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CONSUMER BEHAVIOR ON WATER USAGE AND INVESTMENT PATTERNS

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ABSTRACT

The aim of this paper is to study the water consuming behavior of consumers in Theni district, Tamil Nadu, India. A sample of 240 consumers had taken for the purpose of this study. The Theni district has been purposively selected for the present study. The study covered socio-economic factors, money spent on water and source of drinking water of consumers. Majority of respondents are using municipal water for drinking and spending less than 500 rupees per month for water. As well as for household purpose key source of water is municipality tap inside the house and outside the house. The money spent of household water too is less than 500 rupees. About 67.50 percent respondents are from semi-urban area because most of areas in Theni district are semi-urban and rural.

KEY WORDS

Consumer, Drinking, Household and Water.

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INTRODUCTION

It is important for drinking water suppliers to appreciate consumer's preferences for improved taste, odor, and color as well as their concerns about health effects. It may be as important for decision makers to consider these preferences as it is to consider the water's actual health hazards and aesthetic quality (Lynn l. Curry). ''Packaged'' water is considered drinking water under some regulatory schemes and as a food in others. Some authorities distinguish natural mineral water from other bottled waters. WHO Guidelines for Drinking Water Quality are referred to directly in international norms and are

considered applicable to bottled waters (Codex Alimentations Commission).

Natural mineral water is characterized by its mineral content, trace elements or other constituents and, where appropriate, by certain effects and also by being in its original state, both conditions having been preserved intact because of the underground origin of the water which has been protected from all risk of pollution. The composition, temperature and other essential characteristics of natural mineral water would remain stable at source within the limits of natural fluctuation. In particular, they would not be affected by possible variations in the rate of flow. Mineral waters may be gaseous or nongaseous. Packaged waters with very low mineral content, such as distilled or dematerialized waters are also consumed. Rain water, which is similarly low in minerals, is consumed by some populations without apparent adverse health effects. There is insufficient scientific information on the benefits or hazards of regularly consuming these types of bottled waters (WHO).

The mineral waters are of underground origin, protected from contamination, and microbiologically wholesome. They present a peculiar and constant chemical composition, and have favorable effects on health. To ensure it is safe, they must be bottled at source and checked containers. Mineral water does not simply mean containing minerals. In fact waters that run underground and are enriched with minerals by contact with rocks cannot be considered mineral waters if they do not possess therapeutic properties (Petracci*a et al*). The regulation of contents of bottled mineral water is not stringent and the concentration printed on the labels may not be accurate. One study in Pakistan showed that about 52% of bottled water was not suitable for drinking. A study (Johnson and Debaser, 2003) was conducted in European countries to compare the actual level of different elements to the concentration mentioned at the bottle.

The whole human population needs drinking water for sustaining life and so the provision of a safe water supply is a high priority issue for safeguarding the health and well-being of humans. The production of adequate and safe drinking water is the most important factor contributing to a decrease in mortality and morbidity. To assure consumers that drinking water is safe and can be consumed without any risk, guidelines or standards have been set, giving maximum allow- able concentrations for compounds in drinking water below which no significant health risk is encountered (Leuven).

OBJECTIVES OF THE STUDY

To study water consumption levels of people in Theni district, Tamil Nadu.

To identify source of water and amount of money spend on water of people in Theni district, Tamil Nadu.

METHODOLOGY AND SAMPLING

The following methodology is adopted to achieve the above objectives. Both primary and secondary data sources of information and data are used to carry out the present study. Primary data are collected by interacting with the users of water of the Theni district.

A questionnaire is prepared and administered to the users of water in Theni district to ascertain their water consumption and source. The secondary data are collected from the international water reports, booklets and supplements published by the world health organization. In addition to this, Magazines, Journals, periodicals, newspapers and other relevant publications were used.

Sampling

Sample sizes of 240 respondents have been selected for the present study and 140 from key areas of Theni district. In order to select samples the techniques of simple random sampling has been used. The result of the study helps in understanding water consumption patterns, source of water and amount of money spend on water.

Place of the Study

The consumers of water of all groups have been covered and the study covered different areas of Theni District, Tamil Nadu.

