A STUDY OF CONSUMER BEHAVIOR ON SAFE DRINKING WATER IN HOUSEHOLD

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ABSTRACT

Ensuring safe drinking water remains a big challenge in developing countries where waterborne diseases cause havoc in many communities. A major challenge is limited knowledge, misinformation and attitudes that work against ensuring that drinking water is safe. This study investigated the knowledge, attitudes and practices of urban households in rural and semi urban areas, concerning the collection, treatment and storage of drinking water. Alongside this we examined the role of solid waste disposal in water safety. Three hundred and seventy eight households from four residential regions of varying economic levels were randomly sampled. Data was collected via questionnaire interviews that incorporated attitude questions based on a Likert scale of 1−5, and administered to the households and key informants. The results showed most respondents were knowledgeable about ideal methods of water collection, treatment and storage. However, they did not practice them appropriately. Some attitudes among the respondents worked against the ideals of achieving safe drinking water. For instance, many households perceived their drinking water source as safe and did not treat it, even when obtained from open sources like rivers. Further, they preferred to store drinking water in clay pots, because the pots kept the water cold, rather than use the narrow-necked containers that limit exposure to contaminants. Also, hand washing with soap was not practiced enough in their daily lives to avoid contact with waterborne hazards. We recommend that the government undertake training programmes on drinking water safety that advocate appropriate water use, hygiene and sanitation strategies.

KEY WORDS

Safe drinking water, Water resources and Utilization, SWOT analysis.

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INTRODUCTION

Long before humans learned to rub two sticks together to make fire or took a hammer and chisel in hand to carve out the first wheel, they thirsted for pure drinking water. They established themselves around water sources. While the importance of ample water quantity for drinking and other purposes was apparent to our ancestors, an understanding of drinking water quality was not well known or documented. As we find ourselves in awe of the latest contaminant treatment methods and detection devices, it is easy to forget that the desire for pure drinking water is not a modern phenomenon. Evidence from almost all historical periods suggests that people took measures to ensure a fresh drink of water. But sometimes that drink came with more than its thirst quenching qualities. Early humans thought that the taste of the water determined its purity, and they did not consider that even the best tasting water could contain disease-causing organisms. We know now that just because water tastes good, it is not necessarily safe to drink. However, the efforts of these water treatment pioneers were not in vain. It was through their trials and errors that we now know how to make water safe to drinking. It took thousands of years for people to recognize that their senses alone were not accurate judges of water quality.

Tomb Reveals First Clarifying Device
Pictures of the earliest known clarifying apparatus were first excavated from the walls of 15th and 13th century B.C. Egyptian tombs. Rameses II. The ancient Egyptian operators allowed impurities to settle out of the liquid. The device was pictured in the tomb of Amenophis II and later in the tomb of siphoned off the clarified fluid using wick siphons and, finally, stored it for later use.

Every Household Deserves Clean Water

was becoming the water treatment method of choice for many communities. And town officials began to become concerned with supplying clean water to everyone, wrote Baker and Taras inquest for Pure Water. Around 1703, the Parisian scientist La Hire presented a plan to the French Academy of Sciences, proposing that every household have a sand filter and rainwater cistern. His plan included an elevated, covered cistern, which would prevent freezing and keep out light, thus preventing the surface from growing a “greenish kind of moss.” The rainwater should then be passed through rivers and stored underground. La Hire believed that rainwater treated using this method was the best water because it had not been “mixed with the salt of the earth as spring waters usually are.” And he believed that it could be stored for years, always staying fresh.

LITRATURE REVIEW

Globally, an estimated 1.7 million people die annually, largely through waterborne diseases caused by poor water quality and lack of basic sanitation and hygiene (Ashbolt 2004; WHO 2012). The most affected are children under five years, particularly in developing countries, who often succumb to the ravages of diarrhoeal diseases (Kosek et al. 2003).

Notwithstanding the above, WHO estimates that over 90% of diarrhoea cases can be prevented by enhancing the availability of clean water and improving hygiene and sanitation measures.
This study therefore examined the knowledge and attitudes of peri-urban communities concerning water safety and sanitation. It further explored the initiatives, such as water treatment, that the communities undertook to enhance Disaster Risk Reduction (DRR) towards outbreaks of waterborne diseases.

