A STUDY ON THE CONSUMER'S PROBLEM AND PROSPECTS OF PACKAGED DRINKING WATER IN ARIYALUR DISTRICT

This thesis Submitted to the Bharathidasan University in Partial fulfillment of the requirements for the award of Degree of

DOCTOR OF PHILOSOPHY IN COMMERCE

Submitted By

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Ref. No: 40724/Ph.D.K4/commerce/Part Time/January 2017

Under the guidance of

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PG & RESEARCH DEPARTMENT OF COMMERCE
GOVERNMENT ARTS COLLEGE (GRADE 1)
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CERTIFICATE

This is to certify that the thesis entitled **"A STUDY ON THE CONSUMER'S PROBLEM AND PROSPECTS OF PACKAGED DRINKING WATER IN ARIYALUR DISTRICT"** submitted to the Bharathidasan university in partial fulfillment of the requirement for the award of degree of Doctor of Philosophy in commerce is a record of original research work done by **Mr. P.LOUIS ALPHONSE (Ref. No: 40724/Ph.D.K4/commerce/Part Time/January 2017)**, during the period January 2017 - December 2021 of his research in the P.G. & Research Department of commerce Government Arts college (Grade 1), Ariyalur, under my supervision and guidance and the thesis has not formed the basis for the award of any Degree/Diploma/Associate ship/fellowship or other similar title to any candidate of any university.

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Countersigned

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DECLARATION

I, **P.LOUIS ALPHONSE (Ref. No: 40724/Ph.D.K4/Commerce/Part Time/January 2017)** hereby declare that the Thesis, entitled **"A STUDY ON THE CONSUMER'S PROBLEM AND PROSPECTS OF PACKAGED DRINKING WATER IN ARIYALUR DISTRICT"** submitted to the **Doctor of Philosophy in commerce** is a record of original and independent Research work done by me during January 2017 - December 2021, under the supervision and guidance of **Dr. P. RAJANGAM**, P.G. and Research Department of Commerce, Thanthai Periyar Government Arts & Science College, Tiruchirappalli – 620 023 and that it has not formed the basis for the award of any degree/diploma/Associate ship/Fellowship or other similar title to any candidate of any university.

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(P.LOUIS ALPHONSE)

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LIST OF ABBREVIATIONS USED

BIS	-	BUREAU OF INDIAN STANDARD
FSSAI	-	FOOD SAFETY AND STANDARD AUTHORITY OF INDIA
ISI	-	INDIAN STANDARD INSTITUTION
PDW	-	PACKAGED DRINKING WATER
RO	-	REVERSE OSMOSIS
U.V	-	ULTRA VIOLET

Chapter I

Introduction and Design of the Study

CHAPTER - I

INTRODUCTION AND DESIGN OF THE STUDY

1.1 INTRODUCTION

'Water' is natures gift to mankind and all living beings. It comes in various forms such as rivers, lakes, streams *etc*… Today the consumption of packaged drinking water has increased worldwide. Nearly one million people are drinking unhealthy water in the world. Each and every year, 5 million people worldwide die due to the disease caused by contaminated drinking water.

In developed countries it is found that water is not just a basic consumption food, but also a form of lifestyle product. The packaged drinking water consumption reflect the choices related to the life style as well as serving the purpose of a basic need. The consumption of mineral water is significantly increasing worldwide and here it become an important factor for both economic and health issues.

As population hikes, the need for purified safe drinking water increases as well. Many businesses have started concentrating on purifying and mineralizing the water and distributing the same. In 1967 'Bisleri' water was introduced in India which was an Italian company. This was the first water company and became very famous and gained familiaring in India.

It is important to note that "Travellers' account to 70% of total consumers of packaged drinking water. The packaged drinking water is now served on trains, airlines and in various functions like marriage and religious functions and important meetings.

1.2 STATEMENT OF THE PROBLEM

Today, the Indian Prospects of Packaged Drinking water market is a wide industry and holds active market share and the Prospects of Packaged Drinking water market changes from one place to another. Packaged Drinking Water has become essential consumer product in the recent times. Every year nearly 800 million liter of water are marketed and bottled and the demand continuous to grow. The impurities in the natural water leads to health problem. So there is a need to produce high quality drinking water. Packaged Drinking Water has became popular and familiar in travel, marriage and festival and people realized the need for pure drinking water. The mushrooming growth for packaged drinking water and its markets (with new brand and style). When the aspect of 'brand' it influences the purchase, wherein comes the threat for domestic brand. Hence a research has been carried over to analyse the awareness problem and prospects of Packaged Drinking Water consumer in Ariyalur district, to know the answer for the following question.

i. What is the satisfaction level of consumers about the Packaged Drinking Water?
ii. What are the factors that are influencing the consumer to purchase the Packaged Drinking Water?
iii. What is the problem and Prospects of Packaged Drinking Water consumer?
iv. Which motivating factor has the positive impact on purchase of Packaged Drinking Water?

Thus, it led me to the selection of the research topic **"A STUDY ON CONSUMER'S PROBLEM AND PROSPECTS OF PACKAGED DRINKING WATER IN ARIYALUR DISTRICT".**

1.3 OBJECTIVES OF THE STUDY

i. To study the origin and growth of packed drinking water in general.

ii. To study the profile and awareness of consumers towards packaged drinking water in Ariyalur District.

iii. To understand the problem of consumer who use packaged drinking water.

iv. To analyze the perception and levels of satisfaction of consumers towards the packaged drinking water.

v. To analyze the prospects of the packaged drinking water in Ariyalur district.

1.4 HYPOTHESIS FRAMED FOR THE STUDY

Hypothesis used in the study have been summarized and given below:

Ho_1: Packaged drinking water brand preference on Kinley, Bisleri, Railneer, King fisher, Neera, Bisline and Aquafina has not been influenced by the gender of the respondents Age, marital status, Educational qualification and occupational status of the respondents.

Ho_2: Consumer motivational factors on good for health, standard quality, low price, free from Adulteration, preferred by all age group, ISI/FSSAI has not similar with the educational qualification and gender of the respondents.

Ho_3: Level of consumer satisfaction of packaged drinking water on availability of various quantities, Relatively cheap, margin based pricing, quality of product, Availability all places of purchase, quality of packing, familiar brand, taste of water and discount on bulk purchase has no similar with the respect of educational qualification gender and occupational status of the respondents.

H_{O4}: Gender of the respondents, Educational qualification and occupational status of the respondents does not have any association in factors preference to by ISI brand on packaged drinking water on basis of taste, Standard quality, Safe for health, No adulteration, Reasonable price and Available at all places/Time.

H_{O5}: Gender of respondents, educational qualification occupational status and income of respondents have not any association in factors most influence on packaged drinking water purchase in the health, standard quality, reasonable price, free from adulteration, preferred by all age group and ISI marked.

H_{O6}: Level of consumer satisfaction on good for health, standard quality, Reasonable price, free from adulteration, preferred by all age group and ISI marked are similar with the respect to gender of respondents, educational qualification, occupational status and income of the respondents.

1.5 RESEARCH METHODOLOGY

A research design is the methodological plan of action that is to be carried out in association with proposed research works. The methodology of this study includes the description of research design, sample size, sampling techniques, development and description of the tools, data collection procedure and analysis of the data.

1.5.1 Research Design

As the study is descriptive and analytical in nature, it is important to obtain conceptual clarity through ascertaining the problem and prospects of Packaged Drinking Water from the results of the research.

1.6 SOURCES OF DATA

1.6.1 Primary Data

The primary data are those which are first hand information that is obtained with the help of interviews taken in Ariyalur District.

1.6.2 Secondary Data

The secondary data on the other hand are already available information. Secondary data are collected from published data, Journals, Books, Articals and newspaper *etc*…

1.7 SAMPLING DESIGN

For the purpose of the study of problems and prospects of Packaged Drinking, consumers in Ariyalur District are selected. Total population of Packaged Drinking Water consumers in Ariyalur District is not known completely. So the researcher has used scientific method to design the sample size from the below mentioned scientific formula.

$$SS = \frac{Z^2 \times P(1-P)}{M^2}$$

where SS = Sample Size, Z = Z value, P = Population Proportion (expressed as decimal) assumed to be 0.5 (50%), since this mean positive maximum sample size, M = Margin of Error at 5% (0.05).

$$= \frac{2.86^2 \times 0.5(1-0.5)}{0.05^2} \quad = \frac{8.17 \times 0.5(0.5)}{0.0025}$$

$$= \frac{2.04}{0.0025} = 816 \text{ respondance}$$

The researcher found 816 samples to be collected in total but for convenience, the researcher rounded of the sample size to 800.

The sample size 800 was segmented based on four taluks in Ariyalur District. Out of 800, the sample respondents were selected based on the proportionate population of respective Taluks.

Ariyalur District Population = 8,02,314

Total Sample = 800 (100%)

Taluk Population

1. Ariyalur	2,55,749
2. Udayarpalayam	3,84,800
3. Sendurai	1,11,932
4. Andimadam	49,833
	8,02,314

Source: Census 2011

Selection of Respondents

1. Ariyalur Taluk

$$\frac{2,55,749}{8,02,314} \times 800 = 255 \text{ respondent}$$

2. Udayarapalayam Taluk

$$\frac{3,84,800}{8,02,314} \times 800 = 383 \text{ respondent}$$

3. Sendurai Taluk

$$\frac{1,11,932}{8,02,314} \times 800 = 112 \text{ respondent}$$

4. Andimadam Taluk

$$\frac{49,833}{8,02,314} \times 800 = 50 \text{ respondent}$$

Percentage of Selected Respondents

1. Ariyalur Taluk $\frac{255}{800} \times 100 = 32$ percent

2. Udayarpalayam Taluk $\frac{383}{800} \times 100 = 48$ percent

3. Sendurai Taluk $\frac{112}{800} \times 100 = 14$ percent

4. Andimadam Taluk $\frac{50}{800} \times 100 = 06$ percent

Table 1.1 Selection of Sample Respondent

S.No	Taluk	Number of Respondent		
		Distributed	Collected	Total
1	Ariyalur	255	255	255
2	Udayarpalayam	383	383	383
3	Sendurai	112	112	112
4	Andimadam	50	50	50
Total		800	800	800

Purposive sampling method was used to collect the primary data from all taluks in Ariyalur District. The number of respondents were restricted to the selection of sample

level, only for covering all the geographical locations in all taluk of Ariyalur district viz, Ariyalur, Udayarpalayam, Sendurai and Andimadam.

1.8 DEMO / TRAIL STUDY

A small study conducted in advance with the help of structured interview scheduled. The test-retest method was adopted during the pilot study. A pilot study was conducted with 10% (80 respondent) were approached individually and objective of study were clearly explained. Necessary modification were mad after the pre-testing.

1.9 TOOLS FOR ANALYSIS

The collected data have been analyzed with the help of the following statistical tools.

1. Simple Percentage analysis
2. Chi-Square Test
3. ANOVA
4. Ranking Analysis
5. Spearman's Rank Correlation
6. Kaiser – Meyar – Olkin (KMO) test
7. Factor Analysis

1.10 PERIOD OF STUDY

The data collected for this study was conducted during the period January 2017 to December 2020. The primary data were collected from june 2020 to November 2020 for analysis and interpretation of the results of the collected data.

1.11 SCOPE OF THE STUDY

The study highlights the problem and prospects of Packaged Drinking Water. The study tries to know the opinion of the buyers regarding price, quality, availability and

taste *etc*… The study would be very useful to the consumers to improve the awareness of Packaged Drinking Water.

1.12 LIMITATIONS OF THE STUDY

It is quite impossible to carryout a study without any errors, limitation and constraints. This research is not an exception. The limitations of the study are listed as below.

1. The present study was conducted in Ariyalur District only.
2. Data were collected on random basis.
3. The sample respondents are restricted to 800.
4. The research sample presents the result in this particular research period only and it may differ in future.
5. Water pouches were not taken into consideration for the study because it was banned by the government.

1.13 CHAPTER SCHEMES

The study includes the following chapters.

CHAPTER 1: INTRODUCTION

This chapter deals with introduction, statement of the problem, objectives of the study methodology of the study and limitations.

CHAPTER II: REVIEW OF LITERATURE

Following the introductory chapter, Chapter II deals with review of various literatures available on this area and other areas which are relevant to the study.

CHAPTER III: PROFILE OF STUDY AREA AND PACKAGED DRINKING WATER CONSUMERS - AN OVERVIEW

This chapter provides Profile of study area and Theoretical framework of Packaged Drinking Water consumers.

CHAPTER IV: ANALYSIS AND INTERPRETATION

A study on Problems and Prospects of Packaged Drinking Water consumers in Ariyalur District - Analysis.

CHAPTER V: FINDINGS, SUGGESTIONS AND CONCLUSIONS

This chapter provides brief summary of findings, suggestions and conclusions which are drawn on the basis of the results of the study.

Chapter II

Review of Literature

CHAPTER - II

REVIEW OF LITERATURE

2.1 INTRODUCTION

Getting through the available literatures within the field of study could be a important course of a research. The present survey reviews the existing literature connected to the Packaged Drinking Water. Consumers buying intention, attitude, awareness and satisfaction both in the Indian and international context. The review of the present studies related to the topic is quite significant in nature to understand the concept in the first place and then the recent development and feat achieved in the subject matter so as not repeat the efforts and findings of the past researchers in due course. The research has reviewed the following literature relating to present study in India and also study conducted in abroad to find the research gap.

2.2 INDIAN REVIEWS

1. Prabakaran (2000)[1] the explicit recognition of water as a human right could represent a usable tool for civil society to held Governments accountable for guaranteeing access to water of sufficient quality and quantity and back governments to ascertain effective policies and strategy. To ensure access to drinking water without discrimination, and allow the individual Sight to water to be fully exercised public authorities need to take measures aimed at improving the quality of water, reducing losses and establishing better pricing of water supplies. Active legal measures – under the auspices of human rights protection can be taken to benefit disadvantaged groups; especially people living in poverty, where the management of drinking water and

sanitation is entrusted to private entities, state would need to ensure that the poor receive a minimum supply of drinking water and sanitation.

2. Durai Rajan (2009)[2] Rural drinking water is one of the six components of Bharat Nirman. During Bharat Nirman period, 55,067 uncovered and about 3.31lakhs slipped back habitations are to be covered with provision of drinking water facilities and 2.17 lakh quality affected habitations are to be addressed for water quality problem, while prioritizing the addressable of the water quality problem. While problem, arsenic and fluoride affected habitation have been accorded priority followed by Iron, salinity, nitrate and other contaminants. To guarantee what territory once provided with drinking water supply infrastructure do not trip back and face drinking water problem, sustainability of drinking water cause any system has been accorded high priority. To accomplish drinking water security at village/habitation level, conjunctive utilize of water *i.e*. judicious use of rainwater, surface water and groundwater is promoted. To more support community participation in the drinking water sector for sustainability. National Rural Drinking water quality monitoring and surveillance programmed has been launched in February, 2006 under which 5 person in each gram Panchayat are to be trained to carry out standard scrutiny of drinking water sources for which 100 % financial support including water testing kits, are provided.

3. Mathivannan and Ketharaj (2009)[3] the ensuring rapid economic growth and understanding targeted interventions have been the principle instruments in our poverty alleviation strategy. It is very important that our people have access to basic services including clean drinking water and improved sanitation for general and sustainable growth. This should not be seen merely as essential public services from the welfare perspective; they are critical determinants of economics opportunities for our citizens and preconditions for sustainable long term growth. He said that water conservation and

replenishment is increasingly assuming a global dimension. Global warming and climate change have immediate and dire consequences for the availability of water. He hoped that the Government will continue to emphasis provision of safe drinking water and access to improved sanitation keeping in view the developmental, environmental and public health aspects.

4. Govindarajalu (2009)[4] in this context the industrial effluent released by dyeing and bleaching factories in Tirupur has become a serious issue because it has severe impact on water bodies. The effluents released after semi treatment or without treatment are let into Noyyal River. At present there about 800 dyeing and bleaching industries in Triupur the effluents released by these units are stored in Orathupalayam Dam, which was constructed during 1991 at the cost of Rs.1, 646 lakhs. At present, the stored water in the dam is containing industrial effluents and it is not used for agricultural and human use. Due to this condition of water, the impact is severe on agriculture, fisheries, human health and livestock. Around 21,000 acres of land are affected directly and indirectly. Under these circumstances, it has become the need of the hour to study the impact of industrial effluent on agriculture and other activities.

5. Ajay Kumar (2011)[5] for this study, bromide and bromated ions in various commercial brands of Indian bottled water samples were estimated using ion chromatography. The measured mean concentration of bromide ions in water sample was found to be 28.13µg/l and 11.17µg/l respectively. The average level of bromated in Indian bottled water was found to be slightly higher than the acceptable limits recommended by USEPA (US Environmental Protection Agency). Though, kinetically it is predicted that 62.5 per cent of bromide in bottled water is needed to convert into bromated upon ozonation to exceed the minimum acceptable limits, but the average formation of bromated determined to be only 26.77 per cent of the predicted

concentration. Bromated concentration in bottled water showed a strong correlation with bromide suggesting that its formation in water is very much influenced and controlled by bromide content. The objective of the present study was to determine the bromated content of commercially available different brands of bottled drinking water in India and to estimate the health risks to population due to ingestion. Consequences of predictable excess cancer risk and chemical toxicity risk to Indian population due to ingestion of bottled water were presented and discussed.

6. Kaushal misra (2011)[6] The purpose of this paper is to assess the potential of continuous water supply in New Delhi, India and close to places also to scrutinize/assess / recognize the role of the Municipal Corporation and Delhi Jal Board (DJB), the departments which like care of water supply and dimanol in the region. The conclusion and inference of this research may enhance the existing literature on water supply for the first time focusing on the Indian context, where there is no major problem in supply of water bet the designed infrastructure creates shortages in the area.

7. Panit Ajitha K (2012)[7] One hundred and five sample of bottled drinking water belonging to 30 different brands, collected from six different status of India have been analyzed for total heterotrophic bacterial (THB) load and coli forms. Almost all bottles used multiple treatment procedures such as microfiltration, reverse osmosis and ozonisation to treat the water. Arovind 40 per cent of the samples exceeded the limit of 100 Cfu/ml set by the department of health was well as Bureau of Indian standards (BIS), government of India. Fourteen percent and 44 per cent of the sample with THB loads among 100 and 1000 Cfu/ml or 1000 Cfu/ml tested optimistic for coli forms representative a linear relationship between THB and coli form bacteria. Gram positive genera such as Kurthia and Coryhebacteirum were found to be dominant genera, while members of the family enterobacterium contributed to 7 per cent. Risk assessment of the

heterotrophic bacteria revealed that the majority of the strains acquire resistance against ampicillin, nalidixic acid, novobiocin and oxytetracycline. As bottled drinking water is a ready to drink commodity, the high load of heterotrophic bacteria with multiple drug resistance poses significant health hazards to the consumers, especially to immune compromised individuals.

8. Ramesh J.N (2012)[8] this paper uses a public economics framework to review evidence from randomized trials on domestic water access and quality in developing countries and to access the case for subsidies. Water treatment can cost effectively reduce reported diarrhea. However, many consumers have low compliance to pay for cleaner water; few households purchase household water cure beneath trade model. Free point of collection water treatment systems designed to make water treatment convenient and salient can generate take-up of approximately 60 per cent at a projected cost as low while $ 20 per year of life saved, similar to vaccine costs. In dissimilarity, the limited existing proof suggests that many consumers value better access to water but it does not yet demonstrated that better access improve health.

9. Silva, W. G. M., *et al* (2012)[9] in their study on, "Consumer Perceptions on Quality Attributes of Liquid Food Products: An Empirical Analysis Based On Urban Households", examine empirically the urban consumer perception on top of key food quality attribute, including price, food safety, labeling and packaging for four liquid food products, namely bottled water, pasteurized milk, ready-to-drink fruit juices and carbonated drinks. prearranged the multidimensional nature of problem, the Perceptual Mapping Method explain in the Multidimensional scale multivariate data analysis techniques was employed to estimate and map the variation in consumers' similarity judgments on the quality attributes. A prearranged questionnaire was administrated with 300 households in the urban areas in the Colombo district to gather data from May to

July 2011. The outcome of analysis exposed that, irrespective of the product, price plays the most considerable role on consumer decision making process followed by food safety. However, consumers were judged differently on these quality attributes as they make a decision on purchasing different product combinations and this behavior is correlated with the socio-economic status of a consumer. The results entail that manufacturers of these products shall pay concentration to the food quality attributes in concern in their attempt to cater into their client-base and penetrate into new food markets.

10. Karthikeyan, G.B. and Surya vardhan, T.M.R (2012)[10] in their study titled, "Packaged Drinking Water with special reference to Virudhunagar Town", point out that respondents who were taken for study were aware of packaged drinking water and 60 respondents were aware by advertisement, 40 have got awareness by friends and the balance of 50 have got awareness by family and doctor. Among 150 respondents 51 respondents prefer pet bottles and from the 51 respondents 43 were convenient in using pet bottles and other 8 were not convenient with bubble top containers and among 99 respondents prefer bubble top, 94 respondents were convenient and other 5 were not convenient with bubble top. It was inferred that there is a significant relationship between package and convenience of packaged drinking water. The manufactured goods uniqueness enjoy a predominate place in the minds of consumer while accounting for purchase. The satisfaction level of the consumer is completely vested on the attributes of the product on allowing for the factors such as price, alternative and importance. It was observed and proved ultimately by means of factor analysis.

11. Ramavtaram (2012)[11] made a study titled, "Drinking Water - Hard or Soft?", The study was conduct recently in Surat by as well as both urban and rural areas, water sources either natural or supplied by the corporation have desirable hardness, calcium

and magnesium hardness. But a significant population, both rural and urban, is not consuming these hard water supplies owing to life styles. Reasons for this non consumption of hard water supplies is their own making as they are using the water filters which are not strictly adhered to maintain the purification standards with the maintenance of the desirable levels of total hardness and calcium and magnesium hardness and levels of other trace elements which are necessary for optimum health. An interesting finding of this study is low levels of hardness, calcium and magnesium hardness in the bottled waters of ten commercial suppliers and very low calcium hardness and zero magnesium hardness in one or two brands of commercial bottled.

12. Sudarsan. J.S. and Renganathan.K (2013)[12] in their study on, "Packaged Drinking Water Quality Characteristics at Chennai City, Tamilnadu", report that the inadequacy of protected water supplies in urban centre is a growing problem. In recent years, as communities remedy to buy water from vendors, bubble top cans and bottled water became major sources of drinking water in the households and at work. This study was conducted in Chennai city to assess the physiochemical and bacteriological quality of packaged water sold in several key locations of study area. The three main cause of packaged water includes bottled water, sachet and Bubble top cans. At the time of study 40 key location were identified in study area. From each location samples were collected from a variety of vendors and subjected to physical, chemical and bacteriological analysis. World Health Organization (WHO) standards were adopt for calculation of Water Quality Index (WQI). WQI provides an easy and rapid method of monitor of water quality. Water quality indices revealed that drinking water of Bubble top cans and Sachet were found to be infected, comparing to bottled drinking water. So they need some degree of more treatment before consumption.

13. Priya and Shekalatha (2015)[13] in this study find out consumer Behaviour refers to the buying behaviour of the ultimate consumer. Many factors, specificities and characteristics influence the individual in what he is and the consumer in his assessment making process, shopping habits, purchasing behavior, the brands he buys or the retailers he goes. A purchase conclusion is the result of each and every one of these factors. An individual and a consumer is led by his , his subculture, his social class, his membership groups, his family, his personality, his psychological factors, etc and is influenced by cultural trends as well as his social and societal environment. By identifying and understanding the factors that influence their consumers, brands have the occasion to develop a strategy, a marketing message and advertising campaign more efficient and more in line with the needs and ways of thinking of their target consumers, a real asset to better meet the needs of its consumers and increase sales.

14. Maeena Naman Shafiee (2018)[14] in this article on Indian bottled drinking water industry is driven by the events of unpredicted water shortage and health consciousness that has started to develop in the people. The market of bottled water is dominated by certain players from past few years since it is very competitive. The main marketing competition among the players is that of packaging and attractive labelling which gathers them huge consumer base. Thanks to the low pricing and attractive marketing strategies Packaged Drinking water is now a product chosen by masses. Introduction in the rural areas is the main factor responsible for the development of this industry. Its further development depends on the consumer awareness about its benefits and acceptance.

15. Nithyanandam (2018)[15] in his study entitled, "Market Status of Mineral Water Industry with Special Reference to Team", has found that the consumption pattern of packaged mineral water had changed considerably and companies positioning mineral water as ramification of health has made the market potential limitless.

16. Bana Gauraj (2019)[16] in his research work, "Devising Marketing Strategies for Re-Launch of Ganga Mineral Water in Delhi", has reflected that there are three routes to raise the market share in the current market. The first measure is increasing the demand of existing customers by aggressive advertising and attractive competitive consumers. The second measure is stimulating interest of potential buyers and going in for additional channels in current market. The last step is the product development which included providing water in different variants to suit the likes of the customers.

17. Ramani Sasirega and Sudarsara Reddy, (2019)[17] in their work, "A Study on Institutional Consumer Perception of Packaged Drinking Water", have observed that nearly 37 per cent of the respondents used packaged drinking water for health purposes, 16.43 per cent for its hygienic conditions, 6.43 per cent for its ease to use, 20.71 per cent due to employers demand and 5.71 per cent due to presence of salt in domestic water. The study also extended that all the respondents were choose good brand of Packaged drinking water due to better quality in delivery, majority of the respondents consider quality, availability and price as the important factor while purchasing the jars of Packaged drinking water and 92.14 per cent of the respondents never shifted to other brands while others choosing a renowned brand.

18. Murugesan, P. (1990)[18] in his dissertation, "A Study of Consumer Behavior towards Soft Drinks in Madurai City", has revealed that 76.35 per cent of the consumer bought soft drinks, only because they were satisfied with the quality; only a meager (i.e.) 2.65 per cent of the consumers bought them because of cheaper price. Besides, 51.72 per cent of the consumers changed their brands occasionally and 48.28 per cent changed their preferences frequently.

19. MirajulHaq, Usman Mustafa, and Iftikhar Ahmad, (2001)[19] in their study entitled, "Consumer Perceptions, Practices, and Willingness to Pay for Safe Drinking Water: A Scenario Analysis of Urban and Rural Abbott bad", describe the Contingent Valuation Method (CVM) and Averting Behavior Approach (ABA) to analyze drinking water services and quality in district Abbott bad. In an attempt to measure, how much households are willing to pay for improved water services, used Contingent Valuation Method and apply multinomial logistic regression. In Averting Behavior Approach, again they have used the same technique to estimate the water purification behavior of households. Education, awareness, available water sources, and quality of drinking water determine Willingness to Pay of households in the sample Abbott bad district.

20. Durai. G, (2001)[20] in his study titled, "Future Prospects of Mineral Water", has made an attempt to study the future prospects of mineral water besides finding out the leading brand in Chennai city. In the case of fast moving packages it has been revealed that one litre bottles are more in demand accounting for 60 per cent of sales as against 10 per cent of sales of two litre bottles. The fast moving and leading brand was identified as Bisleri due to its taste and credibility of the company.

21. Kim Peterson (2001)[21] in his study "The Case of Bisleri-A Struggling Brand", averts that a status quo of the market indicates that most sales come from consumer market. But Bisleri has plans to focus more on other segment that is the industrial market. As these two markets differ in size, shape, buying patterns, buying behavior etc., an understanding of the industrial market cannot be established based on the consumer survey. An individual survey and analysis needs to be completed and only then a full understanding of the Indian bottled water market could be found out.

22. Deepak S. Prasanna, B. and Srilakshmi.T (2002)[22] in their study on, "Consumers preference towards mineral water," emphasizes the effect of advertisement on the sales of brands and consumers preference towards the brand, its image both by itself and in the competitive context. The study identified the extent to which consumers prefer Bisleri as compared to Kinley and Aquafuna".

23. Fife-Shaw (2007)[23] in his study entitled, "Consumer Preferences towards Bottled Water: An Overview", shows that primary concerns related to drinking water are linked to its physical properties (taste, odour, appearance) and secondary concerns are with composition. The high level of dissatisfaction with chlorine is also given that the level of chlorine in tap water is inversely proportional to the level of health risk. Using a water filter will result in chlorine being undetectable. Thus it is aesthetics as well as health concerns that encourage people to switch to bottled water. An analysis of the preference for drinking water, has to focus on issues of health, safety, and taste in terms of drinking water, as well as the regulations that bring about such properties. In fact, tap water trumps bottled water in terms of regulations, so the increasing preference for bottled water becomes that much more of a necessity to explain.

24. Murali, D. and Ramesh, C. (2007)[24] in their article, "Packaged Drinking Water Industry-What We See Is the Tip of the Iceberg", disclose that from being confined to the upper most level of society, packaged drinking water has now become a common place commodity and almost a necessity in metros. After witnessing a historic growth in recent years, it has become a Rs.3000 crore industry one that is slated to post healthy growth rates to become a Rs.10,000 crore business in just three years. The industry's phenomenal growth in recent years can be attributed to rising incidence of water borne diseases improper municipal supplies evolved health consciousness of people as well as globalization which has brought in tremendous tourist inflow. Though the industries

growth rate is 40-50 per cent a year, India is still behind countries such as Indonesia, Malaysia and Singapore where the industry is already worth Rs.15000-20000 crore, though, these countries have much smaller population but similar climatic condition.

25. Jeya (2007)[25] in her dissertation, "A Study on consumer attitude towards branded mineral water at Kovilpatti town", concludes that water is a main part of human being's daily life. The consumers have their choices towards the mineral water brand names. Mineral water plays an important role in designing the attitude of the consumers. Different attributes of the mineral water influence the purchase decision of consumers. Buyer behavior is the psychological, social and physiological behavior of potential consumer as they are able to evaluate, purchase consume and tell other people about the products and services. It is that act of considering different facts of benefits expected from the product before affecting the purchase of the product.

26. Martin, J.H., and Elmore, A.C., (2007)[26] in their study titled, "Water Drinking Attitudes And Behaviours In Guatemala: An Assessment And Intervention", explain that in March of 2002, a 244-meter ground water well was installed at an orphanage in Lemoa, a small village in Guatemala, providing a free and sustainable source of drinking water for the surrounding community. The well gave the local residents access to much higher quality water than their traditional sources provided. However, meter readings at the pump showed that few of the residents availed themselves of this new resource. A research team revisited the community in spring 2004 to assess attitudinal and behaviour all determinants of water usage in the community and in a second community with no access to safe well water. Both Lemoa respondents (N = 21) and Camanchaj respondents (N = 30) reported higher ratings of water safety than were warranted by objective data. Educational materials (card-sorting tasks) were prepared to help residents of both communities to better understand the importance of correct water drinking decisions.

These were administered approximately one year after the first survey to independent samples in both communities (N's = 31 and 32). After completing the card-sorting tasks, participant ratings of water safety were significantly lower. Both the survey and the educational interventions appeared to have positively impacted use of the well at Lemoa.

27. Chandrasekhar Hariharan (2008)[27] carried out a survey on attitude to water conservation, observed that rather than expecting restraints from water users, it was important that urban planners devise and implement measures to enhance water reuse.

28. Meena Panickar (2008)[28] in her study entitled, "State Responsibility in the Drinking Water Sector-An Overview of the Indian Scenario", reveals that the changing nature of responsibility of the state with respect to drinking water supply. This changing phase may be a difficult proposition for the average Indian mindset that still believes in an omnipotent role of the state in the basic utilities sector. This analysis of the water supply laws show that most of these legislations were enacted at a time when state was perceived as predominant factor in the public sphere. These specific water supply laws are characterized by some limitations as follows: Water supply is limited to the connections on the basis of applications, be it the household or industry; State as the service provider regulates the supply and connections; Charges are levied from the subscribers; Individual households and dependent on the connections, by and large are limited to towns and cities; Laws focus more on offences by the subscribers while no accountability language is deployed with reference to state authorities. Above all, inefficiency and its root causes did not receive serious remedial measures. The drinking water policies focused in the study are mainly those, which are initiated at the central level. The operation of a number of policies simultaneously reveals by different agencies raises the issue of coordination among them and the generation of conflicting data on the

status of access to drinking water. The policies are on the lines of constitutional goals and hence there are fewer interfaces between the water supply laws and policies.

29. Shrivastava Brajesh K. and Alam Masood (2008)[29] who did a research on the qualitative assessment of the water consumption for manufacturing packaged drinking water at Rail Neer Plant came to a conclusion about the total production and cumulative water consumption of various water treatment units used in drinking water at Rail Neer Plant, Nangloi, Delhi to meet Bureau of Indian Standards specification for packaged drinking water (IS:14543: 2004) and various amendments incorporated till February 2006. The treatment system comprises chlorination, activated carbon filtration, pesticide removing system, softener, ultra filtration, reverse osmosis, marble chip filtration unit, micron filtration, UV disinfection and ozonation. The Study itself was carried-out following Good Manufacturing Practices (GMP) and Good Laboratory Practices (GLP). It was found that for manufacturing one litre of Rail Neer packaged drinking water 1.64 litre water was consumed.

30. Ramachandraiah, C., (2009)[30] in his study on, "Right to Drinking Water in India", explains that right to water has assumed greater significance in India in recent years. Declarations by the United Nations and other international organisations and judicial pronouncements by the Supreme Court of India from time to time that right to water is part of right to life as per Article 21 of the Constitution of India have, among others, contributed to the growing awareness on this issue. That the State has the obligation to protect and fulfill the fundamental rights of citizens, in this case provision of clean drinking water as part of right to life, has not mattered much to the condition of the poor in this regard. In addition to the lack of access to adequate quantity of water, millions of poor have been suffering from the adverse consequences of water contamination. There has been a paradigm shift towards treating water as an economic

good in India as a result of the structural adjustment policies and the State has been adopting policies that favour the corporate business in water sector.

31. Mehul Jain, (2010)[31] made a study entitled, "Status of Household Water Treatment and Safe Storage in 45 Countries and a Case Study in Northern India". This thesis examines the present status of household drinking water treatment and safe storage (HWTS) technologies across the world, and in one location Lucknow, India. The data for the global status of HWTS was collected by contacting the Water, Sanitation and Hygiene (WASH) groups of 45 UNICEF country offices. The second aspect of this thesis analyzes the user perceptions and behaviors relative to HWTS and quality of water at the point of consumption, post HWTS treatment in the field. This was executed by conducting 240 sanitary surveys and 276 water quality tests in Lucknow, India. The result of the study reveals that there is a lack of technical expertise in understanding and implementing these systems in the 45 UNICEF countries where the survey was conducted and in the author's field site in Lucknow, India. Moreover, it was observed in India that safe storage was not being promoted properly by the NGO with which the author worked. It was also observed that HWTS technologies are still relatively expensive because of which they are beyond the reach of the poor. Moreover, lack of education among the masses makes scale-up more challenging.

2.3 FOREIGN REVIEWS

32. Jhon S. Smith (2001)[1] Although the WASEH project facilitated construction of shallow wells and pit latrines, the water quality still needed improvement consequently, in 2001, CARE implemented to safe water system within the already established WASEH communications, using existing community organizations in blend with a social marketing approach that introduced reasonable products. The project has resulted in

adoption rates of 33.5 per cent for chemical water treatment and 18.5 per cent for clay pots modified for safe water storage.

33. Bahruddin Saad (1998)[33] have suggested that the use of capillary ion electrophoresis for the analysis of four anions and four cations in drinking water samples available on the Malaysian market, for example natural mineral water, bottled drinking water and tap water, was investigate. In addition, Zam-Zam water was also analyzed. The anions analyzed were chloride, sulphate, nitrate and fluoride while the cautions analyzed were potassium, calcium, sodium and magnesium. Results of this resolve generally show a low substance of anions and high content of calcium and magnesium in natural mineral water and non-detectable amount of anions and cations in bottled drinking water. Out of the 15 mineral waters of different brand that were analyze four brands show anionic and cationic levels near related to that of tap water. With the exception of fluoride, an unusually high level of both anions and cations were detect in all the Zam-Zam water samples analyze as compare to the other drinking water.

34. Van Leeulnen (2000)[34] has reported that the production of adequate and safe drinking water is a high priority issue for safeguarding the health and well-being of human all over the world customarily, microbiological quality of drinking water has been the main concern, but over the last decades the interest of the general public and health officials on the importance of chemical quality and the danger of chemical pollutant have enlarged with the increase of our knowledge on the hazard of chemical substance There are many source of pollution of drinking water. This paper focused on the toxicological procedures used by the World Health Organization to drive guideline values for chemical compounds in drinking water and will touch upon some critical differences in the nature of procedure and lawfully binding standards.

35. Browning (1998)[35] One of the most famous cases of a food recall in history occurred in 1990. A few bottles of Perrier in North Carolina were discovered to contain track of benzene, a carcinogen. The initial response of Perrier was that the source of the benzene was cleaning fluids used inappropriately on bottling equipment in the United States. Later than a delay, the company recall 70 million bottles of water. Shortly thereafter, officials in Denmark and the Netherlands announced the discovery of benzene contamination in Perrier sold in their countries as well, loading to a worldwide recall of 160 million bottles of Perrier. The source turned out to be the failure to replace filters that eliminate naturally occurring benzene from carbon dioxide in the water. This incident has become a classic case study in the field of food protection recalls and public relations.

36. American Water Works Association (2001)[36], "Dawn of the Replacement Era: Reinvesting in Drinking Water Infrastructure", reveals that most of the underground water infrastructure is at or close to the end of its estimated life span and will require to be replace within the next few decades. Estimated renovation and replacement costs are in the hundreds of billions of dollars. This maintenance will not only allow for the most modern technology and increase effectiveness but will be able to meet and top the increasing number of values set by the Safe Drinking Water Act. Unhappily, the only way to fund these changes is through better rates and taxes which will definitely be met with great confrontation. Ideally, this usual rise in rates will support municipal water companies to sponsor for their services and regain the trust of the public which failed lost for decades. However, whether mandatory increased payments and greater advocacy by water companies will start the necessary shift away from bottled water consumption and back towards tap water trust worthiness is an aspect of the water use debate that ruins to be examined.

37. Aini M, Fakhru'l-Razi A, Suan K., (2001)[37] in their study on, "Water Crisis Management: Satisfaction Level, Effect And Coping of the Consumers", explain that a high level of dissatisfaction could be estimated in a region experiencing considerable water quality problems and frequent supply interruption, and is similar to results from in a different place.

38. Kelt, W Marsh (2003)[38] the purpose of this study was to classify brands of bottled water by manufacturer-assigned labeling to verify the concentration of fluoride for those brands that claim to contain fluoride, and to find out the existence and focus of fluoride for those brands that do not cite fluoride or list it as undecided on the product label. Several main points can be summarized: a) solely drinking bottled water may not provide sufficient fluoride to maintain optimal dental health b) most bottled waters contain low concentrations of fluoride and hence, in and of themselves are not a threat for fluorosis and c) bottled waters are named and packaged in a choice of ways; however, their work is nearly the same.

39. Carey Walker and Brita Sheetian (2004)[39] a second generation 80/90 disinfection (SODIS) system (pouch) was constructed from food grade, commercially available packaging materials selected to fully transmit and amplify the antimicrobial properties of sunlight. Depending upon the season, water source and challenge organism, cultural bacteria were selected between 3.5 and 5.5 log cycles. The structure was also capable of reducing the background presumptive coli form inhabitants in non-sterile river water beneath the level of exposure. Related experiments conducted with a model virus, the F-specific RNA bacteriophage MS2, indicate that the pouch was slightly less capable, reducing viable plaque by 3.5 log units in comparison to 5.0 log reduction of entering oxygenic Escherichia coli O18: H11 within the same time period. These consequences put forward that water of poor microbiological quality can be

improved by using a freely available resource (sunlight) and a specifically designed plastic pouch construct of food grade wrapping materials.

40. Celine Nauges (2004)[40], in his study titled, "awareness of Health Risk and prevention Behavior: An Analysis of Household Water utilization in Southwest Sri Lanka", explains that using household data from a survey made in Sri Lanka, they give original result about i) factors motivating the awareness of risk related to water use and ii) the role of supposed risk on household's decision to treat water before drinking it. First, they find facts that water artistic attributes (taste, smell, and color), household education and information about cleanliness practices drive household's evaluation of safety risk. Second, they show that a higher superficial risk increases the chance that household boil or filter water before drinking it.

