

Should India Drink Kangen Water

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Abstract- This study was carried out to find if Indians were ready to change their water habits to a new technology. India, being the second largest population has a huge market for a new health-oriented Japanese technology that has made remarkable progress internationally. The only difficulty companies face before entering this market is the susceptibility to change amongst Indians. It took a while for reverse osmosis (RO) water systems to enter households and to completely eliminate the problem of fuel exhaustion through boiling of water before every use. Through this paper we will try identifying the Indian water system market by taking a general outlook of Indians on their understanding of total dissolved solids(TDS), RO ban in India, alkaline and hydrogenated water, price sensitivity and monthly acidic consumption, different ph levels of organs and fluids while also asking them about Kangen Water®, awareness, usability, challenges faced in adopting this technology, In this study, people from different regions of India were surveyed and it was observed that majority of the respondents hadn't heard of Kangen Water® before and due to the failing popularity were challenged to know more. The entry of Kangen Water® in India through distributors on incentive basis is a strategy to have a sales team setup in India and thus heavily depend on word of mouth.

I. INTRODUCTION

1.1 Introduction to Water electrolysis

The electrochemical treatment of water with using the electric current is a promising modern approach in the water treatment technique, resulting in obtaining the electrochemically activated water solutions (catholyte/anolyte) carrying new physical-chemical properties stipulated by the changing of the electrochemical characteristics of water as ORP, Eh and pH.

The process of electrochemical water treatment includes several electrochemical processes associated with the transfer in a constant electric field the electrons, ions and other charged particles (electrolysis, electrophoresis, electro flotation,

electrocoagulation), the main of which is the electrolysis of water(Ignatov et al., 2014).

In the field of food science and technology, water is an important ingredient influencing taste, rheology and preservation of foods. Research on functional foods is currently popular; however, it is not yet well known that drinking water also has physiological functions, and that there are some health-beneficial effects of water (Shirahata, 2002, Shirahata, 2004).

1.2 Introduction to Alkalinity of Water

Alkalinity is water's ability to resist/neutralise acid in ph. . All things in nature have either a neutral, basic or an acidic state of existence. Balance of ph in all living organisms is essential to a healthier life (Dr. Peggy Parker, 2006). To a human being, everything we do (breathing, eating, exercising, etc.) creates metabolic acid and acids need to be neutralized to maintain a blood pH of 7.35 to 7.45. It is not just the blood in our body that has a natural ph, but different organs and fluids have different ph levels with respect to their function. Like for example cells, bile juice and pancreatic secretion are slightly alkaline whereas stomach, skin, saliva, gastric juice are slightly acidic. The biological effect of alkaline water consumption is object of controversy. Interestingly, statistical analysis revealed that alkaline water provides higher longevity in terms of "deceleration aging factor" as it increases the survival functions when compared with control group; namely, animals belonging to the population treated with alkaline water resulted in a longer lifespan (Milo Terzo, 2016).

1.3 History of Kangen Water®

In the 1950's , scientific research was conducted and was discovered that all "miracle healing water" from had one thing in common and that is Active Hydrogen or better known as ionized Alkaline water. About 35 years ago , Japan was hit by acid rain that contaminated rivers and surrounding ecosystems. A

group of doctors gathered to save and recover the contaminated water to its original state.

In the year 1974, Enagic company Japan with their alkaline water treatment has innovated a machine for hospital usage, few years later, this technology has been improvised into small in-home water treatment machine name Leveluk SD501.

1.4 Properties of Kangen Water®

Kangen water has three main properties:

- Negative ORP (Oxidation-Reduction Potential) – Anti oxidation is the property that helps things from getting disintegrating, similar is the case when it comes to aging. A freshly cut slice of an apple kept outside is white in colour but as a few hours pass by it turns brown because it undergoes oxidation. The presence of free radicals in humans is what causes aging. Free radicals are electron seeking and attack the oxygen atom in this search, damaging the cells nearly in the energy exchange to give and accept an electron between the two. Anti-oxidants are extra electrons that satisfy such free radicals and increase the longevity of cells. Substances in the -400 to -100 range of ORP are anti-oxidant rich. These include green tea,

broccoli, beetroot, cod liver oil, Kangen Water® and leafy vegetables. Whereas substances like alcohol, aerated beverages, bakery products, bottled water, tap water and fast food have an ORP between +400 to +100 and are not only oxidising but alkaline in nature too.

Antioxidants in our body helps slow down the aging process.

- Alkalization - Kangen Water® is alkaline in nature which neutralises the acidity in the body. This neutralization of the stomach makes the body secrete more acid which helps ingest the meal. Alkalization is a common property found in holy “mirale” water places like the Ganga’s, Zam Zam, Lake Titicaca, Chichen Itza, Black Mesa, etc.
- Micro-clustered molecules – the machine that produces Kangen Water® reduces the size of H₂O molecules from a cluster of 15-20 molecules to a cluster of 5-6 molecules that makes absorption of water molecules in organs and cellular activity easier. This small size of molecules help the cells to absorb water faster, ultimately causing better (6 times more than normal water) hydration.

1.5 Acidic and alkaline state of substances

Pork, Veal, Hamburgers, Polished White Rice	Acid	7.35 — 7.45	pH=0	Battery Acid, Strong Hydrofluoric Acid
Beef, Oysters, Crab Lobster, Shrimp			pH=1	Hydrofluoric Acid Secreted by Stomach Lining
Ham, Turkey, Chicken, Coffee, Tea			pH=2	Lemon Juice, gastric Acid, Vinegar
Eggs, Liquor, chocolate			pH=3	Grapefruit Juice, Orange Juice, Soda
Hard Cheese (Parmesan), Fish			pH=4	Acid Rain, Tomato Juice, Beer
Brown & Wild Rice, Beer, Wine			pH=5	Soft Drinking Water, Black Coffee Pure Rain
Most Breads, Pasta, Spaghetti			pH=6	Urine, Saliva, Egg Yolks, Cow's Milk
Whole Grain Breads, Margarine, Nuts	Neutral	7.35 — 7.45	pH=7	Pure Water
Butter & Cream, Soft Cheeses			pH=8	Sea Water
Whey, Cow's & Goat's Milk			pH=9	Baking Soda
Potatoes, Lentils, Onions, Garlic			pH=10	Great Salt Lake, Milk of Magnesia, Detergent
Apples, Pears, Bananas, Oranges			pH=11	Ammonia Solution, Household Cleaners
Raisins, Green Beans, String Beans			pH=12	Soapy Water
Olives, Molasses, Cabbage, Lettuce			pH=13	Bleaches, Oven Cleaner, Household Lye
Dandelion Greens, Soy Nuts	Base	7.35 — 7.45	pH=14	Liquid Drain Cleaner
Beets, Celery, Carrots, Tomatoes				
Dried Figs, Mushrooms				
Pure Lecithin, Ginger, Spinach				
Cucumbers, Radishes, Squash				

1.6 Different ph values of water

What is Ph?