The literature review begins (section 1) with a review of trends in thinking about health and hygiene communication. It shows how past ideas about information or knowledge transfer have given way in recent years to identifying drivers of behaviour change, and finding the most effective ways to appeal to people’s aspirations and needs. Section 2 reviews current communication strategies and approaches, presenting the limited evidence for the effectiveness of different techniques. Section 3 addresses some of the key issues for rural and remote communities, raising a number of matters which also have relevance in poor urban settings.

A literature search on drinking water interventions was conducted using several online databases.

To be included in the review, the studies had to focus on interventions and their effects on health.

Several exclusion criteria were identified. Due to the small number of intervention studies identified in the database searches, the grey literature was also searched for drinking water interventions. Using the multi-barrier approach to safe drinking water, six potential stages of interventions were identified, including source water protection, water treatment, distribution system, monitoring, at-home strategies and public education. A total of five intervention studies were retrieved and reviewed for this paper. All intervention studies retrieved involved at-home treatment of tap water.

**DRINKING WATER IN ANCIENT INDIA**

From time immemorial water has been the driving force of every civilization and people attached great importance to an adequate supply of water for different purposes like agricultural operations, cooking, drinking, washing etc. People were aware of the medicinal and therapeutic value of water. Depending on the chemical and physical properties and also on a few other factors, our ancients had classified water into several groups. They had also made a thorough study of varying effects of conserving water belonging to different conditions. Some Sanskrit texts give very interesting information on different types of water recognized by our people, chemical and physical properties thereof, their effects on the functions of the body and mind of human beings, impurities in water, necessity of purifying water and different methods of purification, types of water most beneficial during different seasons etc. An attempt has been made here to bring out all the above details based on ancient and medieval Sanskrit texts along with details related to methods of exploration of underground water, their preservation and storage of surface water etc. In the present day background, it will be interesting and also helpful to know how people of ancient India maintained the quality of water in ancient India, methods of purification and storage of water etc. A study of these texts reveals that our ancients were also efficient in carrying out water-analysis and treatment of water scientifically in a simple manner. They were also aware of maintaining ecological balance for the welfare of mankind.

Water is one of the substances without which life cannot exist. From time immemorial water has been the driving force of every civilization and people attached great importance to an
adequate supply of clean water for different purposes like agricultural operations, cooking, drinking, washing, medicinal purposes, treatment of wounds, etc. The Mohenjodaro and Harappan ruins dating back 5000 years have thrown light on the fact that people of even that early period had given importance to proper water-supply for domestic purposes, irrigation and public baths. In ancient India water was used in all religious rituals and ceremonies because it was believed that the pure, divine, well-provided waters convey the offerings to gods. Water, though itself a purifying agent, was held to be very sacred and people were often exhorted not to harm waters 'Subhodaya', which are full of saps and good food. It is needless to point out that water plays an essential role in the life of man, in his physical and mental development. It is an essential element causing health, prosperity and happiness. The Vedic seers, in several hymns, invoked water, the purifying agent to be gracious with mankind, to purify men like mothers and to remove all physical defilements. They believed that waters consumed by men give strength and become auspicious drink within the stomach. Hence they prayed, "May the waters be pleasant to our taste, be free from diseases, sin and sickness, be the remover of fear of death, be full of divine qualities and be the strength of eternal laws". The hymns invoking waters and the prayers directed to Lord Varuna, the presiding deity of waters, reveal that even as early as that of the Vedic period people took precautions to use only water free from all sorts of impurities and that great care was taken for an adequate supply of unpolluted water.

A study of ancient and medieval literary Sanskrit works and other texts also reveals that people in ancient India must have had a plentiful supply of water for drinking, cooking, washing and other purposes. They were particular that water for municipal purposes, for drinking, for general domestic and industrial consumption should be hygienically safe, reasonably soft, practically colorless and free from objectionable odor and taste. Generally, water must be free from various types of impurities. For medical treatment, water having specific qualities was prescribed for different types of diseases. Giving considerable thoughts to all these aspects, people of ancient and medieval India put great effort to test and analyze different types of water collected in different places and in different seasons.