41. Jonathan Chenoweth, (2005)[41], in their study acceptable, "Comparison of Consumer Attitude Between Cyprus and Latvia: An Estimation of Effect of Setting on Consumer preference in the Water Industry", make recognized that models future consumer opportunity of their water supplier from a risk perspective optional that consumers primarily and overwhelmingly want safe drinking water provide. In this study consumer preferences in the water sector were investigated in two different case studies: Cyprus, where there have been significant quantity and stability of supply issue, and Riga, where there have been water quality issues. The analysis of consumer attitude in the two case studies recommended that when the water supply is variable, reliability takes precedence; once it is reliable, quality issues come to the fore.

42. Thomas Clasen and Paul Edmondson (2006)[42] household water treatments using sodium hypochlorite (NaOCl) have been recognized as a cost-effectively mean of reducing the serious weigh down of diarrhea and other water-borne diseases, particularly

between populations lacking admission to enhanced water supply. Sodium dichloroisoujanurate (NADCC), which is usually used in emergency, is an alternative source of chlorine that may present assured compensation more (NAOCl) for household based interventions in development settings. We summarize the basic chemistry and possible benefits of NADCC and review the available literature relating to its safety and regulatory treatment and microbiological efficacy. We analysis the evidence concerning NADCC in field studies, including microbiological performance and health outcomes. Finally, we examine studies and data to compare. NADCC with NAOCl in terms of compliance, acceptability, affordability and sustainability and propose area for additional study.

43. Munoz F.J (2006)[43] have suggested that aquatic microorganisms have the ability to adhere onto any solid surface. They are able to reorganize as biofilms when environmental conditions change and put their life at risk. Biofilms permit bacteria toward stay behind inside water pipes without being eliminated by biocides. Among other properties, biofilms are electrically insulating. Since of this, seeing that they grow on a metal transducer surface, biofilms produce changes in the electrode solution interface properties. These changes have been monitor by means of impedance measurements and microchips as electrical transducers. Biofilms formation has been characterized using on-chip gold working electrodes and the various growth phases have been related to specific impedance changes.

44. Zink Olivia (2006)[44] water is a basic human exact that is significant to economic growth; hence it should be kept in the public trust with group ownership by the citizens. No economic activity takes place without it. This project looks at New Hampshire citizen's involvement and stewardship of water. We need only rise what life would be like lacking water toward realize how priceless this invaluable resource is. This scheme

society is defined as the citizens of NH and the environment. While an accurate dollar amount cannot defiantly mark the economic value of this project, primarily our water wealth is essential to our community. As threats of privatization begin to make a commodity of the water resources we as citizens are banding together to ensure that sustainable future development maintains citizens natural rights to water. This project would build a condition for citizens and organizations who evaluate water resources in NH. This combination, known as the NH water table, has begun to advocate the conservation, protection and management of NH's water supply for the widespread good and scrutinize what steps can be taken to preserve our water supplies and hold them in trust for sustainable use nowadays and for future generations. This partnership is evaluated the communities' watersheds and what safeguards are desirable in order to have a sustainable watershed arrangement.

45. Steve E. Hrudey (2006)[45] Million people die every year around the world from diarrheal diseases much of which is caused by contaminated drinking water. By contract, drinking water safety is largely taken for granted by many citizens of affluent nations. The capability to drink water that is delivering into households without the terror of becoming unwell may be one of the keys major a characteristic of urbanized nations in relation to the majority of the world. However, there is well-documented evidence that disease outbreaks stay a risk that could be better managed and prevented even in affluent nations. A comprehensive exposition study of more than 70 case studies of disease outbreaks in 15 wealthy nations over the past 30 years provides the foundation for much of our conversation. The insight provide can help out in rising a better understanding within the water industry of the causes of drinking water disease outbreak, consequently that more effective preventive measures can be adopted by water systems that are

susceptible. These precautionary features recline at the core of risk management for the stipulation of safe drinking water.

46. Arnold, E. and Larsen, J., (2006)[46] in their study entitled, "Bottled Water: Pouring Resources Down the Drain", reveal that the United Nations Millennium Development Goal for environmental sustainability calls for halving the number of people missing sustainable admittance to safe drinking water by 2015. Meeting this objective would need to double the $15 billion a year that the world currently spends on water supply and hygiene. While this quantity can appear large, it pales in contrast to the estimated $100 billion spent each year on bottled water. Thus, between the money spent by companies on the promotion of bottled water and that spent by consumers on the product itself, adequate public water systems could be put in position for a large portion of the world reducing confidence in bottled water and exciting a massive amount of pressure off the environment.

47. Al-Ghuraiza, Y. and Enshassib, A., (2006)[47] in their study on, "Customers' Satisfaction with Water Supply Service in the Gaza Strip", reveal that while the overall level of satisfaction with water services be usually high across Europe, within further regions the situation can be spectacularly different. A survey conducted in the Gaza Strip, for example, found that more than 71% of respondents were dissatisfied with the quality of their water, 67% were dissatisfied with the quantity they received and 60% were dissatisfied with the continuity of their water supply.

48. Miller, M. (2006)[48] in the study on, "Bottled Water: Why Is It so Big? cause intended for the Rapid Growth of Bottled Water Industries", in 2005, Nestle Waters of North America report that the normal person in the United States consumes twenty times more bottled water than they do 20 years back. The reasons in favor of this differ from

person to person, but the result is the same: bottled water has become the most well-liked infusion in the U.S. Nestle optional that consumers feel a sense of safety in intense bottled water rather than tap water. Over half of the population surveys in 2001, water quality review have a concern about the quality of their drinking water.

49. Hrudey, S. Hrudey, E. and Pollard, S., (2006)[49] in their study entitled, "Risk Management for Assuring Safe Drinking Water", explains that safety does not mean the absence of any risk since to demand an unconditional standard would mean that no water would ever convene this standard and thus no water could ever be suspicious safe. While it is clear from the literature that consumers want water supplies that are 100% safe, what is less clear is what proportion of the population expect some uncertainty and thus accept less than 100% safety. It is not apparent what levels of risk are suitable to different types of consumers. In formal risk assessment risk is normally defined as the probability of the incidence of an unwanted event together with the consequences of that event. However, expert risk appraisal does not seem to communicate with lay assessments of risk.

50. Troy W. Hartley, (2006)[50] in his study on, "Public Perception and Participation in Water Reuse", explains that the Water Environment Research Foundation in the United States funded an interdisciplinary and integrative social science study on public perception and participation in water recycle within the US. It engaged a three phased research protocol consisting of 1) literature review and three inclusive case studies, including interpretive white papers from five different social science disciplines and public health and environmental engineering scientists, 2) a multi- stakeholder meeting to promote integrative, interdisciplinary analysis of the literature and case study conclusion, and 3) peer-review among 21 social science and water resource management experts. 5 themes were recognized as critical to building and maintain public self-confidence in water resource management and water reuse decision-making:

organization information for all stakeholders; maintaining individual motivation and representing organizational pledge; promoting communication and public dialog; ensure a fair and sound administrative process and outcome; and building and maintaining trust.

51. Hobson.W *et al*., (2007)[51] in their study on, "Bottled, Filtered, and Tap Water Use in Latino and Non- Latino Children", had evaluated water preferences on the basis of ethnicity and surveys were given to parents at a pediatric clinic in Salt Lake City, Utah. The population surveyed was mostly Hispanic (80%), and results showed that 30.1% of parents never drank tap water and 42.2% never gave tap water to their children. Results also showed that Non-Hispanic parents were more likely to both drink tap water themselves and to provide tap water to their children, while a higher percentage of Hispanics consideration that drinking tap water would make them unwell.

52. Kirsty McKissock and Richard Morgan, (2007)[52] made a study entitled, "Consumer Perceptions & Experiences of Drinking Water Quality in Scotland Secondary Research", reveals that the recent years have seen significant investment in drinking water quality and increased compliance with quality standards in Scotland. Estimate of the research suggest that consumer perception of quality are based mainly upon subjective skill of water clarity, taste and odour. However, consumers will also consider incidents such as contamination or environmental pollution in shaping their opinions about water quality. Earlier investigate suggest that consumers associate the exterior, taste and odour of drinking water as a direct indication of its purity. Therefore tap water which is cloudy or discolored is deemed to be unclean. Similarly tap water which has a recognizable odour or taste is deemed to contain chemicals and thus be 'impure'. as a result, some consumers believed that bottled water was of better quality than tap water because it was deemed to be clear, tasteless and odourless. Through the process of mapping water quality testing results and consumer complaints it was possible to identify

geographic clustering of complaints and water quality failures. This information was used in the development of a sampling approach for the subsequent stages of primary research, and also allowed analysis of customer perceptions by area with respect to chloramination of water supply, mean chlorine level and water quality failures.

53. Anette Veidung, (2007)[53] made a study entitled, "An Analysis of a Bottled Water's Design, Source and Brand and its Influence on Perceived Quality and Purchase Intention", outlines with the largest bottled water market, Europe, growing and competition increasing it becomes gradually more important for the actors to stand out to the consumer. In order to situate out and capture the consumers' awareness the bottle design becomes an important mean of separation. in addition, when confront with a bottle design the consumer will have a perception about its value and an intention of purchase. The consequences show that there is a positive relationship between the visual magnetism of a bottle and that of the apparent quality as well as planned purchase. The results also demonstrate that a global trend prevail in formative the good looks of the bottles. Hence, there is apparently no need for local adaptation of the water bottle's design. in addition, country of origin information showed no statistically significant strength to positively manipulate professed quality or purchase intention for a visually unappealing rated bottle. The impact of brand information illustrated that a brand with significant international exposure and recognition can influence the consumers' perception of quality and purchase intentions.

54. Carmena *et al.*, (2007)[54] had conducted a study on "Presence of Giardia cysts and Cryptosporidium oocysts in drinking water supplies in northern Spain". They point out that water treatments based on rapid filtration process and chlorination only are often unsatisfactory to provide safe drinking water, a situation that represents an important

public health problem for the precious population because of the hazard of waterborne outbreaks.

55. Sierra Club (2008)[55] made a study entitled, "Bottled Water: Learning the Facts and Taking Action", in their informational packet about bottled water, the Sierra Club mentions water shortages that have been reported close to bottling plants in Texas and the Great Lakes region: the extraction of large quantities of water from springs and aquifers for bottling has exhausted household wells in rural areas, damaged wetlands, and degraded lakes.

56. Max Liboiron, (2008)[56] in his study on, "A Qualitative Study of the Culture of Water Consumption at New York University", tells that while an abundance of information exists about the negative environmental impacts of bottled water, there are few, if any, bottom-up studies of why and how people choose and understand the water they drink, be it bottled, tap or filtered. Its findings challenge popular assumptions about bottled water consumption, including: availability is more influential than convenience for bottled water drinkers. In conclusion, the project finds that there are two types of initiative that can crash bottled water consumption; initiatives that change behavior and can be quantify, and those that effort to change the terms of the overall discussion of water consumption, perhaps legitimizing common practices but also potentially shifting or expanding the spectrum of how water is tacit.

57. Kotler (2008)[57] made a study entitled, "A Study on influencing factors of the consumer buying decision process of demographic (personal) and psychological factors", concluded that both demographic and psychological factors are associated to the buying behavior of bottled water to some area.

58. Andey, S. and Kelkar, P., (2009)[58] in their study titled, "Influence of Intermittent and Continuous Modes of Water Supply on Domestic Water Consumption", explain that the regularity and duration of supply interruption influence the whole amount of water consumed by consumers when the irregular supply is insufficient for allowing consumers to entirely convene their water demands. However, intermittent water supply has little impact on consumption levels where most water demands are met during supply periods.

59. Botto (2009)[59] made a study titled, "Tap Water vs. Bottled Water in a Footprint Incorporated Approach conduct a study using a "footprint incorporated approach", to compare the overall adverse impacts of six Italian bottled water company as well as tap water extraction. Italy is the third largest consumer of bottled water in the world and this study covers about 10% of all of the bottled water manufacturers in Italy. This attitude measures the environmental footprint, the water footprint and the carbon footprint. Both the bottled and tap water process were broken down into four steps: extraction, production and/ or transportation, bottling or storing, and distribution. in the direction of evaluate each of the footprints, transportation, materials and energy used were calculated. Subsequent to the calculations were completed for all six of the companies, an average was taken and compare to that of tap water. Tap water values were found to be approximately 300 times lower than the standard of the bottled water. In the calculation of the carbon footprint, other greenhouse gases besides carbon dioxide were also found. The advertised amount of water used in the production of bottled water was found to be only 1/10th of the actual amount used.

60. Larson, K., (2009)[60] in his study titled, "Social Acceptability of Water Resource Management: - A Conceptual Approach and Empirical Findings from Portland, Oregon", this thesis adopts a behavioral approach to the utilization of bottled water and seek to

offer a comprehensive examination of the links between behavior, attitudes and information. According to a study performed by Larson, environmental attitudes range from individualistic to collective values and bio-centric to anthropocentric orientations. In her words, with respect to management goals, attitudes should be evaluated in relation to associated values including bio-centric anthropocentric orientations and personal (individual), social (collective) interests. as a result of combine these two dimensions, attitudinal responses are likely to differ toward the subsequent types of management objectives: human-centered goals that satisfy private self-interests, human centered goals that serve societal benefits beyond selfish interests, bio-centric goals that entail personal interests and bio-centric goals that entail altruistic values".

61. Rodwan, J. (2009)[61] in his study titled, "Confronting Challenges: U.S. and International Bottled Water Developments and Statistics of 2008", reports that the taste of water is determined by its source and applicable minerals as well as the method of treatment. Magnesium and calcium are examples of two minerals which offer water a separate and often preferred taste. However, in great quantities, these minerals can have unenthusiastic effect. The majority of the bottled water is described as "pure" and "natural" and portray with mountains and rivers. However these descriptors and images provide no guaranteed indication of the geographic source of the water. In fact, the EPA states that a majority of bottled water is actually from a ground water source. The majority bottlers use ozone to disinfect their water. Although it is more luxurious than other behavior methods, it does not depart an undesirable taste. Disinfection methods for tap water take in chlorine, chloramine, ultra-violet light and ozone. Chlorine and chloramine are second-hand because it is both inexpensive and competent. Regrettably, the taste of chlorine is a common complaint concerning tap water taste, so that even

where tap water may be safely drinkable, many people have a preference bottled water, which they regard as superior in taste.

62. EftilaTanellari, (2009)[62] made a study on, "On Consumers' Attitudes and Willingness to Pay for Improved Drinking Water Quality and Infrastructure", explains that the objective of this study was to inspect the effects of information sources and risk perception on individuals' enthusiasm to pay for improved water quality and communications. Concern for water safety risk affect individuals' compliance to pay to reduce these risks. Experiential results confirmed the opportunity that as individuals' becomes more risk reluctant, their readiness to reduce the risk increases. Besides education, demographic uniqueness and family circumstances are not significant determinants of individual's willingness to pay for water quality improvements.

63. Dada, C. A., (2009)[63] made a study titled, "Full Length Research Paper towards a Successful Packaged Water Regulation in Nigeria", reveals that the importance of locally sourced, low-cost alternative drinking water schemes in causal to amplified sustainable access in upward nations cannot be over-emphasized. One of such initiatives in Nigeria, wherever public drinking water provide is endemic is packaged drinking water sell in sachet. Packaged water if improved upon has been recommended as substitute water provisions that could permit aid from local initiatives in the make towards achieving the water target of the Millennium Development Goals. This form of drinking water is trouble-free to get and the price is reasonably priced but people still worry about its cleanliness. Unbeaten the guideline of the packaged water industry residue a challenge to the national agency conventional to enforce compliance with international standards.

64. Lynn L. Curry, (2009)[64] made a study titled, "Consumer Attitudes toward Public Water Supply Quality: Dissatisfaction and Alternative Water Source". A survey of consumers' attitudes was conducted to determine their perception of drinking water quality. The study revealed that people who buy bottled water and home units are dissatisfied with the quality of the available drinking water supply and generally rate their water as poor. The most frequent explanations for dissatisfaction with the quality of drinking water may be placed in two categories: aesthetic reasons and health reasons. Visual concerns were above all with taste and water hardness, then with floating particles (turbidity) and odor and color. The home unit buyers were shown to be mainly concerned with aesthetic qualities such as taste and hardness, while the bottled water buyers more often expressed a concern with the potential health effects of the drinking water. Primary health concerns were creating to be with the sodium content of the drinking water and the occurrence of chemicals.

65. Noah D. Hall (2009)[65] has reported that throughout human history water has defined our sense of place. American water law reflects the associates between water and local people, communities and the environment. Alongside this back crash, global water markets have residential to sell and export this increasingly precious resource. Water markets are predictable in International trade law and take many forms, from tankers of freshwater trip the Mediterranean to bottles of spring water coming to America from remote pacific islands. While the level of water sales and exports is still moderately small, this rising market represents new challenge for organization of water supply. This expose observe the challenges of defensive freshwater resource in the era of global water markets by looking at the most grown-up and developed. Example-Bottled water, Bottled water in America dates back to majestic times, but over the past decade it has become a massive global industry. As bottled water has grown, so has the reaction against it. The

resulting lawsuits and legislation offer a quick look of the future of domestic water law in the global water market era. Bottled water fights supply imperative lessons for how the law should react to globalization of water use. By learning from these lessons, we can meet the challenge of global trade in water by developing effective legal protection for our freshwater resources.

66. Wlater J. Rogan and Michael T. Brady (2009)[66] drinking water for approximately one sixth of US households are obtained from private wells. These wells can become infected by pollutant chemicals or pathogenic organisms foremost to considerable illness. Although the US environmental protection agency and all states propose guidance for manufacture, maintenance, and testing of private wells, there is little guideline, and with few exceptions, well owners are responsible for their own wells. Children may also drink well water at child can or when travelling. Illness ensuing from children's eating of contaminated water can be severe. This information of reviews relevant aspects of groundwater and wells, which describes the widespread chemical and microbiologic contaminants that gives an algorithm with recommendation for estimation testing and remediation for wells as long as drinking water for children reviews the definitions and use of a variety of bottled waters; provides current estimates of costs for well testing, and provides federal national state and where proper tribal contacts for more information.

67. Thomas J. and Raissia (2011)[6] [7]*Pseudomonas aeruginosa* is a ubiquitous environmental bacterium. It can be improved often in high figures, in common food, especially vegetables. Moreover, it can be recovered in low numbers in drinking. A small percentage of clones of *P. aeruginosa* have the essential number of virulence factors to cause infection. However, *P. aeruginosa* will not reproduce on normal tissue but requires before damaged organs. Further, narrowing the risk to human health is that only certain

specific hosts are at risk, including patients with profound. Other than these very well-defined groups, the general population is refractory to infection with *P. aeruginosa*. Because of itubiquitous nature, it is not only practical to eliminate *P. aeruginosa* from our food and drinking water, but attempts to do so would produce disinfection by products more hazardous than the species itself. Moreover, because there is no readily available sensitive and specific means to defect identify *p. aeruginosa* available in the field any potential regulation governing its control would not have a defined laboratory that measure of outcome.

68. Patteric Ruwan. K (2011) [68] In this research project, we studied factors that presumably affect the incidence of diarrhea among young children in urban slums in developing countries, consumption of safe drinks, hygiene behavior, cleanliness of household surroundings and the quality of raw water. Beliefs concerning the cause of diarrhea were also related to health improving behavior, namely the application of the water treatment method SOD's (solar water disinfection) and hygiene behavior. We conduct a survey in a shanty town in Nairobi, Kenya. Field human resources interview 500 households. Analysis with regression models revealed that two out of the four postulated factors were important Children have a lower risk of contracting diarrhea when they consume high percentages of safe drinks and live in households with good hygiene. As regards beliefs, we found that biomedical knowledge of children's diarrhea as well as the perceived social norm for treating water was associated with the use of SOD's and good hygiene.

69. Dakeshan Parri. L (2011)[69] The influence of different storage conditions (temperature, illumination, brand of mineral water and storage time) on growth of mould spores was studied. *Alternaria alternata, Penicillium citrinum* and *Cladosporium Clasdosporioides* spores were inoculated in bottles of mineral and mineralized water,

packaged in polyethylene terephtalate (PET). The bottles were incubate under different storage circumstances. The strains had been isolated from bottled mineral water in a earlier study. Storage time was the limit that had the most important influence in mould growth. The spores grew into visible colonies after 5 months of incubation in bottles just filled, and in a month in bottles that had been stored for 5 month. This could be due to the relocation of compound from PET packaging material into mineral water. This compound could be used as nutrients (organic matter) for mould growth.

70. Marina Leigh (2011)[70] in their study on, "Examining Reasons for Bottled Water Consumption: A Case Study in Pensacola, Florida", explain that over consumption in developed economies undoubtedly puts a large strain on the surroundings, and many would dispute that the damage is irreparable. Modern uses and rates of consumption of freshwater resources are also deemed to be indefensible. A large contributor to the high demand for water is the shift in consumer preference from tap to bottled water. The reason of this thesis was to decide how consumers understand the difference between bottled and tap water, and how such understanding were linked to individual socioeconomic characteristics, properties of bottled water, knowledge of its environmental costs and advertising and marketing. Since the city of Pensacola in Florida was recently determined to have some of the worst tap water in the country, it presented an interesting case study for the discussion of bottled water consumption. Two separate neighborhoods, selected based on average income, were survey in Pensacola, and inhabitants were asking about their bottled water using up and preferences. Topics of inquiry included frequency of consumption, reasons for and against bottled water consumption, and opinions and knowledge surrounding bottled water. The majority of respondents of this study regularly drank bottled water despite of income. Convenience was the most popular reason cite for drinking bottled water, and taste also emerge as an

important goods. Respondents did not believe themselves to be influenced by publicity and marketing by bottled water companies. Concerns regarding tap water were related to the protection and taste of water supply. Participants were to some extent aware of the environmental implications of drinking bottled water, yet this knowledge did not keep them from drinking bottled water. This thesis thus shows that creation people aware of the environmental and economic costs of bottled water is not enough to retrieval tap water belief worthiness. Instead, the habits of consumerism which create it suitable to purchase bottled water seem to be occupied in the popularity of bottled water.

71. Gustaf Olsson (2011)[71] in his study on," Water and Energy Nexus", Water has always been mankind's most precious resource-there are no substitutes. The thrash about to control water resources has shaped human political and economic history. Population growth and economic growth are driving a progressively increasing demand for new spotless water supplies and it is well recognized that be short of access to clean water has major health implications. Many see the water security as the key environmental issue of the 21st century. Water and energy issues are inextricably linked. Energy is needed to extract water from underground aquifers, convey water through canals and pipes, deal with and treat waste water for reuse, and desalinate brackish and sea water to provide new fresh water sources. Water is essential for the energy production, for hydropower dams, for cooling of thermal power plants, and for fossil fuel production and processing. Water and energy are the decisive elements of sustainable economic development without access to both of them, economies cannot grow, jobs cannot be created, and poor people cannot move out of poverty. On a global basis, neither water nor energy is in short supply. What is in short supply is energy and water at a price that people can afford to buy. The stance towards water consumption may be the decisive ingredient. Furthermore, new approaches to financing, managing and maintaining systems must be developed.

72. Abdullah Yasar, (2011)[72] in his study on, "Women Perception of Water Quality and its Impacts on Health in Gangapur, Pakistan", is an attempt to investigate the quality of drinking water used by the people and their awareness towards water quality. Water samples were collected from hand pump, motor pump and tube well. Totally 160 households were surveyed to check their perception against drinking water quality. The results showed the values of bacteriological parameter fecal coli form were above WHO guidelines which made water unfit for drinking purposes. The community was oblivious of the quality of water they were drinking. Women with higher education had perception of smell ($F = 3.51$, $p<0.01$), taste ($F = 3.10$, $p<0.05$) and turbidity in water ($F = 5.34$, $p<0.01$). Incidence of water borne diseases especially in infants appeared to be common problem among the sampled households in the study region. Lack of proper water supply system, proper sanitation and drainage facility were the common and contributing to poor health of people.

73. Morton, L., and Mahler, R., (2011)[73] in their study on, "Bottled Water: United States Consumers and their Perceptions of Water Quality", have shown that gender and education affect environmental risk perceptions thus shaping choices regarding water consumption. In a national survey with over 5,000 respondents that asked about regional water quality, environmental attitudes, bottled water consumption and demographics, this study found that younger respondents and females were most likely to be the most frequent consumers of bottled water. They explained this in terms of younger people paying more attention to marketing and advertising and women being more aware of health risks. This study also found that environmental perceptions were not reflected in decisions to consume or refrain from bottled water. The extent to which these findings are place-specific or can be generalized to the wider U.S. population can thus be empirically examined through this thesis. Drawing on these understandings, this thesis

seeks to investigate how bottled water consumption is related to attitudes towards the environment and knowledge of environmental impacts.

74. Ayokunle, C. Dada, (2011)[74] made a study entitled, "Packaged Water Optimizing Local Processes For Sustainable Water Delivery in Developing Nations", With so much global attention and commitment towards making the Water and hygiene target of the Millennium Development Goals (MDGs) a actuality, available figures seem to speak on the contrary as they make known a large disparity between the expected and what currently obtains especially in developing countries. Since the studies have shown that the standard industrialized world representation for liberation of safe drinking water technology may not be reasonably priced in much of the developing world, packaged water is recommended as a low cost, readily available alternative water stipulation that could help bridge the gap. Despite the established roles that this drinking water source plays in developing nations, its importance is however significantly underestimated and the source considered unimproved going by 'international standards'. Rather than simply disqualifying water from this source, focus should be on identifying means of enhancement. The need for superseding global communities' and developmental organizations to learn from and construct on the local processes that already function in the developing world is also emphasized. Identifying packaged water case studies of some developing nations, the implication of a tenacious focus on imported policies, standards and regulatory approaches on drinking water access for residents of the developing world is also discussed.

75. Joanna Galvez, (2011)[75] made a study titled, "Small Water Enterprises: A Cross-sectional Study of Bottled Water Consumption in the Yucatan Peninsula", explains that each year there are millions of cases of diarrhea worldwide because of lack of access to safe water. Interventions that seek to increase safe access to water vary both in method

and effectiveness. Local small water enterprises (SWEs) can better respond to a community's need for safe water. Living Waters for the World (LWW) is a global non-profit that aids members of local communities to set up SWEs that purify and sell bottled water. There is a dearth of research on communities' views regarding safe water interventions like Living Waters for the World and small water enterprises in general. This thesis explores the difference between LWW consumers and non-consumers in the Yucatan Peninsula. 300 household surveys were conducted in two urban and three rural communities throughout the Yucatan Peninsula. In general, there were some attractive conclusion but due to the small sample it was difficult to perform further analyses. Further study is needed with a larger, randomized sample. Qualitative studies can investigate more in depth the reasons Living Waters for the World consumers prefer to drink their water. The findings from this research can be used to scale up similar interventions, and set up small water enterprises that fit with the community consumption practices. New Living Waters for the World sites, particularly those outside the Yucatan Peninsula should conduct baseline research to determine community attitudes and practices before installing new systems.

76. Xavier Dass (2012)[76] Poly Ethylene Terephthalate (PET) bottle are commonly used for storing mineral water. The relocation of carbonyl compounds from PET bottles into mineral water was observed. Carbonation of water, sunlight and high temperature improve the process of migration. Formaldehyde acetaldehyde and acetone were the most important carbonyls identified in series of bottled water samples. The concentration of carbonyls can change depending on the time of storage as well as storage condition. It was identified particularly high concentration of acetaldehyde in samples of mineral water soaked with CO_2 gas.

77. Simmon David M. Butter (2012)[77] in the wake of several major infections involving food and water, there is a growing concern for the safety and quality of drinking water. Thus, a number of companies and industries have come up with bottled/packaged drinking water for sale to a wide range of consumers particularly those in urban areas. The objectives of this study were to determine the extent of consumption, brand, choice, perceived reason for consumption, standard and average monthly expenditure on bottled/packaged water among Nairobi residents. The study was guided by Aaker's model of perceive quality.

78. Hussin Assraf (2012)[78] While the literature documents the Universal occurrence of heterotrophic plate count (HPC) bacteria in soils, foods, air, and all sources of water, there is lingering question as to whether this group of organisms may signal an increased health risk when elevated populations are present in drinking water. This manuscript reviews the related literature on HPC bacteria in drinking water, the lack of clinical evidence that prominent populations or specific genera within the HPC flora pose an increased health risk to any segment of the population, and the suitable uses of HPC data as a tool to monitor drinking water quality changes following healing. It finds no evidence to support health based system of HPC concentrations.

79. Michel Kozhak (2012)[79] age adjusted, sex and race specific 1969-1971 cancer incidence ratios for the 722 census tracts of the San Francisco-Oakland standard metropolitan statistical area was compared with measured chrysotile asbestos counts in tract drinking water. The water supplies serving the area have varied contact with naturally occurring serpentine, the't' test for multiple regression co-efficient and the't' test for correlation coefficients showed significant relationship between chrysalides asbestos content of tract drinking water and white male lung, white female gall bladder and pancreas and peritoneal cancers in both sexes of weaker significance were female

esophagus, pleura and kidneys as well as stomach cancers in both sexes. These relations appeared to be self-governing of income, education, asbestos occupation, marital status, country of origin and mobility.

Uniqueness of the Study (Research Gap)

A review of the past research studies and literature available relating to the study are presented in this chapter. The review facilitated the researcher to have a comprehensive knowledge on the subject taken for the study. The definitions and reviews of the concept helped the researcher as steering to perform the study in the correct direction.

The review of the past research studies and literature evidenced that most of them have focused on the phenomenon of consumer satisfaction and attitude towards Packaged Drinking water, but only a few studies have attempted to study the attitude to select the problem and prospects of packaged drinking water. There is substantial empirical evidence that the consumers have varied satisfaction and attitude towards packaged drinking water, but the findings are not clear and enough. It is clear from the above mentioned studies that there is no research on the Problems and prospects of Packaged Drinking water in Ariyalur District.

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Chapter III

Profile of Study Area and Packaged Drinking Water Consumers - An Overview

CHAPTER III

PROFILE OF STUDY AREA AND PACKAGED DRINKING WATER CONSUMERS - AN OVERVIEW

3.1 PROFILE OF ARIYALUR DISTRICT

In this part an attempt has been made to depict the present profile of Ariyalur District, it is located central Tamilnadu and is 265 Km. away from Chennai. The district has an area of 1949 sq.km, It is an inland district without any coastal line. Ariyalur has been functioning as a separate district since 23.11.2007 (GO.MS.NO. 683 Revenue RAI (1) department dated 19.11.2007. It is Surrended by Cuddalore and Thanjavur in east, Perambalur and Tiruchirappalli in west, Cuddalore in north and Thanjavur District in south.

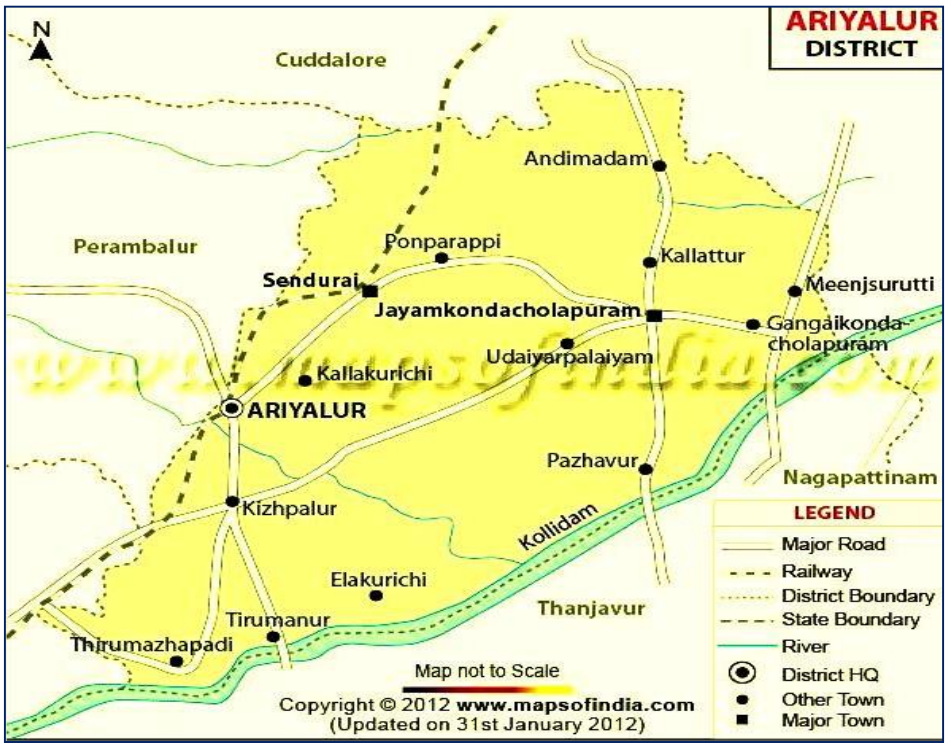


Fig 3.1 Ariyalur District Map

Source: www.profile of Ariyalur district.com; www.mapsofindia.com,

3.1.1 Ariyalur District Administrative Units

Ariyalur[1], Ariyalur District consist of two Revenue Divisions viz.. Ariyalur and Udayarpalayam, Four Taluk *viz.*, Ariyalur, Sendurai, Udayarpalayam and Andimadam Taluk is formed as per G.O.(Ms) No. 167 Revenue (RAI(1)) Department dated: 08-05-2017) comprising 195 Revenue Villages. The District has six blocks viz. Ariyalur, Thirumanur, Sendurai, Jayankondam. Andimadam, and T.Palur comprising 201 Village Panchayats. Two Municipalities namely Ariyalur and Jayankondam and two Town Panchayats namely Udayarpalayam and Varadharajanpettai .

Ariyalur is a municipality and headquarters of Ariyalur District in the State of Tamil Nadu. It is rich in limestone resources and to big business units of Birla (Grasim Industries), India Cements, Dalmia Cements, and Madras Cements Tamil Nadu government's TANCEM (Tamil Nadu Cements) plant is in Ariyalur and is the first factory to establish the cement production in Ariyalur and later nearly as far as six more factories have emerged in and around Ariyalur giving employment to the people. The Ariyalur Town Panchayat was functioning as Second Grade Town Panchayat from 21.12.1943, then First Grade Town Panchayat from 01.01.1955 and the Selection grade Town Panchayat form 01.04.1966. The extent of Town Panchayat is 7.62 sq kilometer and strength of population according to the census of the 2001 year is 27822.

In this Town Panchayat there are 18 wards by division, and for which one President and 18 members have been elected by the public. Amongst the members, there are 7 women members. As per the Government Order No. 150, dated: 01.10.2004, this Town Panchayat was announced as Special Grade Town Panchayat and then by G.O.No.372, dated 16.12.2009 the Municipal 91 Administration and Department of Supply of Drinking water, this Town Panchayat has functioning as third-grade Municipality from 20.12.2004 and as second-grade Municipality from 08.08.2010.

Table 3.1 Taluk wise population

S.No	Taluk	Male	Female	Total
1.	Ariyalur	126931	128818	255749
2.	Udayarpalayam	194974	189826	384800
3.	Sendurai	55414	56518	111932
4.	Andimadam	25914	23919	49833
Total		**403213**	**399081**	**802314**

3.2 HISTORY OF ARIYALUR DISTRICT

In 1741, the Marathas invaded Tiruchirappalli and declared Chanda Saheb as captive. Chanda Saheb succeeded in securing freedom in 1748 and soon got involved in a famous war for the Nawabs place in the Carnatic against Anwardeen, the Nawab of Arcot and his son Mohammed Ali. Mohammed Ali annexed the two palayam of Ariyalur and Udayarpalayam located with troops were in the Ariyalur district on the grounds of default in the payment of Tributes and failure to assist him in quelling the rebellion of Yusuf Khan. In November 1764, Mohammed Ali represented the issue to Madras Council and obtained military assistance on 3 January 1765. The forces led by Umdat-Ul-Umara and Donald Campbell entered Ariyalur and captured it. The young Poligar together with his followers thereupon fled to Udayarpalayam. On the 19th January, the army marched towards Udayarpalayam. The Poligar's troops were defeated and the playam were occupied. The two poligars lost their town and took refuge at Tharangampadi, then a Danish settlement. The annexation of the palayam gave the Navab un-intruded possession of all his territories extending Arcot to Tiruchirappalli.

There was a power struggle between Hyder Ali and later Tipu Sultan with the British. After the death of Tipu Sultan, the English took the civil and military administration of the Carnatic in 1801, Thus Tiruchirappalli came into the hands of the

English and the District was formed in 1801. In 1995 Tiruchirappalli was trifurcated resulting in the formation of the Perambalur and Karur Perambalur district was divided into Perambalur and Ariyalur Districts in the year 2001 and merged with Perambalur in the year 2002. Now the district is bifurcated from Perambalur and now functioning from 23.11.2007.

3.3 HISTORICAL OVERVIEW OF PACKAGED DRINKING WATER

The origin of packaged drinking water can be traced back to the earliest civilization. Precised date of mineral water discovery is unknown for the man, but it is linked to the year 400 BC with an expansion of the Roman imperial. Many famous springs of England, Germany, Belgium and Italy became an important miracle from medical aspect. The Romans investigated favourable, the therapeutic characteristics of water and developed together with a restitution of the empery. Science and medicine touted the natural mineral water beneficial effect for bathing, showering and for drinking purposes. For example, during 1760, people came to contexeville in France at the contrex spring for a cure to eliminate kidney stone.

In 1800, waters from mineral spring near the Albany - Newyork, bottled for commercial use and in 1820, water of Saratoga spring were bottled and sold. In 1845, water was bottled from Poland spring for sale in three-gallon dishes. In South America, in Brazil, Sao Lourenco water was bottled in 1890. The first commercial bottling, noted in France, was in 1873. The legal permission for bottling of natural mineral waters saint Gamier of Badoit spring was guaranteed in 1837. Perrier followed in 1863 and other European countries a few years later. In the early days, consumption of bottled natural mineral waters was the privileges of the haunted bourgeoisie, captain of industry, politician, Royalty and so on. It was bottled in glass or stoneware, with a porcelain or cork stoppers.

Universal bottle, which we use today, probably have origin from glass bottles, were made in Syria in the period of 100 years BC. The glass was made of the mixture of sand and lime and this mixture slowly hated on the temperature of 2500^0F for their whole essence. At the time, the conditions were very difficult. The heat and dust were always present and the production was limited on 1500 bottles per day, because the crew of three blowers and three assistants were engaged in this making.

The removal of package brand, such as glass bottle, which existed for almost 100 years, happened with a launch of a new type of package, which appeared in Europe. It was invented in France for the necessities of packaging of special range. This material made of PET is composed of two layers of plastic with a nylon layer in the middle. The new more resistant material upgrades bottling and became easier for the consumer consumption.

3.4 PACKAGED DRINKING - AN INDIAN PROSPECTIVE

The main consumers of bottled water are urban consumers. This is because of the poor standards of municipal infrastructure providing water in cities and towns resulting in unreliable water supply and poor quality of water, Young consumers tend to opt for carbonates or fruit/vegetable juice when they outside the home, but people in their, 30s and above tend to favor bottled water when they are outside the home.

Packaged drinking water is sold in a variety of packages ranging from 300ml bottles, 500ml bottles, to one-litre bottles and 20 to 50 liter bulk water packs. In terms of cost the packaged drinking water business in India can be divided broadly into three segments, premium natural mineral water, natural mineral water and packaged drinking water. Parle was the first major Indian company to enter into the packaged drinking water market in the country, when it introduce Biller in India 25 years ago and bent “Bisleri”

as the synonym of limestone water. But, now that logo is getting decline with the entry of main global giant like coco cola, Pepsi, lie and clear charm of state troupe like rise Everest, Manikchand, Kingfisher.

