7. Rangaswarni G 1977, Palm tree crops in India. Outlook-on-Agriculture (UK). 9(4): 167-173.
8. Redhead J 1989, Utilization of tropical foods: trees. In: FAO Food and Nutrition Paper No 47: 3. FAO, Rome, pp. 52.
9. Rumokoy, M. M. M, Benefits of Sugar Crop (*Arenga pinnata* Merr) Bulletin Baluka, 2000
10. Sodah Ayernor G K and Matthews J S 1971, The Sap of the Palm *Elaeis guineensis* Jacq. as Raw Material for Alcoholic Fermentation in Ghana. Tropical Science. XIII (1): 71-83.
11. Soeseno, S, Sugar Farming. P.T. Diffuser Organization, Jakarta. 2000
12. Soeseno. S, Palm Cultivation, Penebar Swadaya, Jakarta, 1995
13. The National Population and Family Planning. Welfare Index, Jakarta, 2000
14. Tuley P 1965a, Studies on the production of wine from the oil palm. J. Nigerian Inst. Oil Palm Res. 4: 284-289.
15. Anaglo, J.N., Boateng, S.D., and Swanzy, K.M. (2014). The Influence of Adoption of Improved Palm Production Practices on the Livelihood Assets of Palm Farmers in Kwaebibirem District of Ghana. Journal of Biology, Agriculture and Healthcare, Vol.4, No.1, 88-94.

16. Anwar, R., Sitorus, R.P., Fauzi, A.M. & Widiatmaka, W. (2014). Technical culture and productivity of palm in several plantations in East Kalimantan. *International Journal of Latest Research in Science and Technology*, Vol. 3(2), 19-24.
17. Ernah, Parvathi, P., & Waibel, H. (2016). Adoption of Sustainable Palm Oil Practices by Indonesian Smallholder Farmers. *Journal of Southeast Asian Economies*, Vol. 33 (3), 291-316.
18. Ibitoye & Jimoh, S. (2014). Economic analysis of palm marketing in Dekina local government area of Kogi state, Nigeria, *Asian Journal of Social Sciences, Arts and Humanities*, Vol. 2(1), 1-19.
19. Maesaroh, S.S., Suroso, A.I., & Pahan, I. (2017). Moratorium on oil palm: Ecological recovery or economic slowdown? *Journal of Applied Management*, Vol. 16(1), 148-155.
20. Mingorria . S., Gamboa, G., Martin-Lopez, B., & Corbera, E. (2014). The oil palm boom: socio-economic implications for Q'eqchi' households in the Polochic valley, Guatemala. *Environmental Development Sustainability*, Vol. 16, 841– 871.
21. Potter, L.M. (2016). Alternative Pathways for Smallholder oil palm in Indonesia, *International Comparisions*,. In R. Cramb & J.F. MC Carthy (Eds.), *The oil palm complex: Smallholders, Agribusiness and the state in Indonesia and Malaysia*, (pp 78-108). Nus Press, Singapore.
22. Santosa, A.U. (2014). Towards Sustainable & Productive Palm Oil Sector of Indonesia. *Kontan Online*, Jakarta, Indonesia.
23. Sooryamoorthy, R., (2000), *Climbing Up: The Story of Palmyrah Workers Development Society*, PWDs, Marthandam, Tamil Nadu, 2000.
24. Zen, Z., Barlow, C., & Gondowarsito, R. (2016). Oil palm in Indonesian socioeconomic improvement: a review of options. *Oil Palm Industry Economic Journal*, Vol. 6, 18–29.