**Classification of Water**

In the modern period, water is generally classified as hard, soft, medium hard and saline in accordance with its physical and chemical properties. Caraka and other sages of ancient India have said that the entire water is ultimately of one type, viz., the one which falls from the sky as directed by Indra.

It was believed that Lord Indra directs the fall of water from heaven according to the activities performed by the mortals. This water while falling and having fallen from the sky acquires properties depending upon time and space. Modern scientists say that absolutely pure water consisting only of H2O, free from any dissolved matter, optically void is a laboratory curiosity and most difficult to prepare. Such a water could be soft, colorless, odorless and would have a pH value of 7.0. Water produced in the clouds when they start dropping down has no taste, no odor. It is absolutely pure and beneficial like nectar. It gives and sustains life, quenches thirst, cures wounds caused by weapons etc., and revives the consciousness, of those who faint due to fatigue, gives clear knowledge, removes drowsiness, burning sensation of the body, etc.

Even though it is said in our ancient texts like Caraka Samhita that entire water is ultimately of one type, water was broadly classified into two sorts, divya and bhauma. Divya is that
which falls from the sky and this is again of four types, viz., dharna, kara, tusara and haima. DhSra is the rain water which drops from the sky continuously, kara is hai! Stones, tusara are snow water and haima is the water from the dew. Rain water is again classified as gSńgam and sȁmudtam based on seasonal variations which are responsible for bringing about the various merits and the demerits of water. The ganga type of water is that which is not contaminated with dust, poison etc., where as thesāmudra type of water is contaminated. Among the surface or ground waters, the following nine types are enumerated:

- **Nādeya**, water of rivers emerging out from mountains and flowing in the fertile regions and this water will have the tinge of sapphire.
- **Nisyanda** is the slightly warm and clear water obtained by making a pit in sand with the hand.
- **Sarasa** is the water having lotuses and lilies and collected from streams flowing from rivers and mountains.
- **Bhauma** is the clear and tasty water with the hue of blue lilies collected from ponds and wells.
- **Kaunda** is the water found in the midst of long rocky reservoirs. This water will be sweet, clear, resembling asatipuspa and having therapeutic values.
- **Tadaka** water is that which is collected in large lakes by constructing stone culverts and which is mixed with fresh water every year.
- **Nairjhara** is the soft, clear, tasty water of water-falls which flow down by piercing the rocks of mountains.
- **Varksa** water is obtained from trees, like the coconut water. This is very tasty, nourishing and refreshing.
- **Audbhida** is the water which gushes out with force from a spring.

**BASIC PRINCIPLES OF SAFE DRINKING**

Worldwide human freshwater use increased. Fresh water is used for domestic, recreational, irrigation, livestock support and industrial purposes. The heaviest use is for irrigation, which typically accounts for well over 60%, and industry, which accounts for a further 25%. Aquifers are being rapidly depleted and contamination is a rising threat. There are three main sources for increasing supply of fresh water where it is needed: reuse for multiple purposes, desalination of seawater and brackish (salty) surface water and groundwater, and conservation (avoiding wasteful use and water loss from leaks). Each of these is becoming essential to meet demands in an increasing number of circumstances.

1. **Water quantity**

It has been estimates that the use of at least 20 liters of drinking-water per capita per day represents the minimum quantity required for drinking, food preparation and basic personal hygiene; a quantity higher than 50 liters per capita per day should ensure basic laundry and bathing in addition to the latter uses; quantities beyond 100 litres per capita per day would...
represent an optimal access and should ensure all the previous uses plus a considerable level of comfort and well-being (Howard & Bartram 2003). With no access to a water source within less than a 30 minute walk to fetch water and come back, consumption is likely to be less than the basic requirement, and hygiene will probably be inadequate. It is important to note, however, that even when optimal supply is achieved, if the supply is intermittent, additional risks to health occur because of the compromised condition of the drinking-water supply, as well as interference with the function of waterborne sanitation systems.

Below table demonstrates that only a small portion of the daily water needs are required for hydration and consumed as drinking-water. Climate and physical activity, as well as personal factors, affect the daily hydration need.