Almost all the major international and national brands water bottles penetrated in the Indian markets are available at right from the malls to railway stations to bus station to multiplexes to grocery stores and even at panwala's shop. It has penetrated to so deeply in to the market and now it has become very common to consume packaged drinking water, whereas before few years, it was considered as the rich people choice and fashion to consume packaged drinking water. However, there is a no need to be disappointed looking at the global packaged drinking water industry because our industry data show that the Indian packaged drinking water industry is the one of the most booming sectors in India. If we look at the future of water in India, it is very gloomy. Unless the water management practices are changed and if not taken any drastic steps towards this direction, we will face severe water crisis within next two decades. We will not be left with enough money supply to build new infrastructure and we will also not be able to satisfy the increasing demand for water due to the population explosion in India.

Also world Bank draft report, 'India's water Economy: Bracing for Turbulent Future', says that by 2020, India's demand for water will exceed all sources of supply unless the country's management practices are changed, and soon.

3.5 DIFFERENT TYPES OF WATER

Drinking - water may be important as a source of skeletal fluoride. It has been suggested that there is a minimum level of fluoride in water, below which net loss of fluoride from the skeleton may occur. In many countries public water is being fluoridated in order to reduce tooth decay and prevent cavities. Tooth decay (dental caries) is one of

the most prevalent chronic diseases worldwide. In countries where the public water is not enriched with fluoride, consumption of fluoride in bottled water is preferred by some people, as it is a source for this mineral. On the other hand, in countries where public water is enriched with fluoride, moral, ethical, and safety controversies regarding water fluoridation brought people to prefer bottled water with no added fluoride over enriched tap water.

3.5.1 Artesian Well Water

Bottled water from a well that taps a confined aquifer (a water-bearing underground layer of rocks or sand) in which the water level stands at some height above the top of the aquifer is identified as Artesian well water.

3.5.2 Municipal Water

Municipal water from surface water can sometimes be good and health. Surface water sources are lakes, streams, rivers, and even springs. The spring is a location where ground water comes to the surface. Sometime municipal water which is obtained from the surface has more drinkable water, then municipal water which is from ground water. In very hot weather ground water tends to dry up. However, experts recommend that municipal water which is from surface, ground and rainwater is good and healthy.

3.5.3 Sparkling Water

Sparkling water is water that contains that same amount of carbon dioxide that is had at the source, though it can be removed and then replaced. Soda water, seltzer water, and tonic water are not considered bottled water they may contain sugar and calories and are regulated separately as soft drinks.

3.5.4 Spring Water

Well water and spring water are similar in the sense that they are both produced from natural aquifer located around rock beds and soil. Spring water is however continuous naturally to the surface. Water which comes from below and has no natural tributaries is considered to be spring water. It's also a very good water to drink during and after exercise or throughout the day. Bottles may use some natural processes such as reverse osmosis to improve water quality but spring water must be naturally rich in trace minerals. Some municipalities also use spring as a source for their tap waters, but they are processed with chemicals and more advanced filtration systems. Spring water is perhaps the best overall water for health benefits and rehydration. It has a good taste and is fairly inexpensive at grocery stores.

3.5.5 Distilled Water

Distillation is a process by which water is boiled until vapor is produced. This vapor is collected and cooled until it returns to a liquid state. Because minerals are too heavy to be carried by the vapor, the resulting water is completely free of additives. A desalination plant is a perfect example of distillation. Salt water it boiled, the vapor is cooled and collected, and the salt and minerals are left behind. However, distilled water is also very unpalatable in its natural state. Desalination plant must also add some minerals in order to make the water usable for general consumers. Distilled water is perfect for applications where minerals and contaminants would cause problems. Distilled water is mostly recommended for use in machinery and cleaning products. It is not particular good to drink distilled water, because it has a tendency to pull minerals out of the bloodstream and other areas. Distilled water is perhaps the cleanest version of bottled water available, but it is not good for human consumption.

3.5.6 Mineral Water

Mineral water can come from a natural well or spring, but must contain a specified amount of trace minerals. These minerals, such as calcium and magnesium are essentials for good health. There is no difference between sparkling and non-sparkling minerals waters except for the concentration of carbon dioxide. Both varieties contain a higher concentration of minerals than either spring or well water. Because the water must meet specific requirements, the number of water sources that quality is very limited. Most of the popular varieties of the mineral water are bottled in Europe and imported to the United States. This means that bottled mineral water is going to be more expensive than other types, but the benefits of the added minerals re measurable. Mineral water may be more of a treat than daily refreshment, but it does offer some health benefits. Some may find the taste to be harsher than traditional water, but many more palatable.

3.5.7 Purified Water

Purified water denotes a process by which contaminants and\or minerals have been removed from any water source. It could be tap water which has been forced through a charcoal filter or water treated with ultraviolet light at the grocery store. The designation purified can be applied rather broadly, so a consumer should not be swayed by its use on a label alone. Distilled water is by definition purified, but it is not good water for drinking. Spring water and well waters may have been filtered or deionized or ozonized, which would make them pure by a looser definition.

3.5.8 Ultra Violet Treatment

Ultraviolet equipment provides an economical means of water disinfection for beverage and bottled water manufacturing facilities. There are three primary types of application for ultraviolet system.

The first application provides disinfection from the feed water source to the storage tank. The water can be re-circulated rom the storage tank back through the UV equipment in order to maintain bacteria reduction.

3.6 PACKAGED DRINKING WATER AND CONSUMER BEHAVIOUR

Packaged drinking water has become an indispensable part of human life. It is needless to mention that water, a compound of Hydrogen and Oxygen is a precious natural gift, which is very essential for the survival of the humankind including the animals. The water used for potable purposes should be free from undesirable impurities. The water available from untreated sources such as well, boreholes and spring is generally not hygienic and safe for drinking. Thus, it is desirable and necessary to purify the water and supply under hygienic condition for human drinking purposes. As the name implies, the mineral water is the purified water fortified with requisite amount of minerals such as Barium, Iron, and Manganese and so on, which the human body can accept easily. It is either obtained from natural resources like spring and drilled wells or it is fortified artificially by blending and treating with minerals salts. The mineral water has to be manufactured under hygienic condition and packed in the properly washed and cleaned bottles in sterilized condition. Consumer behavior in a subset of human behavior to understand the psychology and behavior of the consumer. It can help the marketer be responsive to their needs and desires. It is the study of how individual customer reflect in the market place. The customer decisions are not allow cultural social personal and psychological that substantially influence the purchase of the consumer. The most part and marketer cannot control such factors but they must take them into account.

3.7 FACTORS INFLUENCEING ON CONSUMER BEHAVIOUR

3.7.1. Cultural Factors

Social factors and reasons are irresistible where understanding the mindset behind consumption.

A. Cultural influence

Culture represent an overall social heritage a distinctive form of environmental adaptation by a whole society of people it includes a set of learned beliefs values attitudes morals customs habits and forms of behavior that are shared by society and transmitted from generation to generation within that society.

B. Sub culture

Each culture contains smaller sub culture or groups of people with which shared value system based on common experiences and situation sub cultures include nationalities religions racial groups and geographic regions many sub cultures make up important market segments and marketers often design products and marketing programmer tailored to their needs.

C. Social class

Almost every society has come form of social class social classes are society's relatively permanent and ordered divisions whose members share similar values interests and behaviors social class is not determined by a single factor such as income but is measured as a combination of occupation income education wealth and other variables in some social systems members of different classes are reared for certain roles and cannot change their social positions marketers are interested in social class because people within a given social class end to exhibit similar buying behaviors. Social class is not determined by a single factor such as income but is measured as a combination of occupation, income, education, wealth and other variables. In some social systems

members of different classes are reared for certain roles and cannot change their social positions. Marketers are interested in social class bicker people within a given social class tend to exhibit it similar buying behavior.

3.7.2 Psychologica Factors

Four major psychological factors namely motivation, perception, learning, and beliefs and attitudes influences a person's buying choice.

A. Motivation

Motivation is the drive to act, to more to obtain a goal or an objective. It is affected by perceptions, attitudes, personality, traits and by outside influences such as culture and marketing efforts.

Motivation in buyer is concerned with the reason that impel buyer to take certain actions. It suggests that the reasons behind consumer actions are cognitive, but they involve a dynamic interaction between the person and his other social environment. A person has many needs at any given time; Some needs being biological arising out of states of tension such as hunger, thirst or recognition, esteem or belonging. A need becomes a motive when it is aroused to a sufficient level of intercity. A motive is a need that is sufficiently pressing to direct the person seek satisfaction.

B. Perception

Perception is the meaning we given on the basis of our past experience, It is the sensing of stimuli external to the individual organism the act or process of comprehending the world in which the individual exists.

Perception has been defined by a social psychologists as the complex process by which people select, organized and interpret sensory stimulation into a meaningful and coherent picture of the world. Perception determines what is seen and felt by the

consumers when numerous stimuli are directed to them everyday by message broadcast by the marketers though their promotional devices,

It is a selective process. It is the interpretation of information to select a response to a stimulus.

C. Learning

Learning is the central topic in the study of human behavior. It is defined as all changes in behavior that result from previous experience and behavior in similar situation. It refers to a change in the behavior, which occurs because of practices,

Learning is the product of reasoning, thinking information - processing and of course, perception. Buying behavior is critically affected by the learning experience of the buyers.

The practical significance of the learning theory of marketers is that they can build demand for a product by associating it with drives, using motivating cues and providing positive reinforcement.

D. Attitude

Attitude is a state of mind or feeling. It induces a predisposition to behave in some way. Attitudes are very important in explaining buyer behavior.

Social psychologists point out that attitudes govern our response to a stimulus and lead us to certain behavior. Usually to action an attitude is not natural. To have an attitude means to be involved emotionally and read for action. Attitudes are always learned thought our experiences.

Changing present attitudes, particularly negative attitudes towards a certain brand, is the most difficult job for marketing management. Attitudes eventually influence

buying decision which people make and therefore. Marketers are deeply interested in the buyers attitudes, belief, values and goals.

Consumers resist a change in their attitudes. But a change in the attitude leads to change in buying behavior. Promotion devices are essential to change in buying attitudes and modify buyer behavior.

3.9 SATISFACTION OF CERTAIN HUMAN NEEDS

Human beings have certain basic needs. A person buys thing which will fulfill his wants. Buyer behavior is directly based on his needs. According to Maslow there are five set of human needs which is a person seeks to satisfy in order of priority.

Maslow's hierarchy of needs is as follows:

1. Basic psychological needs

These relating to human body *i.e.*, hunger, thirst, sleep, shelter and sex

2. Safety needs

For social security and family stability.

3. Belonging and love needs

For affection sense of belonging to a group etc.,

4. Esteem needs

Desires for self esteem reputation and status.

5. Self-fulfillment needs

To achieve the maximum of one's capabilities.

A person decides to buy only if he perceives that a particular thing will satisfy his want. Buying behavior is influenced by the image the consumer have on different products - what brand to buy, what design, what quantity, from whom to buy, at what price to buy *etc*. Purchasing activity is undertaken after making a decision on these aspects.

3.9 PERSONAL FACTORS

A buyer's decisions are influenced but personal characteristics - notably the buyer's age and life cycle stage. Occupation, economic circumstance, life style and personality and personality and self-concept.

1. Age and life cycle stage

People change the goods and services they buy over their life time in the easily stage. During childhood baby food is consumed, at the youth stage intake of food improves and nourishing in the years people resort to special diets people's relative taste and aptitude for clothes, furniture powders and their reactions are age oriented.

2. Occupation

A person's consumption pattern is also influenced by his or her occupation. Marketers try to identity the occupational groups that have an average interest in their products needs by a given occupational group.

3. Economic consideration

'Man' in economics, is considered to be rational. He is supposed to buy an article from the cheapest source. He compares the price by visiting several shops and then decides to buy from a particular dealer.

The buyer is also guided by other non-economic factors such as products differentiation, situational advantage etc.

a. Prosperity to consumer

The amount that a person is prepared to spend on consumption depends on the level of his income, his prosperity to save etc.

b. Income expectation - consumer's Optimism

The income that a person expects in the future also influences his decision to buy especially in the case of luxury items.

c. Consumer credit

Availability of consumer credit (example hire purchase system, various installment plants etc.,) enables a customer to buy more goods or costly durable goods, which they cannot afford otherwise.

d. Life style

People coming from the same sub-culture. Social classes and even occupation may lead quite different life style portrays the whole person interacting with his or her environment. Life style attempts to profile a whole person's pattern of acting in the world,

e. Personality and self-concept

By personality, mean distinguishing psychological characteristics that lead to relatively consistent and enduring response to environment.

Each person has a distinct personality that will influence his over buying preference; Personality is usually described in terms of such traits as self-confidence, dominance, autonomy, deference, sociality, defensiveness and adaptability.

3.9.1 Income

Income is a vital factor that affects buying preference of consumers to some extent. If the per capita income is high, the demand of consumer goods will also be high. If it is less, the demand will also be less.

3.9.2 Sex

It is a factor influencing buying preferences because buying habits of men differ very much from women. The marketing manager must consider the set ratio and accordingly produce the various types of goods for men and women.

3.9.3 Social Factors

Consumer behavior is also influenced by social factors such as the consumers small groups, family and social roles and status. These social factors can strongly affect consumers responses and hence companies must take them into account when designing their marketing strategies.

3.9.4 Reference Groups

Many small groups, which have a direct influence, influence a person's behavior and the groups to which a person belongs are called membership groups. Some are primary groups with whom there is regular but informal interaction such as family, friends, neighbors and co-workers. Some are secondly groups, which are more formal and have less interaction. They include organization such as religious groups. Professional associations and trade unions.

Reference groups are those that serve as direct or indirect point of comparison or reference in the forming of a person's attitude or behavior.

The importance of group influence varies across products and brands, But it is to be strongest for conspicuous. A product can be conspicuous, for it may be noticeable because the buyer is one of the few people who own it or a brand can be conspicuous it is consumed in public when it can be seen by others.

3.9.5 Family

Most consumers belong to a family group the family can exert considerable influence in shaping the pattern of consumption and indicating the decision making roles personal values attitudes and buying habits have been shaped by family influences you can notice the brands used by a new housewife in her kitchen are similar to those favored by her mother.

3.9.6 Roles and Status

A person belongs to many groups' family, clubs and organization. The person's position in each group can be defined in terms of both role and status.

A role consists of activities people are expected to perform according to the persons around them.

Therefore a person's choice is the result of the complex interplay of cultural, social, personal and psychological factors. Though many of these factors cannot be influenced by the marketer, they are useful in identifying interested buyers and shaping products and appeals to better serve their needs.

Apart from the above factors, advertising is also an important factor. It plays a vital role in influencing the consumer's choice of a particular product. In order to choose among various products, consumers a need suggestions and information about what is available. What might suit his or her personal preferences and what could be new and

interesting experiences. Such suggestions are given to the consumer's thought advertising. Advertising is an effective medium of communication between producers and consumers. It helps in building up primary demand, for the product consumers become aware if the product mainly through the advertisements often various media.

3.9.7 Buyer

- "Buyer means by person who buy any goods or avails services for personal use for consideration".
- The "Buyer" is the one who buys the goods and services produced. As such, buyer plays a vital role in the economic system of a nation.
- But a person who obtained such goods for commercial purpose is not a consumer. It includes the factors of goods services, buyer dispute, deficiency of goods or services differ from manufacture, trader unfair trade practice, state commission, national commission, *etc*.

3.9.8 Buyer Goods

Consumer goods are alternatively called final goods. Essentially, buyer goods are purchased by average buyer, and will be consumed or used right way example food, electronics, automobile, *etc*.

3.9.9 Role and Status

Each person possesses different roles and status is the society depending upon the groups, clubs, family, organization etc. For example a woman is working as a finance manager. Now she is playing two roles, one of finance manager and other of mother. Therefore her buying decisions will by her role and status.

3.9.10 Buyer Product

Buyer product is purchased to satisfy an individual personal wants. Sometimes it can be classified as either a business or buyer product depending upon its intended use. Examples are Fruits, Meats, Vegetables, Kitchen appliances, *etc*.

The study of buyer help firms and organization improve their textiles strategies by understanding issues such as how.

- The psychology of how buyers think, feel, and select between different alternatives (*e.g*., Brands, Product, and Quality).
- The psychology of how the buyers are influenced by his or her environment (*e.g*., Culture, Family and Media).
- How buyers motivation and decision strategies differ between products and that difference in their level of interest entail for the buying?
- How markets can adapt and improve their textiles strategies to more effectively reach the buyer.

How we are concerned with buyers, "buyer behavior is all psychological, social and behavior of potential buyer, as they become aware of evaluated, purchased, buyer and tell other about the product and services".

Textiles is to identify a buyer, to satisfy the buyer and to keep the buyer. Never less marketers must study their target buyer want perception, preference and their buying behavior. Such study will provide clues for developing new products features, price channels and other marketing price elements.

3.10 IMPORTANCE OF BUYERS PERCEPTION

- ❖ Buyer is responsible factor for sales of any product or services. So, when a new product is launched in the market, understanding buyer's buying behavior becomes very essential.
- ❖ In today's world of rapidly changing technologies, buyer preferences are also characterized by fast changes. To survive in the sales promotions. Sales promotions targeted at the buyer sales.

3.11 FACTORS INFLUENCE ON BUYERS PERCEPTION

This buyer decision process does not occur in a vacuum on the country. Several individual and social factors strongly influence the decision process.

3.11.1 Individual Factors

Personal factors can also affect the buyer behavior. Some of the important personal factors that influence the buying behavior are: Lifestyle economic situation, occupation, age personality and self- concept.

A. Perception

Selecting organizing and interpreting information in a way to produce a meaningful experience of the world is called perception. There are the different perceptual processes which are selective attention, selective distortion and selective retention.

B. Motivation

The level motivation also affects is the buying of buyers. Every person has different needs such as physiological needs *etc*. the nature of the needs is that, some of them pressing while are least pressing. Therefore a need become a move when it is more pressing to direct the person to seek satisfaction.

C. Beliefs and Attitudes

Buyers possess specific belief and attitude towards various products. Since beliefs and attitudes make up brand image and affect buyer buying. The father of the nation Mahatma Gandhi said a "buyer is the most important visitor in our premises. He is not dependent MI us, we are dependent on him. He is not an interruption to our work; he is the purpose of it. We are doing as a favors by giving us an opportunity to do so."

3.12 BUYING DECISION PROCESS

Buying decision refers to feeling, thoughts, emotions and instincts that stimulate buyers, a desire to purchase and buy a product finally. That decision making consists of the following participants.

- ❖ Initiator: Initiator is a person who first suggests or thinks of the idea of buying particular products.
- ❖ Influencer: Influencer is one who carries some influence on making the final buying decision.
- ❖ Decider: Decider is a person who ultimately determines any or whole of the buying decision.
- ❖ Buying: Buyer is the person who actually makes the purchase.
- ❖ Users: Users are the person who actually uses or buyer the product or services.

A General model of the buyer decision process consists of the following steps:

1. Problem recognition
2. Identification of alternatives

3. Evaluation of alternatives
4. Purchase decision
5. Post-Purchase Behavior
6. Brand Loyalty

1. Problem Recognition

The buying starts with need recognition. At this stage, the buyer recognizes a problem or need (*e.g*. I am hungry, we need a new sofa, I have headache) or responds to textiles stimulus (*e.g*. you pass star bucks and are attracted by the aroma of coffee and chocolate muffins).

An "aroused" buyer then needs to decide how much information (if any) is required. If need is strong and there is strong and there is a product or service that meets the need close to hand, them a purchase decision is likely to be made there and them. If not, then process of information search begins.

2. Identification of Alternatives

Buyer in the information search stage of the buying process looks for solutions to their problem or needs, the buyer must know the brand of the product, which gives maximum satisfaction and person has to search out for relevant information of the product, brands, location, *etc*... There are many source friends, neighbors, *etc*.

3. Evaluation of Alternatives

Buyer evaluates their purchase option based on product attributes, such as technical specification, though subjective factors, such as brands, and through personal experience, such as sampling or testing products. Buyer and company reviews can influence a buyer's product evaluation.

4. Purchase Decision

By considering the likes and dislike of alternative one is about to take a decision as to buy, one will consider with preference to product, type, quality, *etc*. A seller can facilitate such buyer to buyer to understand the product through advertisement.

5. Post-Purchase Behaviour

After making a purchase, a buyer mentally ranks his/her purchase satisfaction. A brand preference naturally sales to market. A satisfied buyer is a silent advertisement. If the purchase brand fails to give the expected satisfaction to the buyer is affects negatively. A satisfying experience of a buyer tends to strengthen the preference.

6. Brand Loyalty

Brand loyalty is an important and interesting area of buyer behavior. Majority of buyer exhibit brand size and loyalty in respect of certain brand to which they are continuously accustomed *etc*.

3.12.1 Economic Status

Buyer economic situation has great influence on his buying behavior. If the income and saving of a buyer is high then he will purchase more expensive products. On the other hand, a person with low income and savings will purchase in expensive products.

A. Personality

Personality changes from person to person, time and place to place. Therefore it can greatly influence the buying behavior of buyer. Actually, personality is not what one what wears; rather it is the totality of behavior of a man in different circumstances. It has different characteristics such as Dominance, aggressiveness, self-confidence *etc*. This can be useful to determine the buyer behavior for particular product or service.

B. Occupation

The occupation of a person has significant on his buying behavior. For example textiles manager impact of an organization will try to purchase business suits, where as a low level worker in the same organization will purchase rigged work clothes.

C. Lifestyle

Lifestyle of buyer is another import affecting the buyer buying behavior. Lifestyle refers to the way a person lives in a society and is expressed by the thinks in his/her surroundings. It is determined by buyer interest, options, activities *etc*., and shapes his whole pattern of acting and interacting in the world

3.13 TOP TEN PACKAGED DRINKING WATER BRAND IN TAMILNADU

1. Bisleri
2. Kinley
3. Aquafina
4. Kingfisher
5. Bailley
6. Quea
7. Himalaya Water
8. Manichand Qxyrich
9. Tata water plus
10. Railneer

Source: www.marketingmind.in/top packaged mineral - drinking water in india

3.14 LIST OF WATER PLANTS IN ARIYALUR

1. Jayasuriya Aqua Industries – Ameenabath
2. Kavin Aqua – T.Palur

3. Arasi Aqua Packaged drinking water – Manakudi

4. Sathiya packaged drinking water – Keela Rayapuram

5. KVM Beverage and Aqua firm – Jayankondam

Source: www. scribd. com/mineral water – plant Ariyalur /document 335065466

3.15 LIST OF PACKAGED DRINKING WATER AVAILABLE IN ARIYALUR DISTRICT

1. NT
2. Meera
3. Aqua Plus
4. Kavin
5. Bislime
6. Kinley
7. Bisleri
8. Bisvind
9. Railneer
10. Amma water
11. Kingfisher
12. Aquafina

Let's look upon some of the top ten Packaged mineral drinking water brands of the year 2020.

1. Bisleri

We all are very well aware of this brand!. No doubt Parle's Bisleri is the most popular brand in India and is now a household name. It has a huge customer base that has been built over years of trust that the company has created with the quality of water

served to the nation. It holds 40% market share in the Indian packaged drinking water industry. The Parle Group purchased Bisleri from the Italian entrepreneur Signor Felice Bisleri in 1969.

2. Kinley

Yet another trusted name nationwide! Kinley is owned by the Coca Cola Company. The water goes through lots of purity tests before making it to the market. They use the latest technology of operation, that is, Reverse Osmosis.

3. Aquafina

Well, it arrived a bit late in the market but is strong enough to make the presence felt. It was launched on the market in 2000. Owned by Pepsico company it is one of the most popular and bestselling brands nationwide. They have almost 19 plants all over the country that aims to supply pure water to the population.

4. Kingfisher

Owned by United Breweries Ltd, they now boast of millions of customer base. Its premium packaged drinking water is prepared by removing undesirable dissolved solids, biological contaminants, suspended solids and gases from water.

5. Bailley

Owned by the Giant FMCG Parle Agro Ltd, it was launched in 1993. It's a product of Parle Agro Ltd. and is known among users for purity and quality.

6. QUA

It is owned by the Rahul Narang Group. The company believes in using 100% organic products and no chemicals. The water is known to have been sourced from Himalayan Foothills. It is packaged using French bottling expertise.

7. Himalayan Water

As the brand tag goes ‘Live Pure’, the company totally believes in the fact. A joint venture between Tata Global Beverages and PepsiCo India, this packaged water boasts of using totally natural water without any chemical processing. This is the only packaged water Indian brand that has accreditations from renowned institutes across the world including Institute De Fresenius, US FDA and the Health Ministries of Japan & France.

8. Manikchand Oxyrich

The ISO 22000:2005 certified packaged water is the only brand in India to have 200% Oxygen in it. It is also certified by the World Standard for Food Safety Management System. Purity and quality speak for the brand.

9. TATA WATER PLUS

This is the first nutrient water of India that was introduced by the Nourish Co along with a joint project among Pepsi Co and Tata Global Beverages Limited. As the brand tagline goes ‘Goodness of Copper’ the brown label to showcases the goodness of using copper vessels to drink water that was used in ancient India. Thus the water is infused with copper that strengthens the immune system and refreshes one.

10. Rail Neer

This is owned by Indian Railway and is now a brand that quenches thirsts of millions travelling by train. Indian Railways installed by train. Indian Railways installed 4 Neer bottling plants that produce 6.14 lakhs of packaged bottles per day. The Indian Railways plans to produce 16 crore water bottles with a turnover of Rs.120 crore.

Chapter IV

Analysis on Problem, Prospects and Perception of Packaged Drinking Water with Reference to Ariyalur District

CHAPTER - IV

ANALYSIS ON CONSUMERS PROBLEM, PROSPECTS AND PERCEPTION OF PACKAGED DRINKING WATER WITH REFERENCE TO ARIYALUR DISTRICT

Table 4.1 Gender of the Respondents

The table 4.1 depicts the gender wise classification of the respondents selected for the study. The gender is classified as male and female.

S. No.	Gender	No of the respondents	Percentage
1.	Male	486	61
2.	Female	314	39
Total		**800**	**100**

Source: Primary data

The table shows that out of 800 respondents of this study 486 (61 percent) are male respondents and the rest 314 (39 percent) are female. It is inferred that the more than half (61%) of the respondents selected for the review are male.

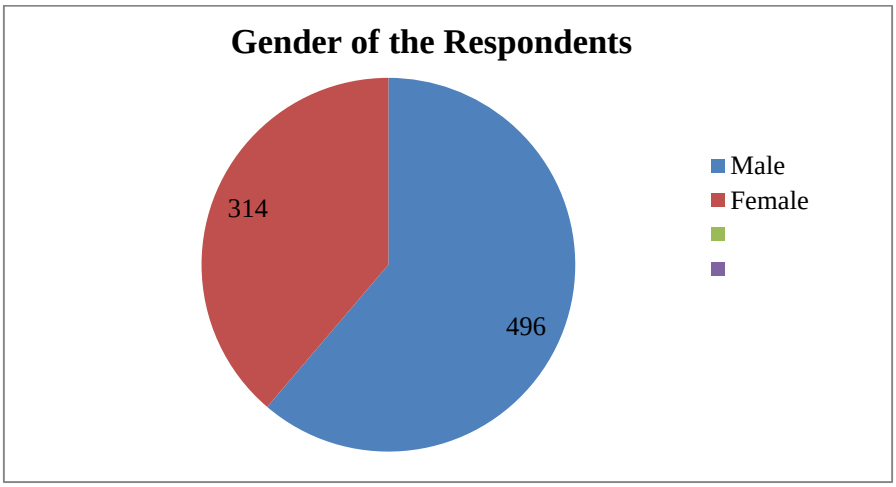


Fig 4.1 Gender of the Respondents

Table 4.2 Age of the Respondents

The above table indicates that the age of the respondents selected for the study.

S. No.	Age	No of the Respondents	Percentages
1.	Below 20 years	176	22
2.	20-40 years	304	38
3.	41-60 years	236	30
4.	Above 60 years	84	10
	Total	**800**	**100**

Source; Primary data

Table 4.2 show the out of 800 respondents, 304 respondents (38.0 percent) belong to 20-40 years, 236 respondents (30.0 percent) are 41-60 years, 176 respondents (22.0 percent) falls within the age below 20 years and 84 respondents are over 60 years. Hence it is concluded that a considerable percentage (38.0 percent) of the packaged drinking water consumer is in the age group of 21-40 years.

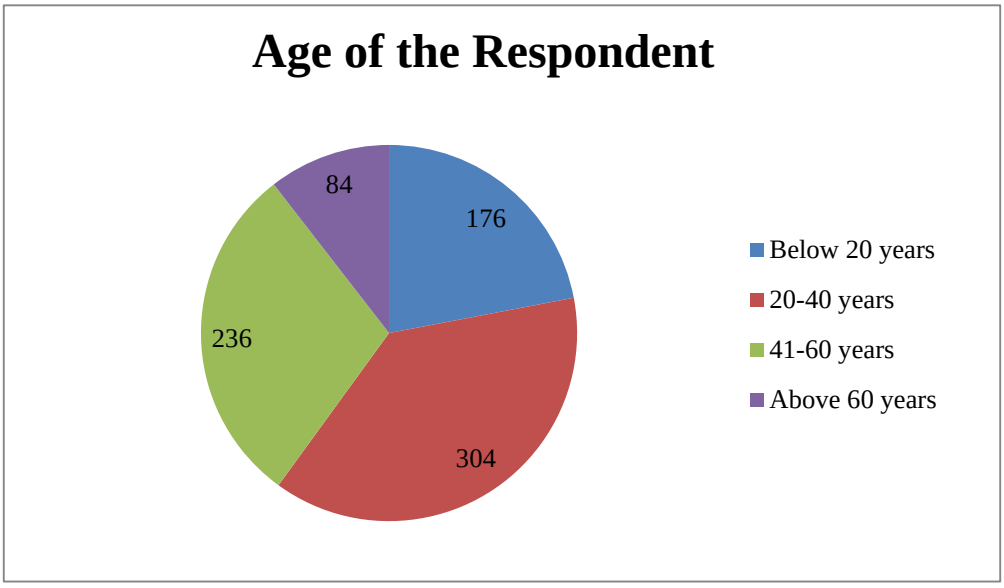


Fig 4.2 Age of the Respondent

Table 4.3 Marital Status of the Respondents

Table 4.3 exhibits that marital status of respondents selected for the study. The marital status is classified into married and unmarried.

S. No.	Marital Status	No of the respondents	Percentage
1.	Married	478	60
2.	Unmarried	322	40
Total		**800**	**100**

Source: Primary data

Table 4.3 reveals that out of total 800 respondents, 478 (60.0 percent) of the respondents are married and 322 (40.0 percent) of the respondents are unmarried. It is inferred that majority of the respondents (60.0 percent) falls under married group.

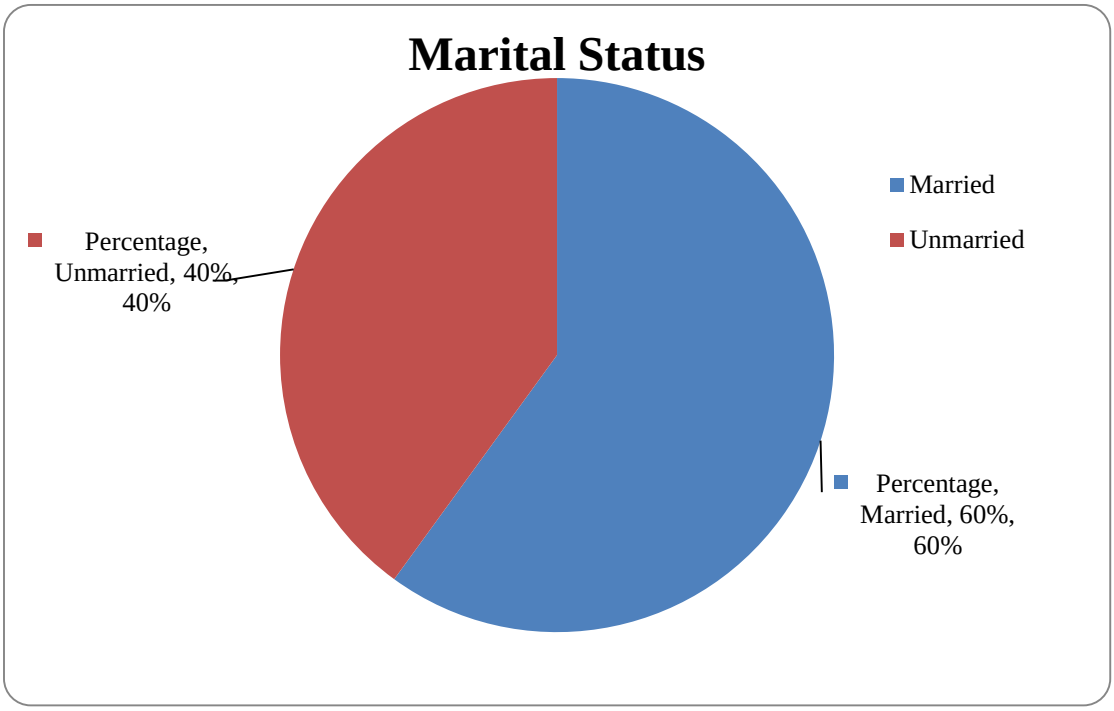


Fig 4.3 Marital Status

Table 4.4 Educational Qualification of the Respondents

Table 4.4 describes educational qualification of the respondents.

The educational qualification is classified as under.

S. No.	Educational qualification	No of the respondents	Percentage
1.	Illiterate	158	20
2.	SSLC/HSC	232	29
3.	UG & above	286	36
4.	Professionals	124	15
Total		**800**	**100**

Source: Primary data

It is evident from Table 4.4 that 286 (36.0 percent) of the respondents belong to UG and above, 232 (29.0 percent) of the respondents are HSC level and 158 (20.0 percent) of the respondents are illiterate and 124 (15.0 percent) are professionals. It maybe concluded that majority of the respondents (36.0 percent) are UG and above.

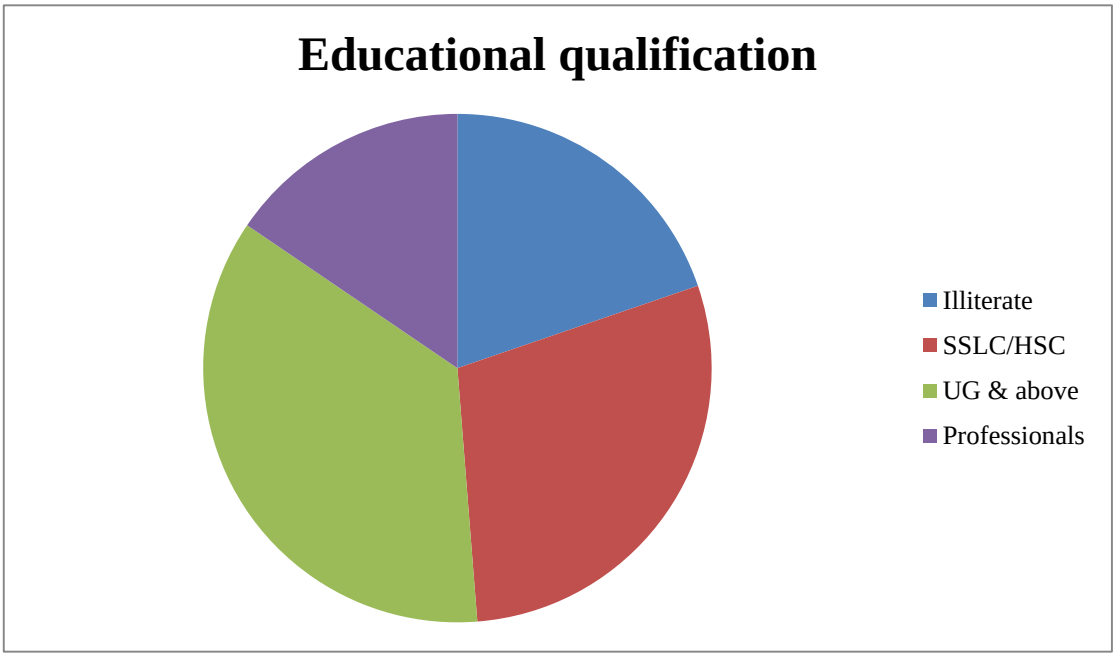


Fig 4.4 Educational qualification

Table 4.5 Occupational status of the Respondents

Table 4.5 show that the occupational status of the respondents selected for this study. The occupational status is classified as employees, professionals, business people and others.

S. No.	Social Stats	No of the respondents	Percentage
1.	Employees	392	49
2.	Professionals	146	18
3.	Business people	198	25
4.	Others	64	08
	Total	**800**	**100**

Source: Primary data

Table 4.5 indicates the occupational status of consumers of the package drinking water consumption in Ariyalur district. It is clear that out of 800 respondents 392 (49.0 percent) of the respondents are employees, 198 respondents (25.0 percent) are Business people, 146 (18.0 percent) of the respondents are professionals and 8 percent belong to others (*i.e* Agriculture, Housewife). Hence it may concluded that a majority of the respondents 392 (49.0 percent) are employees.

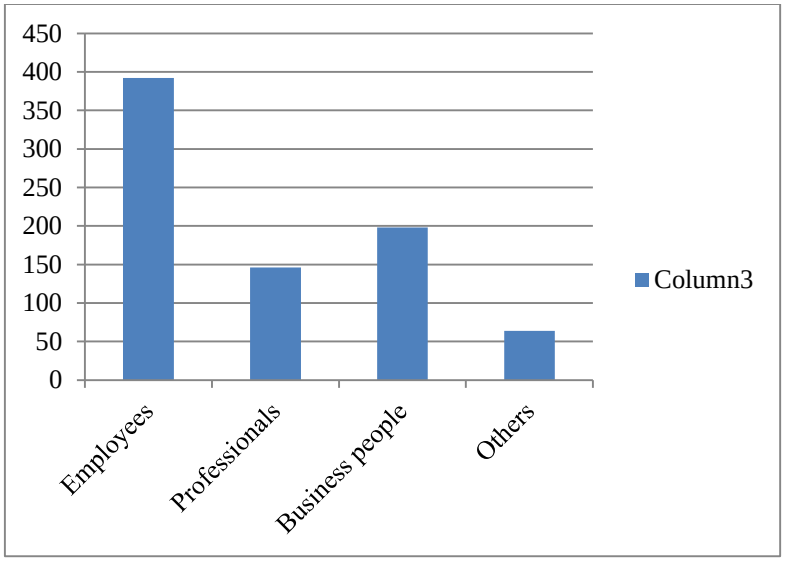


Fig 4.5 Social Stats

Table 4.6 Monthly Income of the Respondents

Table 4.6 exhibits the monthly income of the respondents. The income is classified below 20,000, Rs 20,000 – 30,000, 30,001-40,000, above 40,000.

S. No.	Monthly income (in Rs.)	No. of Respondents	Percentage
1.	Below 20000	94	12
2.	20000-30000	118	15
3.	30001-40000	326	41
4.	Above 40000	262	32
Total		**800**	**100**

Source: Primary data

It is revealed from the table 4.6 out of 800 respondents 326 (41.0 percent) respondents are the income group between 30,001 – 40,000, 262 (32.0 percent) are the income group comes under above 40,000, 118 (15.0 percent) of the respondents are the income group between 20,000 – 30,000, 94 (12.0 percent) respondents are the income group of below 20,000. It is concluded that around 41.0 percent of the consumer fall in the income level of 30,001 – 40,000.