QUESTIONNAIRE

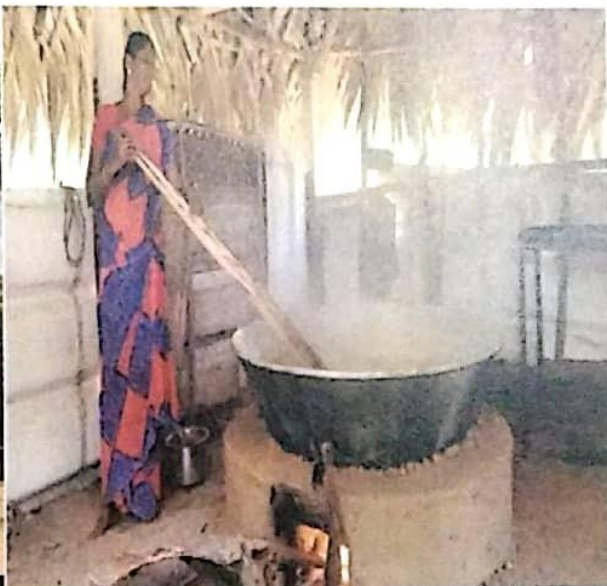
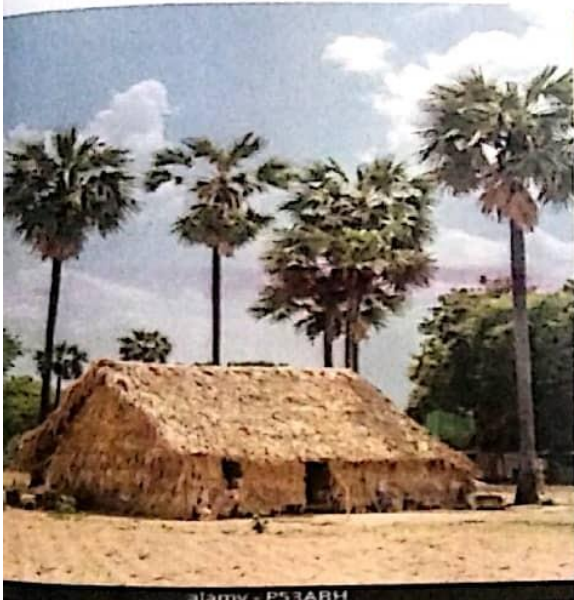
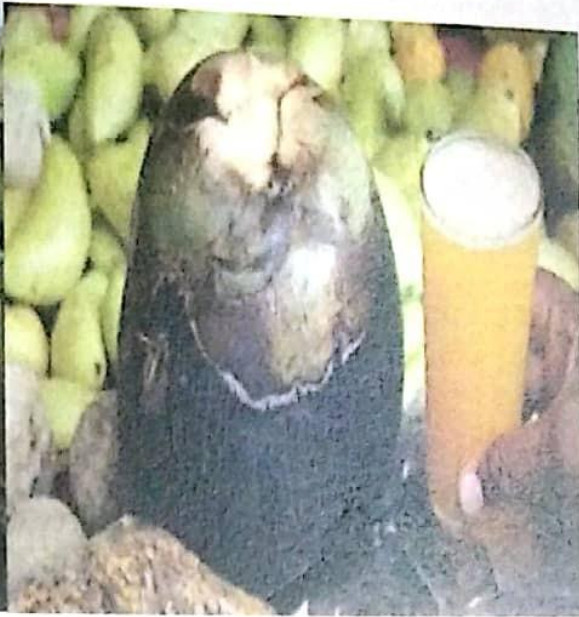
A STUDY ON LIVING CONDITIONS OF PALMYRAH TREE CLIMBERS OF KULATHUR VILLAGE IN THOOTHUKUDI DISTRICT

1. Name :
2. Age :
3. Caste : BC/MBC/ OC/SC
4. Religion : Hindu / Christian / Muslim
5. Sex : Male /female
6. Marital status : Married /Unmarried
7. Education : Primary/ Middle School/SSLC /HSC
/Graduate/Others
8. Family members : 2 -3, 3-4, Above 4
9. Type of family : Joint family / Nuclear family
10. Residential position : Owned House / Rented House
11. Housing Type : Mud / Hut / Tiled/ Concrete/Others
12. Basic facilities Of Housing : Electricity /Toilet / Drinking water
13. Monthly income :
14. Family income per month:
Less than Rs 10000, Rs 10001 – Rs. 15000, RS 15001-Rs.20000, Rs 20001 -Rs. 25000,
Above Rs 25000
15. Family Expenditure per month:
Less than Rs 5000, Rs 5000-Rs.10,000, Rs. 10,000 – Rs. 15000, Above Rs. 15000
16. Saving Per month:
Less than Rs 3000-Rs 3000 - 4000 /Rs 4000 -5000 Above 5000
17. Reason for the choice of Palm tree cultivation: Family occupation/ Lack of suitable job/
Better Income/Others

18. Do you cultivate palm tree in own land: Yes/No?
If yes mention the size of land holding:
If no, mention the rent paid for using other's land: (Rs:)
19. Years of Experience :
Less than 3 years / 3-6 years / 6-9 years / 9-12 years / Above 15 years
20. Working hours per day :
Below 5 hours / 6 - 8 hours / More than 8 hours
21. Whether the work is seasonal : Yes/No
(a) If seasonal, Mention the working months :
(b) What you do during off seasons :
(Mention the other work)
22. Do you have any Union : Yes / No
23. Traveling Expenses : Below 500/ 1000-1500/ Above 1500 (In Rs)
24. Palm is a healthy product : Yes /No
25. Benefits/ Uses of Palm Tree : (a) ceremonies (b) Medical use (c) Other uses
26. The details of sales : profit / Loss (Mention the amount in Rs.)
27. Do you get any help of Government : yes / No
28. Do you get bonus from the owner during festival season: Yes /No
29. Number of working days in a week : (a) 7 days (b) 5-6 days (c) 3-4 days (d) below 3 days
30. Mode of payment : Daily / week / Monthly/ Others
31. Time of starting work : 6 am / 7 am / 8 am / 9 am
32. Are you suffering from any disease : Yes /No
If yes mention the health issues
33. Medical facilities provided : Yes /No
34. Relationship between owner and workers: Poor/Satisfactory/ Good
35. Specific equipment used in work :
36. Products received from palm tree :
37. Jobs Satisfaction level : Poor/ Satisfactory/ Good
38. Suggestions if any :