<table>
<thead>
<tr>
<th>Human type</th>
<th>Average Conditions</th>
<th>Manual labor / high temperature</th>
<th>Pregnancy</th>
<th>Lactation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female adult</td>
<td>2.2</td>
<td>4.5</td>
<td>4.8</td>
<td>5.5</td>
</tr>
<tr>
<td>Male ad</td>
<td>2.9</td>
<td>4.5</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Child</td>
<td>1</td>
<td>4.5</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>


2. Water quality and safety

At least 1.8 million people die every year from diarrheal diseases, including cholera; 90% are children under the age of five, mostly in developing countries. WHO estimates that 88% of diarrheal disease is attributed to unsafe drinking-water supply, and inadequate sanitation and hygiene? Studies have indicated that 7 improved drinking-water supplies reduce diarrhea morbidity by 6% to 25%, and improved sanitation reduces it by 32%. Hygiene interventions, including education and hand washing, can achieve up to 45% reduction of diarrhea cases. In the absence of a good-quality drinking-water supply use of household water treatment, such as chlorination with a few drops of bleach at the point of use, can reduce diarrhea episodes by 39%.

3. Public drinking-water supplies

A drinking-water supply system consists of three major elements: source, treatment and distribution to the users. Contamination can occur in any of those segments and the prevention and mitigation of contamination are essential roles of the water supplier, as well as assuring that the water continuously delivered to the consumer’s entry point is safe and aesthetically acceptable. Each element in the system has vulnerabilities to be managed. The best protection is the multiple barrier approach, which relies upon a series of barriers from the protection of the source water to multiple treatment processes and distribution system integrity to ensure that potentially harmful contaminants are removed with confidence before they reach the consumer’s tap.

The prevention, mitigation and elimination of contamination risks are the key responsibilities of water providers, and regulators in their oversight role. The consuming public also has responsibilities to protect the safety of the water within their dwellings by ensuring the
integrity of their piped systems, providing quick repairs when needed and properly storing and using drawn water so as to protect its quality and safety. In the event of usage of non-publicly distributed water, or when the public supply is unreliable or unsafe, users can also take measures to ensure that their water is safe to drink.

Sources of Water
1. **Groundwater:** The water emerging from some deep ground water may have fallen as rain many decades, hundreds, thousands or in some cases millions of years ago. Soil and rock layers naturally filter the ground water to a high degree of clarity before the treatment plant. Such water may emerge as springs, artesian springs, or may be extracted from boreholes or wells. Deep ground water is generally of very high bacteriological quality (i.e., pathogenic bacteria or the pathogenic protozoa are typically absent), but the water typically is rich in dissolved solids, especially carbonates and sulfates of calcium and magnesium. Depending on the strata through which the water has flowed, other ions may also be present including chloride, and bicarbonate. There may be a requirement to reduce the iron or manganese content of this water to make it pleasant for drinking, cooking, and laundry use. Disinfection may also be required. Where groundwater recharge is practiced; a process in which river water is injected into an aquifer to store the water in times of plenty so that it is available in times of drought; it is equivalent to lowland surface waters for treatment purposes.

2. **Upland lakes and reservoirs:** Typically located in the headwaters of river systems, upland reservoirs are usually sited above any human habitation and may be surrounded by a protective zone to restrict the opportunities for contamination. Bacteria and pathogen levels are usually low, but some bacteria, protozoa or algae will be present. Where uplands are forested or peaty, humid acids can color the water. Many upland sources have low pH which require adjustment.

3. **Rivers, canals and low land reservoirs:** Low land surface waters will have a significant bacterial load and may also contain algae, suspended solids and a variety of dissolved constituents.

4. **Atmospheric water generation:** Is a new technology that can provide high quality drinking water by extracting water from the air by cooling the air and thus condensing water vapor.

5. **Rainwater harvesting or fog collection:** Which collects water from the atmosphere can be used especially in areas with significant dry seasons and in areas which experience fog even when there is little rain.

6. **Desalination of seawater by distillation or reverse osmosis.**

**Early Independence (1947-1969)**

**1949:** The Environment Hygiene Committee (1949) recommends the provision of safe water supply to cover 90 per cent of India’s population in a timeframe of 40 years.

**1950:** The Constitution of India confers ownership of all water resources to the government, specifying it as a state subject, giving citizens the right to potable water.