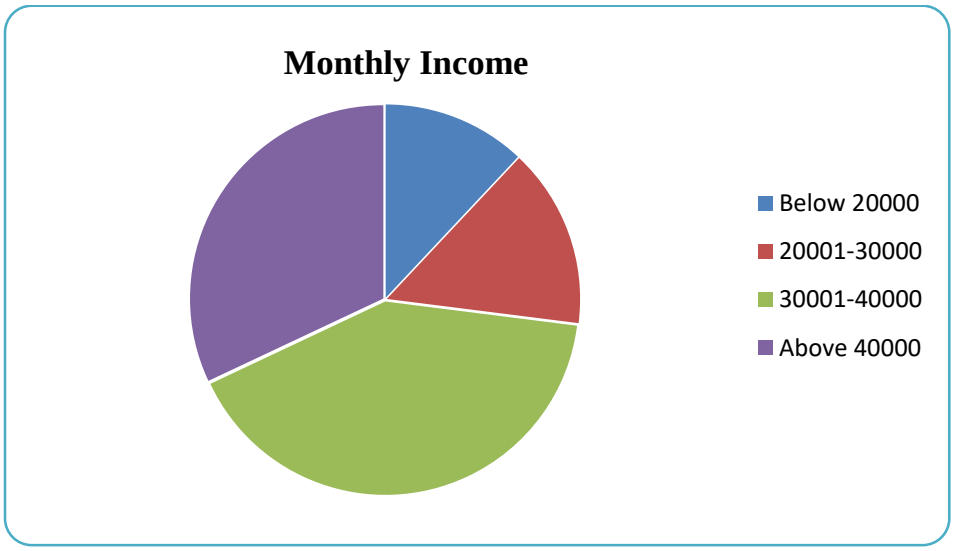


Fig 4.6 Monthly Income

Table 4.7 Family type of Respondents

Table 4.7 describes the family type respondents selected for the studies. The family is classified as Joint family and Nuclear family.

S. No.	Family Type	No. of Rupees	Percentage
1.	Joint Family	520	65
2.	Nuclear Family	280	35
Total		**800**	**100**

Source: Primary data

The above table 4.7 shows that out of the total 800 respondents, 520 (65.0 percent) of the respondents joint family and 280 (35.0 percent) of the respondents are Nuclear family. It is concluded that the majority of the sample (65.0 percent) respondents belong to joint family.

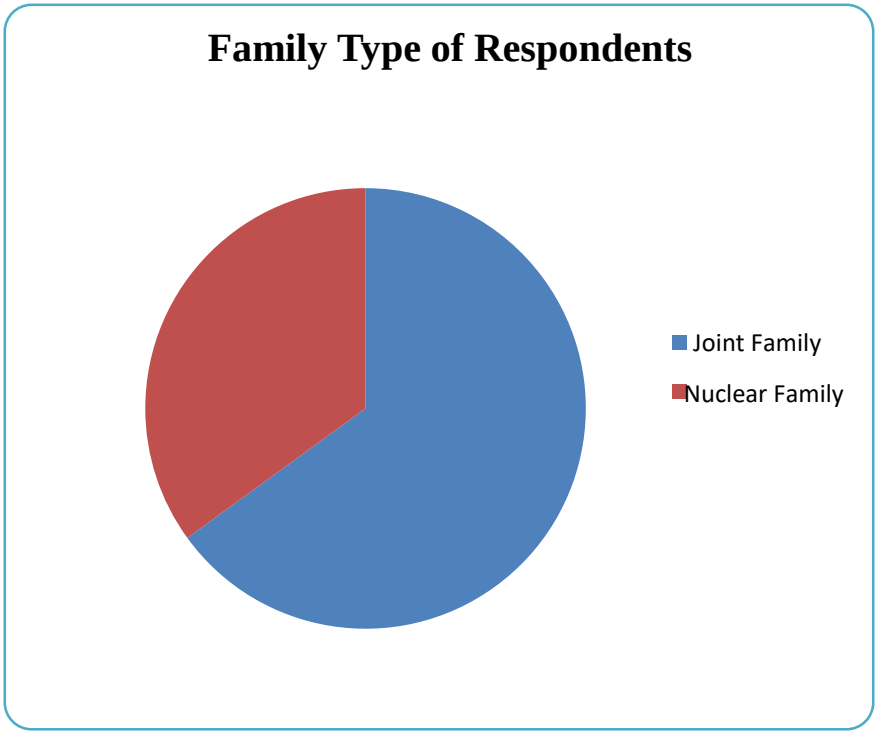


Fig. 4.7 Family Type of Respondents

Table 4.8 Size of Family

The table 4.8 indicates the classification of the family according to size.

S. No.	Size of Family	No. of Respondents	Percentage
1.	Up to 2 members	48	06
2.	3 to 4 members	226	28
3.	5 to 6 members	394	49
4.	Above 6 members	132	17
Total		**800**	**100**

Source: Primary data

It is evident from table 4.8, out of the total 800 respondents 394 (49.0 percent) of the respondents belong to 5-6 members of the family, 226 (28.0 percent) are 3-4 members, 132 (17.0 percent) are above 6 members and 48 (6.0 percent) are upto 2 members. It is concluded that the maximum 394 (49.0 percent) of the respondents are above 5-6 members.

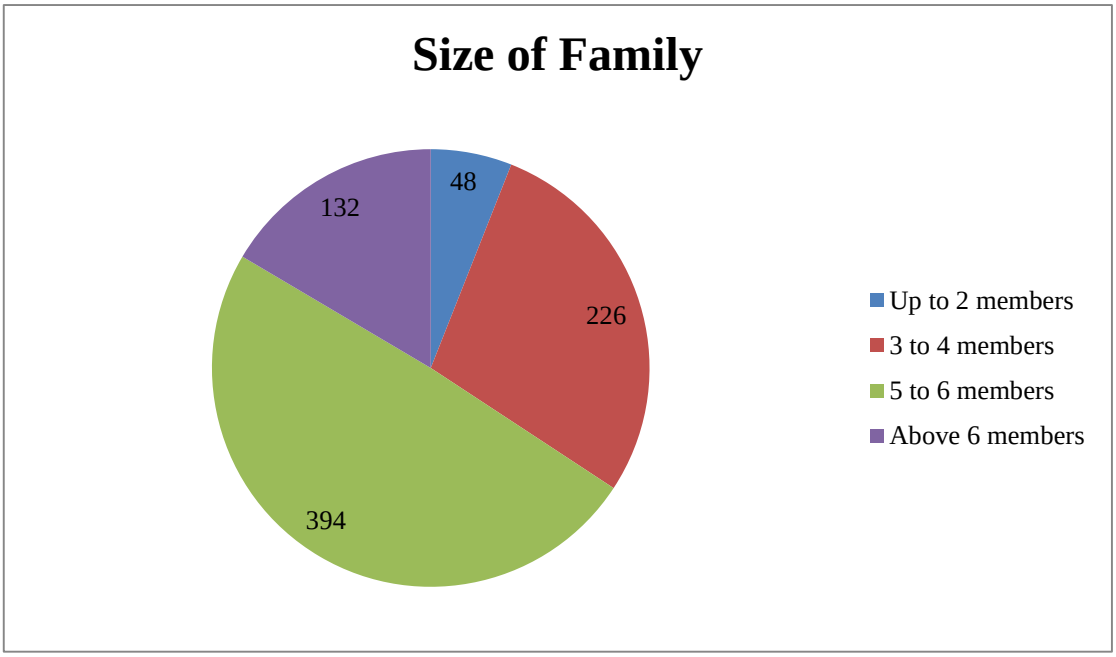


Fig 4.8 Size of Family

II AWARNESS ABOUT THE PACKAGED DRINKING WATER

Table 4.2.1 How long do you aware of Packaged Drinking Water

The below table 4.2.1 reveals the awareness of the packaged drinking water. The size is classified in to below 2 years, 2-4 years, 5-6 years and above 6 years.

S. No.	Awareness	No. of Respondents	Percentage
1.	Below 2 years	45	06
2.	2 to 4 years	186	23
3.	5 to 6 years	396	50
4.	Above 6 years	173	21
Total		**800**	**100**

Source: Primary data

The above table shows that the Awareness of packaged drinking water, out of 800 respondents 396 (50.0 percent) of the respondents are aware for 5-6 years, 186 respondents (23.0 percent) are aware of 2-4 years, 173 (21.0 percent) of the respondents are aware above 6 years and 45 (6.0 percent) of the respondents below 2 years.

The majority of respondents came under the group of the 5 to 6 Years

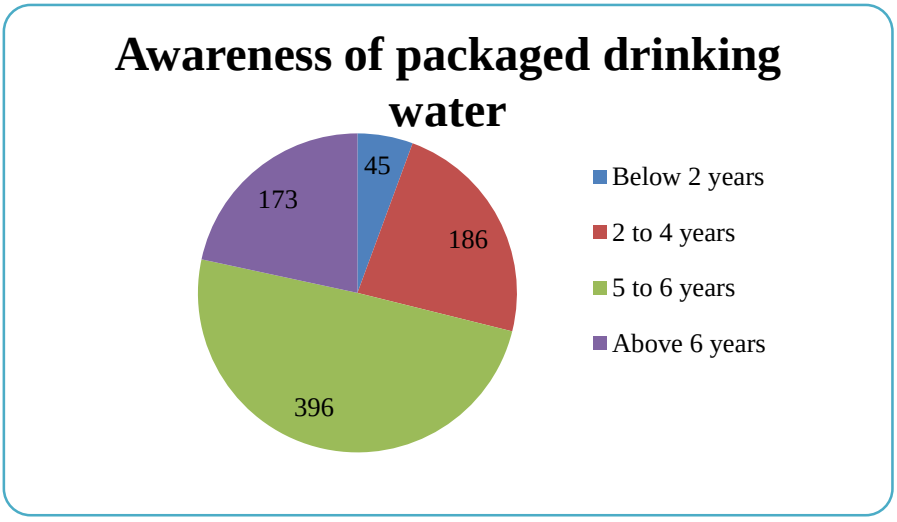


Fig 4.2.1 Awareness of packaged drinking water

Table 4.2.2 Sources of knowledge about the packaged drinking water

Table 4.2.2 describes the sources of knowledge about the packaged drinking water. Sources are classified as friends and relatives, Advertisement, Shop keeper and Sales man.

S. No.	Sources of knowledge	No of respondents	Percentage
1.	Friends& Relatives	326	41
2.	Advertisement	232	29
3.	Shop Keeper	137	17
4.	Sales Man	105	13
Total		**800**	**100**

Source: Primary data

The above table show that out of 800 respondents, 326 (41.0 percent) of the respondents got to know from friends and relatives, 232 (29.0 percent) respondents are from Advertisement, 137 respondents from Shopkeeper and 105 (13.0 percent) respondents from Salesman. The majority of the respondents comes under friends and relatives.

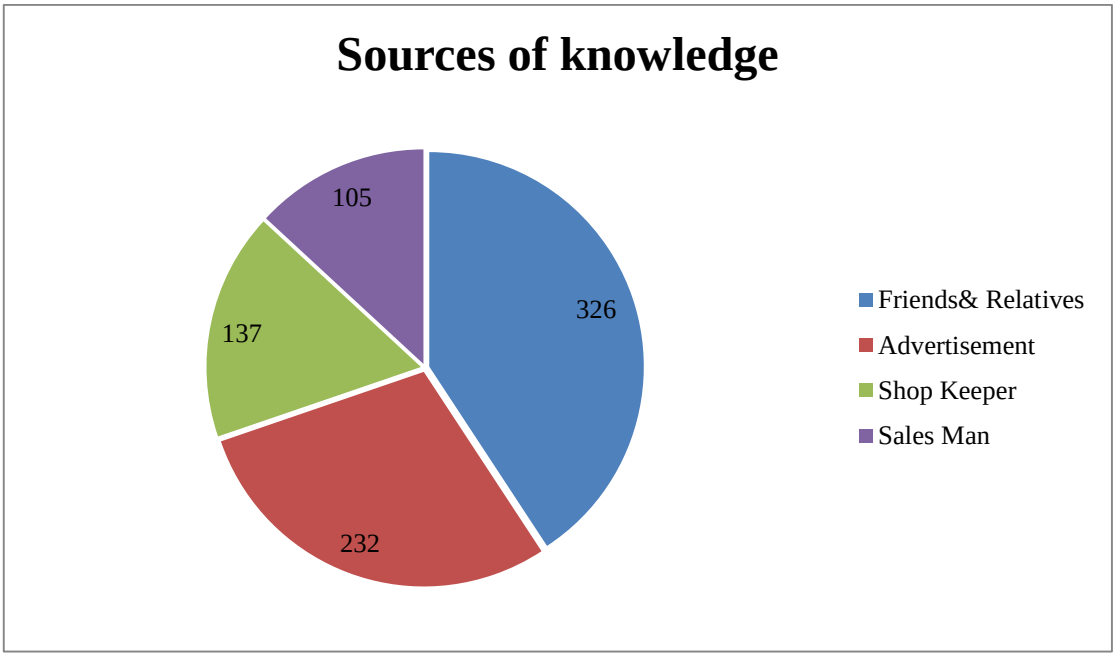


Fig.4.2.2 Sources of knowledge

4.2.3 Reason for consuming the Packaged Drinking Water

Table 4.2.3.1 Health factor for consuming the packaged drinking water

Table 4.2.3.1 describes the health factors of packaged drinking water. The health factors are classified as less salt content, dust free purified water, tasty and mineral content, doctor's advice, free from germs and preventing dehydration.

S.No.	Motivating factor (Health)	Ranking of Motivational factors						
		1	**2**	**3**	**4**	**5**	**6**	**Total**
1	Less salt content	262 (32.8)	302 (37.8)	40 (5.0)	42 (5.3)	76 (9.5)	78 (9.8)	**800 (100%)**
2	Dust free purified water	204 (25.5)	232 (29.0)	221 (27.6)	25 (3.1)	49 (6.1)	65 (8.6)	**800 (100%)**
3	Tasty and mineral content	164 (20.5)	37 (4.6)	299 (37.4)	125 (15.6)	140 (17.5)	35 (4.4)	**800 (100%)**
4	Doctor's advice	69 (8.6)	35 (4.4)	78 (9.8)	32 (4.0)	223 (27.9)	363 (45.4)	**800 (100%)**
5	Free from germs	59 (7.3)	93 (11.6)	115 (14.4)	130 (16.3)	243 (30.4)	160 (20.0)	**800 (100%)**
6	Preventing dehydration	42 (5.3)	79 (9.9)	48 (6.6)	445 (55.6)	91 (11.9)	95 (11.9)	**800 (100%)**
Total		**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	

Source: Primary data

Notes: Figures in brackets indicate the percentages to total sample.

Figures without brackets indicate the number of respondents unless otherwise specifically mentioned.

It is found that from table 4.2.3.1 that among total Health factor respondent, 32.8 percent, 25.5 percent and 20.5 percent of the respondent respectively have given top performance to the factors less salt content, Dust free purified water, Tasty and mineral content respectively. 37.8 percent, 29.0 percent and 11.6 percent of the respondents have given second place to the factors of "less salt content, Dust free purified water, free from germs" respectively. 37.4 percent, 27.6 percent and 14.4 percent of the total respondents

have given third place in the factors of “tasty and mineral content, dust free purified water, free from germs” respectively .55.6 percent, 16.3 percent and 15.6 percent of the respondents gave 4th rank in the factors of “Preventing Dehydration, free from germs and tasty and mineral content” respectively 30.4 percent, 27.9 percent and 17.5 percent of the respondents have stated 5th position in the “free from germs, doctors advice and tasty and mineral content” respectively. And finally the 6th rank is given by 45.4 percent, 20.0 percent and 11.9 percent of the respondents in the factors of “doctors advice free from germs and preventing dehydration “respectively. It is concluded that a maximum of 32.8 percent of the respondents have given high priority to the Less salt content as health factor of the packaged drinking water**.**

Table 4.2.3.2 Availability factor for consuming the packaged drinking water

Table 4.2.3.2 describes the availability factor for consuming the packaged drinking water. The availability factors are classified as Available in all place, Change the suppliers as possible, Unavailability of hygienic water, Available at different quantities, Available at door step (door delivery), Different taste are available.

S.No.	Motivating factor (Availability)	Ranking of Motivational factors						
		1	**2**	**3**	**4**	**5**	**6**	**Total**
1	Available in all place	277 (34.6)	312 (39.0)	49 (6.1)	65 (8.1)	64 (8.0)	33 (4.1)	**800 (100%)**
2	Change the suppliers as possible	96 (12.0)	48 (6.0)	391 (48.9)	113 (14.1)	103 (12.9)	49 (6.1)	**800 (100%)**
3	Unavailability of hygienic water	66 (8.3)	166 (20.8)	31 (3.9)	184 (23.0)	240 (30.0)	113 (14.1)	**800 (100%)**
4	Available at different quantities	279 (34.9)	80 (10.0)	199 (24.9)	65 (8.11)	128 (16.0)	49 (6.1)	**800 (100%)**
5	Available at door step(door delivery)	50 (6.3)	49 (6.1)	81 (10.1)	80 (10.0)	311 (38.9)	428 (53.5)	**800 (100%)**
6	Different taste are available	32 (4.0)	145 (18.1)	48 (6.0)	311 (38.9)	136 (17.0)	128 (16.0)	**800 (100%)**
Total		**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	

Source: Primary data

Notes: Figures in brackets indicate the percentages to total sample. Figures without brackets indicate the number of respondents unless otherwise specifically mentioned.

It is evident from table 4.2.3.2 that among total availability factor respondents 34.9 percent, 34.6 percent and 12.0 percent of the respondents respectively have given top performance to the factors "Available at different quantities, Available in all place and Change the suppliers as possible" respectively. 39.0 percent, 20.8 percent and 18.1 percent of the respondent have given second position to the factors of "Available in all place, Unavailability of hygienic water and Different taste are available"

respectively.48.9 percent, 24.9 percent and 10.1 percent of the respondents gave third rank in the factors of "Change the suppliers as possible, Available at different quantities and Available at door step (door delivery)" respectively. 38.9 percent, 23.0 percent and 14.1 percent of the respondents have given fourth position in the factors of "Different taste are available, Unavailability of hygienic water and Change the suppliers as possible" respectively 30.0 percent, 17.0 percent and 16.0 percent of the respondents gave 5^{th} rank in the factors of "Unavailability of hygienic water, Different taste are available and Available at different quantities" respectively. 53.5 percent, 16.0 percent and 14.1 percent of the respondents have given last position to "Available at door step (door delivery), Different taste are available and Unavailability of hygienic water" respectively. It is concluded that a maximum of 34.9 percent of the respondents have given high priority to the available at different quantities as the availability factor of the packaged drinking water.

Table 4.2.3.3 Price factor for consuming the packaged drinking water

Table 4.2.3.3 describes the price factor for consuming the packaged drinking water. The price factors are classified as Affordable price, Discount for bulky purchase, Fit for family budget, Low deposit and Available in all prices.

S.No.	Motivating factor (Price)	Ranking of Motivational factors						
		1	**2**	**3**	**4**	**5**	**6**	**Total**
1	Affordable price	60 (7.5)	529 (66.1)	75 (9.4)	100 (12.5)	24 (3.0)	12 (1.5)	**800 (100%)**
2	Discount for bulky purchase	(200) (25.0)	156 (19.5)	373 (46.6)	47 (5.9)	20 (2.5)	04 (0.5)	**800 (100%)**
3	Fit for family budget	417 (52.1)	32 (4.0)	212 (26.5)	61 (7.6)	32 (4.0)	46 (5.8)	**800 (100%)**
4	Delay payment is accepted	59 (7.4)	20 (2.5)	84 (10.5)	97 (12.1)	164 (20.5)	376 (47.0)	**800 (100%)**
5	Low deposit	32 (4.0)	47 (5.9)	04).5)	191 (23.9)	441 (55.1)		**800 (100%)**
6	Available in all prices	32 (4.0)	16 (2.0)	52 (6.5)	304 (38.0)	119 (11.9)		**800 (100%)**
Total		**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	

Source: Primary data

Notes: Figures in brackets indicate the percentages to total sample.

Figures without brackets indicate the number of respondents unless otherwise specifically mentioned.

It is found from table 4.2.3.3 that among total price factor respondents 52.1 percent, 25.0 percent and 7.5 percent of the respondents respectively have given top performance to the factors "Fit for family budget, Discount for bulky purchase and Affordable price" respectively. 66.1 percent, 19.5 percent and 5.9 percent of the respondents have given second position in the factors of "Affordable price, Discount for bulky purchase and Low deposit" respectively. 46.4 percent, 26.5 percent and 10.5

percent of the respondents gave third rank to the factors of "Discount for bulky purchase, Fit for family budget and Delay payment is accepted" respectively .38.0 percent, 23.9 percent and 12.5 percent of the respondents have given fourth position in the factors of "Available in all prices, Low deposit and Delay payment is accepted" respectively. 55.1 percent, 20.5 percent and 11.9 percent of the respondents gave 5^{th} rank to the factors of "Low deposit, Delay payment is accepted and Available in all prices" respectively. 47.0 percent, 34.6 percent and 10.6 percent of the respondents have given last position in the "Delay payment is accepted, Available in all prices and Low deposit" respectively. It is concluded that a maximum of 52.1 percent of the respondents have given high priority to the available at fit for family budget as the price factor of the packaged drinking water.

Table 4.2.3.4 Packaging factors for consuming the packaged drinking water

Table 4.2.3.4 describes the packaging factors for consuming the packaged drinking water. The packaging factors are classified as hygienically packaged, Easy to use, Different Uniformity in container, Seal tight packing, Transparency in container and ISI Mark is provided.

S. No	Motivating factor (Packaging)	Ranking of Motivational factors						
		1	**2**	**3**	**4**	**5**	**6**	**Total**
1	Hygienically packaged	46 (5.8)	192 (24.0)	65 (8.1)	128 (16.0)	96 (12.0)	273 (34.1)	800 100
2	Easy to use	300 (37.5)	48 (6.0)	48 (6.0)	48 (6.0)	336 (42.0)	20 (2.5)	800 100
3	Different Uniformity in container	15 (1.9)	31 (3.9)	79 (9.9)	267 (33.4)	95 (11.9)	313 (39.1)	800 100
4	Seal tighten packing	329 (41.1)	158 (19.8)	112 (14.0)	86 (10.8)	65 (8.1)	50 (6.3)	800 100
5	Transparency in container	47 (5.4)	361 (45.1)	135 (26.9)	112 (14.0)	65 (8.1)	80 (10.0)	800 100
6	ISI Mark is provided	63 (7.9)	10 (1.3)	361 (45.1)	159 (19.9	143 (17.9)	64 (8.0)	800 100
Total		**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	**800 (100)**	

Source: Primary data

Figures without brackets indicate the number of respondents unless otherwise specifically mentioned.

It is found from table 4.2.3.4 that among total packaging factor respondents 37.5 percent, 29.8 percent and 12.5 percent of the respondent respectively have given top performance to the factors "Seal tighten packing, Easy to use and ISI Mark is provided" respectively.28.1 percent, 25.0 percent and 23.4 percent of the total respondent can give second position to the factors of "Transparency in container, hygienically packaged and

Seal tighten packing" respectively.31.2 percent, 28.1 percent and 20.3 percent of the respondents gave 3rd position in the factors of "ISI Mark is provided, Transparency in container and Seal tighten packing" respectively. 36.0 percent, 18.7 percent and 14.0 percent of the respondents gave fourth position in the "Different Uniformity in container, ISI Mark is provided and hygienically packaged" respectively. 29.8 percent, 26.5 percent and 21.9 percent of the respondents have given that 5th place to the factors of" Easy to use, ISI Mark is provided and Hygienically packaged" respectively. It is concluded that 37.5 percent, 29.8 percent and 12.5 percent of the respondents respectively have given top factors as "Different Uniformity in container, hygienically packaged and Transparency in container" respectively.

Table 4.2.4 How long have you been consuming the packaged drinking water

S. No.	Period of consumption of packaged drinking water	No. of Respondents	Percentage
1.	Below 2 years	128	16
2.	2 to 4 years	306	38
3.	5 to 6 years	192	24
4.	Above 6 years	174	22
Total		**800**	**100**

Source: Primary data

Table 4.2.4 depicts that 306 (38.0 percent) of the respondents have been consuming 2-4 years, 192 (24 percent) of the respondents use it for 5-6 years, 174 (22 percent) of the respondents are above 6 years and 128 (16.0 percent) of the respondents below 2 years. It is concluded that majority of the respondents 306 (38.0 percent) came under the group of 2-4 years of consumption.

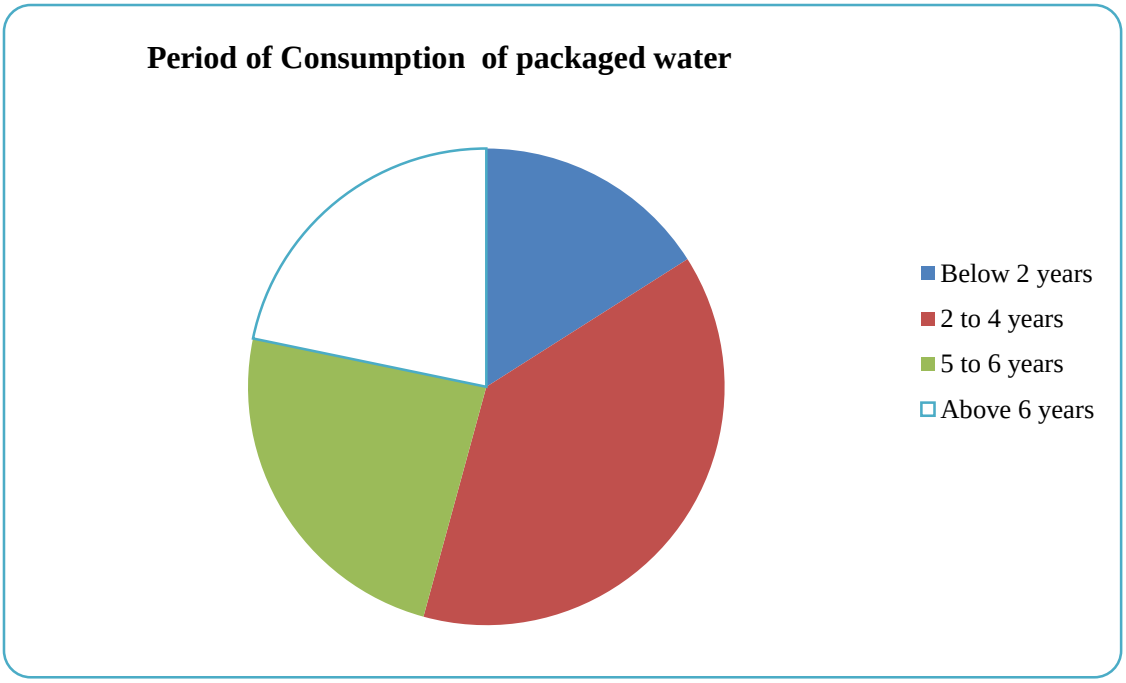


Fig. 4.2.4 Period of Consumption of packaged water

Table 4.2.5. When do you prefer the Packaged Drinking Water

S. No.	Places of preferences	No of respondents	Percentage
1.	Regular	160	20
2.	During Water Scarcity	96	12
3.	During Function / Celebration	338	42
4.	During Sickness	46	06
5.	During Travel	124	16
6.	All of the above	36	04
Total		**800**	**100**

Source: Primary data

Table 4.2.5 reveals the occasion when preferred to buy packaged drinking water. Out of 800 respondents, 338 (42.0 percent) of the respondents are stated that during function and celebration, 160 (20.0 percent) of the respondents are buying regularly, 124 (16.0 percent) of the respondents prefer during travel, 96 (12.0 percent) of the respondents prefer when water scarcity occurs, 46 and 36 (6 percent and 4 percent) of the respondents willing to buy during sickness and all of the above respectively. It is concluded that majority of the respondents 338 (42 percent) prefer to buying the packaged drinking water at the time of function / celebration.

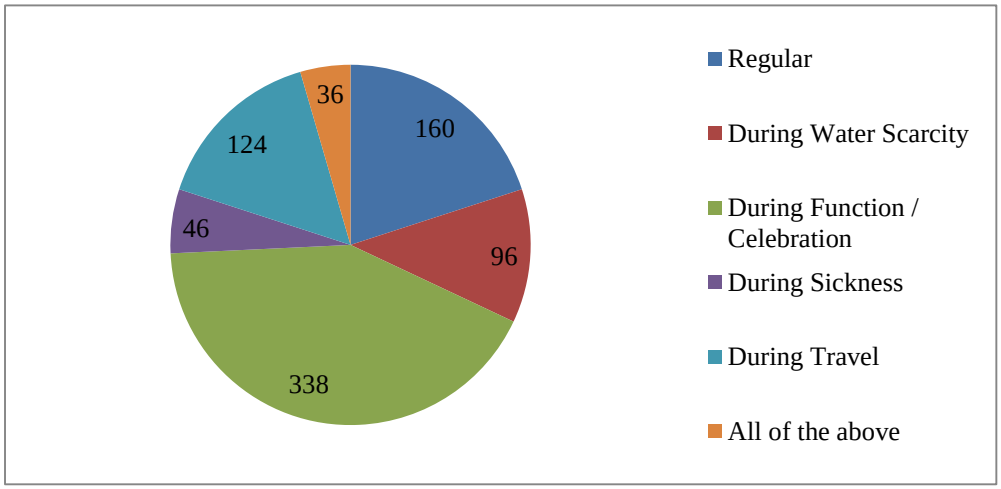


Fig.4.2.5 Places of preferences

Table 4.2.6 Consumer's awareness about the packaged drinking water

Without awareness, no one can do the best and they could get deceived by the duplicates amongst the originals available in the market. Hence, the consumers make engage themselves to know the awareness of the consumed products. The table 4.2.6 indicate the consumer awareness about the packaged drinking water.

S. No.	Awareness of the products	No of the respondents	Percentage
1.	ISI marks	272	34
2.	RO treatments	127	16
3.	UV treatments	96	12
4.	Ingredients	98	13
5.	Expiry Date	112	14
6.	All the above	95	11
Total		**800**	**100**

Source: Primary data

It is evident from the table 4.2.6, out of the total 800 respondents, 272 (34.0 percent) of the respondents are aware of ISI mark, 129 respondents (16.0 percent) are aware about RO treatments, 112 (14.0 percent) of the respondents are aware about expiry date, 98 (13.0 percent), 96 (12.0 percent), 95 (11 percent) are aware about ingredients, UV treatments and all the above respectively. It is to be concluded that majority of respondents were aware of ISI mark in general.

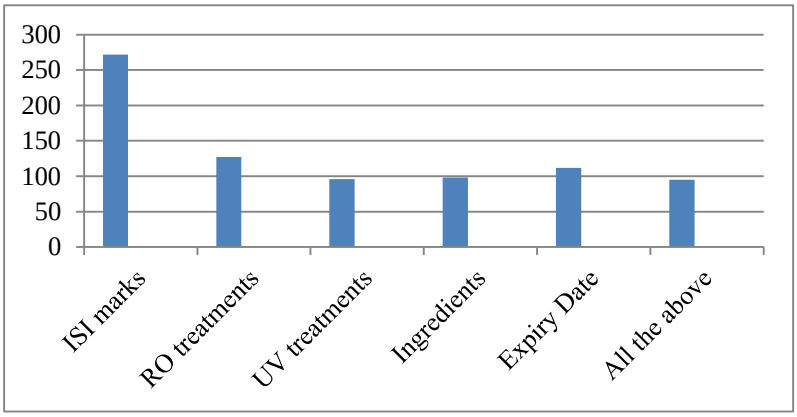


Fig 4.2.6 Consumer's awareness about the packaged drinking water

Table 4.2.7 Distribution of respondents according to the awareness of health issues

Table 4.2.7 exhibits that the continuous intake of high salinity water results in health issues.

S. No.	Awareness	No of the respondents	Percentage
1.	**Yes**	446	56
2.	**No**	354	44
Total		**800**	**100**

Source: Primary Data

The above table reveals that out of total 800 respondents 446 (56 percent) of the respondents were aware about health issues and 354 (44 percent) of the respondents were not aware about the health issues like kidney stones *etc*.. It is found that majority of the respondents are aware about the health factor pertaining to it.

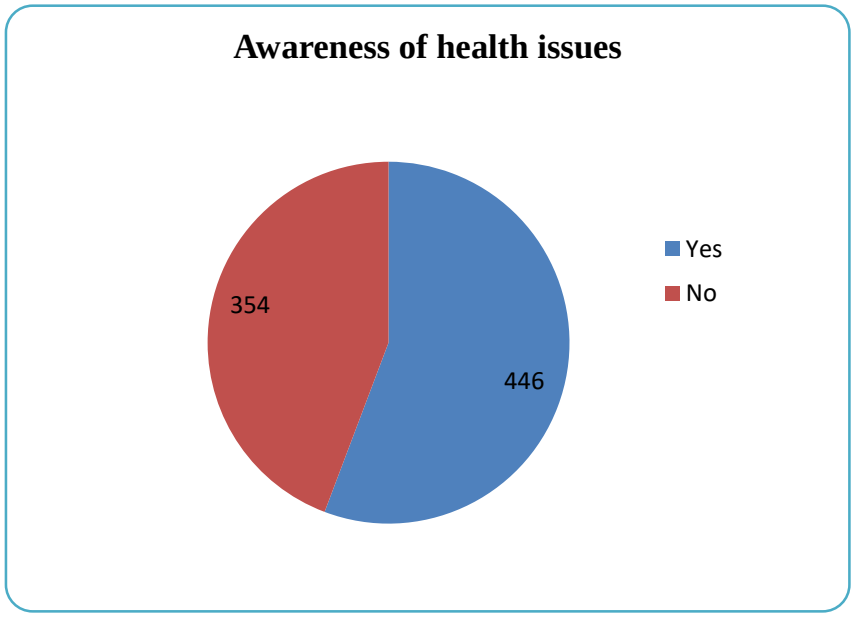


Fig 4.2.7 Awareness of health issues

3. Problems faced by packaged drinking water consumers

Table 4.3.1 Problems faced by packaged drinking water consumers (SA=Strongly Agree, A=Agree, NO=No Opinion, DA=Disagree, SDA=Strongly Disagree)

S.No	Statements	S A	A	N O	DA	SDA	Total
1	When the bottles are exposed to direct sunlight, the taste of the water is different	288 (36.0)	216 (27.0)	198 (24.8)	52 (6.5)	46 (5.7)	800 100
2	Uneven mineral content	96 (12.0)	344 (43.8)	272 (34.0)	40 (5.0)	42 (5.2)	800 100
3	High chlorine content	324 (40.5)	286 (13.7)	116 (14.5)	44 (5.5)	30 (3.8)	800 100
4	Duplicate brand	216 (27.0)	248 (31.0)	152 (19.0)	104 (13.0)	80 (10.0)	800 100
5	Duplicate ISI certificate	58 (7.2)	60 (7.5)	142 (17.8)	236 (29.5)	304 (38.0)	800 100
6	No uniform price is same quantity	316 (39.5)	272 (34.0)	168 (21.0)	26 (3.3)	18 (2.2)	800 100
7	Taste of the water for not uniform all the time	146 (18.3)	180 (22.5)	208 (26.0)	144 (18.0)	122 (15.2)	800 100
8	Quality of the water is not proved	272 (34.0)	332 (41.5)	108 (13.5)	56 (7.0)	32 (4.0)	800 100
9	Maximum retail price is not printed	94 (11.8)	82 (10.2)	324 (40.5)	138 (17.3)	162 (20.2)	800 100
10	Irregular supply by agent	112 (14.0)	94 (11.7)	304 (38.0)	156 (19.5)	124 (16.8)	800 100
11	Containers are not hygienic	318 (39.7)	270 (33.8)	158 (19.7)	28 (3.5)	26 (3.3)	800 100
12	Leakage of taps	158 (19.8)	194 (24.2)	306 (38.3)	94 (11.7)	48 (6.0)	800 100
13	Provision for opening the lids is not available	278 (34.7)	354 (44.6)	86 (10.7)	48 (6.00	34 (4.0)	800 100
14	Date of manufacture & expiry is not mentioned	68 (8.5)	72 (9.0)	182 (22.7)	206 (25.8)	272 (34.0)	800 100
15	Different brands are supplied by same agents	282 (35.2)	242 (30.2)	158 (19.8)	66 (8.3)	52 (6.5)	800 100

Source: Primary data

Notes: Figures in brackets indicate the percentages to total sample. Figures without brackets indicate the number of respondents unless otherwise specifically mentioned.

The table 4.3.1 describes the problem faced by packaged drinking water consumer. It is classified as strongly agree, agree, neutral, disagree and strongly disagree, 40.5 percent 39.5 percent, 36.0 percent and 35.2 percent of the respondents strongly agreed in “High chlorine content, no uniform price, taste of water and different brands supplied by same agents”. 44.6 percent, 43.8 percent, 41.5 percent and 34.0 percent of the total respondents are agreed with problem faced by Packaged Drinking Water consumer with the factor of “Opening the lids, uneven mineral content, quality of water, no uniform price in the same quantity”. 40.5 percent, 38.3 percent, 38.0 percent and 34.0 percent are the respondents are neutral in “maximum retail price, leakage of taps, Irregular supply and uneven mineral content”. 29.5 percent, 25.8 percent, 19.5 percent and 18.0 percent of the respondents disagreed to the factor of “Duplicate ISI certificate, expiry date, Irregular supply and taste of water”. 38.0 percent, 34.0 percent, 20.2 percent and 18.0 percent of the respondents strongly disagreed” to the factor of duplicate ISI certificate date of manufacture, maximum retail price and taste of water. It is the concluded that maximum of 354 (44.6 percent) of respondents agree with the factor of provision for opening the lids is not available in the Packaged Drinking Water.

IV TO ANALYSE THE PERCEPTION AND LEVEL OF SATISFACTION OF PACKED DRING WATER CONSUMERS

Table. 4.4.1 Do you prefer to buy the ISI marked packaged drinking water

The table 4.41 shows the classification of the respondents for buying the ISI branded packaged drinking water. The categories are classified as yes and no.

S. No.	Do you prefer to buy the ISI marked	No of the respondents	Percentage
1.	**Yes**	716	90
2.	**No**	84	10
Total		**800**	**100**

Source: Primary data

In this table 4.4.1 Reveals that out of 800 samples, 716 respondents (90.0 percent) of them stated 'Yes' and remaining 84 respondents (10.0 percent) stated 'No' to buy the ISI marked. It is concluded the maximum 716 (90.0 percent) of the respondents prefer to buy the ISI marked packaged drinking water.

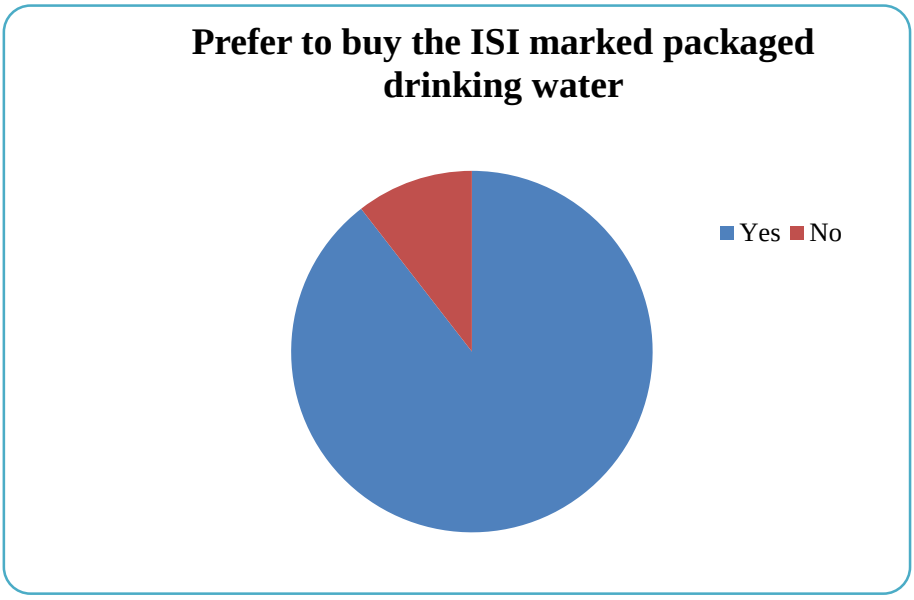


Fig.4.4.1 Prefer to buy the ISI marked packaged drinking water

Table 4.4.2 If yes, what is the reason to buy the ISI marked packaged drinking water?