Ph (potential hydrogen) is the balance between hydrogen and hydroxide ions. Ions are atoms that have lost or gained an electron and hold a positive or negative charge. An acid is a substance that can give up a hydrogen ion (H^+); a base is a substance that can accept H^+ . The more acidic a solution the greater the hydrogen ion concentration and the lower the pH. It can range from values between 1 to 14. Values below 7 classify the solution as acidic and above 7 as alkaline, 7 being neutral. (Hoegh-Guldberg O, 1972) Water can range between any of these values but the property of water changes with different ph levels. There are 5 recommended ph levels of water that can be used by humans:

2.5ph: Sanitizing, disinfecting and sterilizing (anti-microbial). 6ph & 7ph : Used to restore the natural ph of skin (6-6.5ph).

9ph: Drinking water, enhances flavour and retains nutrients in the food. Reduces acidity caused by food and beverages. Kangen water is a great mixer and is good for hangovers as well.

11.5ph: Used to remove all oil-based pesticides from your fruits and vegetables. Can be used to clean and remove grease strains from ovens, sinks, tubs, chimneys, etc. Can be used to make soaps and lotions. (Dr. Peggy Parker, 2012).

1.7 The Ionizer of Kangen Water®

Kangen Water® Ionizer is equipped with the big LCD screen and voice commands available in 5 languages. The LeveLuk ionizer series of Enagic have a number of electrodes ranging from 4 (JR IV) to 12 (Super501), made of pure titanium which is fully coated with platinum (99.97%). The devices are equipped with an adsorption filter which eliminates chlorine, lead, lime scale and improves the taste of water. Figure 1 shows the filter which consists:

- 3-way 1 μm filter (sediment/GAC/KDF);
- Calcium sulfite;

- GAC (Granular Activated Carbon Granular activated carbon) removes organic pollutants;
- KDF (Kinetic Degradation Fluxion) removes chlorine and heavy metals;
- The filter capacity: 6,000 liters of water (~6 months).

Altogether, these elements rebalance the pH levels of your water and optimize the mineral level for soft and hard water.

Figure 1: Scheme representation of the water purifying filter

Figure 2 shows Kangen Water® Ionizer in working. The device is set up with electrodes and adsorption filter. Before entering the electrolysis enhancer water passes through the filter removes chlorine, lead, sediments and microbes. After which there is electrolysis cell which hydrolyses water into alkaline and acidic water.

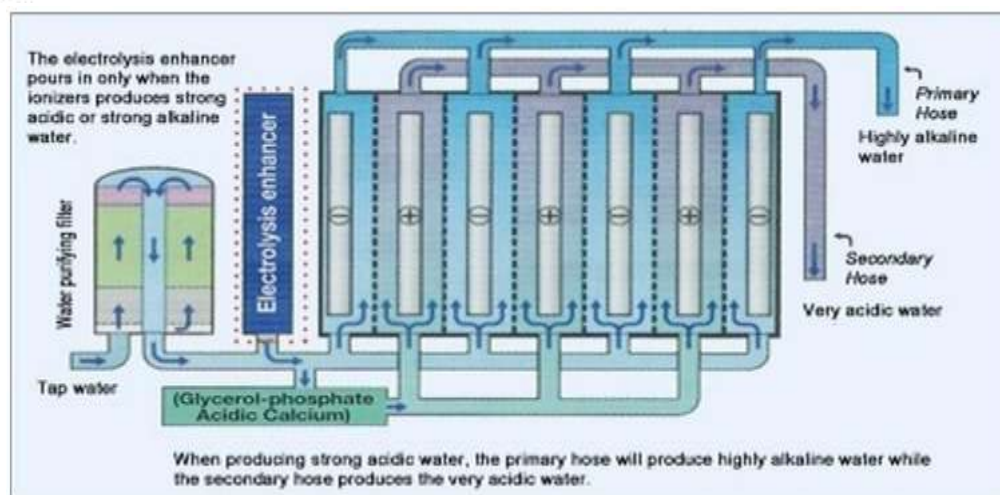
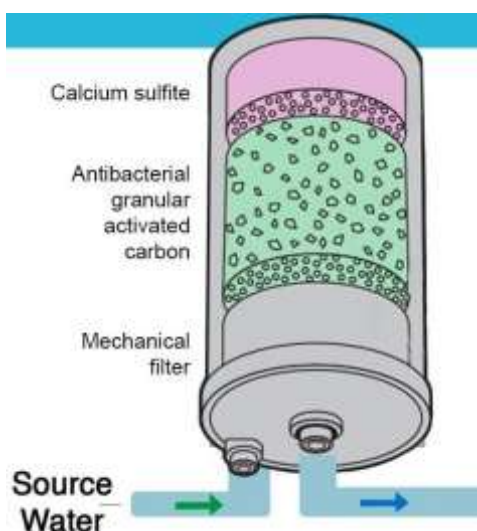


Figure 2: The scheme representation of electrolysis process for water treatment in the Kangen ionizer

1.8 What is TDS?

Total dissolved solids (TDS) refer to the amount of minerals, metals, organic material and salts that are dissolved in a certain water volume that is expressed in mg/L. It is directly associated with the quality and purity of water, particularly in water purification

systems. It is used as an indication of characteristics of drinking water and as an aggregate indicator of the presence of a broad array of chemical contaminants (Oleg Mosin, 2019).

In the treatment of tap water, a study has shown that with 90 minutes of electrical treatment, 34.58% of TDS content were removed, supporting the effectiveness of electricity and its usage in wastewater treatment. Electrolysis is one of the most effective methods of eliminating TDS. Experiments have proven that increased current and duration of time helps lower TDS. (Bill B. Wang, 2021).

1.9 RO ban in India

Depending on age, a human being is made up of 70 to 90% water and an adult drink approximately 2.5 liters of water each day in order to sustain his normal life. Another 1.5 liters is absorbed in the skin during bathing or showering. Water makes a long and difficult journey before arriving in our homes. It used to be common knowledge that a settlement could only occur where there was a natural source of water. Today, whether or not there is water in a place is of no importance because we transport water for thousands of miles using high pressure. In nature, rivers and streams always flow along a smoothly curving course whereas any water supply system has multiple right-angle turns. The natural structure of the water breaks down more and more with each such turn. Water from a water supply system which flows into our homes through pipes has various forms of crystals. It is well known that the water supply in many large cities is a closed loop system after undergoing aggressive chemical purification and passing through powerful filters. The water in these systems is returned to our homes where we have water purifiers that are supposed to remove added chemicals and restructure the water for our consumption but the RO/UV purifiers that exist today don't have the capacity to restructure the water.

In the past decade, the decrease in the quality of tap water because of pollution of the global environment over time has become a major social problem. Air pollution affects water in soils, rivers, and farm products by acid rain. Chemicals in polluted water are considered to generate oxidative stress in the placenta of pregnant women, and this can cause various types of diseases in new-borns (Obolenskaya et al., 2010).

The National Green Tribunal directed the Ministry of Environment and Forests (MoEF) that by the year-end a notification banning RO purifiers where total dissolved solids (TDS) in water are below 500 milligrams per litre. In a bid to regulate the use of RO purifiers, the NGT had directed the government to prohibit them and to sensitise the public about the ill-effects of demineralised water.

The tribunal has also asked the government to make it mandatory to recover more than 60% water wherever RO is permitted across the country. TDS is made up of inorganic salts as well as small amounts of organic matter. As per a WHO study, TDS levels below 300 mg per litre are considered to be excellent, while 900 mg per litre is said to be poor and above 1200 mg is unacceptable.

The order had come after perusing an expert committee report according to which wherever TDS is less than 500 milligrams per litre, a RO system will not be useful but will result in removing important minerals as well as cause undue wastage of water.