**1969:** National Rural Drinking Water Supply programme launched with technical support from UNICEF and Rs.254.90 crore is spent during this phase, with 1.2 million bore wells being dug and 17,000 piped water supply schemes being provided.
Transition from technology to policy (1969-1989)

1972-73: Introduction of the Accelerated Rural Water Supply Programme (ARWSP) by the Government of India to assist states and union territories to accelerate the pace of coverage of drinking water supply.

1981: India as a party to the International Drinking Water Supply and Sanitation Decade (1981-1990) declaration sets up a national level Apex Committee to define policies to achieve the goal of providing safe water to all villages.

1986: The National Drinking Water Mission (NDWM) is formed.

1987: Drafting of the first National Water Policy by the Ministry of Water Resources.

Restructuring phase (1989-1999)


1994: The 73rd Constitutional Amendment assigns Panchayat raj institutions (PRIs) the responsibility of providing drinking water.

1998: For ensuring sustainability of the systems, steps are initiated to institutionalize community participation in the implementation of rural drinking water supply schemes through sector reform. Sector reform ushers in a paradigm shift from the ‘Government-oriented supply-driven approach’ to the ‘People-oriented demand-responsive approach’. The role of the government is envisaged to change from that of service provider to facilitator. Under reform, 90 per cent of the infrastructure is funded by the government, with the community contributing 10 per cent of the remaining cost and 100 per cent of operation and maintenance costs. Sector reforms projects were introduced in 67 districts across the country on pilot basis.

1999: Total Sanitation Campaign (TSC) as a part of reform principles initiated in 1999 to ensure sanitation facilities in rural areas with broader goal to eradicate the practice of open defecation. As part of the programme, a nominal subsidy in the form of incentive is given to rural poor households for construction of toilets. TSC gives strong emphasis on Information, Education and Communication, Capacity Building and Hygiene Education for effective behavior change with involvement of PRIs, CBOs, and NGOs

Consolidation phase (2000 onwards)

2002: Nationwide scaling up of sector reform in the form of Swajaldhara.

2002: The National Water Policy is revised, according priority to serving villages that did not have adequate sources of safe water and to improve the level of service for villages classified as only partially covered.

2003: India commits to the Millennium Development Goals to halve by 2015, from 1990 levels, the proportion of people without sustainable access to safe drinking water and basic sanitation.
2004: All drinking water programmes are brought under the umbrella of the RGNDWM.

2005: The Government of India launches the Bharat Nirman Programme for overall development of rural areas by strengthening housing, roads, electricity, telephone, irrigation and drinking water infrastructure. The target is to provide drinking water to 55,069 uncovered habitations; those affected by poor water quality and slipped back habitations based on 2003 survey, within five years.

2007: Pattern of funding under the Swajaldhara Scheme changes from the previous 90:10 central-community share to 50:50 centre-state shares. Community contribution is now optional. The approach paper for the 11th Five Year Plan calls for a comprehensive approach which encompasses individual health care, public health, sanitation, clean drinking water, access to food and knowledge about hygiene and feeding practice. It also states the need to upscale more schemes related to community management of water reducing the maintenance burden and responsibility of the state. It is envisaged to provide clean drinking water for all by 2009 and ensure that there are no slip-backs by the end of the 11th Plan.

Some basic facts on Water problem

- Infected water causes an estimated 80 percent of disease in India, according to the World Health Organization (WHO).
- About half the world’s reported cases of polio, a crippling disease which is waterborne, occur in India.
- Each year, diarrhea kills 500,000 Indian children.
- Water is pure at the source which is the municipal treatment plant. It comes to your house through pipes.
- These pipes are very old and have rusted, which way be the cause of contamination.
- Sewage lines are also in contact with underground water pipes.
- People also break open pipes at places to have access to water. These open cracks allow contaminated matter to get inside the water pipes.
- With the ever growing problem of safe drinking water faced in India, HUL has come with a social initiative of providing safe and pure drinking water by means of pureit, a quality yet affordable water purifier.

Companies Providing Product for Safe Drinking Water

a) Whirlpool- Purafresh elite
b) Whirlpool –Purafresh Deluxe
c) Whirlpool –Purafresh Platinum
d) Eureka Forbes Aquaguard Total RO
e) Eureka Forbes- Aquaguard Ultra
OBJECTIVES

❖ The main objective of the paper is to get the full knowledge of the products for the safe drinking water.