S. No.	Reason to prefer ISI marked	No of the respondents	Percentage
1.	Tastier	108	15
2.	Standard quality	142	20
3.	Safe for health	192	27
4.	No Adulteration	118	17
5.	Reasonable price	89	12
6.	Available at all places/times	67	09
Total		**716**	**100**

Source: Primary Data

In this table 4.4.2 shown, majority of 192 (27.0 percent) of the respondents states safe for health, 142 (20.0 percent) of the respondents by because of standard quality, 118 (17.0 percent) of the respondents stated that no adulteration, 108 (15.0 percent) of the respondents mentioned tastier, 89 (12.0 percent) of the respondents stated the reasonable price and 67 (9.0 percent) of the respondents gave the reason of availability in all places and times. It is concluded that majority of the respondents believer safe for health as the most important factor to buy ISI marked packaged drinking water.

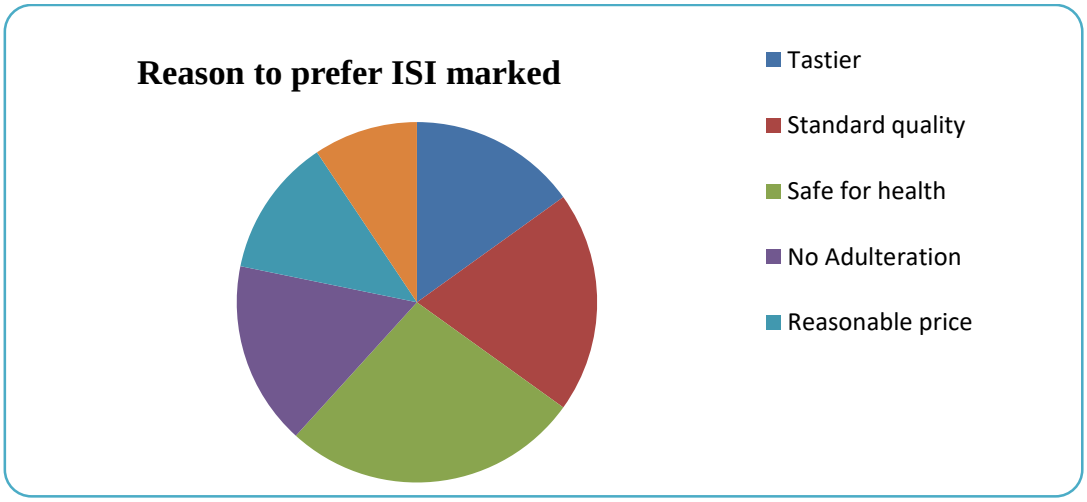


Fig.4.4.2 Reason to prefer ISI marked

Table 4.4.3 Which is your choice of selecting the Packaged Drinking Water

S. No.	Choice of Brand	No of Respondents	Percentage
1.	All branded water	124	15.5
2.	Specific brand only	92	11.5
3.	Packaged with ISI mark	334	41.7
4.	RO processed	166	20.7
5.	UV Treated	84	10.6
Total		**800**	**100**

Source: Primary Data

It is clear from the above table, 334 (41.7 percent) of the respondents are buying with ISI mark, 166 (20.7 percent) of the respondents stated RO processed and 124 (15.5 percent) of the respondents stated they go with all branded water, 92 (11.5 percent) of the respondents stated that they only buy specific brand and 84 (10.6 percent) of the respondents prefer UV treated. It is concluded that majority of the respondents 334 (41.7 percent) choose packaged drinking water with ISI mark.

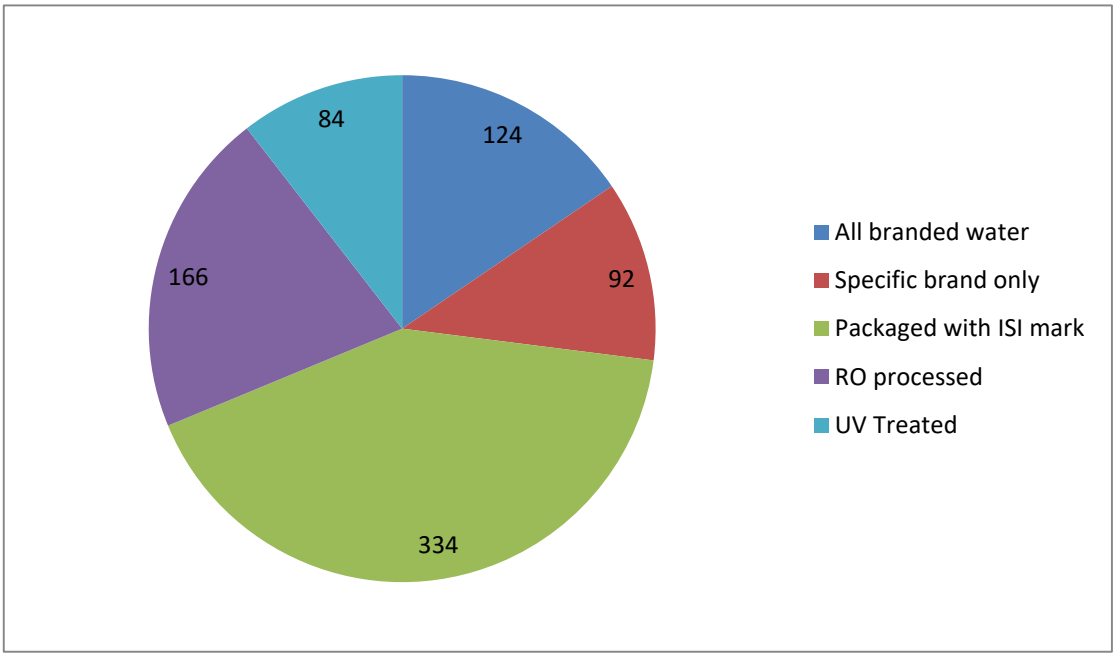


Fig.4.4.3 Choice of selection of packaged drinking water

Table 4.4.4 Brand preferences of packaged drinking water by the consumers

S. No.	Brand Preference	No of the respondents	Ranks of the brand
1.	Kinley	136	2
2.	Bisleri	160	1
3.	Railneer	76	5
4.	Kingfisher	108	3
5.	Amma water	35	10
6.	Neera	59	7
7.	Bisline	64	6
8.	Aqua plus	47	8
9.	Kavin	40	9
10.	Aqua Fina	75	4
Total		**800**	--

Source: Primary Data

It is clear from the above table the brand preference of the packaged drinking water by the consumer, Bisleri brand occupied first place, Kinley occupied second place, Kingfisher occupied third place and Aquafina, Railneer, Biline, Meera occupied fourth, fifth, sixth and seventh place respectively. Aquaplus, Kavin, Amma water occupied eighth, ninth and tenth place respectively. It is concluded the majority of the respondents prefer Bisleri brand.

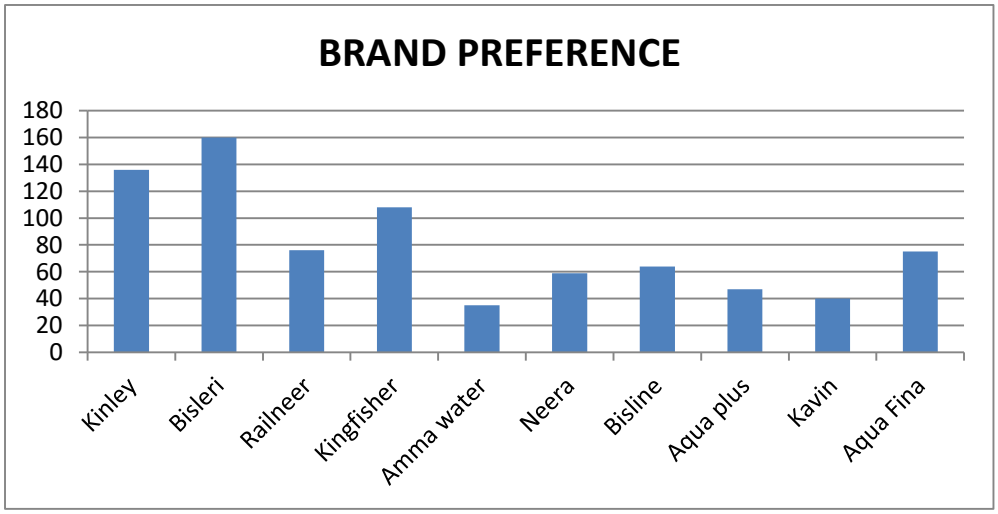


Figure 4.4.4 Brand Preference

Table 4.4.5 Preferences in the quantity of packaged drinking water at home What / How much quantity of packaged drinking water do you prefer at home?

S. No.	Preferences of quantity	No of the respondents	Percentage
1.	300ml	23	3
2.	500ml	75	9
3.	1 L	228	29
4.	2 L	118	15
5.	3 L	356	44
Total		**800**	**100**

Source: Primary data

The above table shows the preferences in the quantity of the packaged drinking water at home 44 percent of the respondents preferred the 20L size of packaged drinking water at home, 29 percent of the respondents preferred the 1L size of packaged drinking water, 15 percent of the respondents preferred the 2L size of the packaged drinking water, whereas 300 & 500 ml size of packaged drinking water were mostly used in functions only. Among the total respondents, the majority of the respondents preferred 20 L size of the packaged drinking water at home.

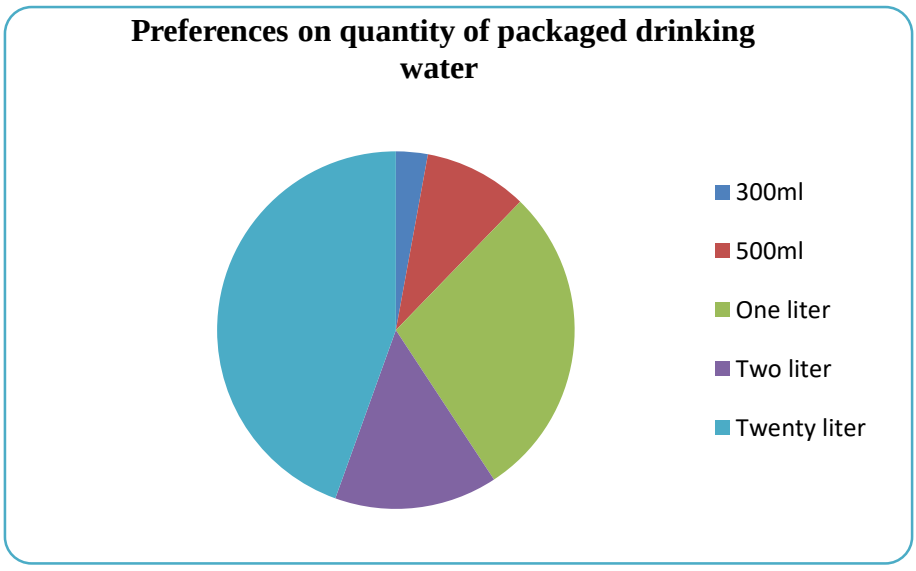


Figure 4.4.5. Preferences on quantity of packaged drinking water

Table 4.4.6 For what purpose the packaged drinking water is used at your home?

The reason for the uses of particular brand of packaged drinking water of the respondents are given below.

S. No.	Reason to purchase	No of the respondents	Percentage
1.	Drinking Purpose	428	53
2.	Cooking Purpose	118	15
3.	Both Purpose	254	32
4.	Other Purpose	0	0
Total		**800**	**100**

Source: Primary Data

The above table shows that reason of preference of particular brand of packaged drinking water. 428 (53.0 percent) of respondents preferred the particular brand of packaged drinking water for the drinking purpose, 15 percent of the respondents prefer the particular brand for the Cooking purpose, 32 percent of the respondents prefer the particular brand for the both purpose of drinking and cooking. The majority of the respondents preferred particular brand for the Drinking purpose [53%].

Table 4.4.7 Who advise you to buy the packaged drinking water in your family?

S. No.	Who Advise to buy	No of respondents	Percentage
1.	Spouse	49	6
2.	Adult Children	136	17
3.	Parent	44	5
4.	Friends & Relatives	348	44
5.	Own Decision	223	28
Total		**800**	**100**

Source: Primary data

The above table shows who advices you to buy the packaged drinking water in the family to buy the particular brand of packaged drinking water. 44 percentages of respondents preferred particular brand of packaged drinking water as advised by the friends and relatives, 28 per cent of the respondents purchased the particular brand by their own decision, 17 per cent of the respondents purchased the particular brand by the advice of their adult children, 6 per cent of the respondents purchased the particular brand by the advice of their spouse and 5 per cent of the respondents preferred particular brand by their parents. The majority of the respondents bought the packaged drinking water as advised by the friends and relatives [44%].

Table 4.4.8 Sources of buying the packaged drinking water

S. No.	Sources of purchase	No of the respondents	Percentage
1.	Agent	59	7
2.	Middlemen	197	25
3.	Retailer	128	16
4.	Wholesaler	156	20
5.	Shop	260	32
Total		**800**	**100**

Source: Primary Data

The above table shows the sources for purchasing the particular brand of packaged drinking water. 260 (32.0 Percent) of respondents preferred the particular brand of packaged drinking water from shop, 25 percent of the respondents was purchased the particular brand through middleman, 20 percent of the respondents was purchasing at the wholesaler, 16 percent of the respondents was purchased from at the retailer and 7 per cent of the respondents was preferred the particular brand from an agent. The majority of the respondents preferred to by the particular brand from shop (32%).

Table 4.4.9 Satisfaction level of Consumers towards Packaged Drinking Water consumer

Table 4.4.9 found that the factor of satisfaction towards Packaged Drinking Water reliability and reputation. These are classified as availability of quantities, relatively cheap, price, quality of product, availability of places, product design, quality of packing, familiar branded, taste and discount.

S.No.	Satisfaction factor	Highly satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Highly dissatisfied	Total
1.	Availability of various quantities	228 (28.5)	464 (58.0)	44 (5.5)	34 (4.2)	30 (3.8)	**800 100**
2.	Relatively cheap	52 (6.5)	124 (15.5)	78 (9.7)	262 (32.7)	284 (35.6)	**800 100**
3.	Margin based Pricing	164 (20.5)	304 (38.0)	224 (30.5)	62 (7.8)	26 (3.2)	**800 100**
4.	Quality of product	312 (39.0)	352 (44.0)	94 (11.7)	25 (3.1)	17 (2.2)	**800 100**
5.	Availability of places for purchasing	116 (14.5)	332 (41.5)	84 (10.5)	220 (27.5)	48 (6.0)	**800 100**
6.	Product design	178 (22.3)	386 (48.0)	174 (22.5)	34 (4.2)	24 (3.0)	**800 100**
7.	Quality of Packing	316 (39.5)	356 (44.5)	64 (8.0)	16 (2.0)	48 (6.0)	**800 100**
8.	Familiar brand	184 (23.0)	312 (39.0)	206 (25.7)	76 (9.5)	22 (2.8)	**800 100**
9.	Taste of water	392 (49.0)	248 (31.0)	92 (11.5)	42 (5.2)	26 (3.3)	**800 100**
10.	Discount on bulk purchase	174 (21.8)	409 (51.1)	148 (18.5)	37 (4.6)	32 (4.0)	**800 100**

Source: Primary Data

Table 4.4.9 found that level of satisfaction towards packaged drinking water reliability and reputation. There is classified as highly satisfied, satisfied, neutral, dis

satisfied and highly dissatisfied. 49.0 percent, 39.5 percent and 39.0 percent and 28.5 percent of the respondents are highly satisfied to the factor of “taste of water, quality of packing, quality of product and availability of various quantities”. 58.0 percent, 51.1 percent and 48.0 percent of the respondents are satisfied with the availability of various quantities, “discount on bulk purchase and product design”. 30.5 percent, 25.7 percent and 22.5 percent of the respondents were neutral with the factors of “margin based pricing, familiar brand and product design”. 32.7 percent, 27.5 percent and 9.5 percent of the respondents are dissatisfied in the factor of “Relatively cheap, Availability all places and familiar brand”. 35.6 percent, 6.0 percent and 4.0 percent of the respondents were highly dissatisfied with relatively cheap quality of packing and no discount on bulk purchase. It is concluded that 49.0 percent of the respondents are highly satisfied with the factor of “taste of water” in the level of liking towards packaged drinking water.

Table 4.4.10 Opinion about the consumer perception on packaged drinking water

Table 4.4.10 states the consumer perception of buying towards packaged drinking water. The categories are classified as strongly agree (SA), agree (A), neutral (N), disagree (DA), strongly disagree (SDA).

Q .No	Statements	Tick the boxes where appropriate					
		SA	A	N	DA	SDA	Total
5.1	Packaged drinking water is pure than other drinking water	424 (53.0)	216 (27.0)	84 (10.5)	52 (6.5)	24 (3)	800 100
5.2	Packaged drinking water is safe because it contains less toxic chemicals	175 (21.8)	408 (51.0)	146 (18.2)	39 (5.0)	32 (4.0)	800 100
5.3	Consuming packaged drinking water affects Health	198 (24.8)	204 (25.5)	308 (38.5)	62 (7.8)	28 (3.4)	800 100
5.4	Packaged drinking water is refreshing and thirst quenching	258 (32.2)	324 (40.5)	106 (13.2)	60 (7.6)	52 (6.5)	800 (100)
5.5	Plastic packaging of water will affect the health	326 (40.8)	262 (32.7)	168 (21.0)	28 (3.5)	16 (2.0)	800 (100)
5.6	Packaged drinking water is not too expensive	164 (20.5)	182 (22.8)	218 (27.2)	126 (15.7)	110 (13.8)	800 100
5.7	Sales of packaged drinking water after the expiry period is common	320 (40.0)	160 (20.0)	240 (30.0)	48 (6.0)	32 (4.0)	800 100
5.8	Regular purchase of packaged drinking water affects the family budget	56 (7.0)	84 (10.5)	168 (21.0)	228 (28.5)	264 (33.0)	800 100
5.9	Packaged drinking water is suitable for special occasion in family	306 (38.3)	282 (35.2)	168 (21.0)	24 (3.0)	20 (2.5)	800 (100)
5.10	The advertisement of packaged drinking water is expensive	164 (20.5)	188 (23.5)	336 (42.0)	68 (8.5)	44 (5.5)	800 (100)
5.11	Quality of water sold is good	182 (22.8)	210 (26.2)	312 (39.0)	74 (9.2)	22 (2.8)	800 100
5.12	Taste of packaged drinking water is better than other water	68 (8.5)	54 (6.7)	132 (14.5)	232 (29.0)	314 (39.4)	800 100
5.13	The quality of packaged drinking water is better than that of boiled water	212 (26.5)	334 (14.7)	128 (16.0)	58 (7.2)	68 (8.6)	800 100
5.14	The brand of packaged drinking water I drink tastes better than other brands	48 (6.0)	92 (11.5)	172 (21.5)	126 (28.2)	262 (32.8)	800 100
5.15	Packaged drinking water is convenient for usage	284 (35.5)	208 (26.0)	158 (19.7)	94 (11.8)	56 (7.0)	800 100
5.16	Post sales problem are solved immediately	148 (18.5)	178 (22.2)	212 (26.5)	138 (17.3)	124 (15.5)	800 100
5.17	Different taste are available	324 (40.5)	258 (32.2)	138 (17.3)	46 (5.7)	34 (4.3)	800 100
5.18	Packaged drinking water container is convenient for handling	278 (34.8)	352 (44)	98 (12.3)	34 (4.2)	38 (4.7)	800 100
5.19	Packaged drinking water is available in convenient quantity	184 (23.0)	218 (27.2)	302 (37.8)	66 (8.2)	30 (3.8)	800 100
5.20	Packaged drinking water available anywhere	148 (18.5)	178 (22.2)	206 (25.8)	146 (18.2)	20 (2.5)	800 100

Source: Primary Data

The table shows that 424 (53.0 percent), 326 (40.8 percent), 324 (40.5 percent) and 320 (40.0 percent) of the respondents stated that strongly agreed with the factor of "packaged drinking water is pure than other Drinking water, plastic packing of water affect the health, different taste sale of packaged drinking water after expire period is common disposal of container is easy and convenient usage respectively. 51.0 percent, 44.0 percent and 40.5 percent of the respondents are agreed with "packaged drinking water is safe, because is contained lass toxic chemical, convenient for handling and refreshing and thirst quenching". 42.0 percent, 39.0 percent and 38.5 percent of the respondents were neutral to the factor of advertisement of packaged drinking water is expensive, "quality of water sold is good and consuming packaged drinking water affects health". 29.0 percent, 28.5 percent and 28.2 percent of the respondents disagreed with the factor of "taste of drinking water is better than other water, regular purchase affect family budget and better than other brands". 39.4 percent, 33.0 percent and 32.8 percent of the respondents strongly disagree with the factor of "taste of drinking water is better than other water, regular purchase affect family budget and the brand I drink taste better than other brands".

Table 4.4.11 State the Overall Perception Level of Consumers. The categories are classified as Lower level, Moderate level and High Level

Variables	PERCEPTION LEVEL		
	Low level	Moderate level	High level
Safe for health	145 (18.2%)	507 (63.3%)	148 (18.5%)
Reasonable price	126 (15.75%)	184 (23.0%)	490 (61.25%)
Standard quality	156 (19.5%)	476 (59.5%)	168 (21.0%)
Availability at all places	108 (13.5%)	496 (62.0%)	196 (24.5%)

Source: Primary Data

Table 4.4.11 shows the overall perception level, 507 respondents (63.3%) had a moderate level of perception, 148 respondents (18.5%) had a high level of perception and 145 respondents (18.2%) had low levels of perception with respect to safe for health of packaged drinking water. From the result, it is known that most of the respondents had the moderate level of perception with the quality of packaged drinking water.

Table 4.4.11 highlights the fact that the proportion of respondents with high level of perception regarding the price of packaged drinking water was 490 (61.25%), with moderate level of perception regarding the price of packaged drinking water was 184 (23.0%) and with low level of perception regarding the price of packaged drinking water was 123 (15.75%). The result clearly reports that most of the respondents had the highest level of perception with the price of packaged drinking water.

Table 4.4.11 also shows that the majority of respondents 476 (59.5%) were found with moderate level of perception regarding the quality of packaged drinking water. About 168 respondents (21%) had a high level of perception and 156 respondents

(19.5%) had low levels of perception among the brand of packaged drinking water. The result clearly reported that most of the respondents had the moderate level of perception with the quality of packaged drinking water.

From Table 4.4.11, it is inferred that the distribution of respondents with high level of perception with regard to availability of packaged drinking water was 132 (22.0%), with moderate level of perception of availability of packaged drinking water was 381 (63.5%) and with low level of perception of availability of packaged drinking water was 87 (14.5%). The result proved that the majority of the respondents had a moderate level of perception with regard to availability of packaged drinking water.

V. PROSPECTS AND ATTITUDES OF PACKAGED DRINKING WATER CONSUMERS

Table 4.5.1 State your opinion towards the prospect of packaged drinking water

Table 4.5.1 states the prospects of packaged drinking water consumers. The factor are classified and health factor, price factor, availability factor and quality factor.

S.No	Statements	Strongly Agreed	Agreed	Neutral	Disagreed	Strongly disagreed	
I	**Safe For Health**						
1	Useful in preventing dehydration and sustaining Health	427 (53.2)	204 (25.5)	74 (9.3)	38 (4.8)	57 (7.2)	800 100
2	Trust worthiness(free from worries)	282 (35.2)	350 (43.8)	80 (10.0)	56 (7.0)	32 (4.0)	800 100
3	Intake or consume more water	34 (4.3)	288 (36.0)	362 (45.3)	87 (10.8)	29 (3.6)	800 100
4	Do not heat or filter	216 (27.0)	248 (31.0)	144 (18.0)	112 (14.0)	80 (10.0)	800 100
5	Minimize medical expenses	148 (18.5)	178 (22.2)	206 (25.8)	146 (18.2)	20 (2.5)	800 100
II	**Price**						
1	Reasonable price and more quantity	306 (38.3)	282 (35.2)	168 (21.0)	24 (3.0)	20 (2.5)	800 100
2	Fit for family budget	124 (15.5)	162 (20.0)	276 (34.5)	181 (23.0)	57 (7.0)	800 100
3	Discount for regular purchases	168 (21.0)	415 (52.0)	146 (18.0)	39 (4.8)	32 (4.0)	800 100
4	Available in all prices and quantity	258 (32.2)	324 (10.5)	106 (13.2)	60 (7.6)	52 (6.5)	800 100
5	No deposit is demanded for containers	58 (7.2)	60 (7.5)	142 (17.8)	236 (29.5)	304 (38.0)	800 100
III	**Availability**						
1	Packed water available anywhere	280 (35.0)	352 (44.0)	56 (7.0)	80 (10.0)	32 (4.0)	800 100
2	Home delivery	260 (32.5)	332 (41.5)	96 (12.0)	74 (9.2)	38 (4.8)	800 100
3	Packaged drinking water is conveniently packed	134 (16.8)	188 (23.5)	352 (44.0)	92 (11.5)	34 (4.2)	800 100
4	Different tastes are available	35 (4.3)	83 (10.3)	135 (17.0)	245 (30.6)	302 (37.8)	800 100
5	Easy to store and stay forever	82 (10.2)	74 (9.2)	354 (44.2)	158 (19.8)	132 (16.6)	800 100

IV	Quality						
1	ISI Mark/FSSAI is provided on packaged water bottle	428 (53.5)	288 (36.0)	64 (8.0)	8 (1.0)	12 (1.5)	800 100
2	All age group prefer packaged drinking water	262 (32.8)	320 (40.0)	96 (12.0)	65 (8.1)	57 (7.1)	800 100
3	Better quality is provided on packaged water	326 (40.8)	262 (32.7)	168 (21.0)	28 (3.5)	16 (2.0)	800 100
4	Packaged drinking water is tastier than other Water	164 (20.5)	188 (23.5)	336 (42.0)	68 (8.5)	44 (5.5)	800 100
5	Conforming to have a ready supply of drinking Water	168 (21.0)	192 (24.0)	224 (28.0)	124 (15.5)	92 (11.5)	800 100

Source: Primary data

1. Regarding safe for Health

The above table shown the opinion of the respondents regarding safe for health 427 (53.2 percent), 282 (35.2 percent) and 216 (27.0 percent) of the respondents strongly agreed to the factors of “preventing dehydration, trust worthiness and do not heat at filter”. 43.8 percent, 36.0 percent and 31.0 percent of the respondents agreed with “trust worthiness, consume more water and do not heat or filter”. 45.3 percent, 25.8 percent and 18.0 percent of the respondents neutral with “intake more water, minimize medical expenses and do not heat”. 18.2 percent, 14.0 percent and 10.8 percent of the respondents disagreed on cutting down, medical expenses, do not heat and consume more water”. 10.0 percent, 7.2 percent and 4.0 percent of the respondents strongly disagree with the factor of do not heat, preventing dehydration and free from worries.

2. Regarding price factor

The above table shows that the opinion of the respondents regarding price factor 306 (38.3 percent), 258 (32.2 percent) and 168 (28.0 percent) of the respondents strongly agreed to the factor of “reasonable price, available in all qualities, discount on regular purchase”. 415 (52.0 percent), 282 (35.2 percent) and 162 (20.0 percent) of the respondents agreed to the factor of “discount on regular purchase, reasonable price and

fit for family budget". 34.5 percent, 21.0 percent and 18.0 percent of the respondents were neutral with the factor of "fit the family budget, reasonable price, and discount on regular purchase". 29.5 percent, 23.0 percent and 7.6 percent of the respondents with disagreed with the factor of "no deposit is demand, fit for family budget and available in all quantities". 38.0 percent, 7.0 percent and 6.5 percent of the respondents strongly disagree with the factors of "no deposit demand, fit for family budget, available in all quantities".

3. **Availability factor**

The above table shows that the opinion of the respondents regarding a**vailability factor**. 280 (35.0 percent), 260 (32.5 percent) and 134 (16.8) percent of the respondents strongly agreed with "available at anywhere, home delivery and conveniently packed". 44.0 percent, 41.5 percent and 23.5 percent of the respondents agreed that to the factor of "available at anywhere, home delivery and conveniently packed". 44.2 percent, 44.0 percent and 17.0 percent were neutral with the factor of "easy to store, conveniently packaged and different taste". 30.6 percent, 19.8 percent and 11.5 percent of the respondents disagreed with "different taste, easy to store and contently packaged". 37.8 percent, 16.6 percent and 4.8 percent of the respondents strongly disagreed to the factor of "different taste, easy to store and home delivery".

4. Quality factor

The above table shows that the opinion of the respondents regarding quality. 428 (53.5 percent), 326 (40.8 percent) and 262 (32.8 percent) of the respondents strongly agreed to the factor of "ISI mark, better quality provided and all age group preferred". 320 (40.0 percent), 288 (36.0 percent) and 262 (32.7 percent) of the respondents agreed with the factor of "all age group preferred, ISI mark and better quality". 42.0 percent, 28.0 percent and 21.0 percent of the respondents were **neutral** in the factor of "tastier

than other water, ready for supply and better quality provided". 15.5 percent, 8.5 percent and 8.1 percent of the respondents disagreed with "ready supply, tastier than other water and all age group preferred". 11.5 percent, 7.1 percent and 5.5 percent of the respondents strongly disagreed to the factor "ready supply, all age group preferred and tastier than other water".

Table 4.5.2 what was / were the deciding attitude factors that made you to buy the packaged drinking water (Give Rank?)

S.No	Factors	Rank
1	Health factor	I
2	Price factor	V
3	Quality factor	II
4	Age factor	VIII
5	Brand factor	IV
6	Container factor	VII
7	Water characteristics factor	VI
8	Certification factor (ISI and FSSAI)	III

Source: Primary data

It is clear from the above table that the attitude factors motivated to buy the packaged drinking water. The consumer's health factor occupied first place, quality factor occupies second place and certification factor occupied third place. It is also clear that brand factor, price factor, characteristic factor, container factor and age factor occupied fourth, fifth, sixth, seventh and eighth place respectively. It is concluded that majority of the respondents stated that health factor highly motivated them to buy packaged drinking water.

Table 4.5.3. Have you ever recommended others to buy the packaged drinking water?

S. No.	Recommend	No of the respondents	Percentage
1.	Yes	596	75
2.	No	204	25
Total		800	100

Source: Primary Data

The above table shows that recommendation made to others to buy the package Drinking water, 75.0 percentages said 'Yes' and the remaining 25.0 percentage said 'No'. Majority of the respondents came under the 'Yes' category.

Table 4.5.4 State the factor which most influences to buy the packaged drinking water

S. No.	Factor	Gender of Respondents		Total
		MALE	FEMALE	
1	Good for Health	120	78	198
2	Standard Quality	106	60	166
3	Low Price	77	50	127
4	Free from Adulteration	86	72	158
5	Preferred by all age groups	38	26	64
6	ISI & FSSAI Marked	59	28	87
Total		**486**	**314**	**800**

Source: Primary Data

The table 4.5.4 explains that the most influencing factor to buy the packaged drinking water. Out of 800 respondents 120 and 78 male and female respondents stated that Good for Health, 106 and 60 male and female respondents stated with the factor of standard quality, and the remaining male and female respondents stated the reason for buying the packaged drinking water as low price, free from adulteration, preferred by all age groups and ISI marked. It is concluded that majority of the respondents (198) recommended it as good for health.

Table 4.5.5 State your overall satisfaction of the packaged drinking water

S. No.	Satisfaction	No of the respondents	Percentage
1.	Highly Satisfied	342	41
2.	Satisfied	256	32
3.	Neutral	160	21
4.	Unsatisfied	22	03
5.	Highly Unsatisfied	20	03
Total		**800**	**100**

Source: Primary Data

The above table reveals that 342 (41.0 percent) of the respondents are highly satisfied, 256 (32.0 percent) of the respondents are satisfied and 60 (21.0 percent) are neutral. It is concluded that 342 (41.0 percent) of the respondents are highly satisfied of the packaged drinking water.

Table 4.5.6 Mention your opinion about the need of packaged drinking water

S. No.	Opinion	No of the respondents	Percentage
1.	Very much needed	186	23
2.	Needed	242	30
3.	Moderately needed	282	35
4.	Not needed	90	12
Total		**800**	**100**

Source: Primary Data

The above table reveals that the opinion about the packaged drinking water 282 (35 percent) of the respondents say it is moderately needed, 242 (30 percent) of the respondents said it is needed and 186 (23 percent) of the respondents said it is very much needed about the packaged drinking water. It is concluded that most of the respondents stated that packaged drinking water is moderately needed.

ASSOCIATE STATISTICS

Packaged Drinking water Brand Preference and Gender

For finding the relationship between packaged Drinking water Brand preference and gender of respondents, a hypothesis is framed and tested with the help of ANOVA and presented in Table 4.5.7.

HO: preference of the packaged Drinking water Respondents is similar with respect to gender.

Table 4.5.7 Mean, Standard Deviation, F and P Values between Packaged Drinking water Brand preference and Gender

Packaged Drinking water Brand preference	Gender of Respondent				F Value	P Value
	Male		Female			
	Mean	S.D	Mean	S.D		
Kinley	3.7	0.729	3.37	0.669	13.623	**0.001***
Bisleri	3.76	0.76	3.22	0.462	2.034	**0.001***
Railneer	3.08	0.682	2.8	0.411	13.156	**0.001***
King fisher	3.28	0.636	2.83	0.323	14.890	**0.001***
Neera	2.99	0.628	3.04	0.669	3.962	**0.213**
Bisline	2.98	0.564	2.79	0.224	8.091	**0.001***
Aqua fina	2.85	0.437	2.62	0.758	8.429	**0.001***

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table 4.5.7 shows the mean, standard deviation, P and F values between Packaged Drinking water Brand preference and Gender of Respondents .The significant P values on level of Brand Preference, kinley, bisleri, railneer, king fisher, bisline and Aquafina on gender infers that this company brand Preference have been influenced by gender. The non-significant P values on the remaining (Neera) brand preference infer that these packaged drinking water brand preference do not have any influence over gender.

Packaged Drinking water Brand Preference and Age

In this part, an attempt is made to know whether the brand preference have influence over the age of respondents or not. To test these factors, a hypothesis is framed and tested by using ANOVA and presented in table 4.5.2.

HO: Preference of the packaged drinking water brand similar with respect to age.

Table 4.5.8 Mean Standard Deviation, F and P Values between Packaged Drinking water Brand preference and Age

Brand preference	Age of Respondents								F Value	P Value
	Below 20		20-40		41-60		Above 60			
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
Kinley	3.92	0.432	4.08	0.568	3.86	0.608	4.51	1.256	19.256	0.001*
Bisleri	4.59	0.823	3.98	0.105	4.52	0.742	4.94	0.124	6.145	0.001*
Railneer	3.7	0.639	3.54	1.325	3.95	0.612	4.17	0.481	8.358	0.001*
King fisher	3.21	0.568	4.29	0.928	3.57	0.324	3.97	0.005	7.458	0.001*
Neera	4.39	0.96	3.67	0.725	3.85	1.831	4.07	1.712	20.974	0.001*
Bisline	4.1	0.484	4.32	0.843	3.72	0.981	3.53	0.962	26.791	0.001*
Aquafina	4.02	0.896	4.04	0.983	3.85	0.627	3.69	0.576	16.843	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table 4.5.8 reveals mean, standard deviation, P and F values between level of preference of packaged drinking water brand and age of the respondents. The significant P values on the level of preference of the Packaged Drinking water, kinley, bisleri, railneer, kingfisher, neera, bisline and Aquafina infer that these levels of preference of Packaged Drinking water Brand have been influenced by age of the respondents.

Packaged drinking water Brand Preference and Marital Status

For knowing the influence of marital status on level of preference of packaged Drinking water a hypothesis have been framed and tested by applying ANOVA and is presented in Table 4.5.3.

HO: Brand Preference of the packaged drinking water consumer is similar with respect to marital status.

Table 4.5.9 Mean, Standard Deviation, F and P Values between Brand Preference and Marital Status

Packaged Drinking water Brand Preference	Marital status				F Value	P Value
	Married		Unmarried			
	Mean	S.D	Mean	S.D		
Kinley	3.94	0.832	3.74	1.481	9.854	0.001*
Bisleri	4.01	0.784	4.65	1.029	22.794	0.004*
Railneer	4.95	0.681	3.57	0.932	5.648	0.207
King fisher	4.76	0.864	3.92	0.684	27.987	0.001*
Neera	3.83	0.901	4.92	0.893	70.014	0.001*
Bisline	4.33	0.527	3.74	0.876	2.984	0.001*
Aqua fina	4.57	0.947	4.26	0.693	14.953	0.001

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table 4.5.9 shows the mean, standard deviation, P and F values between Packaged Drinking water Brand preference and Marital status of the respondents. The significant P values of kinley, bisleri, king fisher, neera, bisline and Aquafina on Marital Status infers that these level of company brand preference of Packaged Drinking water have been influenced by Marital Status. The non-significant P values of railneer infer that this factor on packaged drinking water has not been affected by Marital Status.

Packaged Drinking water Brand preference and Education Qualification

For testing the relationship between the Brand preference and Educational qualification of the respondents, a hypothesis is framed and tested with the help of ANOVA and presented in Table 4.5.10.

HO: Brand preference of the respondents is similar with respect to Educational qualification.

Table 4.5.10 Mean, Standard Deviation, F and P Values between Packaged Drinking water Brand Preference and Education Qualification

Brand Preference	Education Qualification								F Value	P Value
	Illiterates		SSLC/HSC		UG and Above		Professionals			
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
Kinley	3.84	0.847	4.87	0.925	3.84	0.487	3.64	1.801	15.344	0.001*
Bisleri	4.81	0.861	4.46	1.641	3.59	0.689	3.29	1.378	4.982	0.001*
Railneer	4.75	0.879	4.391	1.824	3.64	0.487	3.47	0.191	25.692	0.001*
King fisher	3.65	0.748	3.67	1.341	4.68	0.972	3.66	0.963	18.354	0.001*
Neera	3.74	0.684	3.07	0.951	4.81	0.394	3.28	0.773	40.124	0.001*
Bisline	4.01	0.589	3.47	0.875	4.73	0.471	4.38	0.851	29.348	0.001*
Aqua fina	4.35	0.971	3.67	0.941	4.92	0.680	4.81	0.679	28.924	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.5.10 shows the mean, standard deviation, P and F values between the preference of Packaged Drinking water and educational qualification of the respondents infer that all 7 Brand preference namely kinley, bisleri, railneer, king fisher, neera, bisline and Aqua fina on educational qualification infers that this company brand preference have been influenced by educational qualification of the respondents.

Packaged Drinking water Brand Preference and Occupational Status

To test the relationship between occupational status of the respondents and their brand preference, a hypothesis is framed and tested with the help of ANOVA and presented in Table 4.5.11.

HO: packed Drinking water brand preference is similar with respect to their occupational status.

Table 4.5.11 Mean Standard Deviation, F and P Values between Brand preference of Packed Drinking water and Occupational Status

Brand Preference	Occupational Status								F Value	P Value
	Employees		Professionals		Business People		Others			
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
Kinley	4.82	0.792	3.91	0.843	4.001	1.339	4.953	0.013	38.697	0.001*
Bisleri	3.69	0.982	3.64	0.051	4.29	1.348	4.867	0.049	15.346	0.001*
Railneer	3.85	0.679	4.75	1.621	4.86	1.847	4.801	1.075	12.346	0.001*
King fisher	3.47	0.924	4.64	1.026	3.68	1.328	4.72	0.975	7.621	0.001*
Neera	3.29	1.259	4.61	0.924	3.45	0.9458	4.364	0.076	22.501	0.001*
Bisline	3.68	1.064	3.26	0.863	3.29	0.483	4.384	0.586	14.345	0.001*
Aqua fina	3.45	1.071	3.83	0.076	3.72	1.594	3.988	0.674	16.349	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.5.11 Shows the mean, standard deviation, P and F values between the brand preference of Packaged Drinking water and occupational status of the respondents infer that all 7 Brand preference namely kinley, bisleri, railneer, king fisher, neera, bisline and Aquafina on occupational status infers that awareness on companies have been influenced by occupational status of the respondents.

Motivational factors on Purchase of packaged drinking water and Educational Qualification

In order to know the relationship between educational qualification of the consumer and motivation factors to purchase. For testing this factor, a hypothesis framed with the help of ANOVA.

HO: consumer motivational factor to purchase are similar with respect to educational qualification.