1.10 Price Comparison and competitor study

Kangen Water® machines start from a price of 2,18,000 to 3,97,000 (18% GST included). This price range includes a variety of products offered by Enagic and the prices differ based on the number of platinum-dipped titanium plates used. Plates in these machines range from 4 plates that are used commercially; catering to 3-4 people in the space to 12 plates which are used for industrial use; catering to hospitals, hotels, restaurants, gyms, clinics, etc. This range is offered for consumers to better select the product according to their daily requirements of water usage. Enagic's Kangen Water® has about 3% of the Indian water purifier market.

Competitors to Kangen Water® are RO/UV purifiers that have captured more than 60% of the Indian water purifier market. Other competitors are Activated Carbon (18.19%), Ultrafiltration (11.83%), ionizer/softener machines that are different from electrolyzed water (5.5%) and Nano-filtration (0.91%) of the market (Shangliao Sun, 2021).

1.11 Hospitals using Kangen Water® & Certifications

Tata Memorial Hospital in Mumbai which is also a specialist cancer treatment and research centre, closely associated with the Advanced Centre for Treatment, Research and Education in Cancer has installed a machine for patients and visitors. The Enagic ionizer is promoted by the Japanese government to aid its citizens wellbeing and thus is installed by the majority of healthcare workers including hospitals like Kyowa Hospital (Osaka), Kitari Institute Medical Center, Showa University Hospital (Tokyo), Kanto Teishin Hospital, Nara College of Medicine Hospital, Tokyo Women's Medical University, Hanabatake Hospital and IIDA Hospital (TAKASHI ITO, 2020; RYOKO NARUI, 2020).

Enagic has a gold standard certificate which is a standard and logo certification for non-governmental emission reductions projects in the Clean Development Mechanism (CDM), the Voluntary Carbon Market and other climate and development interventions. Along with quality standard certificates like ISO 13485, 14001, 9001 and Japanese Association of Preventive Medicines for Adult Diseases (Panayot Kirov, 2002).

II. LITERATURE REVIEW

In advance research on benefits of reduced water (alkaline water with antioxidant potential/Kangen Water®) written by Sanetaka Shirahata, Takeki Hamasaki, Kiichiro Teruya (2012); they mentioned the physiological functions of reduced water like anti-cancer effects - Electrochemically reduced water (ERW) causes telomere shortening in cancer cells. It suppresses tumor angiogenesis by scavenging intracellular reactive oxygen species (ROS) and suppressing the gene expression and secretion of vascular endothelial growth factor. ERW suppresses the growth of cancer cells and microorganisms. Hydrogen water suppresses the side effects of anti-cancer drugs. Anti-arteriosclerosis effects - ERW suppresses triglyceride levels in mice fed high fat foods. Hydrogen-supplemented water also suppresses arteriosclerosis. Anti-neurodegenerative effects - ERW suppresses neural cell death by oxidative stress.

Hydrogen-supplemented water also exhibits various anti-neurodegenerative disease effects.

The research conducted by Ignat Ignatov, Oleg Mosin, Panayot Kirov on Mathematical Model of Kangen Water®. Biophysical and Biochemical Effects of Catholyte, shows that the natural mountain water and melt water with unique chemical composition, the pH value and less amount of deuterium seems to be one of the most important factors for human health. In Bulgaria, most long-lived people and centenarians live in the Rhodope Mountains, while in Russia – in Dagestan and Yakutia. It worth to note that IR-spectrum of mountain water is most similar to the IR-spectrum of blood serum of healthy group of people with a local maximum at $\lambda = 8.95 \text{ m}$. The similar spectral characteristics possess mountain water from Teteven and other Bulgarian sources. Studying the human blood serum by NES and DNES-methods show that by measuring the average energy of hydrogen bonds among H₂O molecules and the distribution function of H₂O molecules on energies it is possible to show a vital status of a person and associated life expectancy. Our data indicates that water in the human body has the IR-spectrum resembling the IR-spectrum of human blood serum. On the characteristics of the IR-spectrum of water also exerts an influence the presence of deuterium in water samples. In the research there is the optimal composition of mountain and melt water from areas where are lived the long live people and centenarians. The decreased content of deuterium in studied water samples with residual deuterium content of 60-100 ppm, the variety of ions (K⁺, Na⁺, Ca²⁺, Mg²⁺, Mn²⁺, Fe²⁺, Fe³⁺, Zn²⁺, SO₄²⁻, Cl⁻, HCO₃⁻, CO₃²⁻), and chemical-physical parameters (pH, electroconductivity) of studied water samples renders beneficial effects of this type of water on human health. We have also obtained new proofs for biophysical and biochemical effects of Ca²⁺, Mg²⁺, Zn²⁺ and Mn²⁺ in composition of water on human organism and DNES-spectra of water. There are obtained new results of chemical composition of water from Glacier Rosenlaui, Swiss Alps. According to the analysis of various water samples by the NES and DNES methods can be drawn the main conclusions:

- The energy of hydrogen bonds of water in the samples was differed because of the different number of hydrogen bonds in the water samples, which may result from the fact that different waters have a different structure and various intermolecular interactions
- various associative elements with different structure, clusters of formula $(H_2O)_n$ with different n , connected into the molecular associates;
- As a result of different energies of hydrogen bonds, the surface tension of water samples was increasing or decreasing. For Kangen Water® and melt water from Glacier Rosenlauri there was the increasing of surface tension regarding the control samples;
- The experimental data obtained with Kangen Water® testified the following conclusion from the mathematical models of Kangen Water® according mathematical models of tap water. For the value $E = -0.1387 \text{ eV}$ or $\lambda = 8.95 \text{ } \mu\text{m}$ there is local the biggest structuring of hydrogen bonds. This fact may be a proof that Kangen Water® (electrochemical method) stipulates the restructuring of H_2O molecules and on molecular level and is very useful for the prophylaxis of development of cancer cells.
- The redistribution of H_2O molecules in water samples according to the energy (statistical process of dynamics); The hydrogen bond network may be stabilized with metal cations and anions, contained in water.

The paper on Alkaline Water and Longevity: A Murine Study by Massimiliano Magro, Livio Corain, Silvia Ferro, Davide Baratella, Emanuela Bonaiuto, Milo Terzo, Vittorino Corraducci, Luigi Salmaso, and Fabio Vianello in 2016, presents a 3-year survival study on a population of 150 mice, and the data were analyzed with accelerated failure time (AFT) model. Starting from the second year of life, nonparametric survival plots suggest that mice watered with alkaline water showed a better survival than control mice. Interestingly, statistical analysis revealed that alkaline water provides higher longevity in terms of “deceleration aging factor” as it increases the survival functions when compared with control

group; namely, animals belonging to the population treated with alkaline water resulted in a longer lifespan. Histological examination of mice kidneys, intestine, heart, liver, and brain revealed that no significant differences emerged among the three groups indicating that no specific pathology resulted correlated with the consumption of alkaline water. These results provide an informative and quantitative summary of survival data as a function of watering with alkaline water of long-lived mouse models.