❖ To find out the marketing strategy of industry for safe drinking water.

❖ The service quality prevailing in water industry.

❖ To find out the service quality of industry in various areas and find out the deficiency.

❖ To study the factors determining the choice of branding strategy in market.

❖ To find out consumer behavior in drinking safe water

❖ Which type of water they are drinking

❖ How much they spend monthly on drinking safe water

RESEARCH METHODOLOGY

Data Collection: The data collected for the purpose of research can be classified into primary and secondary data.

Primary Data: Primary data is the first hand information. Primary data can be collected through questionnaire, survey method.

Secondary Data: Secondary data are the data collected through journals

Following steps were taken in to consideration, to identify the research problem-

1. Informal investigation
   - Visit to the shop owners, talked to the distributors and to the consumers in the locality and surrounding areas.

2. External and Internal Analysis
   - Understanding customer problem
• Understanding the market structure
• Tastes & preferences of customer
• Needs & income of customer

**Major Competitors**

a) Kent  
b) Eureka Forbs  
c) Philips  
d) Usha  
e) Tata  
f) Whirlpool

A Compressive study of Secondary and Primary data was collected through specific questionnaires for people and shop-owners & distributors.

**Sampling Technique**

For the survey we used *Cluster Sampling* technique. I selected a sample of 100 people around the area and interviewed them according to the questionnaire. In the survey I tried to find out their preferences & tastes, their purchasing habit, are they brand loyal or they consider their friends advice or some reference group during purchasing. I also tried to find out that are they satisfied with the quality or present stature of product, did they want any change in the existing product. I also asked some of the shop owner and distributors and try to find out what the company is doing to sustain their customer and what new changes they are bringing in their product to gain competitive advantage from other competitors.

**Research Instrument**

Research instruments, for the purpose of primary data collection were Questionnaires.

To find out about the needs and preferences of the customers and what they want from in the product and also the level of knowledge about different products in the market.

For secondary data we use net, magazines.

**IMPORTANT FINDINGS**

For the analysis of data collected through survey work, a series of steps were followed which are given in a chronological order

• Each question of the questionnaire was made according to need of company

• Each questionnaire was punched into ms-excel sheet thus forming a data base (punching)

• Further the data was analyzed by using diagrams, graphs, charts etc.
The graphic rating scale and ranking method was used to measure the response and attitude of the customer.

Finally, an effort was made to extract meaningful information from analyzed data, which acted as a base for the recommendations.

**Water Sector Analysis**

Rural India has more than 700 million people residing in about 1.42 million habitations spread over 15 diverse ecological regions. Meeting the drinking water needs of such a large population can be a daunting task. The non-uniformity in level of awareness, socio-economic development, education, poverty, practices and rituals and water availability add to the complexity of the task. Despite an estimated total of Rs. 1,105 billion spent on providing safe drinking water since the First Five Year Plan was launched in 1951, lack of safe and secure drinking water continues to be a major hurdle and a national economic burden. Around 37.7 million Indians are affected by waterborne diseases annually, 1.5 million children are estimated to die of diarrhea alone and 73 million working days are lost due to waterborne disease each year. The resulting economic burden is estimated at $600 million a year. While ‘traditional diseases’ such as diarrhea continue to take a heavy toll, 66 million Indians are at risk due to excess fluoride and 10 million due to excess arsenic in groundwater. In all, 1, 95,813 habitations in the country are affected by poor water quality. It is clear that the large investments have not yielded comparable improvements in health and other socio-economic indicators.

**Water Resources and Utilization**

India has 16 per cent of the world’s population and four per cent of its fresh water resources.

- Estimates indicate that surface and ground water availability is around 1,869 billion cubic meters (BCM). Of this, 40 per cent is not available for use due to geological and topographical reasons.
- Around 4,000 BCM of fresh water is available due to precipitation in the form of rain and snow, most of which returns to the seas via rivers.
- Ninety two per cent groundwater extracted is used in the agricultural sector, five and three per cent respectively for industrial and domestic sector.
- Eight -nine per cent of surface water use is for agricultural sector and two per cent and nine per cent respectively are used by the industrial and domestic sector. While on the one hand the pressures of development are changing the distribution of water in the country, access to adequate water has been cited as the primary factor responsible for limiting development. The average availability of water remains more or less fixed according to the natural hydrological cycle but the per capita availability reduces steadily due to an increasing population.
- In 1955, the per capita availability was 5,300 cubic meters per person per year, which came down to 2,200 cu. m in 1996.
It is expected that by around 2020, India will be a ‘water stressed’ state with per capita availability declining to 1600 cu m/person/year. A country is said to be water stressed when the per capita availability of water drops below 1700 cu. m/person/year.