Table 4.5.12 Mean, Standard Deviation, F and P Values between Motivational factors on Purchase of packaged drinking water and Educational Qualification

Motivational factors	Educational Qualification								F Value	P Value
	Illiterates		SSLC/HSC		UG and Above		Professionals			
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
Good for Health	4.61	0.491	4.53	0.847	3.49	1.681	4.97	0.031	40.371	0.001*
Standard Quality	3.02	0.946	3.42	0.009	3.67	1.461	4.69	0.530	7.641	0.001*
Low price	3.56	0.846	4.35	0.991	3.94	1.467	4.91	0.007	9.246	0.001*
Free from Adulteration	3.76	0.761	4.19	0.983	3.17	0.946	5.34	0.049	6.970	0.001*
Preferred by all age group	3.19	0.781	4.34	0.794	4.59	0.257	4.95	1.248	14.354	0.001*
ISI/ FSSAI	3.47	1.247	4.38	1.029	4.01	1.462	5.01	1.349	14.348	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.5.12 shows the mean, standard deviation, P and F values of motivational factors of Packaged Drinking water and educational qualification. The significant P values of all motivational factors to purchase on educational qualification infer that all motivational factors have been influenced buy educational qualification.

Motivational factors on Purchase of packaged drinking water and Occupational Status

To test the relationship between occupational status of the respondents and their level of motivational factors to purchase, a hypothesis is framed and tested with the help of ANOVA and the results are presented in the Table 4.5.13.

HO: Motivational factor to purchase are similar with respect to their occupational status

Table 4.5.13 Mean Standard Deviation, F and P Values between Motivational factors on Purchase of packaged drinking water and Occupational Status

Motivational factors	Occupational Status								F Value	P Value
	Employees		Professionals		Business People		Others			
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
Good for Health	4.93	0.671	3.94	0.490	3.41	1.243	3.41	0.553	36.661	0.001*
Standard Quality	4.54	0.988	4.61	0.120	3.17	1.048	4.38	0.671	12.064	0.001*
Low price	4.35	0.952	4.83	0.967	3.16	1.046	4.92	1.034	10.370	0.001*
Free from Adulteration	4.61	0.976	4.67	0.243	3.47	0.971	4.00	0.914	10.192	0.001*
Preferred by all age group	4.00	1.024	4.10	1.042	4.51	0.687	4.31	0.750	25.317	0.001*
ISI/ FSSAI	4.89	1.354	4.09	1.092	4.37	1.248	3.92	0.436	14.391	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.513 Shows the mean, standard deviation, P and F values of motivational factors of Packaged Drinking water and occupational status. The significant P values of 7 motivational factors to purchase on occupational status infer that all motivational factors have been influenced by their occupational status.

Motivational factors to Purchase of packaged drinking water and Gender

For finding the relationship between motivational factors to purchase and gender of respondents a hypothesis is framed and tested with the help of ANOVA.

HO: Motivational factor of the consumer to purchase the packaged drinking water are similar with respect to gender.

Table 4.5.14 Mean Standard Deviation, F and P Values between Motivational factors to Purchase of packaged drinking water and Gender

Motivational factors	Gender of Respondent				F Value	P Value
	Male		Female			
	Mean	S.D	Mean	S.D		
Good for Health	2.39	1.910	1.39	3.104	25.947	0.001*
Standard Quality	5.39	2.731	6.01	1.842	12.073	0.001*
Low price	2.78	2.930	1.01	1.170	23.143	0.001*
Free from Adulteration	4.91	1.742	5.34	1.397	16.350	0.001*
Preferred by all age group	5.19	2.611	4.72	1.192	5.301	0.001*
ISI/ FSSAI	5.46	2.430	4.67	1.483	14.540	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.5.14 shows the mean, standard deviation, P and F values of motivational factors to purchase of Packaged Drinking water and Gender respondents. The significant P values of all motivational factors to purchase on Gender infer that all motivational factors have been influenced by Gender of respondents.

Gender and Level of Satisfaction to Consumer Buying Decision

The level of satisfaction may differ from consumer to consumer. On the basis of their assumption the researcher made an attempt to know which gender has a high level of satisfaction. The hypothesis framed and tested by applying ANOVA is given below.

HO: Level of satisfaction towards impact to consumer buying decision is similar with respect to gender.

Table 4.5.15 Mean Standard Deviation, F and P Values between Gender and Satisfaction level of consumers towards packaged drinking water

Satisfaction level	Gender of Respondent				F Value	P Value
	Male		Female			
	Mean	S.D	Mean	S.D		
Availability at various quantities	2	1.47	2.12	2.604	24.969	0.001*
Relatively Cheap	5.3	2.291	6.74	1.342	18.623	0.001*
Margin based pricing	2.39	2.49	1.74	0.67	14.471	0.001*
Quality of product	4.82	1.302	6.07	0.897	15.372	0.001*
Availability all places of purchases	4.8	2.171	5.45	0.692	16.003	0.001*
Quality of packing	5.37	1.99	5.4	0.983	3.547	0.001*
Familiar Brand	6.77	1.961	5.9	0.794	16.974	0.001*
Taste of Water	3.29	1.07	3.72	3.814	22.609	0.001*
Discount on bulk Purchase	4.9	1.971	3.40	2.201	16.076	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.5.15 reveals mean standard deviation F and P values between gender and level of satisfaction of consumer. The level of satisfaction on Availability of various quantities, Relatively Cheap**,** Margin based pricing**,** Quality of product, Availability all places of purchases, Quality of packing, Familiar Brand**,** Taste of Water, Discount on bulk Purchases are influenced by gender. Since the P value (0.001) is less than 0.05 at 5 percent level of signification.

Educational status and Level of Satisfaction to Consumer Buying Decision

For knowing the influence of educational status and level of satisfaction to consumer buying decision, a hypothesis has been framed and tested by applying ANOVA and is presented in Table 4.5.16.

HO: Level of satisfaction towards the impact of consumer buying decision is similar with respect to educational status.

Table 4.5.16 Mean Standard Deviation, F and P Values between Educational status and Level of Satisfaction to Consumer Buying Decision

Satisfaction level	Education Status								F Value	P Value
	Illiterates		SSLC/HSC		UG and Above		Professionals			
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
Availability of various quantities	4.33	0.421	3.59	1.39	4.11	1.643	4.21	0.953	35.697	0.001*
Relatively Cheap	3.94	0.738	4.26	1.02	3.87	1.448	5.18	1.071	11.118	0.001*
Margin based pricing	3.75	0.702	4.48	1.867	3.86	1.446	5.72	1.434	9.406	0.001*
Quality of product	4.01	0.726	4.32	1.143	4.17	1.371	4.8	1.314	9.246	0.001*
Availability in all places of purchases	3.4	0.774	3.75	1.942	5.21	1.087	5.11	1.15	24.353	0.001*
Quality of packing	4.29	1.104	3.74	1.992	5.07	1.648	4.72	0.836	13.445	0.001*
Familiar Brand	3.77	1.623	4.38	1.837	5.06	1.691	3.99	1.131	13.036	0.001*
Taste of Water	4.22	1.17	4.50	1.202	3.71	1.504	3.81	0.687	6.001	0.001*
Discount on bulk Purchase	4.27	0.928	3.21	1.27	4.19	1.114	3.43	0.930	8.608	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.5.16 reveals mean standard deviation F and P values between educational status and level of satisfaction on consumer that the level of satisfaction on consumers in all 9 factors are influenced by namely Availability of various quantities , Relatively Cheap **,** Margin based pricing **,** Quality of product, Availability all places of purchases ,Quality of packing, Familiar Brand **,** Taste of Water, Discount on bulk Purchases influenced by educational status of the consumers since the P value (0.001) is less than 0.05 at 5 percent level of signification.

Occupational Status and Level of Satisfaction to Consumer Buying Decision

In this part, an attempt is made to know whether the level of satisfaction to consumer buying decision is influenced by occupational status or not. A hypothesis is framed below.

HO: Level of satisfaction towards impact of buying decision is similar with respect to occupation status.

Table 4.5.17 Mean, Standard Deviation, F and P Values between Occupation and Level of Satisfaction to Consumer Buying Decision

Level of Satisfaction	Occupational Status								F Value	P Value
	Employees		Professionals		Business People		Others			
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
Availability of various quantities	2.5	1.254	4.24	0.976	4.35	0.956	4.13	0.859	25.348	0.001*
Relatively Cheap	5.5	0.124	4.5	0.946	4.46	0.978	4.69	0.918	15.308	0.001*
Margin based pricing	5.12	1.204	4.57	1.674	5.12	0.874	4.34	1.354	12.152	0.001*
Quality of product	3.54	0.534	4.62	1.468	4.79	1.064	3.78	1.045	9.145	0.001*
Availability in all places of purchases	1.45	0.547	4.34	1.462	4.73	0.983	1.72	1.046	21.632	0.001*
Quality of packing	4.31	0.134	3.46	1.762	4.56	1.468	4.22	1.467	18.412	0.001*
Familiar Brand	3.45	1.045	4.75	0.947	4.17	1.046	3.74	0.956	14.319	0.001*
Taste of Water	4.37	0.349	4.67	0.896	4.57	0.674	3.48	1.247	15.151	0.001*
Discount on bulk Purchase	4.39	1.248	3.75	1.348	4.12	1.46	3.64	1.523	13.462	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.5.17 shows mean, standard deviation, F and P values between occupational status and level of satisfaction on consumer which is presented in the above table 4.5.17. It states that the level of satisfaction on consumers in all the 9 factor is influenced by occupational status. Since the P value (0.001) is less than 0.05 at 5 percent level of signification. The mean reveals that the level of satisfaction on consumers namely availability of various quantities, Relatively Cheap **,** Margin based pricing **,** Quality of product, Availability all places of purchases ,Quality of packing, Familiar Brand **,** Taste of Water and Discount on bulk Purchase.

Gender and Preference to Buy the ISI Marked Packaged Drinking Water

Preferences may differ from consumer to consumer. On the basis of this assumption the researcher makes an attempt to know which gender has a high level of preference. The hypothesis framed and tested by applying ANOVA is given below.

HO: The impact of preference to buy the ISI marked packaged drinking water is similar with respect to gender.

Table 4.5.18 Mean, Standard Deviation, F and P Values between Gender and Preference to buy ISI Marked Packaged Drinking Water

Factors on preference to buy ISI Brand	Gender of Respondent				F Value	P Value
	Male		Female			
	Mean	S.D	Mean	S.D		
Tastier	4.91	1.024	4.23	0.851	19.102	0.001*
Standard quality	4.24	1.045	4.87	0.792	16.014	0.001*
Safe for healthy	3.41	0.972	4.41	1.953	34.138	0.001*
No Adulteration	3.15	0.869	2.36	0.897	12.992	0.001*
Reasonable price	3.45	0.798	4.1	0.903	14.139	0.001*
Available at all Places / Times	4.37	1.612	3.72	1.26	11.054	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.5.18 exhibits mean, standard deviation, F and P values between Gender and preference to by ISI brand packaged drinking water. The preference on ISI brand on Tastier, Standard quality, Safe for healthy is influenced by gender. Since the P value (0.001) is less than 0.05 at 5 percent level of significance. No adulteration, Reasonable price **,** Available at all Places / Time is also less than 0.05 that infers the preference to buy ISI brand is influenced by gender.

Educational status and Buying Preference on ISI Branded Packaged Drinking Water

It is an attempt to know the preference on ISI marked packaged drinking water is influenced by educational Status or not. A hypothesis is framed and tested with the help of ANOVA.

HO: Educational status towards packaged drinking water is similar with respect to preference on ISI Brand.

Table 4.5.19 Mean, Standard Deviation, F and P Values between and Educational status and Preference on ISI Branded Packaged Drinking Water

Factors on preference to buy ISI marked	Educational Status								F Value	P Value
	Illiterate		SSLC/HSC		UG and Above		Professionals			
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
Tastier	4.829	0.881	4.22	2.1	4.67	1.333	3.87	1.297	33.267	0.001*
Standard quality	4.439	1.198	4.89	1.73	4.43	1.138	4.84	1.415	8.688	0.001*
Safe for healthy	4.249	1.162	5.11	2.577	4.42	1.136	5.38	1.778	6.976	0.001*
No Adulteration	4.509	1.186	4.95	1.853	4.73	1.061	4.46	1.658	6.816	0.001*
Reasonable price	3.899	1.234	4.38	2.652	5.77	0.777	4.77	1.494	21.923	0.001*
Available at all Places / Times	4.789	1.564	4.37	2.702	5.63	1.338	4.38	1.18	11.015	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table: 4.5.19 reveals mean, standard deviation, F and P values between educational status and preference to by ISI brand packaged dirking water respondents. All the 6 factors are influenced by educational status of consumers. Since the P value (0.001) is less than 0.05 at 5 percent level of significance.

Occupational Status and consumer preference to buy ISI marked Packed Drinking Water

In this part, an attempt is made to know whether consumer preference on ISI marked packaged drinking water have influence over occupational status of respondents or not. For testing these factors, a hypothesis is framed and tested by using ANOVA and presented in Table 4.5.20.

HO: Level of consumer preference on ISI branded packed drinking water is similar with occupational status.

Table 4.5.20 Mean, Standard Deviation, F and P Values between Occupational status and preference to buy ISI Brand

Factors on preference to buy ISI marked	Occupational Status								F Value	P Value
	Employees		Professionals		Business People		Others			
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
Tastier	3.72	1.954	3.51	1.118	3.81	1.456	4.51	1.659	23.784	0.001*
Standard quality	6.72	0.824	3.77	1.088	5	1.478	5.07	1.718	13.684	0.001*
Safe for healthy	6.34	1.904	3.84	1.816	4.58	1.374	4.72	2.154	10.588	0.001*
No Adulteration	4.76	1.234	3.89	1.61	5.33	1.564	4.16	1.845	11.581	0.001*
Reasonable price	2.67	1.247	3.61	1.604	4.19	1.483	2.1	1.846	9.379	0.001*
Available at all Places / Times	5.53	0.834	2.73	1.904	5.1	1.968	4.6	2.267	16.028	0.001*

Source: Computed from primary data. *significant at 5 percent level. S.D – standard Deviation

Table 4.5.20 states mean, standard deviation, F and P values between occupational status and preference on ISI marked towards factor of risk involved in packaged drinking water which is presented in the above Table 4.5.14 exhibits that all 6 factors is influenced by occupational status. Since the P value (0.001) is less than 0.05 at the 5 percent level of significance. The mean value reveals the involvement in packaged drinking water on consumer namely Tastier, Standard quality, Safe for healthy, No Adulteration, Reasonable price and Available at all Places / Time of all the six factors are influenced by the occupational status.

Factors most Influence on Buying the Packaged Drinking Water and Gender of Respondents

In this part, an attempt is made to know whether the factors which most influences the Buying of the Packaged Drinking over Gender of respondents or not. For testing these factors, a hypothesis is framed and tested relating to this is given below in Table 4.5.21.

HO: There is no association between the gender and factors most influence on Buying the Packaged Drinking Water.

Table 4.5.21 Factors most influence on Packaged Drinking Water

Factors most influence on Packaged Drinking Water	Gender of Respondent		Total	
	Male	Female		
Good for Health	120	78	**198**	**Chi-Square Value = 5.193 DF= 5 P Value = 0.393**
Standard Quality	106	60	**166**	
Low price	77	50	**127**	
Free from Adulteration	86	72	**158**	
Preferred by all age group	38	26	**64**	
ISI Marked	59	28	**87**	
Total	**486**	**314**	**800**	

Source: Computed from primary data. *significant at 5 percent level.

In the table 4.5.21 the chi-square value of 5.193 with degree of freedom 5 and the P value is 0.3928. Since the P value is greater than 0.05 the null hypothesis is accepted. That means there is no association between the gender of respondent and factors most influence on packaged drinking water. In nutshell factor most influence on buying the packaged drinking water differs from male gender and female gender. Male gender is most influenced on purchase of packaged drinking water on their own to some extent.

Factors most Influence on Buying the Packaged Drinking Water and Educational Status

In this part, an attempt is made to know whether the factors most Influence on Buying the Packaged Drinking Water have influence over educational status or not. The hypothesis is framed and tested relating to this is given below Table 4.5.22.

HO: There is no association between the educational status respondents and factor most influence on buying the packaged drinking water.

Table 4.5.22 Factors most Influence on Buying the Packaged Drinking Water and Educational Status

Most Influence Factors	Education Status				Total	
	Illiterate	SSLC/HSC	UG and Above	Professionals		
Good for Health	33	72	58	35	**198**	**Chi-Square Value = 35.34 DF= 15 P Value = 0.0001***
Standard Quality	38	57	44	27	**166**	
Reasonable Price	18	32	63	14	**127**	
Free from Adulteration	35	40	61	22	**158**	
Preferred by all age group	16	10	28	10	**64**	
ISI Marked	18	21	32	16	**87**	
Total	**158**	**232**	**286**	**124**	**800**	

Source: Computed from primary data. *significant at 5 percent level.

In the above table 4.5.22, the chi-square value is 35.34 with degree of freedom=15 and the p valued is less than 0.05, it can be inferred that there is an association between the education qualification and factor most influence on buying the packaged drinking water is influenced by educational qualification the respondents.

Factors most Influence on Buying the Packaged Drinking Water and Occupation Status of Respondents

In this part, an attempt is made to know whether the Factors most Influence on Buying the Packaged Drinking Water have influence over occupational status of respondents or not. For testing these factors, a hypothesis is framed and tested in relation to the given Table 4.5.23 below.

HO: There is no association between the occupational status of respondents and most influence factor on buying the packaged drinking water.

Table 4.5.23 Factors most Influence on Buying the Packaged Drinking Water and Occupation Status of Respondents

Most Influence Factors	Occupational Status				Total	
	Employees	Professionals	Business peoples	Others		
Good for Health	99	45	42	12	**198**	**Chi-Square Value = 49.05** **DF= 15** **P Value =0.0521**
Standard Quality	64	43	36	21	**166**	
Reasonable Price	82	13	28	04	**127**	
Free from Adulteration	67	24	48	19	**158**	
Preferred by all age group	29	09	23	03	**64**	
ISI Marked	51	12	19	05	**87**	
Total	**392**	**146**	**198**	**64**	**800**	

Source : Completed from primary data: * significant at 5 percent level.

In the table 4.5.23 the chi – square value is 49.05 with degree of freedom 15 and the p value is 0.0521, it can be inferred that there is no association between occupation status of the respondents and factor most influence on buying the packaged drinking water.

Factors most Influence on Buying the Packaged Drinking Water and Income of Respondents (in Rs)

In this part, an attempt is made to know whether the most Influencing factors of Buying the Packaged Drinking Water have influence over income of respondents or not. For testing these factors, a hypothesis is framed and tested relating to this is given below Table 4.5.24.

HO: There is no association between the Income of respondents and factor most influence on buying the packaged drinking water.

Table 4.5.24 Factors most Influence on Buying the Packaged Drinking Water and Income of Respondents (in Rs)

Most Influence Factors	Income of respondents				Total	
	Below 20000	20000-30000	30001-40000	Above 40000		
Good for Health	17	22	69	90	**198**	**Chi-Square Value =115.71 DF= 15 P Value= 0.0001 ***
Standard Quality	22	09	89	46	**166**	
Reasonable Price	28	37	23	39	**127**	
Free from Adulteration	08	16	90	44	**158**	
Preferred by all age group	08	11	28	17	**64**	
ISI Marked	11	23	27	26	**87**	
Total	**94**	**118**	**326**	**262**	**800**	

Source: Computed from primary data. *significant at 5 percent level.

Table 4.5.24, the chi- square value 115.71 with degree of freedom 15 and the p value is 0.001, since the p value is less than 0.005, it can be inferred that there is an association between the monthly income of respondent and the factors most influence on buying the packaged drinking water, which means the purchase decision differs among the respondents to different income group.

Factors most Influence on Buying the Packaged Drinking Water and Age of Respondents

In this part, an attempt is made to know whether the Factors most Influence on Buying the Packaged Drinking Water have influence over Age of respondents or not. For testing these factors, a hypothesis is framed and tested relating to this is given below Table 4.5.25.

HO: There is no association between the Age of respondents and factor most influence on buying the packaged drinking water.

Table 4.5.25 Factors most Influence on Buying the Packaged Drinking Water and Age of Respondents

Most Influence Factors	Age of Respondents				Total	
	Below 20 years	20 - 40 years	41-60 years	Above 60 years		
Good for Health	30	86	69	13	**198**	**Chi-Square Value =51.16 DF= 15 P Value=0.0001***
Reasonable Price	56	45	46	19	**166**	
Standard Quality	28	53	36	10	**127**	
Free from Adulteration	43	48	41	26	**158**	
Preferred by all age group	09	27	19	09	**64**	
ISI Marked	10	45	25	07	**87**	
Total	**176**	**304**	**236**	**84**	**800**	

Source: Computed from primary data. *significant at 5 percent level.

In the table 4.5.25, the chi – square value is 51.16 with degree of freedom 15 and the p value is 0.001. Since the p value is less than 0.05, it can be inferred that there is an association between the age of the age of the respondent and the factor most influence on packaged drinking water which means that factor most influence on purchase differ among the respondent to different age group

Table 4.5.26 Spearman's Correlation Between Ranking of Factors to Health and Availability

Availability Factors / Health Factors	Available in All places	Changes the Supplier as Possible	Unavailability of hygienic water	Available at different quantites	Available at door step	Different taste are available
Less salt content	**-0.0009**	**0.014**	**-0.098**	**0.037**	**0.091**	**-0.056**
Dust free Purified Water	**0.044**	**0.079**	**-0.049**	**-0.984**	**0.89**	**-0.070**
Tasty and Mineral Content	**-0.018**	**-0.059**	**0.072**	**-0.019**	**-0.006**	**0.052**
Doctors Advice	**-0.017**	**-0.030**	**0.043**	**0.052**	**-0.111**	**0.056**
Free from Germs	**0.118**	**-0.078**	**0.021**	**-0.024**	**-0.076**	**0.051**
Preventing dehydration	**-0.124**	**0.081**	**-0.029**	**0.007**	**0.108**	**-0.073**

Source: Computed from primary data.

The above table 4.5.26, depicts the correlation between availability factors to packaged drinking water has low degree of positive and negative relationship with **HEALTH FACTOR** on packaged drinking water. Available in places to packaged drinking water has low degree of positive relationship with dust free purified water and free from germs and tasty and mineral content and low degree of negative relationship with less salt content, taste and mineral content, doctors advice, preventing dehydration. Changes the suppliers has low degree of positive relationship with less salt content, tasty and dust free purified water and preventing dehydration and low degree of negative relationship with tasty and mineral content, doctors advice and free from germs. Unavailability of hygienic water has low degree of positive relationship with tasty and mineral content, doctors advice and free from germs and low degree of negative relationship with less salt content, dust free purified water and preventing dehydration. Available at different Quantity has low degree of positive relationship with less salt

content doctors advice and preventing dehydration and low degree of negative relationship with dust free purified water, tasty and mineral content and preventing dehydration. Available at door step has low degree of positive relationship with tasty and mineral content, doctors advice and free from germs and low degree of negative relationship with the less salt content, dust free purified water and preventing dehydration. Different taste are available has low positive correlation with less salt content, dust free purified water and preventing dehydration and low degree of negative correlation with tasty and mineral content, doctors advice and free from germs. Surprisingly it is noted that the health and availability ranking factors relating to packaged drinking water low degree of positive or negative relationship with ranking of factors related to packaged drinking water.

Table 4.5.27 Spearman's Correlation between Ranking of Factors to Price and Packaging

Packaging Factors / Price Factors	Hygienically Packaged	Easy to Use	Different Uniformity in Container	Seal tighten Packing	Transparency in container	ISI Mark is provided
Affordable Price	**0.031**	**-0.113**	**0.057**	**0.033**	**-0.071**	**0.196**
Discount for bulk purchase	**-0.033**	**0.106**	**0.043**	**-0.068**	**0.002**	**-0.031**
Fit for family Budget	**-0.003**	**0.112**	**-0.167**	**0.064**	**-0.053**	**-0.088**
Delay payment is Accepted	**0.264**	**0.250**	**0.010**	**-0.270**	**-0.305**	**-0.215**
Low deposit	**0.188**	**0.140**	**-0.176**	**-0.019**	**-0.199**	**-0.114**
Available in all prices	**-0.408**	**-0.403**	**0.212**	**0.247**	**0.512**	**0.255**

Source: Computed from primary data.

The above table 4.5.27, correlation between packing factors to packaged drinking water has low degree of positive and negative relationship with price factors on packaged drinking water. Hygienically Packaged has low degree of positive relationship with Affordable price, delay payment is accepted, low deposit and available in all prices and low degree of negative relationship with discount for bulk purchase and fit for family budget. Easy to use has low degree of positive relationship with discount for bulk purchase, fit for family budget, delay payment is accepted and low deposit and low degree of native relationship with affordable price and available in all prices. Different Uniformity in Container has low degree of positive relationship with affordable price, discount for bulk purchase, fit for family budget available in all prices and low degree of negative relationship with fit for family budget and low deposit. Seal tighten Packing

has low degree of positive with affordable price, fit for family budget and low deposit and available in all prices and low degree of negative relationship with Discount for bulk purchase and Delay payment is Accepted. Transparency in container has low degree of positive relationship with Discount for bulk purchase and Available in all prices and low degree of native relationship with affordable prices, fit for family budget, delay payment is accepted and low deposit. ISI Mark is provided on packaging factor has low positive correlation with affordable price and available in all prices and low degree of negative correlation with discount for bulk purchase, fit for family budget, delay payment is accepted and low deposit. It is noted surprisingly that the price and packaging ranking factors relating to packaged drinking water low degree of positive or negative relationship with ranking of factors related to packaged drinking water consumers.

Factor Analysis of consumer Perception on Packaged Drinking Water

The Kaiser-Meyar-Olkin (KMO) test was used as an assumption test for testing the sampling adequacy of the data for Factor analysis. The K-M-O test and Bartlett's Test of Sphericity found that all extraction values are as per the expected values, therefore all items were used for further analysis. Item communalities also found to be good in the data set. Item communalities are considered “high” if they are all .8 or greater although this is unlikely to occur in the social sciences therefore low to moderate communalities of more than .50 is acceptable.

The maximum likelihood estimation procedure was used to extract the factors from the variable data. Principal Component analysis was employed primarily for extracting factors which have Eigen values greater than ‘1’ as per the Kaiser’s rule. Using this rule, four factors were extracted

Table No. 4.5.28 KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.874
Bartlett's Test of Sphericity	Approx. Chi-Square	5802.925
	df	190
	Sig.	.000**

**Significant at .05 level of confidence

Table indicates (K-M-O test is significant because test value is greater than .500 at 5% level) This shows a Factor Analysis is possible and Bartlett's Test of Sphericity also found significant χ =5802.925, P < 0.01). It indicates that there is relationship between the variables influencing consumer perception on packaged drinking water and data set was adequate to perform factor analysis.

Table No. 4.5.29 Principal Component Analysis (PCA)

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.248	31.239	31.239	6.248	31.239	31.239
2	1.853	9.263	40.502	1.853	9.263	40.502
3	1.626	8.129	48.631	1.626	8.129	48.631
4	1.269	6.347	54.978	1.269	6.347	54.978
5	.949	4.747	59.725			
6	.904	4.520	64.245			
7	.864	4.320	68.565			
8	.794	3.972	72.537			
9	.739	3.694	76.230			
10	.634	3.170	79.401			
11	.566	2.830	82.230			
12	.540	2.698	84.928			
13	.494	2.472	87.400			
14	.476	2.378	89.778			
15	.448	2.238	92.016			
16	.409	2.044	94.060			
17	.341	1.705	95.765			
18	.310	1.551	97.316			
19	.292	1.462	98.778			
20	.244	1.222	100.000			

Extraction Method: Principal Component Analysis, using Varimax rotation

Principal Component Analysis (PCA) revealed four components that had Eigen values greater than one and which explained 31.239%, 9.263%, 8.129%, and 6.347% of the total variance, respectively. The analysis yielded four factors explaining a total of 54.978% of the variance for the entire set of variables related to the Perception of the respondents towards the packaged drinking water. It is a pretty good extraction because

it is able to economize on the number of choice factors (from 20 to 4 underlying factors), it lost 45.022 % of information content for choice of variables. In addition, a four-component solution met the interpretability criterion. As such, four components were retained.

Table NO. 4.5.30 Rotations Sums of Squared Loadings

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.831	19.156	19.156
2	2.739	13.694	32.850
3	2.607	13.036	45.886
4	1.818	9.092	54.978

Source: Computed from primary data.

The purpose of this investigation was to explore the factor structure underlying the data set of perception of the respondents towards the packaged drinking water. Factor analysis has its key objective of reducing a larger set of variables to a smaller set of factors; less in number than the original variable set, but capable of accounting for a large portion of the total variability in the items.

Table 4.5.31 Varimax Orthogonal Rotated Component Matrix

	Variables	Component				Communalities
		1 (Safe for health)	2 (Reasonable price)	3 (Standard quality)	4 (Availability at all the places)	
1.	Packaged drinking water is pure than other drinking water	**.807**	.137	-356	382	.691
2.	Packaged drinking water is safe because it contains less toxic chemicals	**.790**	.136	235	153	.608
3.	Consuming packaged drinking water affects Health	**.749**	.197	125	233	.557
4.	Packaged drinking water is refreshing and thirst quenching	**.724**	.295	392	-352	.628
5.	Plastic packaging of water will affect the health	**.704**	.192	156	159	.571
6.	Packaged drinking water is suitable for special occasion in family	**.699**	.145	438	321	.532
7.	Packaged drinking water is not too expensive	.156	**.673**	236	-452	.558
8.	Sales of packaged drinking water after the expiry period is common	.285	**.670**	258	352	.450
9.	Regular purchase of packaged drinking water affects the family budget	.270	**.650**	365	189	.549
10.	The advertisement of packaged drinking water is expensive	.235	**.627**	356	359	.555
11.	Quality of water sold is good	.184	**.580**	262	319	.475
12.	Packaged drinking water is relatively cheap	.234	**.538**	-357	261	.619
13.	Taste of packaged drinking water is better than other water	.173	.256	**.763**	221	.465

14.	The quality of packaged drinking water is better than that of boiled water	.284	.145	**.689**	-365	.636
15.	The brand of packaged drinking water I drink tastes better than other brands	.295	.284	**.664**	325	.598
16.	Packaged drinking water is convenient for usage	.101	.236	**.657**	156	.583
17.	Different tastes are available	.236	.357	-326	**.757**	.401
18.	Packaged drinking water is available in various Product Designs	-201	.268	-125	**.743**	.556
19.	Packaged drinking water is available in convenient quantities	412	.101	.236	**.624**	.271
20.	Packaged drinking water is available anywhere	356	.426	258	**.518**	.692
21.	Eigen Values	6.248	1.853	1.626	1.269	
	% of Variation	31.239	9.263	8.129	6.347	
22.	Cumulative % of Variation	31.239	40.502	48.631	54.978	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

The Table 4.5.31 reveals that all the twenty variables have been extracted in to four factors. The factors have been appropriately labeled on the basis of variables represented in each case.

Factor 1 was labeled as 'Safe for Health' due to the high loadings by the following items: Packaged drinking water is pure than other drinking water, Packaged drinking water is safe because it contains less toxic chemicals, Consuming packaged drinking water affects Health, Packaged drinking water is refreshing and thirst quenching, Plastic packaging of water will affect the health and Packaged drinking water is suitable for special occasion in family. This first factor explained 31.24% of the variance. The loading of the variables first,

second, third, fourth, fifth and sixth on first Factor is .807, .790, .749, .724, .704 and .699 respectively. The communality of the factor is 31.24%, which means approximately 31.24% of the variance in any one of the original variable which is being captured by the extracted factors.

Factor II was labeled as 'Reasonable Price' due to the high loadings by the following items: Packaged drinking water is not too expensive, Sales of packaged drinking water after the expiry period is common, Regular purchase of packaged drinking water affects the family budget, The advertisement of packaged drinking water is expensive, Quality of water sold is good and Packaged Drink water is relatively cheap. This second factor explained 9.26% of the variance. The loading of the variables first, second, third, fourth, fifth and sixth on second Factor is .673, .670, .650, .627, .580 and .538 respectively. The communality of the factor is 40.50%, which means approximately 40.50% of the variance in any one of the original variable which is being captured by the extracted factors.

Factor III was labeled as 'Standard quality' due to the high loadings by the following items: Taste of packaged drinking water is better than other water, The quality of packaged drinking water is better than that of boiled water, The brand of packaged drinking water I drink tastes better than other brands and Packaged drinking water is convenient for usage. This third factor explained 8.13% of the variance. The loading of the variables first, second, third and fourth on third Factor is .763, .689, .664 and .657 respectively. The communality of the factor is 48.63%, which means approximately 48.63% of the variance in any one of the original variable which is being captured by the extracted factors.

Factor IV was labeled as 'Available in all Price' due to the high loadings by the following items: Different taste are available, Packaged drinking water is available with various Product Design, Packaged drinking water is available in convenient quantity, Packaged drinking water in available anywhere. This fourth factor explained 6.35% of the

variance. The loading of the variables first, second, third and fourth on fourth Factor is .757, .743, .624, and .518 respectively. The communality of the factor is 54.98%, which means approximately 54.98% of the variance in any one of the original variable which is being captured by the extracted factors.

Consumer perception on Packaged Drinking Water

To know the level of perception of the respondents in the study area an attempt was made towards the packaged drinking water. The level of perception of the respondents towards the packaged drinking water has been classified into three categories, namely, high level, moderate level and low level for analytical purpose. While the score value > (! + "#) and the score value < (!– "#) have been classified as high level perception and low level perception respectively, and the score values between (! + "#) and (!– "#) have been classified as moderate level perception. !and "# are the arithmetic mean and standard deviation of the score values of perception of 800 respondents. The dependent variables such as perception with safe for health, Reasonable Price, Standard Quality and available at all Places, which were factored by Factor analysis in the previous section were used in this analysis.

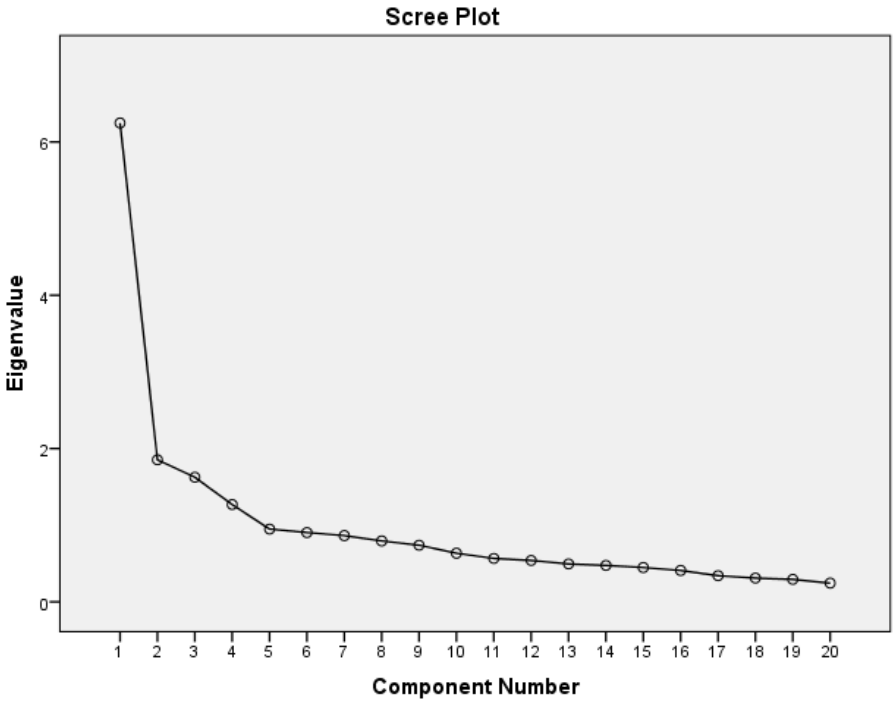
Table No 4.5.32 Scale of perception Level

Variables	Statistics		Scale		
	Mean ($\bar{x}$)	SD	Low Level	Moderate Level	High Level
Safe for Health	18.32	2.16	<16.03	16..03 to 20.62	20.62<
Reasonable Price	15.31	1.2	<12.35	12.35 to 18.28	18.28<
Standard Quality	13.67	1.02	<10.87	10.87 to 16.47	16.7<
Availability at all places	10.39	2.06	<8.32	8.32 to 12.46	12.46<

Source: Primary Data

The Table 4.5.32 shows the mean (!), standard deviation (SD) and scale to measure the Perception level of each variable. The value of the variable of Perception with safe for health has been classified into three levels of Perception as above 20.62 for high level, 16.03 to 20.62 for moderate level and below 16.03 for low level. The value of Perception with price was classified as above 18.28 for high level, 12.35 to 18.28 for moderate level and below 12.35 for low level. The value of Perception with quality was classified as above 16.70 for high level, 10.87 to 16.47 for moderate level and below 10.87 for low level. The value of Perception with Availability was classified as above 12.46 for high level, 8.32 to 12.46 for moderate level and below 8.32 for low level.

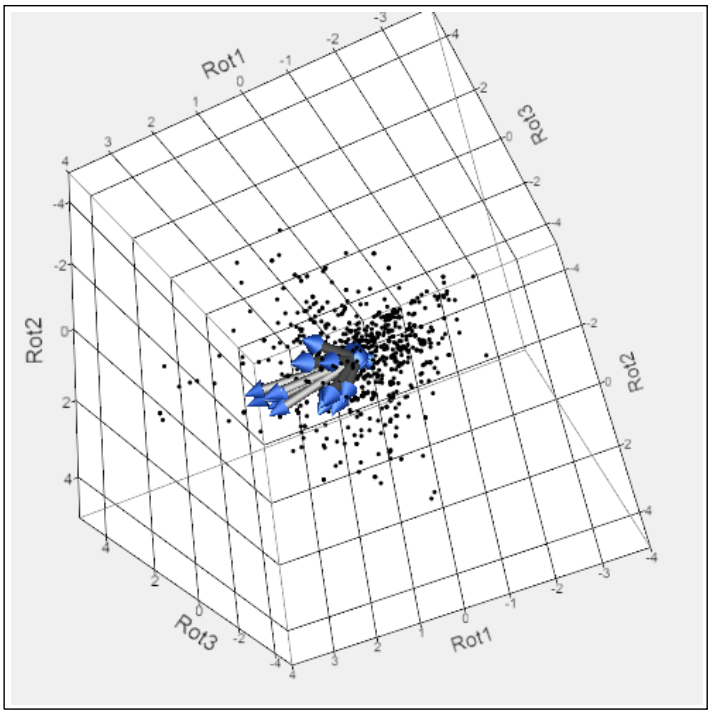
Figures. 4.5.1 Scree Plot shows the emerging components



Figures. 4.5.1 labeled "Total Variance Explained," shows that total variance of the observed variables is explained by each of the principal components. The first principal component explains the largest part of the total variance, this accounts to 31.239% of the total variance, second component explains 9.263% of the total variance, third component explains 8.129% of the total variance, fourth component explains 6.347% of the total variance. A component that displays an Eigen value greater than 1.00 accounts for a greater amount of variance. Therefore, only those components which are considered as principal components have Eigen value greater than 1.00. Here, four components having Eigen value more than 1.0 which explains 54.978% (approx 55%) of the total variance and the remaining components explain 45% of the total variance. Thus, above Figure demonstrates the distribution of variance among the components graphically.

Downward slope implies that out of twenty variables by the first four are principal components.