S.S. Rana & Co. Advocates in 2020 wrote about RO ban in India when the National Green Tribunal (NGT) ordered prohibiting the use of RO water purifiers which had given a severe jolt to the manufacturers. RO water purifiers have become an indispensable household item for any general Indian household today. The public to avoid consumption of polluted water and associated health benefits have been hugely investing in RO water purifiers. However, the NGT through its expert committee report had highlighted that RO water purifier system demineralizes water in areas where TDS in water is less than 500 milligram/ litre, thereby making it unhealthy for human consumption.

In research on domestic water pipelines in India by Tahera Akter (2016), it was mentioned that public health is at risk due to chemical contaminants in drinking water which may have immediate health consequences. Drinking water sources are susceptible to pollutants depending on geological conditions and agricultural, industrial, and other man-made activities. Ensuring the safety of drinking water is, therefore, a growing problem. To assess drinking water quality, we measured multiple chemical parameters in drinking water samples from across Bangladesh with the aim of improving public health interventions.

Hasan ShakerMajdi (2019). Multi-layers filters are usually used in conventional water treatment plants to purify water, reduce turbidity, and remove plankton and undesired odours. Multi-layers filter consists of basic layers represented in graded sand and supporting gravel layers. This research aims to study the efficiency of such filters after the addition of new layers made of copper and zinc particles by 50% per

each with high purity, which are traditionally called KDF (Kinetic Degradation Fluxion). The purpose of adding such layers is to increase the efficiency of filters in the removal of diverse chemical contaminants of heavy elements (Lead, Nickel, iron, etc.), and chlorine to use them in traditional or advanced filter stations, such reverse osmosis plants or ion exchange water filters.

The results show a very high efficiency of such filters to remove chlorine from the treated water by 90% and more, while the efficiency of the modified filter to remove lead, nickel and iron was 92%, 88%, and 67% respectively; however, there was no significant records in removing the biological contaminants.

Yoshinori Tanaka (2019). In Japan, alkaline electrolyzed water (AEW) apparatus has been approved as a medical device. And for the patients with gastrointestinal symptoms, drinking AEW has been found to be effective in relieving gastrointestinal symptoms. But some users of AEW apparatus do not have abdominal indefinite complaint. Little attention has been given to the benefit for the users which have no abdominal indefinite complaint. The objective of this study is to evaluate the effect on health, including gastrointestinal symptoms, when a person without abdominal indefinite complaint, etc., drinks AEW on a daily basis. A double-blind, randomized controlled trial has been designed.

Sufficiently clear effect could not be confirmed. But the stools were more normal, and, as shown in the previous report, that drinking AEW is considered to contribute to intestinal normalization. In addition, when drinking AEW, a high proportion of the respondents said that they felt they were able to sleep soundly, and the proportion of subjects who answered that they felt good when awakening increased. The effect of reducing oxidative stress, thus allowing for improved sleep, was exhibited by drinking AEW containing hydrogen, which is considered to be an antioxidant substance.

III. RESEARCH METHODOLOGY

The tools I have selected to execute our exploratory research design are both primary and secondary data collection tools. The primary tool has further been classified into qualitative and quantitative tools. Observations are part of qualitative primary data sources while on the other hand questionnaire is a part of Quantitative tools. Literature review is a secondary source of data collection tools. I have selected the above-mentioned tools to serve three different objective of the study which are not explained by the literature therefore is exploratory research.

3.1 Objectives of Research

Objectives of this research are to find if India is ready for the shift in its drinking water in terms of:

1. Investing in a new technology and
2. Increased acidic consumption while understanding the benefits of ionized water.

3.2 Research Design

The research design that I am looking forward is exploratory research as it a qualitative and flexible tool to obtain more clarity about the area. Since this study is loosely structured, a wide variety of established methods and techniques for conducting exploratory research can be used. Exploratory research, as the name suggests, intends merely to explore the research questions and does not intend to offer final and conclusive solutions to existing problems. Conducted in order to determine the nature of the problem, this type of research is not intended to provide conclusive evidence but helps us to have a better understanding of the problem. When conducting exploratory research, the researcher ought to be willing to change his/her direction because of revelation of new data and new insights (Winston, 2002).

I intend to study Kangen water penetration in India from the perspective of potential users in India based on their knowledge of the trends in the market, comparison of water system competition in India. The scope of the research includes potential users of the age of 15 and above, residing in different cities of

India like Mumbai, Kanpur, Delhi, Bhopal, Thiruvananthapuram, Jaipur, Raipur, Chandigarh, Chennai, Hyderabad, Lucknow and Dehradun. I have also used a descriptive tool (Questionnaire) for studying the trends and comparison.

3.3 Questionnaire

Questionnaire includes a standard set of questions; it will help to collect information from a large sample in a reasonably short time period. It is a descriptive tool to collect information for the objectives of trends and comparison of submarkets. The questionnaire design would be formal and unconcealed because it would be easy to administer as the questionnaire are self-explanatory and the answer categories are well defined. Additionally, it would also serve the purpose of data analysis.

3.4 Interview

One-on-one structured and semi-structured conversations with potential buyers and users of the

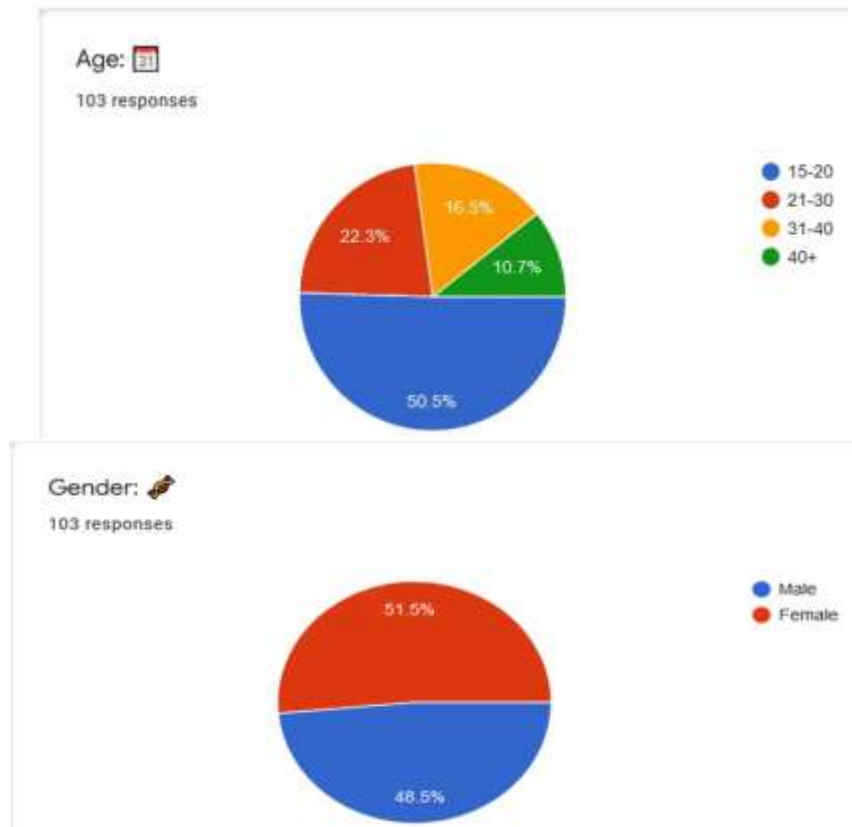
product were conducted. Interviews are great for in-depth testing of research hypotheses and insights into the psyche of potential buyers and users, access to qualitative data and ability to explore and probe responses. Interviews were conducted in both online and offline medium. Zoom meetings was used as an application for online interviews.