Source: Primary Data through Questionnaire

The results show that out of 240 consumers, about 56.70 percent of consumers are males, while the rest of 43.30 percent of consumers are females. It is evident from the data that 27.90 percent of

respondents are in the age group of 31 - 35 years, followed by 36-40 years (20.00 percent), 41-45 years (14.60 percent), 26-30 years (14.20 percent), 46-50 years (7.90 percent), 21-25 years (6.70 percent), 51-55 years (5.40 percent), 56-60 years (2.10 percent) and more than 60 years (1.30 percent) It is clear that about 23.80 percent of respondents are educated up to graduation followed by diploma (20.4 percent), higher secondary (18.80 percent), and post-graduation and up to secondary (17.90 percent), and professionals (1.30 percent).

From the table, it is observed that out of 240 respondents, about 69.60 percent of respondents belong to Hindu community followed by Christian (21.30 percent) and Muslim (9.20 percent) It is clear that about 54.20 percent of respondents are belong to backward class followed by other category (27.10 percent), most backward class (10.80 percent), and scheduled cast (7.80 percent).The results reveal that about 43.30 percent of respondents are having business as occupation followed by government service (25.00 percent), private sector (15.00 percent), MNCS (8.80 percent), others (6.70 percent) and rest of 1.30 per cent are retired. It is also observed that about 38.30 percent of respondents belong to the monthly income group of Rs. 15001-20000 followed by Rs. 25001-30000 and Rs. 10001-15000 (12.90 percent), Rs. 20001-25000 and below Rs. 10000 (11.70 percent), Rs. 30001-35000 (8.80 percent) and rest are (Rs.30,001-35,000, Rs.45,001-50,000 and above Rs.50,001) 1.30 percent. It is apparent that out of total respondents, about 92.90 percent of respondents are married and the rest of 7.10 percent of respondents are unmarried. About 60.40 per cent of respondents living as Nuclear families and the rest of 39.6 percent of respondents are living as Joint families. The results show that about 69.50 percent of respondents have the family size of 4-6 members followed by 2-3 members (23.80 percent) and more than six (6.70 percent). Most of areas of Theni district are semi-urban and rural. The table depicts that about 67.50 percent of respondent are from semi-urban, while the rest of 32.50 percent of respondents are from rural area.

It is observed that about 71.30 percent respondents are living in area more than 10 years followed by 5-10 years (26.70 percent) and less than 5 years (2.10 percent).

Amount of money spent on water and source of water for both household and drinking

The frequency distribution of source of water for household, source of drinking water are analyzed and amount of money spend on water are results presented in Table No.2.

Source: Primary Data through Questionnaire

From the Table No.2 it is apparent that out of 240 respondents, about 77.50 percent are using municipality tap water as drinking water followed by packaged drinking water (20.40 percent) and others (2.10 percent). The table also indicates that out of 240 respondents about 85.40 percent of respondents are using municipal tap water facility inside the house for household purpose followed by 13.80 percent municipal tap water outside the house and 0.80 per cent using bore well inside the house.

It is also identified that majority of respondents (87.50 percent) spending monthly < 500 Rupees on the water followed by 11.70per cent (500 – 1000 Rupees), and 0.80 per cent (morethan1000 Rupees).

It is inferred that majority of respondents (70.40 percent) are using municipal water as drinking water and spending less than 500 Rupees on water. Another finding is that about 77.10 percent are spending monthly less than 500 Rupees on water and using municipal water tap facility inside the house for household purpose.

Since the P-value of the chi-square is greater than 0.05, the level of significance it is conclude that the chi-square make note that amount of money spent and source of drinking water have independent to each other at 5 level. And also P – value of chi-square test between amount of spend on water and source of water for household is greater than 0.05, so it is conclude that both variables are isolate.

Amount of money spent on the water and quantity of water used for household and drinking

The frequency distribution of quantity of water used for household purpose and drinking per day and amount of money spend on it is presented in Table No.3.

Source: Primary Data through Questionnaire

Table No.3 has presented amount of money spent on water and quantity of water needed for household and drinking purpose per day. From the table it is clearly resulted that amount on money spend on water and quantity of water needed for household per day are moderately co - related, the co- relation between amount of money spend on water and Quantity of water needed for drinking is weak. The co- relation between quantity of water needed for drinking per day and quantity of water needed for household per day is week.