Article 47 conferring the duty of providing clean drinking water and improving public health standards to the State. Rural water supply (RWS) programmes in India can be divided into several distinct phases

SWOT Analysis

Strengths

1. Loyalty from customers is also the major strength for the industry
2. Employees are also loyal due to the decentralized culture of industry
3. People trust on products due to the proper health and safety measures.
4. The strength of water industry is its imported raw material & Filtration Equipment, which strengthens its image.
5. Being have a multinational companies it has the capability to attract more customer
6. Industry has the ability to compete in a dynamic environment
7. This industry always adapts the new technology

Weaknesses

The weaknesses are as follows:

1. There is not much margins for retailers to prefer its sales
2. They need to provide the Accessories like water dispensers
3. The distribution cost is high as compared to the competition in the local market
4. Companies mostly advertises its products through print media, advertisement of mineral water is not so better on electronic media like TV ads

Opportunities

- Companies have an opportunity to expand or capture the market by adding its product line.
- Companies have the opportunity to offer bottled water at shops and malls.
- Companies can also capture the market of domestic customers more aggressive strategies and offers.
  a) Companies can open separate stores to eliminate retailers..
  b) Companies is trying to open stores in universities.
c) Companies can provide incentives to retailers to increase sales volume.

d) Companies can enter into Food/beverages products.

**THREATS**

1. Existing companies are increasing their product lines that can prove to be a threat in the coming years.
2. Company like Nestlé is giving more discounts to retailers as compared to distributors due to which retailers prefer its products for sale.
3. As compared to the local competitors, the distributor cost is very high. As Aqua Safe Mineral Water has to maintain and obey the Aqua Safe standards.
4. Some companies are competing on the basis of cost.

**SUGGESTIONS & RECOMMENDATIONS**

In accordance to my observation and analysis I would like to give some suggestions

- Some incentives should be given regarding price to high potential customers
- Free samples and gifts should be complementary provided to every potential customer visited
- There should be a brand equity/promotion campaign for different target segments
- Customer service should be given an utmost priority
- For Internees there should be courtesy visits to the existing and potential customers.
- There should be facility to taste water quality by Customers before purchasing.
- Company should conduct survey from time to time to according to which changes can be introduced in the organization to stay updated in the market.
- Changes can be introduced in the organization to stay updated in the market.

**CONCLUSION**

During this research I have learned a lot and my vision and practical exposure has broadened very much. The water filter sector is contributing a lot in the industry and changed the business scenario to a large extant.

Further, I also concluded that 100 percent concentration, full care, analytical, descriptive and communication skills are the key prerequisites for working in an industry. During this research I availed the opportunity to flourish my communication skills, polish my capabilities and abilities, upgrade my knowledge about mineral water sector and broaden my vision and exposure towards practical life.
By concluding all this I would like to say keeping in view findings and analysis is in competitive, sound and stable positions but there is still a lot more potential in the market which catered and captured to expand the market share where there is no presence of it and should widen its area of service and incentives in price, security deposit etc. can make more businesses in the customer’s list.

The practice of treatment for household water and safe storage can lead to enormous disaster risk reduction in health problems and improvement of livelihoods in any community. The hygiene and sanitation practices of the peri-urban households can greatly affect the quality of drinking water and are a result of culture, knowledge and attitude of the people.

Based on the findings my analysis is as under:

1. Customers are Price conscious they tend to use less priced mineral water with less on no security deposit
2. They don’t give preference to the highly quality product that much
3. They use their customer personal recommended brand and they go for experiments
4. Delivery service is their main concern
5. They also give priority to those brands which provides accessories with their core product as well
6. Customer service is also a major concern of these customers like help solving service queries and problems

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