3.5 Literature Review

Literature review consists of a search and evaluation of the previously available literature in the topic area. The group has written an extensive literature review for this purpose. It is a part of secondary data collection tool in which information can be extracted from both internal and external sources. I have used research papers, article journals, websites and books.

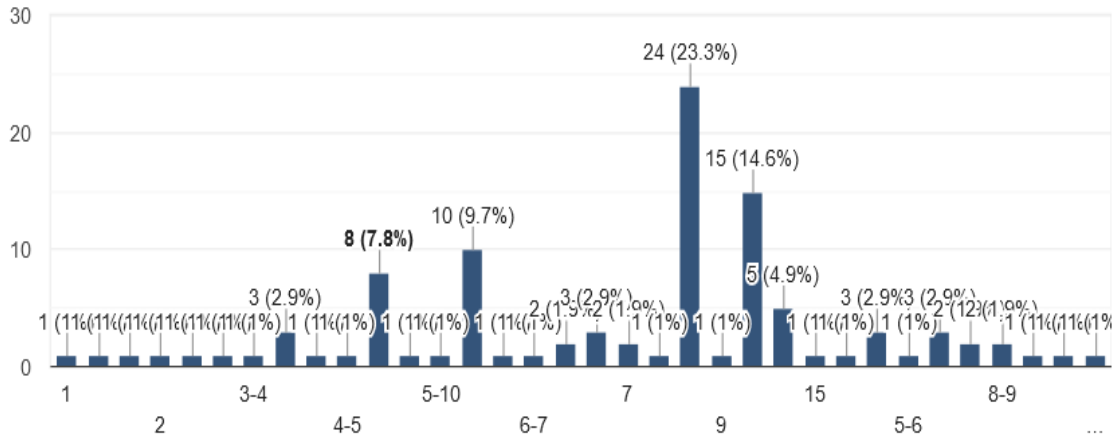
IV. DATA ANALYSIS

4.1 Questionnaire



How many glasses of water do you drink per day?

103 responses

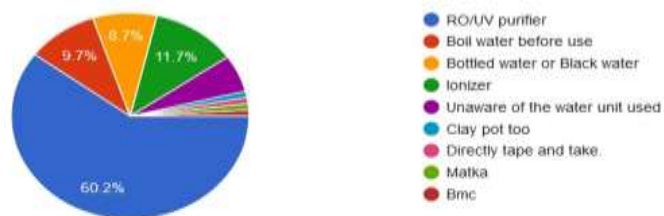


Analysis: Recommended number of glasses per day by doctors are 7-8 glasses (2 ounces). The data collected shows this is being followed by only 40% of the respondents rest were either more or less than the recommended level. Interestingly, all those who knew about Kangen water and hydrogenated water

drank 8 glasses everyday. The variation from more than or less than 8 glasses show that the respondents are either slightly overhydrated or dehydrated respectively, out of which the latter can lead to complications in health.

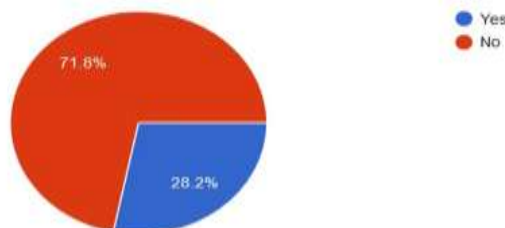
How do you store and drink water?

103 responses



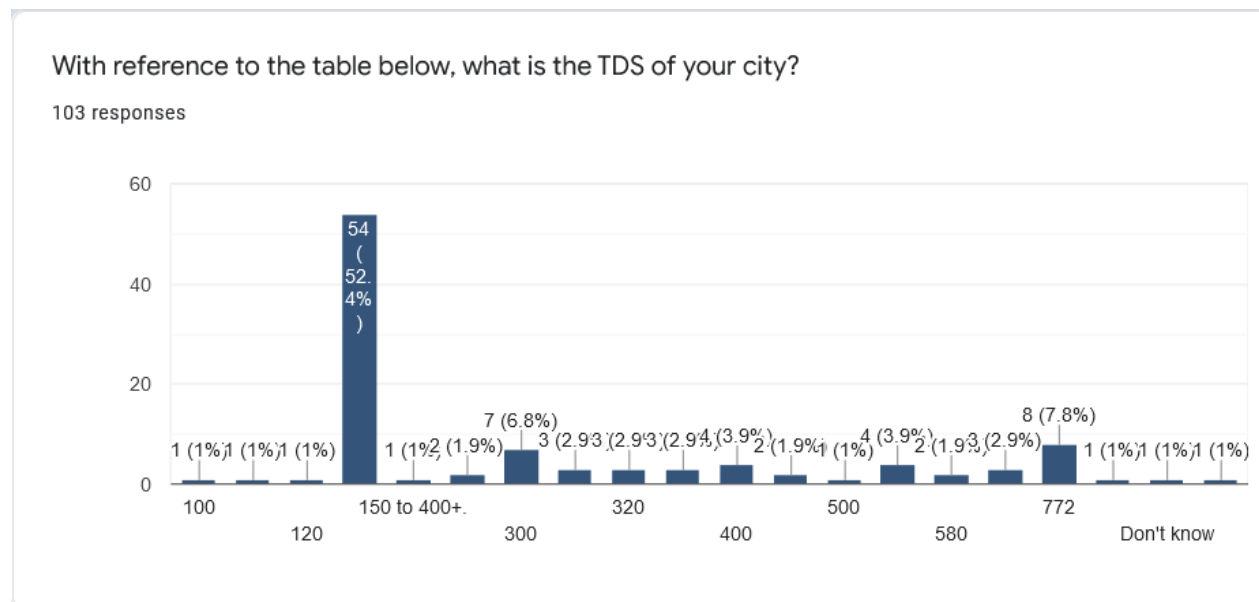
Do you know about the RO ban in India?

103 responses



Analysis: Out of the 60% of the respondents that use RO/UV purifier only 10% knew about the RO ban. Whereas 100% of the 11.7% of the people that used ionizer knew about the RO ban. The companies selling ionizers in India are focused on spreading awareness on the RO ban and influencing the customer to switch from what is not scientifically safe to consume. While the respondents that use bottled water/black water and boil water before use