RESULTS AND DISCUSSION

Table No.1: Socio - Economic Factors of Respondents

Variable	Number of respondents	percent	Variable	Number of respondents	percent
Gender			**Educational qualification**		
Male	136	56.7	Up to secondary	43	17.9
Female	104	43.3	Higher secondary	45	18.8
Age			Diploma	49	20.4
21-25 years	16	6.7	Graduate	57	23.8
26-30 years	34	14.2	Post graduate	43	17.9
31-35 years	67	27.9	Professionals	3	1.3
36-40 years	48	20	**Religion**		
41-45 years	35	14.6	Hindu	167	69.6
46- 50 years	19	7.9	Christian	51	21.3
51-55 years	13	5.4	Muslim	22	9.2
56-60 years	5	2.1	**Community**		
Above 60 years	3	1.3	Other category(OC)	65	27.1
Occupation			Backward class(BC)	130	54.2
Business	104	43.3	Most backward class(MBC)	26	10.8
Government Service	60	25	Schedule caste(SC)	19	7.9
Private Sector	36	15	**Monthly income**		
MNCs	21	8.8	Below Rs.10,000	28	11.7
Retired	3	1.3	Rs.10,001 – Rs.15,000	31	12.9
Others	16	6.7	Rs.15,001 – Rs.20,000	92	38.3
Marital Status			Rs.20,001 – Rs.25,000	28	11.7
Married	223	92.9	Rs.25,001 – Rs.30,000	31	12.9
Unmarried	17	7.1	Rs.30,001 – Rs.35,000	21	8.8
Type of family			Rs.35,001 – Rs.40,000	3	1.3
Joint	95	39.6	Rs.45,001 – Rs.50,000	3	1.3
Nuclear	145	60.4	Above Rs.50,001	3	1.3
Size of family			**Residential Area**		
2 – 3 Members	57	23.8	Semi-Urban	162	67.5
4 – 6 Members	167	69.50	Rural	78	32.5
Above 6 Members	16	6.7	**years of residence**		
----	----	----	Less than 5 years	5	2.1
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Table No.2: Frequency Distribution of Amount of Money Spent on Water and Source of Drinking Water and Water for Household

source of drinking water	Amount of money spent on the water								Chi-square value	p-value
	<500 Rupees		500-1000 Rupees		>1,000 Rupees		Total			
	No. of respondents	Percentage	No. of respondents	percentage	No. of respondents	percentage	No. of respondents	percentage		
Municipality tap water	169	70.40	16	6.70	1	0.40	186	77.50	**11.546**	**0.021**
Packaged drinking water	38	15.80	10	4.20	1	0.40	49	20.40		
Others	3	1.20	2	0.80	0	0.00	5	2.10		
Total	210	87.50	28	11.70	2	0.80	240	100.00		
source of water for your household										
Municipality tap water in my house	185	77.10	19	7.90	1	0.40	205	85.40	**10.468**	**0.033**
Municipality tap water outside the house	24	10.00	8	3.30	1	0.40	33	13.80		
Bore well in my house	1	0.40	1	0.40	0	0.00	2	0.80		
	210	87.50	28	11.70	2	0.8	240	100.00		

Table No.3: Co-relation among Amount of Money Spent on the Water and Quantity of Water used for Household and Drinking

Correlations				
co-relation among amount of money spent on the water and quantity of water used for household and drinking		**amount of money spent on the water**	**quantity of water needed for household per day**	**quantity of drinking water needed per day**
amount of money spent on the water	Pearson Correlation	1	.474**	.104
	Sig. (2-tailed)	---	.000	.109
	N	240	240	240
quantity of water needed for household per day	Pearson Correlation	.474**	1	.129*
	Sig. (2-tailed)	.000	---	.047
	N	240	240	240
quantity of drinking water needed per day	Pearson Correlation	.104	.129*	1
	Sig. (2-tailed)	.109	.047	---
	N	240	240	240
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

CONCLUSION

About 56.70 percent of consumers are males, 69.60 percent of respondents belong to Hindu community, 60.40 percent of respondents living as Nuclear families and about 71.30 percent respondents are living in area more than 10 years. Out of 240 respondents, about 77.50 percent are using municipality tap water as drinking water followed by packaged drinking water. It is also identified that majority of respondents (87.50 percent) spending monthly less than 500 Rupees on the water. Majority of respondents (70.40 percent) are using municipal

water as drinking water and spending less than 500 rupees on water. Finally it is clearly resulted that amount on money spend on water and quantity of water needed for household per day are moderately co-related, the co-relation between amount of money spend on water and quantity of water needed for drinking is weak.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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