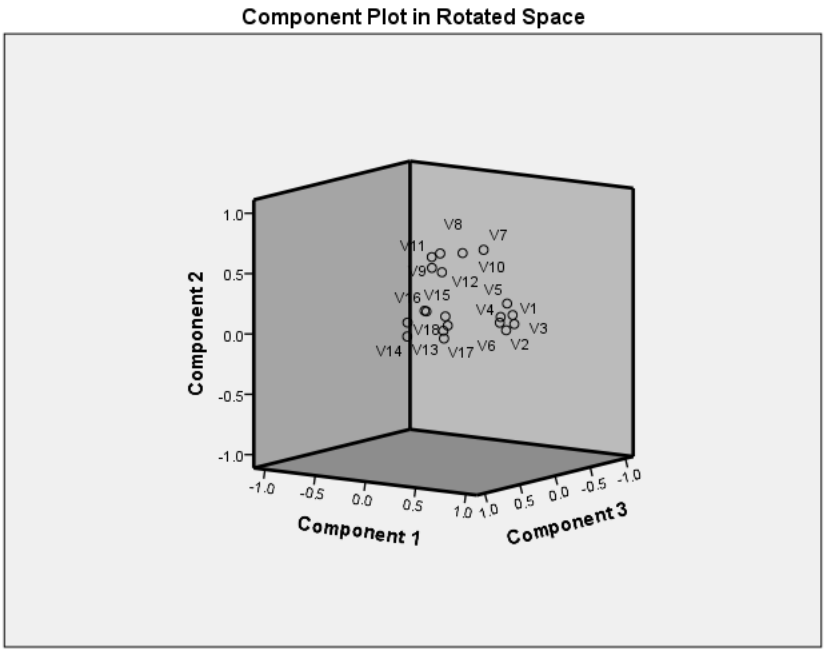
Figures. 4.5.2 Scatter Plot 3D shows the emerging components



Factor Analysis: Maximum Likelihood / Varimax

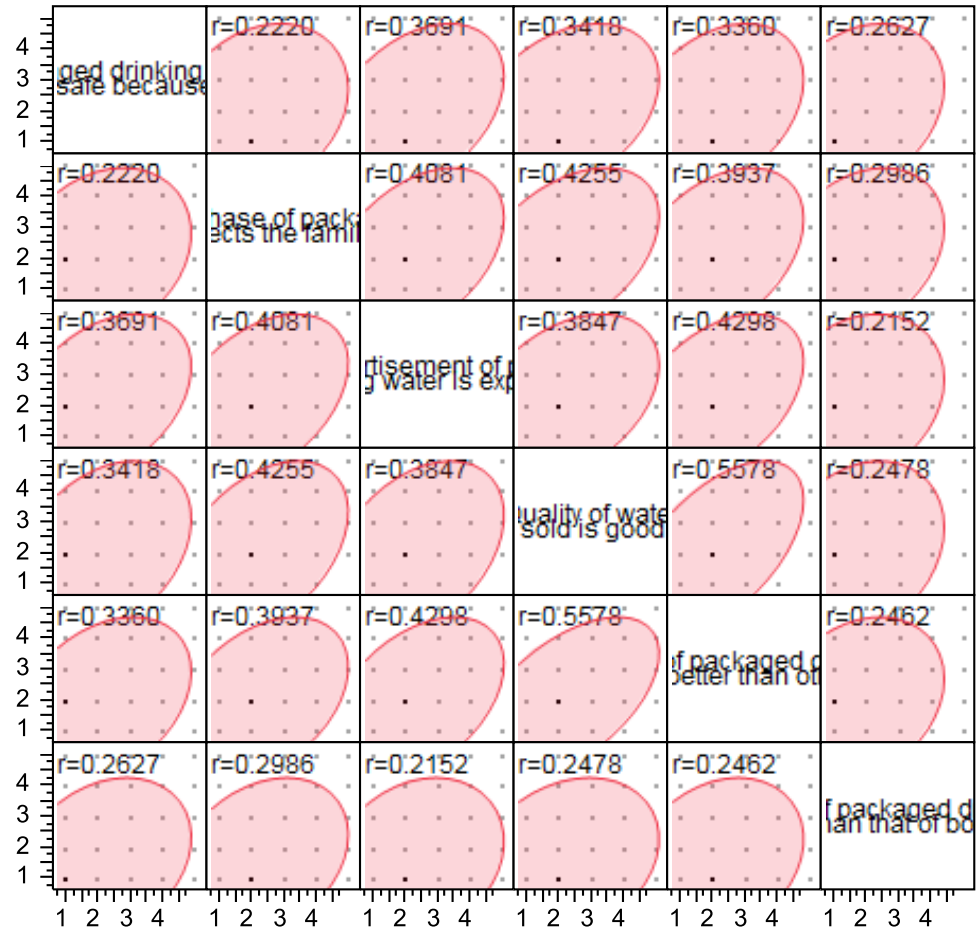
3D scatter plot shows that plot data points of the three axes in an attempt to show the relationship between the three variables.

Figures. 4.5.3 Component plot of factors 1, 2, 3.



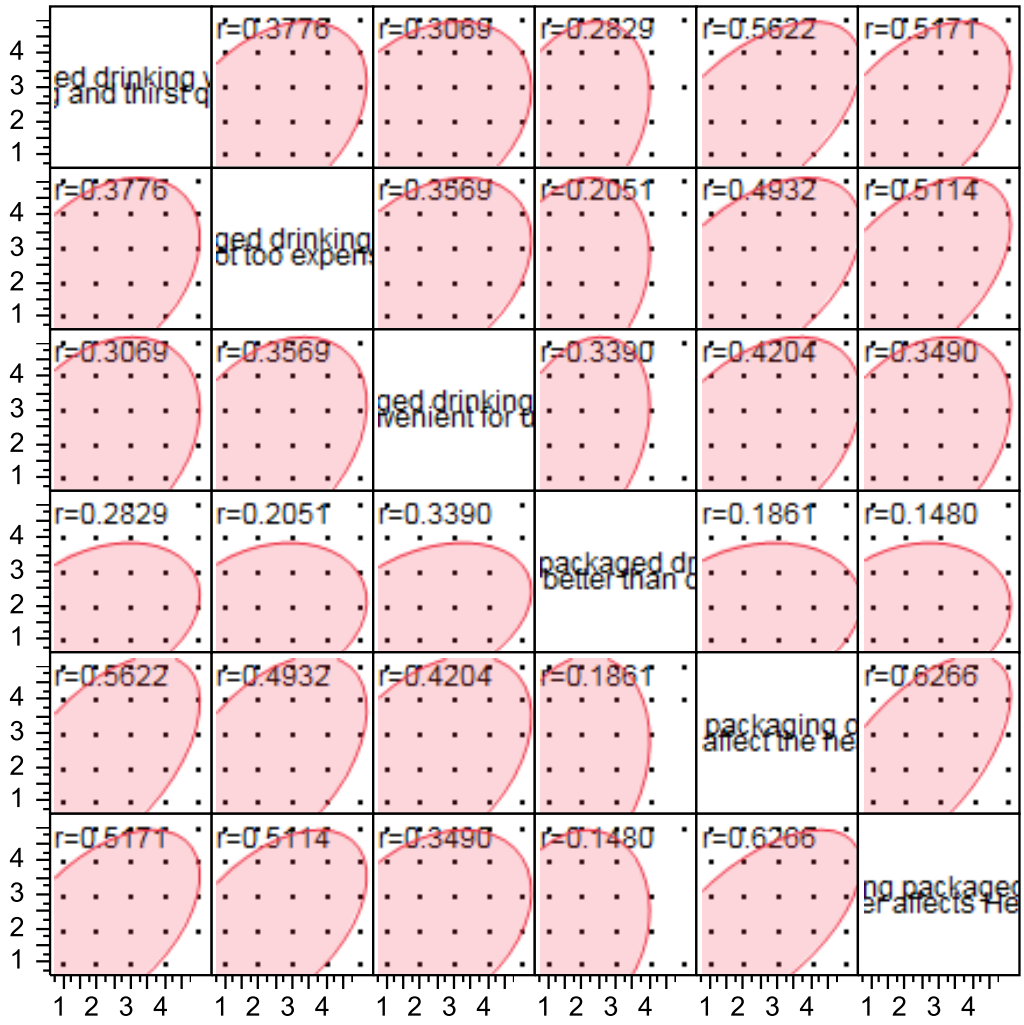
The above figures shows the plot of factors to replace a large number of correlated variables with a smaller number of un correlated variables, while computing as much information in the original variable as possible.

Figures. 4.5.4 Correlation between the indicators emerging in Component 1 – Safe for health



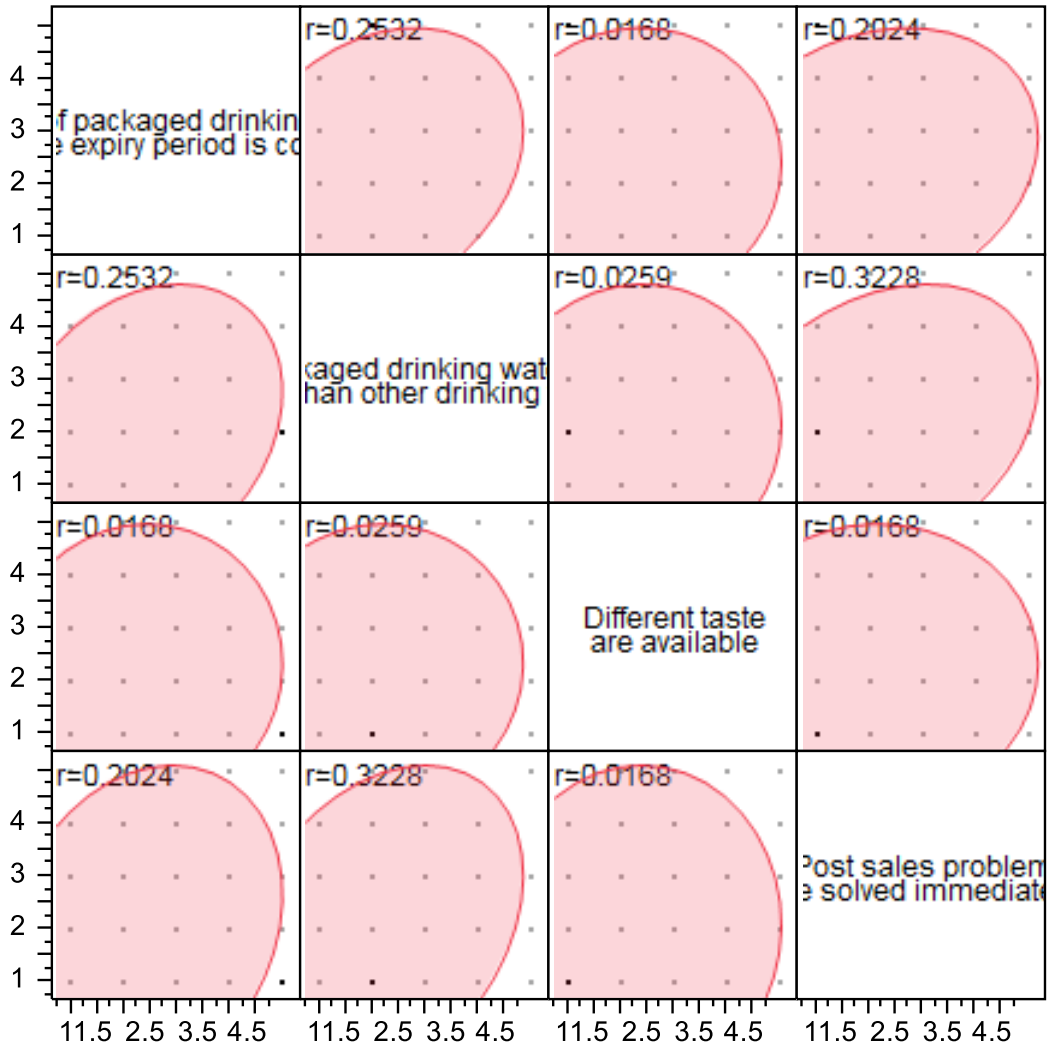
The Figures. 4.5.4 revealed that the First component was emerged with six indicators. All the indicators represent the “Safe of water for health”. The highest factor score happened to be “Packaged drinking water is safe because it contains less toxic chemicals” by scoring 0.807. Moreover, the scatter plot matrix diagram expose the correlation among the six indicators as positive. The strong correlation of 55.78 percent happened between “Quality of water sold is good” and Packaged drinking water is safe because it contains less toxic chemicals.

Figures. 4.5.5 Correlation between the indicators emerging in Component 2 – Reasonable price



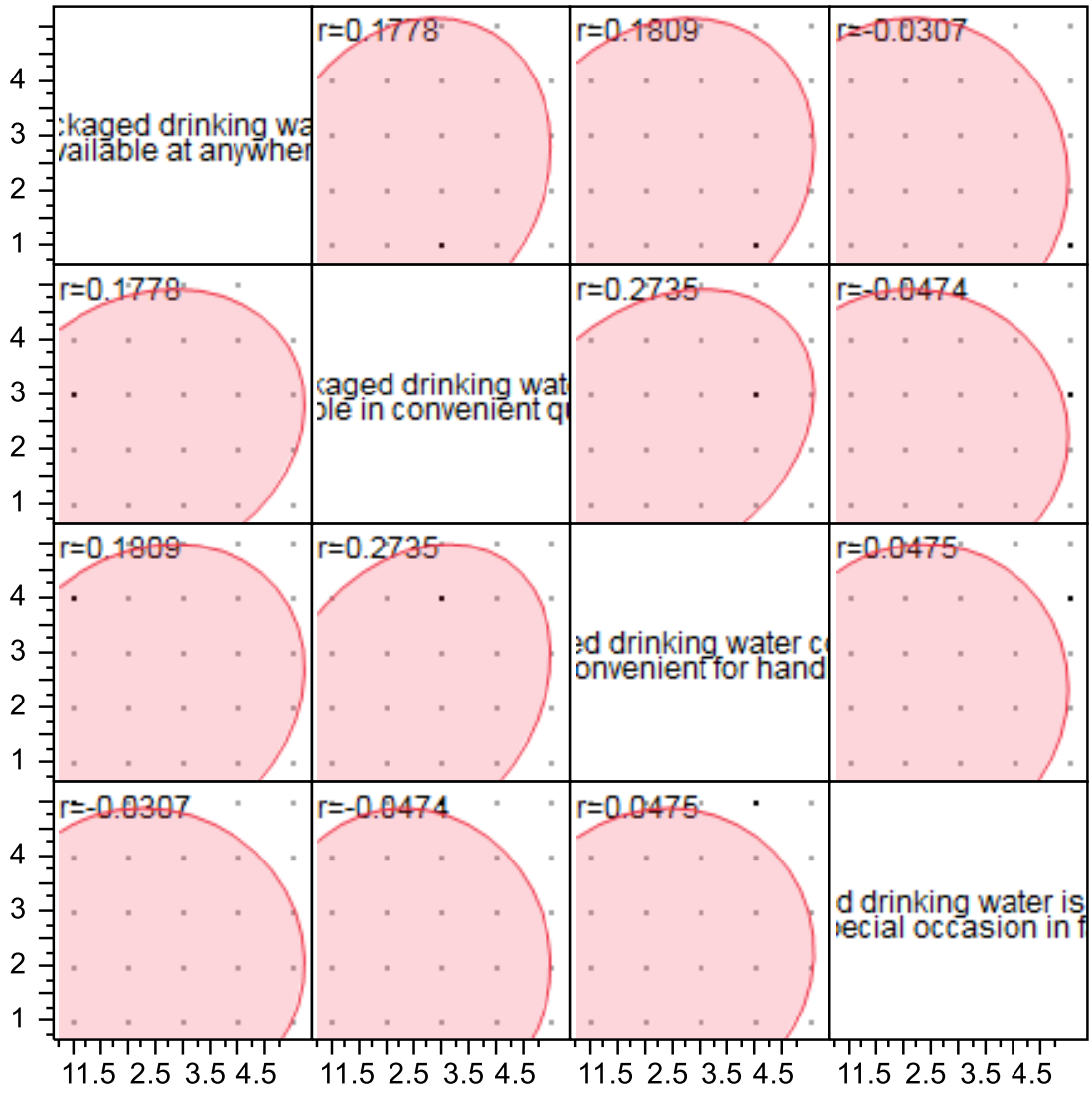
The Figures. 4.5.5 revealed that the Second component emerged with six indicators. All the indicators represent the "Reasonable price for the packed drinking water". The highest factor score of 0.673 happened to be "Packaged drinking water is refreshing and thirst quenching". Moreover, scatter plot matrix diagram expose the correlation among the six indicators were positive. The strong correlation of 62.66 percent happened between "Packaged drinking water is convenient for usage" and "Packaged drinking water is not too expensive".

Figures. 4.5.6 Correlation between the indicators emerging in Component 3 - Standard quality



The Figures. 4.5.6 revealed that the Third component emerged with four indicators. All the indicators represent the “Standard quality of the packed drinking water”. The highest factor score of 0.763 happened to be “Sales of packaged drinking water after the expiry period is common”. Moreover, scatter plot matrix diagram expose the correlation among the four standard quality indicators were positive. The strong correlation of 32.28 percent happened between “Post sales problem are solved immediately” and “Packaged drinking water is pure than other drinking water”.

Figures. 4.5.7 Correlation between the indicators emerging in Component 4 – Availability at all places



The Figures. 4.5.7 revealed that the Fourth component emerged with four indicators. All the indicators represent the "Availability of the packed drinking water". The highest factor score of 0.757 happened to be "Packaged drinking water available at anywhere". Moreover, scatter plot matrix diagram expose the correlation among the four indicators were positive. The strong correlation of 47.5 percent happened between "Packaged drinking water container is convenient for handling" and "Packaged drinking water is suitable for special occasion in family.

Chapter V

Findings, Suggestions and Conclusion

CHAPTER – V

FINDINGS, SUGGESTIONS AND CONCLUSION

FINDINGS

1. The study explains that out of 800 respondents, 486 (61 percent) are male respondents and the remaining 314 (39 percent) are female.

2. It was found that out of 800 respondents, 304 respondents (38.0 percent) are between the age group of 20-40 years, 236 respondents (30.0 percent) are between the age group of 41-60 years, 176 respondents (22.0 percent) are in the age group below 20 years and 84 respondents are above 60 years.

3. It reveals that out of total 800 respondents, 478 (60.0 percent) of the respondents are married and 322 (40.0 percent) of the respondents are unmarried.

4. It is evident that 286 (36.0 percent) of the respondents have finished their UG and above, 232 (29.0 percent) of the respondents are of HSC level and 158 (20.0 percent) of the respondents are illiterate and 124 (15.0 percent) are professionals.

5. This study indicates the occupational status of the packaged drinking water consumers in Ariyalur district. It is clear that out of 800 respondents, 392 (49.0 percent) of the respondents belong to employees category, 198 respondents (25.0 percent) are Business people, 146 (18.0 percent) of the respondents belong to others (i.e. Agriculture, Housewife). Hence it may is concluded that a majority of the respondents 392 (49.0 percent) are employees.

6. It is obvious that out of 800 respondents, 326 (41.0 percent) respondents are of the income group between Rs. 30,001-40,000, 262 (32.0 percent) are of the income group which comes under above Rs.40,000, 118 (15.0 percent) of the

respondents are of the income group between Rs.20,001-30,000, and 94 (12.0 percent) respondents are of the income group below Rs.20,000.

7. It is evident that out of the total 800 respondents, 520 (65.0 percent) of the respondents belong to joint family and 280 (35.0 percent) of the respondents are of Nuclear family.

8. The study finds out that the total 800 respondents, 394 (49.0 percent) of the respondents are of 5-6 members in the family, 226 (28.0 percent) are of 3-4 members, 132 (17.0 percent) are above 6 members and 48 (6.0 percent) are up to 2 members.

9. It is clear that Awareness of packaged drinking water, out of 800 respondents 396 (50.0 percent) of the respondents are aware of 5-6 years, 186 respondents (23.0 percent) are aware of 2-4 years, 173 (21.0 percent) of the respondents are aware for over 6 years and 45 (6.0 percent) of the respondents are aware less than 2 years.

10. The majority 326 (41.0 percent) of the respondents came to know from friends and relatives, 232 (29.0 percent) respondents through Advertisements, 137 respondents from Shopkeeper and 105 (13.0 percent) respondents got to know from Salesmen.

11. It was clear that most of the total respondent 32.8 percent, 25.5 percent and 20.5 percent of the respondent respectively have given top performance to the factors "less salt content, Dust free purified water, Tasty and mineral content", 37.8 percent, 29.0 percent and 11.6 percent of the respondents have given second place to the factors of "less salt content, Dust free purified water, free from germs" respectively, 37.4 percent, 27.6 percent and 14.4 percent of the total respondents have given third place to the factors of "tasty and mineral content, dust free

purified water, free from germs" respectively. 55.6 percent, 16.3 percent and 15.6 percent of the respondents gave 4th rank to the factors of "Preventing Dehydration, free from germs and tasty and mineral content" respectively. 30.4 percent, 27.9 percent and 17.5 percent of the respondents have given 5th position to "free from germs, doctors advice and tasty and mineral content" respectively, And finally the 6th rank is given by 45.4 percent, 20.0 percent and 11.9 percent of the respondents to the factors of "doctors advice free from germs and preventing dehydration" respectively.

12. The study finds out that 34.9 percent, 34.6 percent and 12.0 percent of the respondents respectively have given top performance to the factors "Available at different quantities, Available in all place and Change the suppliers as possible" respectively, 39.0 percent, 20.8 percent and 18.1 percent of the respondent have given second position to the factors of "Available in all place, Unavailability of hygienic water and Different taste are available" respectively. 48.9 percent, 24.9 percent and 10.1 percent of the respondents are given third rank to the factors of "Change the suppliers as possible, Available at different quantities and Available at door step (door delivery)" respectively, 38.9 percent, 23.0 percent and 14.1 percent of the respondents have given fourth position to the factors of "Different taste are available, Unavailability of hygienic water and Change the suppliers as possible" respectively. 30.0 percent, 17.0 percent and 16.0 percent of the respondents have given 5th rank to the factors of "Unavailability of hygienic water, Different taste are available and Available at different quantities" respectively, 53.5 percent, 16.0 percent and 14.1 percent of the respondents have given last position to "Available at door step (door delivery), Different taste are available and Unavailability of hygienic water" respectively

13. It is evident from out of the total 800 respondents, 272 (34.0 percent) of the respondents are aware of ISI mark, 129 respondents (16.0 percent) are aware of RO treatments, 112 (14.0 percent) of the respondents are aware of expiry date, 98 (13.0 percent), 96 (12.0 percent) and 95 (11 percent) are aware of ingredients, UV treatments and all of the above respectively.

14. From the result of the study, 446 (56 percent) of the respondents are aware about health issues and 354 (44 percent) of the respondents all not aware of the related health issues like kidney stones etc..

15. This study describes the problem faced by packaged drinking water consumers. It is classified as strongly agree, agree, natural, disagree and strongly disagree, 40.5 percent 39.5 percent, 36.0 percent and 35.2 percent of the respondents are strongly agreed in “High chlorine content, no uniform price, taste of water and different brands supplied by same agents”. 44.6 percent, 43.8 percent, 41.5 percent and 34.0 percent of the total respondents agreed to the problems faced by Packaged Drinking Water consumer with the factor of “Opening of lids, uneven mineral content, quality of water and no uniform price in the same quantity”. 40.5 percent, 38.3 percent, 38.0 percent and 34.0 percent are the respondents are neutral in “maximum retail price, leakage of taps, Irregular supply and uneven mineral content”. 29.5 percent, 25.8 percent, 19.5 percent and 18.0 percent of the respondents status that disagreed in the factor of “Duplicate ISI certificate, expiry date, Irregular supply and taste of water. 38.0 percent, 34.0 percent, 20.2 percent and 18.0 percent of the respondents strongly disagreed to the factor of “duplicate ISI certificate date of manufacture, maximum retail price and taste of water”.

16. It was proved that out of 800 samples, 716 respondents (90.0 percent) of them stated yes and remaining 84 respondents (10.0 percent) stated no to buy the ISI marked.

17. In this study majority of 192 (27.0 percent) of the respondents bought it because it is safe for health, 142 (20.0 percent) of the respondents for standard quality 118 (17.0 percent) of the respondents for no Adulteration, 108 (15.0 percent) of the respondents mentioned for taste, 89 (12.0 percent) of the respondents stated the reason of reasonable price and 67 (9.0 percent) of the respondents opinion about available in all places and times. It is concluded that majority and of the respondents bought it for safe health consciousness.

18. It was clear that most 334 (41.7 percent) of the respondents are buying with ISI mark, 166 (20.7 percent) of the respondents stated RO processed and 124 (15.5 percent) of the respondents stated that they buy any all brands 92 (11.5 percent) of the respondents stated that they only buy specific brand and 84 (10.6 percent) of the respondents buy only UV treated.

19. From this study, it is clear that the brand preference of the packaged drinking water by the consumer, ‘Bisleri’ brand occupied first place, ‘Kinley’ occupied second place, ‘Kingfisher’ occupied third place and Aquafina, Railneer, Biline, Meera occupied fourth, fifth, sixth and seventh place respectively. Acquaplus, Kavin, Amma water occupied eighth, ninth and tenth place respectively.

20. This study found out that the preferences in the quantity of the packaged drinking water at home 44 percent of the respondents preferred the 20L size of packaged drinking water, 29 percent of the respondents preferred 1L size of packaged drinking water, 15 percent of the respondents preferred the 2L size of the

packaged drinking water and 300 & 500 ml size of packaged drinking water were mostly used in the functions only.

21. It was evaluated that reason for preferring of particular brand of packaged drinking water. 428 (53.0 percent) of respondents preferred the particular brand of packaged drinking water for the drinking purpose, 15 percent of the respondents are prefer the particular brand for the Cooking purpose, 32 percent of the respondents prefer the particular brand for both purpose of drinking and cooking.

22. It was identified that advice to buy the packaged drinking water in the family for purchasing the particular brand of packaged drinking water. 44 Percentages of respondents preferred the particular brand of packaged drinking water as advised by their friends and relatives, 28 per cent of the respondents purchased the particular brand by own decision, 17 per cent of the respondents purchased the particular brand by as advised by their adult children, 6 per cent of the respondents purchased the particular brand by their spouse and 5 per cent of the respondents preferred the particular brand because of their parents.

23. It was clear that sources for purchasing the particular brand of packaged drinking water. 260 (32.0 Percent) of respondents preferred the particular brand of packaged drinking water from the shop, 25 percent of the respondents purchased the particular brand through middle man, 20 percent of the respondents purchased from the wholesaler, 16 percent of the respondents purchased from the retailer and 7 per cent of the respondents was preferred the particular brand from agent.

24. It was realized that level of satisfaction towards packaged drinking water reliability and reputation. There is classified as highly satisfied, satisfied, neutral, dis satisfied and highly dissatisfied. 49.0 percent, 39.5 percent and 39.0 percent

and 28.5 percent of the respondents are highly satisfied to the factor of "taste of water, quality of packing, quality of product and availability of various quantities". 58.0, 51.1 percent and 48.0 percent of the respondent are satisfied with the availability of various quantities, discount on bulk purchase and product design". 30.5 percent, 25.7 percent and 22.5 percent of the respondents are neutral with the factors of "margin based pricing, familiar brand and product design". 32.7 percent, 27.5 percent and 9.5 percent of the respondents are dissatisfied to the factor of "Relatively cheap, Availability all places and familiar brand". 35.6 percent, 6.0 percent and 4.0 percent of the respondents are highly dissatisfied with "relatively cheap quality of packing and discount on bulk purchase".

25. It was evident that opinion of the respondents regarding safe for health 427 (53.2 percent), 282 (35.2 percent) and 216 (27.0 percent) of the respondents strongly agreed to the factors of "preventing dehydration, trust worthiness and do not heat at filter". 43.8 percent, 36.0 percent and 31.0 percent of the respondents agreed with "trust worthiness, consume more water and do not heat or filter". 45.3 percent, 25.8 percent and 18.0 percent of the respondents were neutral with "intake more water, minimize medical expenses and do not heat". 18.2 percent, 14.0 percent and 10.8 percent of the respondents disagreed with minimize medical expenses, do not heat and consume more water". 10.0 percent, 7.2 percent and 4.0 percent of the respondents strongly disagreed with the factor of do not heat, preventing dehydration and free from worries.

26. This study concluded that the opinion of the respondents regarding price factor 306 (38.3 percent), 258 (32.2 percent) and 168 (28.0 percent) of the respondents strongly agreed to the factors of "reasonable price, available in all qualities, discount on regular purchase". 415 (52.0 percent), 282 (35.2 percent) and 162

(20.0 percent) of the respondents agreed to the factor of "discount, reasonable price and family budget". 34.5 percent, 21.0 percent and 18.0 percent of the respondents were Neutral to the factors of "fit the family budget, reasonable price, and discount on regular purchase". 29.5 percent, 23.0 percent and 7.6 percent of the respondents disagreed to the factor of "no deposit, fit for family budget and available in all quantities". 38.0 percent, 7.0 percent and 6.5 percent of the respondents strongly disagreed to the factors of "no deposit, fit for family budget, available in all quantities".

27. It was proved that the respondent's availability factor. 280 (35.0 percent), 260 (32.5 percent) and 134 (16.8) percent of the respondents strongly agreed with "available in anywhere, home delivery and conveniently packed". 44.0 percent, 41.5 percent and 23.5 percent of the respondents agreed to the factor of "available in anywhere, home delivery and conveniently packed". 44.2 percent, 44.0 percent and 17.0 percent are Neutral with the factor of "easy to store, convenient packaged and different taste". 30.6 percent, 19.8 percent and 11.5 percent of the respondents disagreed with "different taste, easy to store and contently packaged". 37.8 percent, 16.6 percent and 4.8 percent of the respondents strongly disagreed to the factor of "different taste, easy to store and home delivery".

28. This study explored the quality, 428 (53.5 percent), 326 (40.8 percent) and 262 (32.8 percent) of the respondents strongly agreed to the factor of "ISI mark, better quality provided and all age group preferred". 320 (40.0 percent), 288 (36.0 percent) and 262 (32.7 percent) of the respondents agreed to the factors of "all age group preferred, ISI mark and better quality". 42.0 percent, 28.0 percent and 21.0 percent of the respondents were **neutral** to the factor of "tastier than other water, ready for supply and better quality provided". 15.5 percent, 8.5 percent and

8.1 percent of the respondents disagreed with “ready supply, tastier than other water and all age group preferred”. 11.5 percent, 7.1 percent and 5.5 percent of the respondents strongly disagreed to the factors of “ready supply, all age group preferred and tastier than other water”.

29. It was valuated that 424 (53.0 percent), 324 (40.5 percent), 320 (40.0 percent) and 284 (35.5 percent) of the respondents strongly agreed with the factors of “packaged drinking water is pure than other waters, disposal of container is easy and after expiry date and convenient usage”. 51.0 percent, 44.0 percent and 32.2 percent of the respondents agreed with “packaged drinking water is safe, convenient for handling and disposal of container”. 39.0 percent, 38.5 percent and 37.8 percent of the respondents are neutral to the factor of “quality of water sold is good, affecting health and available in convenient quantity”. 29.0 percent, 28.5 percent and 28.2 percent of the respondents disagreed with the factor of “taste of drinking water is better than other water, regular purchase affect family budget and better than other brands”. 39.4 percent, 33.0 percent and 32.8 percent of the respondents strongly disagreed with the factor of “taste of drinking water is better than other water, regular purchase affect family budget and better than other brands I drink”.

30. It is clear from the attitude factors motivated to by the packaged drinking water that the consumer’s health factor occupied first place, quality factor occupied second place and certification factor occupied third place. It is also clear that brand factor, price factor, characteristic factor, container factor and age factor occupied fourth, fifth, sixth, seventh and eighth place respectively. It is concluded that majority of the respondents stated that health factor is highly motivating for by the consumers.

31. In this study recommended other to buy the packaged drinking water, 75.0 percentages belonged to Yes category and the Balance 25.0 percentage to No category.

32. This study explored that the reason for recommend to buy the packaged drinking water. Out of 800 respondents, 120 and 78 male and female respondents stated that Good for Health, 106 and 60 male and female respondents stated with the factor of standard quality, and the remaining male and female respondents stated the reason for buying the package drinking water is low price, free from adulteration and ISI marked.

33. The majority 342 (41.0 percent) of the respondents are highly satisfied, 256 (32.0 percent) of the respondents are satisfied and 160 (21.0 percent) are neutral.

34. This study reveals that 282 (35 percent) of the respondents moderately needed, 242 (30 percent) of the respondents needed and 186 (23 percent) of the respondents very much needed the packaged drinking water.

35. This study indicate the mean, standard deviation, P and F values between Packaged Drinking water Brand awareness and Gender of Respondents .The significant P values on level of awareness, Kinley, Bisleri, Railneer, Kingfisher, Bisline and Aquafina on gender infers that this company brand awareness have been influenced by gender. The non-significant P values on the remaining (Neera) brand awareness infer that these packaged drinking water brand awareness do not have any influence over gender.

36. This study reveals mean, standard deviation, P and F values between level of awareness of packaged drinking water brand and age of the respondents. The significant P values on the level of awareness of the Packaged Drinking water, Kinley, Bisleri, Railneer, Kingfisher, Neera, Bisline and Aquafina infer that the

level of awareness of Packaged Drinking water Brand have been influenced by age of respondents.

37. This study describes the mean, standard deviation, P and F values between Packaged Drinking water Brand awareness and Marital status of the respondents. The significant P values of Kinley, Bisleri, Kingfisher, Neera, Bisline and Aquafina on gender infers that these level of company brand awareness of Packaged Drinking water have been influenced by Marital Status. The non-significant P values of Railneer infer that factors on packaged drinking water has not been affected by Marital Status.

38. This study finds out the mean, standard deviation, P and F values between level of awareness of Packaged Drinking water and educational qualification of the respondents infer that all the 7 Brand awareness namely Kinley, Bisleri, Railneer, Kingfisher, Neera, Bisline and Aquafina on educational qualification infers that awareness on these companies have been influenced by educational qualification of the respondents.

39. This study explains the mean, standard deviation, P and F values of motivational factors to of Packaged Drinking water and occupational Gender. The significant P values of 7 motivational factors to purchase all based on educational qualification and it is inferred that all motivational factors have been influenced to occupation and Gender.

40. It was observed that mean standard deviation F and P values between gender and level of satisfaction on consumer. The level of satisfaction on Availability of version quantities, Relatively Cheap**,** Margin based pricing**,** Quality of product;Availability all places of purchases, Quality of packing, Familiar Brand**,**

Taste of Water, Discount on bulk Purchaseis influenced by gender. Since the P value (0.001) is less than 0.05 at 5 percent level of signification.

41. This study reveals the mean standard deviation F and P values between educational status and level of satisfaction on consumer reveals that the level of satisfaction on consumers all 9 factor is influences namely Availability of version quantities, Relatively Cheap**,** Margin based pricing**,** Quality of product, Availability all places of purchases, Quality of packing, Familiar Brand**,** Taste of Water and Discount on bulk Purchase are influenced by educational status of the consumers since the P value (0.001) is less than 0.05 at 5 percent level of signification.

42. The result of the study exhibits mean, standard deviation, F and P values between Gender and preference to by ISI marked packaged dirking water. The preference on ISI marked on Taste, Standard quality and Safe for healthy are influenced by gender. Since the P value (0.001) is less than 0.05 at 5 percent level of significance. No Adulteration, Reasonable price**,** Available at all Places/Time are also less than 0.05 which infers the preference to buy ISI marked is influenced by gender.

43. This study reveals the mean, standard deviation, F and P values between educational status and preference to by ISI marked packaged drinking water. All the 6 factors are influenced by educational status of consumers. Since the P value (0.001) is less than 0.05 at 5 percent level of significance.

FINDINGS ON PERCEPTION OF RESPONDENTS IN PACKAGED DRINKING WATER

1. The findings from the factor analysis revealed that the twenty variable to find the perception of the respondents with the packaged drinking water were classified into four factors such as safe for health reasonable price, standard and available at all places.
2. The Kaiser-meyar-olkin (KMO) and Bartlett's test are significant because their test values are greater than 500 at .874. This shows a factor analysis is possible and Bartlett's test & Sphere city significance.
3. Correlation between the indicators emerging in Component 1 – Safe for health with six indicators. The highest factor score happened to be "Packaged drinking water is safe" because it contains less toxic chemicals by scoring 0.807. The strong correlation of 55.78 percent happened between "Quality of water sold is good" and Packaged drinking water is safe because it contains less toxic chemicals.
4. Correlation between the indicators emerging in Component 2 – Reasonable price with six indicators. The highest factor score of 0.673 happened on "Packaged drinking water is refreshing and thirst quenching". The strong correlation of 62.66 percent happened between "Packaged drinking water is convenient for usage" and "Packaged drinking water is not too expensive".
5. Correlation between the indicators emerging in Component 3 - Standard quality with four indicators. All the indicators represent the "Standard quality of the packed drinking water". The strong correlation of 32.28 percent happened between "Post sales problem are solved immediately" and "Packaged drinking water is pure than other drinking water".

6. Correlation between the indicators emerging in Component 4 – Availability at all places with four indicators. The highest factor score of 0.757 happened on "Packaged drinking water available at anywhere". The strong correlation of 47.5 percent happened between "Packaged drinking water container is convenient for handling" and "Packaged drinking water is suitable for special occasion in family.

SUGGESTION OF THE STUDY

In the glow of the above findings, the following suggestions are offered to develop the business of packaged drinking water. The suggestions based on the study would be pertinent only for the Ariyalur district in the state of Tamilnadu.

It is found from the study that the need for purified water increases day by day the manufactures of the PDW should concentrate on in gradient denoted by the BIS (Bureau of Indian Standard) and FSSAI.

From the above discussion, most of the people who responded have moderate level of satisfaction with margin based pricing, product design and quality of packing drinking water except the quality of product and familiarity of brand of packaged drinking water.

Customers used to give importance to taste for buying packaged drinking water. Therefore, it is very much essential for the manufactures to produce the packaged drinking water in required quality taste and with reasonable price. This will help the manufactures to increase their market share for the products.

It is observed from the study that majority of the respondents are aware of packaged drinking water through TV advertisements next to friends and relatives. This clearly indicates that among other media, Television plays a dominant role in creating

awareness about packaged drinking water. Hence, it is suggested to the manufactures of packaged drinking water to use the TV media more effectively.

The findings of the study confirmed that most of the people who responded have given their preference to buy the packaged drinking water of Bisleri, Kinley, and Kingfisher than other brands such as Railneer, Bisline, Neera, Aqua finae, Aquaplus and Kavin.

Hence, it is suggested to manufactures to produce and ensure the availability of packaged drinking water in different containers adequately. This will help the manufactures to attract more and more customers so that not only sales will increase but also it will help in establishing the brand equity.

The study reveals that customer satisfaction is the most significant factor in marketing the packaged drinking water.

Hence, it is recommended that the companies of packaged drinking water should often ensure the availability of original quality and should offer better services of the sales point of their packaged drinking water.

It is observed from the result that the respondents in the different categories of occupation, income, age, education, and possession of different types of houses take care to check the information on the labels. Because of the perishable nature of packaged drinking water, the respondents need to check the information printed. The manufacturing date, expiry date and the contents of the packaged drinking water in its label.

Producers should keep in mind on discount of any kind. It will make sure to promote their market with big rewards.

Most of the rural customers are not aware of the brand thus, the company should create awareness among the rural area people about the hygiene and safety of packaged drinking water. At the time of exhibitions and festival occasions, the companies should sell a free sample pack of drinking water to attract new customer. So that it helps to increase its base in rural areas.

Consumers perception on PDW varies from individual to individual. So that the companies should ensure customers that these have the R.O. systems (Reverse osmosis systems) which are especially designed in removing salts contents, chemicals and other kinds of dissolved solids.

The findings of the study show that there were no association between the factors most influence on buying the packaged drinking water and gender of respondents. The companies of packaged drinking water should realize that new approaches need to be taken to develop the attitude of buying the packaged drinking water.

The study also reveals that majority of the respondents now-a-days, all are eager on buying safe drinking water, irrespective of their income, education, age and size of the family. The companies should get the certificate from BIS (Bureau of Indian Standard), Food safety standards act of India (FSSAI) 2006 and prevention of Food Adulteration Act (PFA) which will assure the consumers that their packaged drinking water is trustworthy. They should also get the certificate of Indian standard IS: 14543-1998 which prescribes the quality and safety requirements of packaged drinking water.

The Government of India and State Government should come forward to introduce a separate legislation such that of Drinking water (control) regulation act' for the sake of sustainability of natural resources, pollution control, optimum use of water, regulation of water content and related.