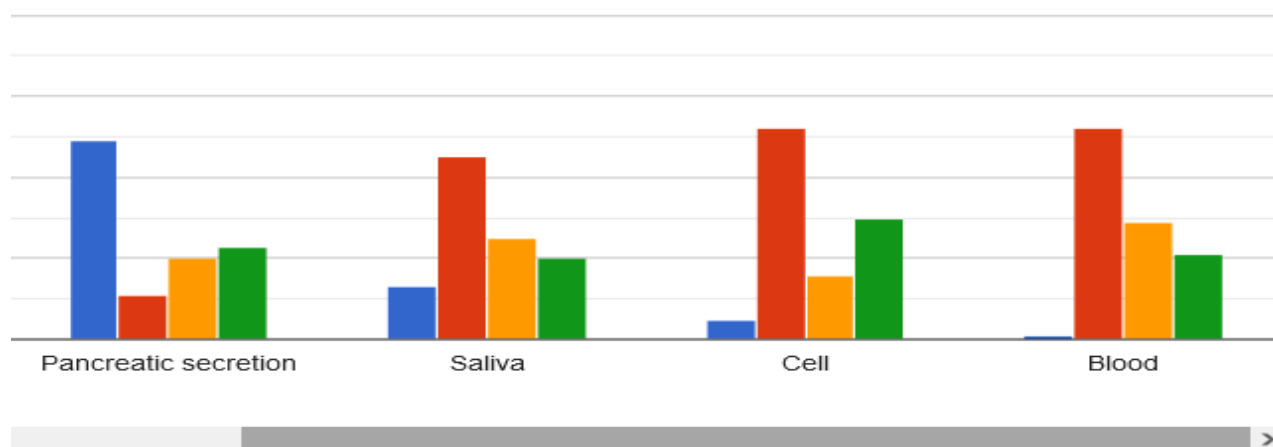
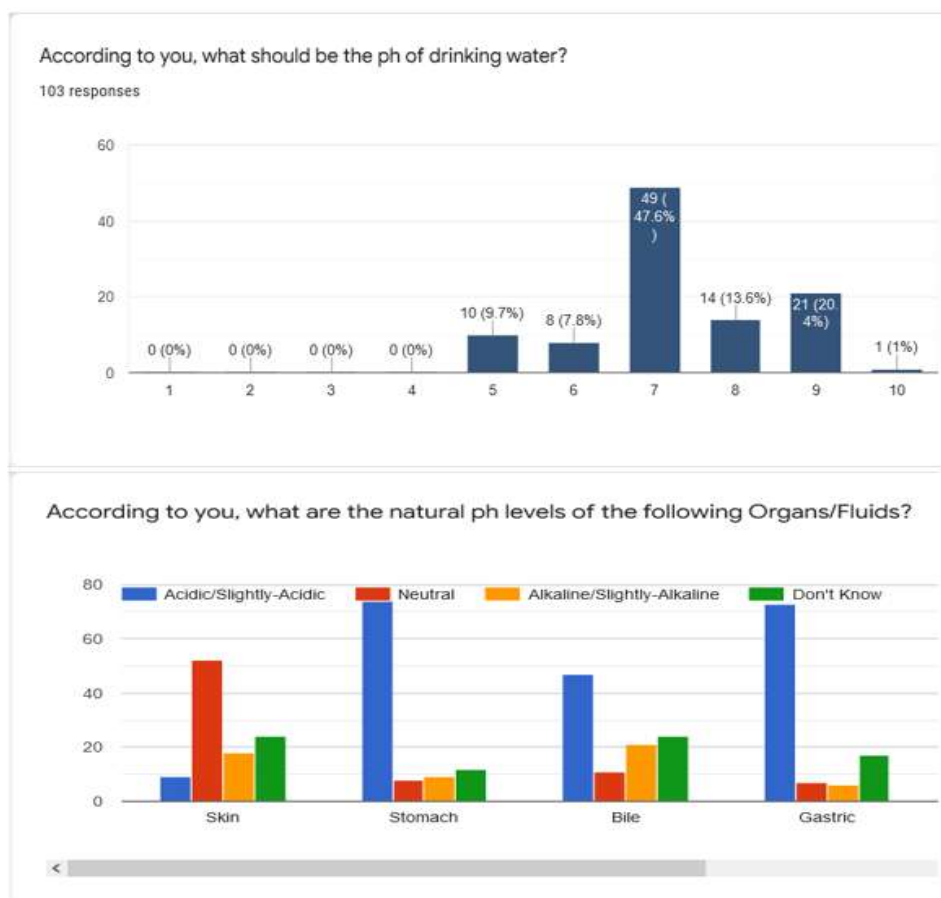
50% of them knew about the ban from the cumulative 18%. This means either the respondents that drink and store their water in the above way do so because they do not believe in the technology trusted by millions and prefer the traditional way of drinking water or availability of funds to invest in such technology is unavailable.



City	TDS (ppm)
Mumbai	150
Kanpur	194
Delhi	400
Bhopal	772
Thiruvananthapuram	488
Jaipur	300
Raipur	676
Chandigarh	391
Chennai	310

Hyderabad	520
Lucknow	580
Dehradun	320

Analysis: This question was targeted to make respondents aware of the TDS of their area and to also understand the region they are currently residing in. There were 2 “Don’t know” responses from which it can be assumed that they were from cities apart from those mentioned. 52% of the respondents were from Mumbai and about 7% from both Jaipur and Bhopal. It would be fair to state that observations made from this questionnaire are highly corresponded to these 3 cities.

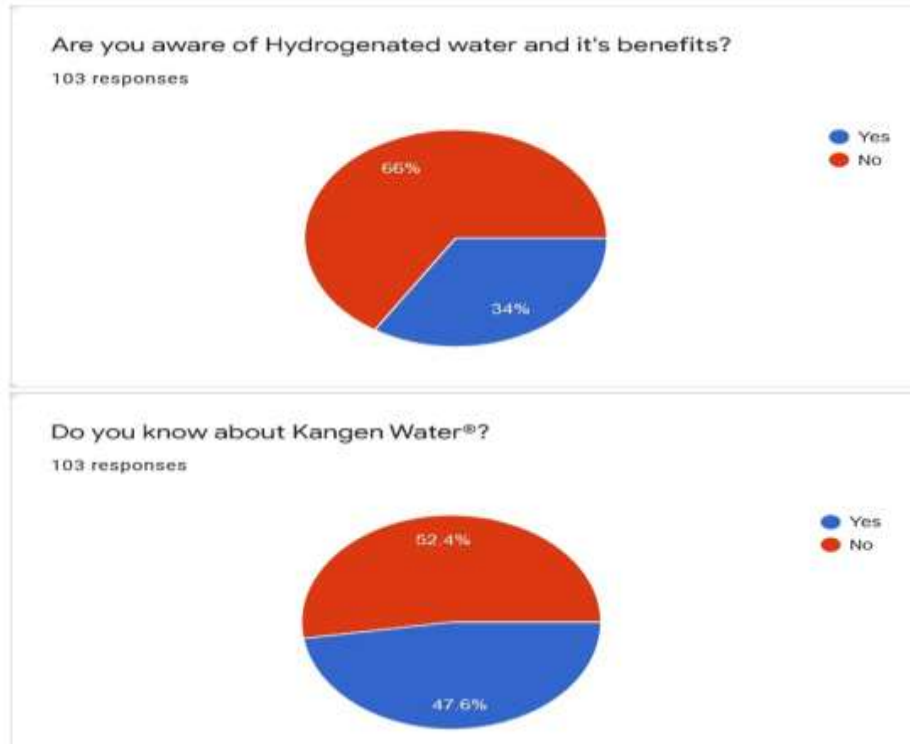


Analysis: About 20% of the respondents did not know what the ph of drinking water should be and the another 20% didn't know the ph of the organs/fluids mentioned above. More than 90% of

the respondents were wrong in answering all the natural ph of organs/fluids, the current state of awareness when it comes to natural ph levels of life sustaining objects is poor in India and thus an entry

into this market should make sure their potential buyers are aware of the pH levels because without the knowledge of what's good for an individual he/she cannot act in order to correct it. This also helps in