PALM TREE USES AND ITS PRODUCTS



Palm Craft



**AN ECONOMICS OF SRI JEYASAKTHI TIMBER TRADERS
KRISHNARAJA PURAM THOOTHUKUDI**

Project Report Submitted in to the

DEPARTMENT OF ECONOMICS

ST.MARYS COLLEGE (AUTONOMOUS) THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Thirunelveli

In partial fulfillment for the award of the degree of

Bachelor of Economics

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MAY 2022

AN ECONOMIC ANALYSIS OF GOLD SMITHS

IN THOOTHUKUDI AREA

Project Report submitted to

ST. MARY'S COLLEGE (Autonomous), THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Tirunelveli

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DEPARTMENT OF ECONOMICS

St. Mary's College (Autonomous), Thoothukudi

(Re-accredited with "A+" Grade by NAAC)

May 2022

**A STUDY ON LIVING CONDITIONS OF SALT WORKERS WITH SPECIAL
REFERENCE TO MUTHIAHPURAM AREA OF THOOTHUKUDI DISTRICT**

Project report submitted to the

DEPARTMENT OF ECONOMICS

ST.MARY'S COLLEGE (Autonomous), THOOTHUKUDI

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May 2022

A STUDY OF PROBLEMS AND PROSPECTS OF DRY FISH VENDORS IN THERESPURAM AREA OF THOOTHUKUDI DISTRICT

**Project report submitted to the
DEPARTMENT OF ECONOMICS**

ST.MARY'S COLLEGE (Autonomous), THOOTHUKUDI

Affiliated to Manonmaniam Sundaranar University, Tirunelveli

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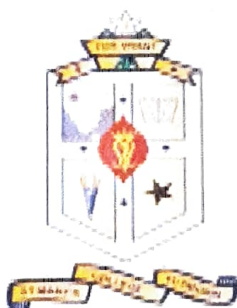
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MAY - 2022

**A STUDY ON PRODUCTION AND WORKERS DETAILS OF BHARATHI
CORRUGATED CARTON INDUSTRY, ARASADI, THOOTHUKUDI DISTRICT**

Project report submitted to

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI

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(Reaccredited with 'A + 'Grade by NAAC)

2021-2022

**A STUDY ON CUCUMBER PRESERVATION OF SDK RAJAN INDIAN
TROPICAL AGRO PRODUCTS (P) LTD, MADATHUR, THOOTHUKUDI
DISTRICT**

Project report submitted to

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI

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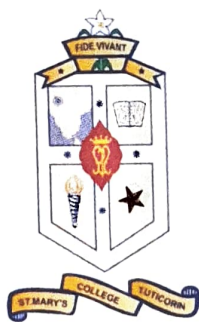
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2021-2022

**AN ANALYSIS OF THE PERFORMANCE OF BANK OF INDIA,
BALAVINAYAGAR KOVIL STREET, THOOTHUKUDI**

Project report submitted to

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2021-2022

**A STUDY ON MUDIVAITHANENDAL VILLAGE OF THOOTHUKUDI DISTRICT
WITH SPECIAL REFERENCE TO GOVERNMENT EMPLOYEES**

Project Report Submitted to the

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May 2022

**A STUDY ON LIVING CONDITIONS OF PALMYRAH TREE CLIMBERS IN
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Project Report Submitted to the

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**PROBLEMS AND PROSPECTS OF URBAN WORKING WOMEN IN
THOOTHUKUDI CITY**

Project Report Submitted to the

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In partial fulfillment for the award of the Degree of

Bachelor of Arts in Economics

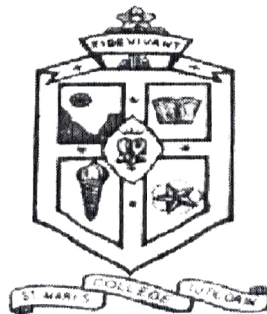
By

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DEPARTMENT OF ECONOMICS

St. Mary's college (Autonomous) Thoothukudi

(Re-accredited with "A +" Grade by NAAC)

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