In the present scenario, health is important to every person and it resonates the famous saying “Health is Wealth”, in this reference, water plays an important role in maintenance the good health, it is also recommended that we should drink more water.

Therefore this industry is growing day by day but it needs control on quality as well as price by the government which must followed by industries strictly and government should govern them time to time. Bureau of Indian Standard (BIS) has given strict instructions to packaged Drinking water Industries that no person is authorized to manufacture, sell or exhibit for sale, packaged drinking water and packaged mineral water except under Bureau of Indian Standards Certification Mark.

Proper measures are to be taken for the proper functioning of water filtration plants and it should be maintained properly because they are installed with the motive of providing safe and pure water to the public, but in present situation the aim / vision is not upheld.

There should be strict and proper control measures to the packaged drinking water as it is related to the health of the public, therefore, government should interfere in all the aspects and processing of packaged drinking water to make it hygienic.

CONCLUSIONS

In recent times, PDW play an important role in the society due to scarcity of pure drinking water.

The people realized the need for clean drinking water convenient for travel and safe for health. The competition in the packaged drinking water market has gone up with new brands coming up and thus increasing the competition among the existing brands. The demand for packaged drinking water is always on rise due to its consumption on all types of occasions.

The present study is an attempt to analyze the consumers' problem and prospects of packaged drinking water in Ariyalur District. The researcher has indentified the socioeconomic status and usage profile of the respondents. And further, he analyzed the satisfaction, problem, prospects and attitudes and perception of buying and impact of satisfaction on the attitude of buying of Consumers' consuming packaged drinking water.

The research indicates that the prospects of consumer behaviour on PDW is positive manner like preventing dehydration, trust worthiness, intake more water etc. Most of the respondents' opinion after consumption of PDW for 5-6 years, 'Kinley' water brand has captured top position followed by 'Bisleri'. The overall result prove the respondents has perceived PDW in a positive manner. Over all, most of the packaged drinking water consumers reported to have satisfying experience with their quality, price and availability. With record to these, it is hoped that the present study on problem and prospects of packaged drinking water in Ariyalur District will provide a clear vision for empirical research in these area and generate interest and insight among the consumers.

SCOPE FOR FURTHER RESEARCH

The following are suggested for further research on packaged drinking water.

1. A Study on Buying Behavior of Customers towards Packaged Drinking Water in Ariyalur District.

2. A study on Brand Awareness towards Packaged Drinking Water in Ariyalur District.

3. A Comparative Study on consumption of Packaged Drinking Water to Tap Water in Ariyalur District.

4. A study on Consumer's Satisfaction towards Packaged Drinking Water in Ariyalur District.

5. Marketing Strategies of Packaged Drinking Water, Packaged Mineral Water and Bottled Soft Drinks-A Comparative Analysis.

6. A Study on level of satisfaction of Consumers on Packaged Drinking Water Brands their Attitudes and perception.

7. A Study on Consumer Perception on Packaged Drinking Water, Packaged Mineral Water and Bottled Soft Drinks-A Comparative study.

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Appendix

GOVERNMENT ARTS COLLEGE –ARIYALUR
PG & RESEARCH DEPARTMENT OF COMMERCE

A STUDY ON CONSUMERS PROBLEMS AND PROSPECTUS OF PACKAGED DRINKING WATER WITH SPECIAL REFERENCE TO ARIYALUR DISTRICT

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INTERVIEW SCHEDULE FOR CONSUMERS

Please put tick mark (√) in the appropriate boxes.

I. PERSONAL INFORMATION

1	Name	:		
2	Gender	:	1) Male	[ ]
			2) Female	[ ]
3	Age	:	1) Below to 20 Years	[ ]
			2) 21 to 40 Years	[ ]
			3) 41 to 60 Years	[ ]
			4) Above 60 Years	[ ]
5	Marital Status	:	1) Married	[ ]
			2) Unmarried	[ ]
6	Educational Qualification	:	1) Illiterates	[ ]
			2) SSLC/HSC	[ ]
			3) UG & Above	[ ]
			4) Professionals	[ ]
7	Occupational Stations	:	1) Employee	[ ]
			2) Professionals	[ ]
			3) Business people	[ ]
			4) Others	[ ]
8	Total Monthly Family Income	:	1) Below Rs.20,000	[ ]
			2) Rs.20,000 to Rs.30,000	[ ]
			3) Rs.31,001 to Rs.40,000	[ ]
			4) Above Rs.40,000	[ ]

9	Type of Family	:	1) Joint Family 2) Nuclear Family	[ ] [ ]
10	Size of the Family	:	1) Upto 2 members 2) 3-4 members 3) 5-6 members 4) Above 6 members	[ ] [ ] [ ] [ ]

II. AWARENESS ABOUT PACKAGED DRINKING WATER

2.1 How Long do you aware of the packaged drinking water?	1) Below 2 years	[ ]
	2) 3 to 4 years	[ ]
	3) 5 to 6 years	[ ]
	4) Above 6 years	[ ]
2.1 How do you come to know about the packaged drinking water?	1) Friends and relatives	[ ]
	2) Advertisement	[ ]
	3) Shopkeeper	[ ]
	4) Salesman	[ ]

2.2 State the reasons for consuming the packaged drinking water:

(SA=Strongly Agree; A=Agree; NO=No Opinion; DA=Disagree; SDA=Strongly Disagree)

S.NO.	Statement	SA	A	NO	DA	SDA
1.	**HEALTH PURPOSE**					
	Less salt content					
	Dust free purified water					
	Tasty and mineral content					
	Doctor's advice					
	Free from germs					
2.	**AVAILABILITY**					
	Available in all place					
	Change the suppliers as possible					
	Unavailability of hygienic water					
	Available at different quantities					
	Available at door step(door delivery)					
3.	**PRICE**					
	Affordable price					
	Discount for bulky purchase					
	Fit for family budget					
	Delay payment is accepted					
	Low deposit					
4.	**PACKAGING**					
	Hygienically packaged					
	Easy to use					
	Different Uniformity in container					
	Seal tighten packing					
	Transparency in container					

2.4 How long have you been consuming the packaged drinking water?	:	1) Below 2 years 2) 2 to 4 years 3) 4 to 6 years 4) 6 to 8 years 5) Above 8 years	[ ] [ ] [ ] [ ] [ ]

2.5 When do you prefer the packaged drinking water?	:	1) Regular 2) During Water Scarcity 3) During Function / Celebration 4) During Sickness 5) During Travel

2.6 Are you aware of the following about the packaged drinking water

1) ISI & FSS AI
2) RO
3) U/V
4) Ingredients
5) Expiry Date
6) All of the above

2.7 Are you aware that the Continuous intake of High salinity content water results in health issues like kidney stones.	1) Yes	[ ]
	2) No	[ ]

III. PROBLEMS FACED BY PACKAGED DRINKING WATER CONSUMERS

(SA=Strongly Agree; A=Agree; NO=No Opinion; DA=Disagree; SDA=Strongly Disagree)

	Statements	**SA**	**A**	**NO**	**DA**	**SDA**
3.1	When the bottles are exposed to direct sunlight, the taste of the water is different					
3.2	Uneven mineral content					
3.3	High chlorine content					
3.4	Duplicate brand					
3.5	Duplicate in ISI certificate					
3.6	No uniform price is same quantity					
3.7	Taste of the water is not uniform all the time					
3.8	Quality of the water is not proved					
3.9	Maximum retail price is not printed					
3.10	Irregular supply by agent					
3.11	Containers are not hygienic					
3.12	Leakage of taps					
3.13	Provision for opening the lids is not available					
3.14	Date of manufacture & expiry is not mentioned					
3.15	Different brands are supplied by same agents					

IV . 1 . TO ANALYSE THE PERCEPTION OF PACKED DRINKING WATER CONSUMERS

4.1	Do you prefer to buy the ISI marked packaged drinking water?	:	1) Yes 2) No	[ ] [ ]
4.2	If Yes, state the reasons for purchasing the ISI marked packaged water.	:	1) Tastier 2) Standard quality 3) Safe for health 4) Standard characteristics 5) No Adulteration 6) Reasonable price 7) Available at all places/times	[ ] [ ] [ ] [ ] [ ] [ ] [ ]

4.3 Which type of packaged drinking water do you normally prefer to consume?	:	1) All Branded water	[ ]
		2) Specific Brand only	[ ]
		3) Package with ISI Mark and FSSAI	[ ]
		4) RO Processed	[ ]
		5) VV Treated &Ozoniced	[ ]
4.4 Among the branded packaged drinking water, which brand is most preferred by you?	:		
		1) Kavin	[ ]
		2) Aquafina	[ ]
		3) Bisleri	[ ]
		4) Kingfresher	[ ]
		5) Neera	[ ]
		6) Kinley	[ ]
		7) Aquo plus	[ ]
		8) Rail Neer	[ ]
		9) Amma Water	[ ]
		10) Bisline	[ ]
4.5 Which volume of packaged drinking water do you prefer for home?		1) 300 ml bottle	[ ]
		2) 500 ml bottle	[ ]
		3) One litres	[ ]
		4) Two litres	[ ]
		5) 20 litres	[ ]
4.6 In what purpose the packaged drinking water is used for your home?		1) Drinking Purpose	[ ]
		2) Cooking Purpose	[ ]
		3) Both Purpose	[ ]
		4) Other Purpose	[ ]
4.7 Who advice you to buy the packaged drinking water in your family?		1) Spouse	[ ]
		2) Children	[ ]
		3) Parent	[ ]
		4) Relatives	[ ]
		5) Own decision	[ ]

4.8 Source of buying packaged drinking water, Rank it according to your preference.	1) Agent	[ ]
	2) Middlemen	[ ]
	3) Retailer	[ ]
	4) Wholesaler	[ ]
	5) Shop	[ ]

4.9 Satisfaction level of Consumers towards Packaged Drinking Water consumer

1	2	3	4	5
High Dissatisfaction	Dissatisfaction	Moderate	Satisfaction	High Satisfaction

Q.No	Statements	Tick the boxes where appropriate				
		HD	D	M	S	HS
4.1	Availability of various quantities					
4.2	Relatively cheap					
4.3	Margin based Pricing					
4.4	Quality of product					
4.5	Availability places for purchasing					
4.6	Product design					
4.7	Quality of Packing					
4.8	Familiar brand					
4.9	Taste of water					
4.10	Discount on bulk purchase					

4.4.10 Consumers Opinion about the perception on packaged drinking water

1	2	3	4	5
Strongly Disagree	Disagree	No	Agree	Strongly Agree

Q.No	Statements	Tick the boxes where appropriate				
		SA	D	N	A	SA
5.1	Packaged drinking water is pure than other drinking water					
5.2	Quality of water sold is good					
5.3	Packaged drinking water is safe because it contains less toxic chemicals					
5.4	Post sales problem are solved immediately					
5.5	Taste of packaged drinking water is better than other water					
5.6	The quality of packaged drinking water is better than that of other water					
5.7	Packaged drinking water is not too expensive					
5.8	The brand of packaged drinking water I drink tastes better than other brands					
5.9	Packaged drinking water container is convenient for handling					
5.10	Sales of packaged drinking water after the expiry period is common					
5.11	Consuming packaged drinking water affects Health					
5.12	The disposal of the container of packaged drinking water after usage is easy					
5.13	Packaged drinking water is available in convenient quantity					
5.14	Regular purchase of packaged drinking water affects the family budget					
5.15	Packaged drinking water is convenient for usage					

V. PROPECTS OF PACKAGED DRINKING WATER CONSUMERS

5.1 State your opinion towards the prospect of packaged drinking water: (SA=Strongly Agree; A=Agree; NO=No Opinion; DA=Disagree; SDA=Strongly Disagree)

S. No.	**Statements**	**SA**	**A**	**NO**	**DA**	**SDA**
	SAFE FOR HEALTH					
5.1	Useful in preventing dehydration and sustaining health					
5.2	Trust worthiness(free from worries)					
5.3	Intake or consume more water					
5.4	Do not heat or filter					
5.5	Minimize medical expenses					
	PRICE					
5.6	Reasonable price and more quantity					
5.7	Fit for family budget					
5.8	Discount for regular purchases					
5.9	Available in all prices and quantity					
	AVAILABILITY					
5.10	Packed water available anywhere					
5.11	Home delivery					
5.12	No deposit is demanded for containers					
5.13	Packaged drinking water is conveniently packed					
5.14	Different tastes are available					
5.15	Easy to store and stay forever					
	QUALITY					
5.16	ISI Mark/SFSSAI is provided on packaged water					
5.17	All age group prefer packaged drinking water					
5.18	Better quality is provided on packaged water					
5.19	Packaged drinking water is tastier than other water					
5.20	Conforming to have a ready supply of drinking water					

5.2 What attitude factors motivated you to buy the packaged drinking water (Give Rank)

Factors	**Rank**
1) Health factor	
2) Price factor	
3) Quality factor	
4) Age factor	
5) Brand factor	
6) Container factor	
7) Water characteristics factor	
8) Certification factor (ISI and FSSAI)	

5.3	Have you ever recommended others for buying the packaged drinking water?	:	1) Yes	[ ]
			2) No	[ ]
5.4	If Yes, state the reasons for recommendation buying the Packaged drinking water	:	1) Good for Health	[ ]
			2) Standard Quality	[ ]
			3) Low Price	[ ]
			4) Free from Adulteration	[ ]
			5) Preferred by all age groups	[ ]
			6) ISI & FSSAI Marked	[ ]
5.5	State your overall all satisfaction on the packaged drinking water.	:	1) Highly Satisfied	[ ]
			2) Satisfied	[ ]
			3) Neutral	[ ]
			4) Unsatisfied	[ ]
			5) Highly Unsatisfied	[ ]
5.6	Mention your opinion about the need of packaged drinking water.	:	1) Very much needed	[ ]
			2) Needed	[ ]
			3) Moderately needed	[ ]
			4) Not needed	[ ]

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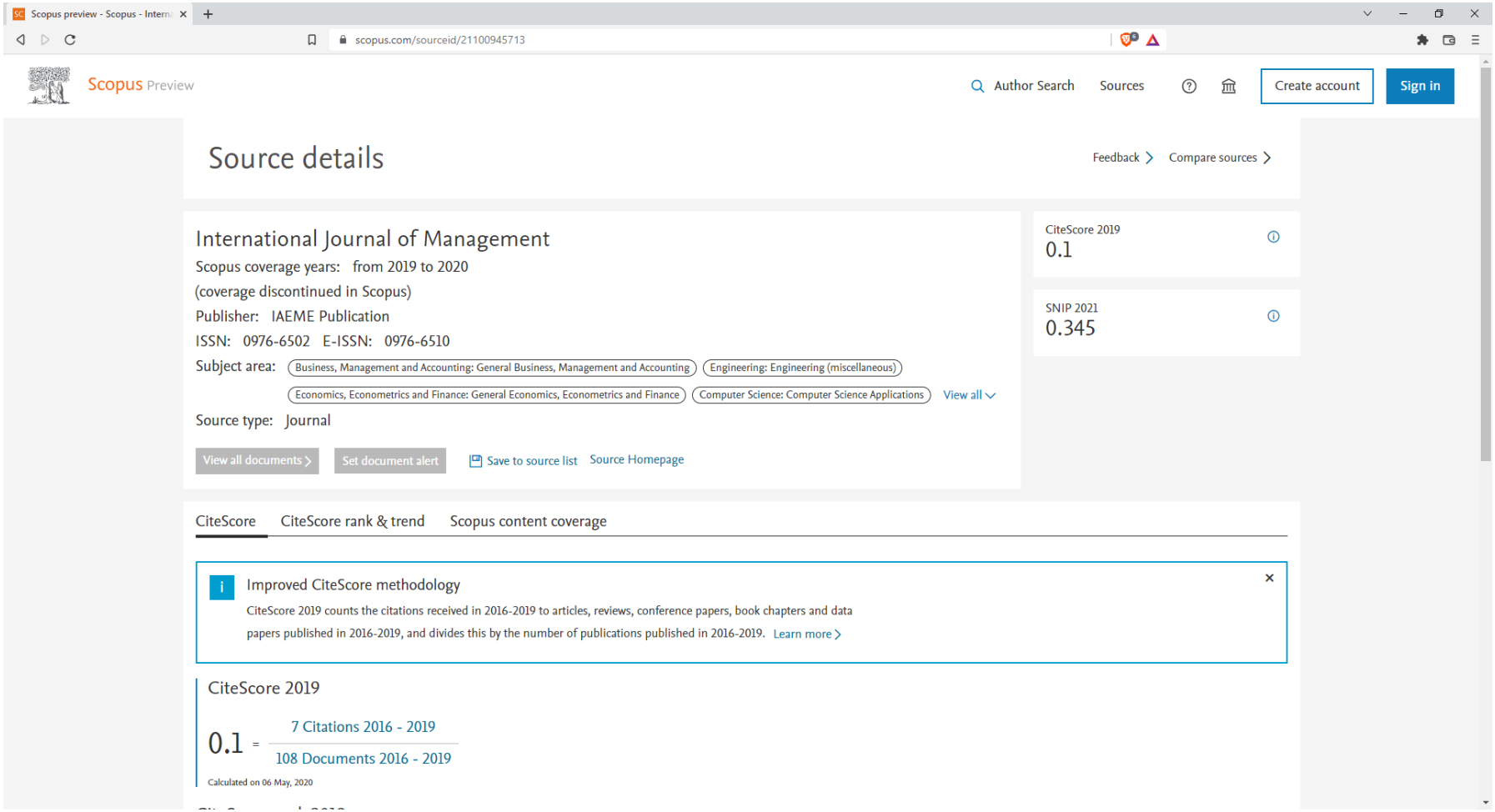
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A STUDY ON CONSUMER SATISFACTION TOWARDS PACKAGED DRINKING WATER CONSUMERS IN ARIYALUR TOWN

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ABSTRACT

Water is a precious gift of nature. It is obtained from various sources such as river, lakes, streams, well, bore well etc. Nearly (70%) of the earth is covered with water. There is nolife on earth with out water. The demand for the Packaged Drinking Water is always an increasing trends due to its uses of all types of instance. The main objectives of the present study are to analyse the level of satisfaction among the consumer towards Packaged Drinking Water. Packaged Drinking Water is easy to handling and customer buying the water bottles increasing in population the need for pure and safe water is rising due to increasing population. The Packaged Drinking Water is available in 300ml, 500 ml, 1 litre and 2 litre bottles and in 20 litre cans. Hence this study have been carried out to examine the consumer satisfaction towards Packaged Drinking Water.

Key words: Packaged Drinking Water, Consumer

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1. INTRODUCTION

Water is a distinct valuable gift to all living beings. Water is the most important component to our survival. Packaged drinking water has become an indispensable part of human life.

It is needless to mention that water, a component of Hydrogen and Oxygen is aprecious natural gift, which is very essential for the survival of the human kind and the animals (Gopinath & Kalpana, 2011a). The water available from untreated sources such as well, boreholes and spring is generally not hygienic and safe for drink. Thus it is desirable and necessary to purify the water and supply under hygienic condition for human drinking purpose (Usharani & Gopinath,2020b). To meet the drinking water requirements of people, many business concerns low & started purifying water, Bisleri is the first Italian based bottled water company in India. The detailed findings and implication and discussed in the chapter.

2. LITERATURE REVIEW

- Wagner M and oehlmann J (2009), in this study the results indicated that a broader range of foodstuff may be contaminated with endocrine disruptors when packed in plastics.
- In April, 2013, mineral water project information web site release an article on five mistakes can avoid in mineral water business like 1. Not doing proper market research. 2. Not deciding product mix properly, 3. Not properly deciding land, building size, machinery properly, 4 not doing plant layout, 5. Not executing plan properly. This indicates that we must focus on market research and consumer perception towards mineral water product (Usharani & Gopinath, 2020a).
- Shalini, S. and Lavanya, R (2016) study considered that packaged drinking water is a product which people buy not only when they undertake travelling or stay out of their own place but also during the stay in their own places. The reasons is that people are becoming health conscious in the present day environment. However the cost aspect of packaged water cannot be over looked in this process because for some people (Gopinath & Kalpana, 2011b).
- Sangeetha, M & Dr. K. Brindha (2017) study concludes that quality is the most important factor influencing the consumers to go for a particular brand of bottled water. They believe that compared to the tap water, consuming Bottled Drinking water is a hygienic one. Therefore the study suggested to the manufacturers to give due consideration for the hygienic aspect while manufacturing Bottled Drinking water.
- Water quality association (2001), eighty six percent of Americans have concerns about their home drinking water against cardiovascular diseases.

3. STATEMENT OF THE PROBLEM

The innovation of the last few deter many have promoted fast and efficient ways of demand of water on a global scale. Packaged Drinking Water is choosing familiar as the aspects of convenience and quality has be guaranteed Packaged Drinking Water has become anessential customer product in the recent Packaged Drinking Water industry has given choices in selecting with various styles of containers like bottle top, can etc. The people realized the need for pure drinking water convenient for travel and safe for health (Unnamalai & Gopinath, 2020). Hence the study has been carried out to answer the level of consumer satisfaction towards Packaged Drinking Water.

4. OBJECTIVES OF THE STUDY

- To Analyze the demographic profile of the consumer in Ariyalur town.
- To analyze the level of satisfaction of consumers using package Drinking waterin Ariyalur Town.

5. SCOPE OF THE STUDY

The present study has been limited to consumer satisfaction towords package Drinkingwater consumers in Ariyalur town.

6. METHODOLOGY

6.1 Sampling Design

The methodology of the study is mainly based on the primary data collected through interview schedule from the Package Drinking water Consumer. The non probability sampling technique is adopted for the study.

6.2 Sampling Procedure

The researcher has adopted convenience sampling method. The total sample size is 150 respondents. A well structured interview schedule was used to collect the relevant data from the population.

7. AREA OF THE STUDY

The study area was restricted to Ariyalur town only.

7.1 Statistical Tools Used

To collect data were analyzed by using the appropriate statistical tools.

- Percentage Analysis
- Two – way Table
- Chi – square Test.

7.2 Hypothesis

Hypothesis means more assumption or some suppositions to be proved or disproval.

- Null hypothesis (Ho). There is no significant relationship between the dependent andindependent variables.
- Alternative Hypothis (H1). There is a significant relationship between the dependent andindependent variables.

8. LIMITATION OF THE STUDY

- The present study was conducted in Ariyalur town only.
- Data were collected by random basis only.
- The sample respondent are restricted to 150 only.

9. ANALYSIS AND RESULTS

Table 1 Gender Classification

Gender	Frequency	Percentage
Male	114	76
Female	36	24
Total	**150**	**100**

Table 2 Marital Status

Status	**Frequency**	**Percentage**
Married	93	62
Unmarried	57	38
Total	**150**	**100**

Table 3 Educational Qualification

Educational	**Frequency**	**Percentage**
SSLC/HSC	15	10
Under Graduate	90	60
Post Graduate	29	19
Professionals	16	11
Total	150	100

Table 4 Occupational Status

Occupational	**Frequency**	**Percentage**
Business	40	27
Professional	35	23
Employed	55	37
House wife	20	13
Total	**150**	**100**

Table 5 Monthly Income

Income	**Frequency**	**Percentage**
Upto 10000	11	7
10001 to 20000	34	23
20001 to 30000	62	41
Above 30000	43	29
Total	**150**	**100**

Table 6 Satisfaction Factor

Factor	**Frequency**	**Percentage**
Price	23	15
Quality	45	30
Durability	27	18
Model / Design	20	13
Brand Loyalty	35	24
Total	**150**	**100**

Table 7 Sources of Awareness

Sources	**Frequency**	**Percentage**
Advertisement	58	39
Friends and Relatives	46	31
Neibours	27	18
Shopkeeper	19	12
Total	**150**	**100**

The table showing the distribution of respondents based on overall satisfaction of Packaged Drinking water Consumers.

Table 8 Satisfaction Level

Satisfaction	Frequency	Percentage
Highly Satisfied (Yes)	124	83
Not Satisfied (No)	26	17
Total	150	100

Table 9 Two way table showing the relationship between gender and level ofsatisfaction about the Packaged Drinking water Consumer

Gender	Level of Satisfaction		
	Satisfied (Yes)	No Satisfied (No)	Total
Male	83 (66.93)	09 (34.61)	92
Female	41 (33.07)	17 (65.39)	58
Total	124 (82.67)	26 (17.33)	150

Table 10 Two way table showing the Relationship between marital status andlevel satisfaction about the Packaged Drinking water Consumers

MaritalStatus	Level of satisfaction		
	YES	NO	Total
Married	78 (62.90)	15 (57.69)	93
Unmarried	46 (37.10)	11 (42.31)	57
Total	124 (82.67)	26 (17.33)	150

CHI Square Table Showing the Relationship between Martial Status and Level of satisfaction of Packaged Drinking water Consumers

Null Hypothesis

There is significant relationship between Martial Status and Level of stratification of Packeged Drinking water consumers.

Table 11 calculate chi – square value of 0.2467 is less than the table value of 3.84 at 5% level of significance. So the null hypothesis is accepted. Hence there is no significant relationship between Martial Status and Level of stratification of Package Drinking water Consumers.

CELL	F_0	F_e	$F_0 - F_e$	$(F_0 - F_e)^2$	$(F_0 - F_e)^2 / F_e$
R1C1	78	76.88	+1.12	1.25	0.0162
R1C2	15	16.12	-1.12	1.25	0.0775
R1C1	46	47.12	-1.12	1.25	0.0265
R1C2	11	9.88	+1.12	1.25	0.1265
Total	150				0.2467

Calculate chi-square value = 0.2467

Degree of freedom = 1

Level of significance = 5%

Chi-square table value = 3.84

CHI Square Table Showing the Relationship between Gender and Level of satisfaction of Packaged Drinking water Consumers.

Null Hypothesis

There is significant relationship between Gender and Level of satisfaction of Packaged Drinkingwater Consumers

Table 12 calculate chi – square value of 9.4674 is greater than the table value of 3.84 at 5% level of significance. So the null hypothesis is rejected. Hence there is significant relationship between Gender and Level of stratification of Packaged Drinkingwater Consumers.

CELL	F_0	F_e	$F_0 - F_e$	$(F_0 - F_e)^2$	$(F_0 - F_e)^2 / F_e$
R1C1	83	76.05	6.95	48.3025	0.6351
R1C2	09	15.94	-6.94	48.1636	3.0215
R1C1	41	47.94	-6.94	48.1636	1.0046
R1C2	17	10.05	+6.95	48.3025	4.8062
Total	150				9.4674

Calculate chi-square value = 9.4674

Degree of freedom = 1

Level of significance = 5%

Chi-square table value = 3.84

9.1 Results of Percentage Analysis

- 76% of the respondents are male.
- 62% of the respondents are married.
- 60% of the respondents are under graduate.
- 37% of the respondents are employees.
- 41% of the respondents monthly income is between 20,001-30,000.
- 30% of the respondents satisfied with quality.
- 39% of the respondents awareness of Packaged Drinking Water was through advertisement.

10. TWO – WAY TABLE

10.1 Gender and Level of Satisfaction.

Indicates out of total respondents 82.67% of the respondent have satisfied about Packaged Drinking Water. Among them 66.93% of the respondent are male and only 33.07% of the respondents are female (Gopinath & Kalpana, 2019).

10.2 Marital Status and Level of Satisfaction

This table shows that out of 150 respondents 17.33% of the respondents have not satisfied awareness about packaged drinking water. Among them 57.69% of respondents are married and 42.31% of the respondents are unmarried(Gopinath, 2019a).

11. CH1-SQUARE TEST

- There is significant relationship between gender and level of satisfaction aboutPackage Drinking water Consumers.

- There is no significant relationship between marital status and level of satisfaction aboutPackage Drinking water Consumers.

12. SUGGESTION

The Demand for purified water increase day by day. So that the quality to be maintained in their product.

The company should crate awareness among the rural area. So that it help to increase the sales in such areas.

The container is playing a key role. Hence the producer have to concentrate more convenient.

Proper care should be taken that supply is made regularly to the steps.

13. CONCLUSION

Due to the scarcity of pure drinking water, packaged Drinking water plays an important role in the society. packaged drinking water occupies a special place in the minds of consumer. Consumer determine the existence of business (Gopinath, 2019b). The manufacturing date, expiry date and content should be Printed in a visible way. The government should make Frequent visit to the water producing industry to ensure the quality of water.

SCOPE FOR FURTHER RESEARCH

A review of the past research studies and literature available relating to the studyare presented in this chapter. The review facilitated the researcher to have a comprehensive knowledge on the subject taken for the study. The definitions andreviews of the concept used helped the researcher as steering to perform the study in thecorrect direction (Kathick et al., 2020a).

The review of the past research studies and literature evidenced that most of them have focused on the phenomenon of consumer satisfaction and attitude towards Packaged Drinking water, but only a few studies have attempted to study the attitude to select the branded packaged drinking water. There is substantial empirical evidence that the consumers have varied satisfaction and attitude towards packaged drinking water, but the findings are not clear and enough (Kathick et al., 2020b). It is clear from the above mentioned studies that there is no research on the levelof satisfaction of Packaged Drinking water in Ariyalur District.

The above aspects expose the gaps in the research on consumers' level of satisfaction towards packaged drinking water in Ariyalur District. In this context, the researcher aims to analyze the level of satisfaction of the consumers' towards packaged drinking water. The study also aims to analyse the impact of consumers' level of satisfaction towards the packaged drinking water in Ariyalur District.

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A STUDY ON CONSUMER BRAND AWARENESS TOWARDS THE PACKAGED DRINKING WATER CONSUMERS WITH SPECIAL REFERENCE TO ARIYALUR TOWN

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ABSTRACT

Packaged Drinking Water has special impact on consumer consumption. Today one million people are drinking unhealthy water in the world. Every year nearly 5 million people world wide die due to the diseases caused by unhealthy drinking water Today the consumption of Packaged Drinking Water increasing world wide. Because of the increase in population the need for pure and safe water. To fulfill the people requirements of Packaged Drinking Water so many business concerns have started mineralizing the water. Many varieties of Packaged Drinking Water brands are available in the market. Hence this studyhas been carried out to analyze the brand awareness about the packaged drinking water.

Key words: Internal Migration, Informal Labour Market, Migration Workers, Seasonal unemployment

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1. INTRODUCTION

Water is a nature's unique and valuable gift to living being. It is a essential part of every human being next to air. Unhealthy water creater a great risk, particularly for children because of their weak immune system. In the marbown hierarchy of needs water is stated as abasic need (Gopinath & Kalpana, 2016). In the earlier period branded bottled water were used in the restaurant, clubs, cinemas, malls, hotels etc. In the later period Packaged Drinking Water is highly consumer by tourist for the purpose of health (Gopinath & Kalpana, 2011b). At present

Packaged Drinking Water popularity has beenincreased among all classes of consumers which consequently raised the rapid growth in the production and sales of Packaged Drinking Water.

2. STATEMENT OF THE PROBLEM

Packaged Drinking Water has become an essential consumer product in the recent era.The impurities in the nature water caused by pollution leads to variety of health problem. Packaged Drinking Water is getting familier as the aspect of convenience and quality has been provided. The mushroom growth of Packaged Drinking Water provides the consumers variety of brands available for selecting the drinking water. The increasing demand for Packaged Drinking Water is due to the deficit of healthy water and lack of quality of tap water. Hence a research has been carried out to analyze the awareness of Packaged Drinking Water.

3. LITERATURE REVIEW

- Water quality association (2001), eighty six percent of Americans have concerns about their home drinking water against cardiovascular diseases.
- Andrew Szasz (2007), shopping our way to safety: how we can changed from protecting the environment to protecting ourselves. He point out the bottled water and the inverted quarantine concept.
- Adlin Kanisha, K.S., Princy, J., and Subramani, A.K., (2015) the research concluded thatthe demographic variables such as age group, gender and occupation are having no impact on the factors of consumer satisfaction. It is found that there is overall satisfaction and loyalty of the consumer towards Bisleri water is also good.
- Vijaya Venkateswari, K., Jeevitha, P., Jacquelin Mercy, A., (2016); Gopinath (2019) in their research suggested that most of the respondents are giving priority to the factor hygienic condition of the packaged water. So the marketers should ensure that the packaged wateris hygienic before it is offered in order to create brand loyalty among consumers.
- Vanitha, S., (2017); Karthick et al.(2020a), in her study found out that majority of the respondents do not have adequate awareness about the adding and removing of minerals from the packaged drinking water. They trust the content and the safety of packaged drinking water. Further this study suggested that the Food Safety and Consumer Protection Department should make frequent visit to the water producing industry to ensure the quality of water.

4. OBJECTIVES OF THE STUDY

To study the consumers brand awareness of the Packaged Drinking Water.

5. SCOPE OF THE STUDY

This study covers the awareness towards Packaged Drinking Water in the Ariyalur District which helps to find out the factor that influence the consumer to purchase a particularbrand.

6. RESEARCH METHODOLOGY

Source of Data

Primary and secondary data are used for this study. Primary data were collected from the respondents through questionnaire and secondary data were collected from Reports,Journals and articles.

Sampling Method

The study was carried out using 120 respondents using convenience sampling method.

Tools for Analysis

The collected where analyzed by using appropriate statistical tools and techniques. For analytical purpose the following tools were used.

- Percentage Analysis.
- Two-way Table.
- Chi-Square Test.

Hypothesis

Hypothesis means more assumption or some suppositions to be proved or disproval.

- Null hypothesis (Ho). There is no significant relationship between the dependent and independent variables.
- Alternative Hypothis (H1). There is a significant relationship between the dependent and independent variables.

7. LIMITATION OF THE STUDY

- The present study was conducted in Ariyalur town only.
- Data were collected by random basis only.
- The sample respondent are restricted to 120 only.

8. ANALYSIS AND RESEARCH

Gender of the Respondent

Table 1

Gender	No of Respondent	Percentage
Male	82	68
Female	38	32
Total	120	100

Marital Status

Table 2

Status	No of Respondent	Percentage
Married	72	60
Unmarried	48	40
Total	120	100

Educational Qualification

Table 3

Educational Level	No of Respondent	Percentage
HSC/Diploma	10	8
UG	72	60
PG	23	19
Professionals	15	13
Total	120	100

Occupational Status

Table 4

Occupational	No of Respondent	Percentage
Business	36	30
Professional	27	23
Employed	46	38
House wife	11	09
Total	120	100

Monthly Income

Table 5

Income	No of Respondent	Percentage
Upto 10,000	09	8%
10,001-20,000	28	23%
20,001-30,000	46	38%
Above 30,000	27	31%
Total	120	100

Source of Awareness

Table 6

Sources	No of Respondent	Percentage
Advertisement	48	40
Friends and Relatives	36	30
Neibours	22	18
Shopkeeper	14	12
Total	120	100

Table showing the distribution of respondents

Table 7

Awareness	No of Respondent	Percentage
Yes	93	78
No	27	22
Total	120	100

Two way table showing the Relationship between gender and awareness aboutthe packaged drinking water consumers

Table 8

Gender	Awareness of PDW		
	YES	NO	Total
Male	48 (51.61)	10 (30.03)	58
Female	45 (48.39)	17 (62.97)	62
Total	93 (77.50)	27 (22.50)	120

Two way table showing the Relationship between marital status and Awarness about the Packaged Drinking Water consumers

Table 9

Marital Status	Awareness of PDW		
	YES	NO	Total
Married	53(56.98)	15 (55.55)	68
Unmarried	40 (43.02)	12 (44.45)	52
Total	93 (77.50)	27 (22.50)	120

CHI Square Table Showing the Relationship between Gender and Awareness of Packaged Drinking Water Consumers

Null hypothesis

There is significant relationship between gender and awareness of packaged drinking water consumers.

Table 10: calculate chi – square value of 4.3730 is greater than the table value of 3.84 at 5% level of significance. So the null hypothesis is rejected. Hence there is significant relationshipbetween gender and awareness of packaged drinking water consumers.

CELL	F_0	F_e	$F_0 - F_e$	$(F_0 - F_e)^2$	$(F_0 - F_e)^2 / F_e$
R1C1	68	63.55	4.45	19.8025	0.3116
R1C2	14	18.45	-4.45	19.8025	1.0733
R1C1	25	29.45	-4.45	19.8025	0.6724
R1C2	13	8.55	4.45	19.8025	2.3160
Total	Total				4.3730

Calculate chi-square value = 4.373Degree of freedom = 1

Level of significance = 5% Chi-square table value = 3.84

CHI Square Table Showing the Relationship between Martial Status and Awareness of Packaged Drinking Water consumers

Null hypothesis

There is significant relationship between marital status and awareness of packaged drinking water consumers.

Table 11: calculate chi – square value of 17.5155 is greater than the table value of 3.84 at 5% level of significance. So the null hypothesis is rejected. Hence there is significant relationshipbetween gender and awareness of Packaged Drinking water consumers.

CELL	F_0	F_e	$F_0 - F_e$	$(F_0 - F_e)^2$	$(F_0 - F_e)^2 / F_e$
R1C1	53	52.70	+.30	0.09	1.7077
R1C2	15	15.30	-.30	0.09	5.8823
R1C1	40	40.30	-.30	0.09	2.2332
R1C2	12	11.70	+.30	0.09	7.6923
Total	Total				17.5155

Calculate chi-square value = 17.5155Degree of freedom = 1

Level of significance = 5% Chi-square table value = 3.84

9. RESULTS OF PERCENTAGE ANALYSIS

- 68% of the respondents are male.
- 60% of the respondents are married.
- 60% of the respondents under graduate.
- 38% of the respondents are employees.
- 38% of the respondents monthly in come is between 20001 to 30000.
- 40% of the respondents awareness of Packaged Drinking Water was through advertisement.

Two – way Table

Gender and awareness

Indicates out of total respondents 77.5% of the respondent have awareness about Packaged Drinking Water. Among them 55.61% of the respondent are male and only 48.39% of the respondents are female (Karthick et al., 2020b)

Marital status and awareness

This table shows that out of 120 respondents 22.5% of the respondents have no awareness about packaged drinking water. Among them 55.55% of respondents are married and 44.45% of the respondents are unmarried.

CHI – Square Test

- There is significant relationship between gender and awareness about the Packaged Drinking Water.
- There is significant relationship between marital status and awareness about the Packaged Drinking Water.

10. SUGGESTION

- The quality of mineral water should be improved.
- The company should give a free sample pack of drinking water to attract the new customer at the time of festivals and exhibition.
- The government should take necessary steps to prevent the sale of unrecognizedbrands.
- Proper care should be taken that supply is made regularly to the steps.
- Special container for children can be introduced to attract low age group.

11. CONCLUSION

Packaged Drinking Water occupies a special place in the minds of consumer, proper care should be taken for health conscious (Unnamali & Gopinath, 2020). In this study majority of the respondents do not have adequate awareness about the adding and extraction of minerals from the Packaged Drinking Water. They trust the content and the safety of Packaged Drinking Water. Consumer determine the grouth, prospects and even the existence of a business (Usharani & Gopinath, 2020a). Necessary act should be erected to inform the consequences of Packaged Drinking Water. The government should ensure safe water to all over the Nations.

SCOPE FOR FURTHER RESEARCH

A review of the past research studies and literature available relating to the study are presented in this chapter. The review facilitated the researcher to have a comprehensive knowledge on the subject taken for the study. The definitions and reviews of the concept used helped the researcher as steering to perform the study in the correct direction.

The review of the past research studies and literature evidenced that most of them have focused on the phenomenon of consumer satisfaction and attitude towards Packaged Drinking water, but only a few studies have attempted to study the attitude to select the branded packaged drinking water (Usharani & Gopinath, 2020b). There is substantial empirical evidence that the consumers have varied satisfaction and attitude towards packaged drinking water, but the findings arenot clear and enough. It is clear from the above mentioned studies that there is no research on the brand awareness of Packaged Drinking water in Ariyalur District.

The above aspects expose the gaps in the research on consumers' brand awareness towards packaged drinking water in Ariyalur District. In this context, the researcher aims to analyse the brand awareness of the consumers' towards packaged drinking water (Gopinath & Kalpana, 2011b). The study also aims to analyse the impact of consumers' brand awareness towards the packaged drinking water in Ariyalur District.

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