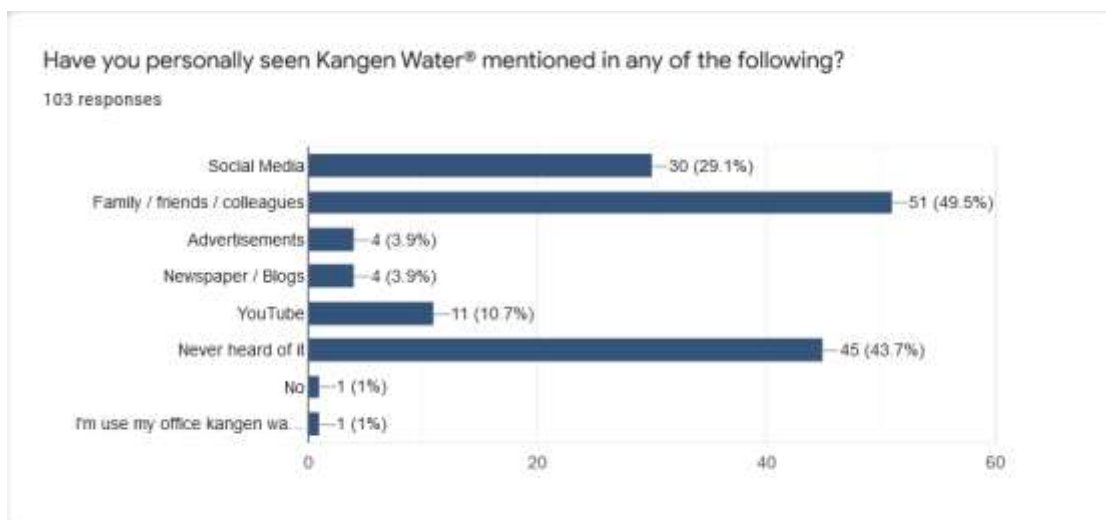
better selection of products for need satisfaction and quality results.



Analysis: Awareness of Kangen Water® in the selected sample was an approx. 50-50 ratio. Although awareness has been a major challenge for potential buyers to close the deal on Kangen Water®, it can be concluded that knowing about Kangen water® does not necessarily mean they know the benefits, pricing and installation procedures. Hydrogenated water was seen to have a higher number of “No”, inspite of

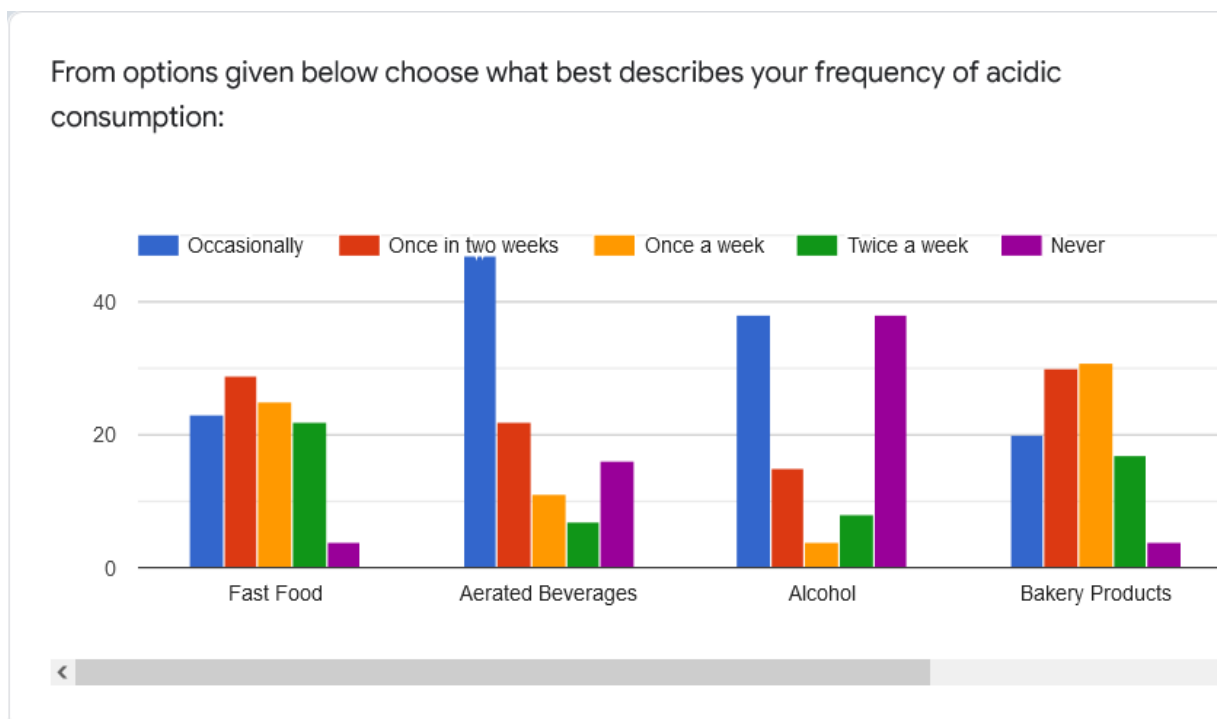
hydrogenated water and Kangen water® being one and the same thing.

This shows that Enagic has created a brand around this word and can really use this added benefit to beat competition. The patented word also acts in their favor.



Analysis: The platforms mentioned are places one would find information and trends about water systems. Word of mouth through family, friends and colleagues was seen to be most effective amongst less popular mediums like social media, YouTube and offline advertisements, newspapers and blogs.

30% for social media is from advertisements and pages run by sellers online to promote and market the machines. Setting up a Kangen Water® machine in office was also seen to generate a rememberable lead. In spite of all these there is 45% market left that contributes to poor awareness.

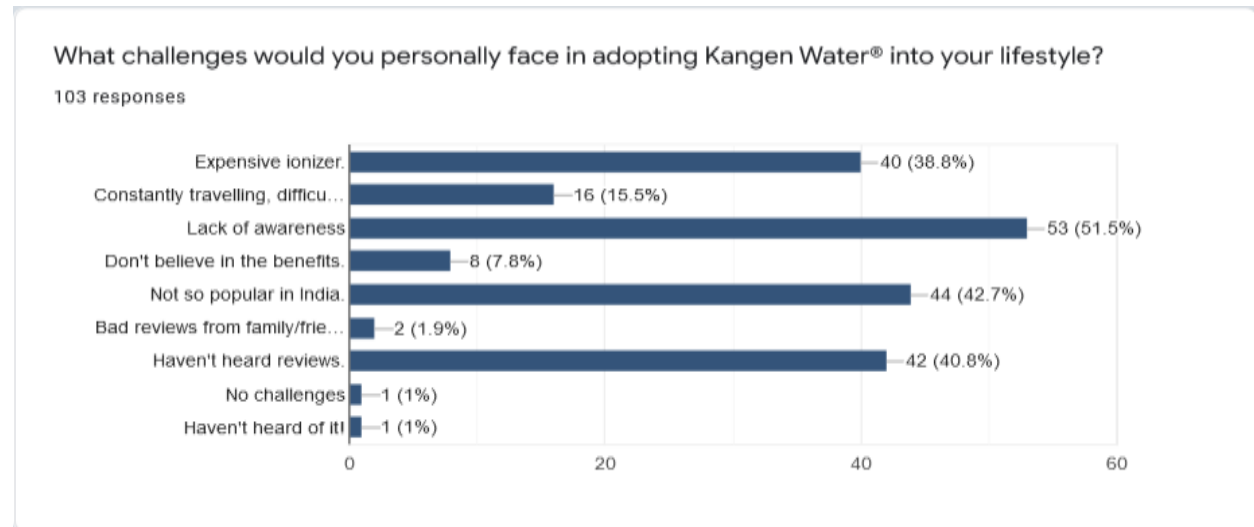


Analysis: Fast foods and Bakery products have a greater average weekly consumption in the sample taken. Sorbet, ice creams and bottled water had an equal average weekly consumption which means

consumers in India are still neglecting towards the ecosystem when it comes to bottled water. Alcohol and aerated beverages were seen to have the least weekly consumption, this could be a result of Indians

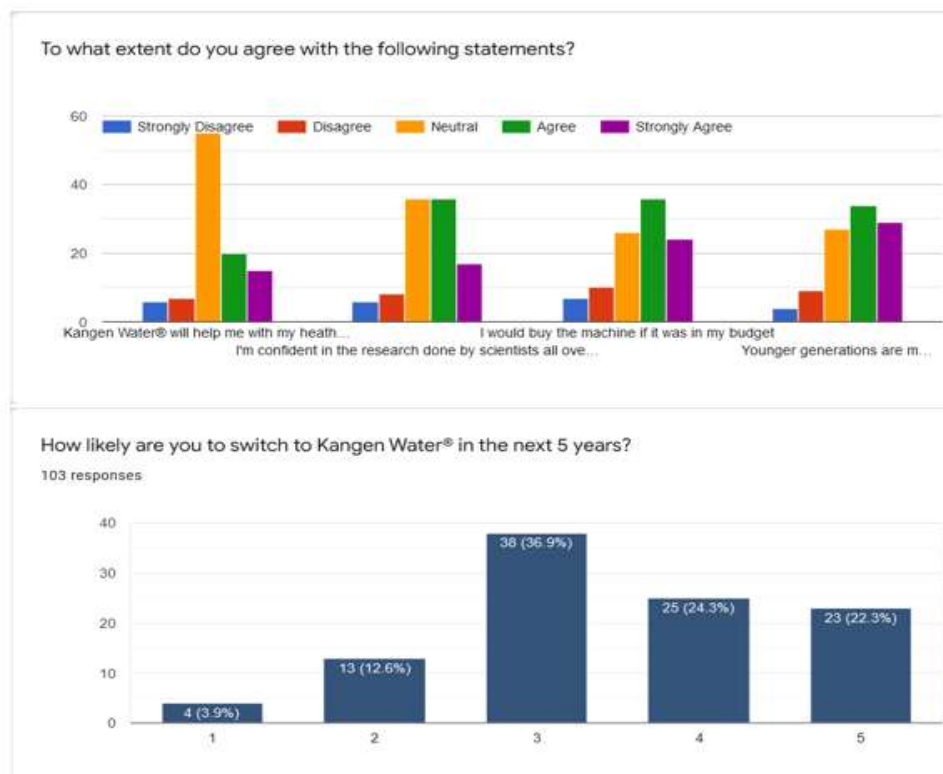
reacting to the pandemic and adopting a healthier lifestyle. Kangen water® being a healthcare product

can take advantage and penetrate the market in the post pandemic recovery time frame.



Analysis: Challenges are a direct way of understanding the hardships of the consumer before adopting Kangen water®. “Lack of awareness”, “Not so popular in India”, “Haven’t heard reviews” all lead to more than 60% of the respondents not giving Kangen water® a try. On the other hand, even after

enough awareness something that is a potential deal breaking challenge is that the potential buyer doesn’t believe in the claimed benefits (8 respondents). Testimonials, certifications and research paper citings might help overcome this challenge.



Analysis: Susceptibility to change amongst Indians towards Kangen Water® was seen to be promising when asked if the respondents would switch to electrolyzed alkaline water as opposed to the purifier they've been using for years. Majority of the respondents showed agreeableness towards questions related to personal health condition improvement, their trust in the research done internationally and that they would buy the machine if the costing was in their budget. Younger generations being more tech-savvy and research oriented might switch to Kangen Water® more easily as the community for Kangen water both internationally and domestically is increasing.

4.2 Interviews

1. Hello, my name is Vivek Allahbadia. I am an orthopedic surgeon at P.D Hinduja hospital, Khar. I have been using Kangen water for a long time now, I mean more than 6 years. It's been beneficial for me and my family. I had kidney stone issues which have virtually stopped now. Acidity issues have gone. It does help bring down sugar a little. Japanese people have been using it for past 35 to 40 years and I think all diseases in the body come with acidity in the body. Its always healthy to keep the body alkaline.
2. Hi, my name is Vyoma Dave and I have been using Kangen Water since the last 5 years. This is how my Kangen journey has been, before Kangen water I got tested for my thyroid TSH hormone levels. The report stated my TSH level as 12.5, which is very high, normal range for TSH is 0.2-.05. After drinking Kangen water for 1-1.5 years, I got tested again and the report stated my THS level as 0.4, which is the normal range. According to me, I believe this change is because of drinking Kangen water. There have been absolutely no complaints from the performance of the machine and the servicing is quite easy to do. No need for technicians if you have time.
3. Hello, my name is Nishith Mazmudar. We are using SD501 model(7 plate ionizer by Enagic). We have been consuming Kangen water for almost a year now. For me personally it has been reduction in my uric acid levels as well as cholesterol, these two things for sure. Other than that, in the family, my sons had acidity which also

they find lot of relief after using Kangen water machines.

Analysis: From the three interviews conducted it was clear that the users had no complaints in usage of the product and were quite relieved to have a product to cure their medical conditions. The fact that they don't have to invest anymore in healthcare is in itself a huge step towards customer service and meeting multiple needs.

V. CONCLUSION

Although, Kangen Water® machines are expensive, Indians feel that bigger challenges for them at this point are awareness, user feedback and poor popularity. These three responses dominated the budget criteria. Awareness and feedbacks can be majorly shared through Word of mouth (by delivering unmatched service), social media and YouTube as these are platforms used more by the younger generation since they are more open to sources, seen more health conscious and always on a lookout to experience new technology. Newspaper and TV commercials could be another option to increase reach and capture different markets.

Fast foods and bakery products are a weekly consumption for most of us and to neutralise so much of acidic waste is very important. The build up of acidic waste in our body is what causes various diseases also weakening body's ability to fight bacteria and promoting growth of cancer cells.

Eliminating acidic waste becomes easy when all you have to do is drink water that is also 6 times more hydrating than normal water. This excretion of acidic waste is what helped the users to recover from their health conditions. The world today is filled with tricks of instant gratification and cost saving techniques which lead to a compromise in the lifestyle. Oil based chemical pesticides are used to save costing of buying pesticides monthly. Getting rid of such pesticides is not easy without contaminating edibles with more chemicals but Kangen Water® and electrolyzed water have the property to get rid of such pesticides by completely emulsifying with the oil. Yes, oil and water can now

mix. In conclusion, as we move forward and as things get more dynamic, one can only keep up with the new innovations made to tackle new problems. Consequently, more research is necessary to ascertain whether the prices of the machines can be reduced for the Indian market to better penetrate the market, beat market competition and help aid the citizens lead a healthier life.

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