Enhancing Consumer Preference towards healthy drinks

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Abstract: In India, soft drinks, particularly - "Carbonated Soft Drinks (CSD)" - hold a lion's share in market revenue (₹16,000 crore) across all beverages. If we consider the preferred choice of consumers as well as the overall growth, the compounded annual growth rate (CAGR) of CSD in 2016 was a staggering 71%. Another interesting fact is that India consumes more than 5.9 billion litres of soft drinks in a year. These statistics support an accompanying and often alarming trend. Sugar-sweetened beverages now cause every one in 200 deaths due to India's increasing rate of cardiovascular ailments, diabetes and obesity. This has increased health awareness among consumers and they prefer more health and wellness products. To counter these health issues, Govt. of India is planning to levy "Fat Tax", which will mandate manufacturers of fizzy soft drinks such as Pepsi to display fat, sugar and salt content on their products packages. Moreover, the recently introduced Goods and Services Tax (GST) by Govt. of India places Carbonated Soft Drinks such as Pepsi, Coca Cola and Sprite in the 40% tax slab, whereas fruit based or fruit pulp beverages fall under a lower tax slab of 12%. The lower tax rate will promote sourcing of fruits which will aid agricultural productivity. All these measures, along with growing consumer awareness, has inherently created an incentive for the soft drink market leaders (Pepsi, Coke, etc.) and challengers (Xalta, Twiss, etc.) to launch fruit based aerated / carbonated beverages in the market. Through this empirical project, we aim to analyse Indian consumer behaviour trends and their current purchase patterns of fruit based beverages. Based on qualitative and quantitative research, we will study and analyse the factors that will enhance consumers towards healthier alternatives in carbonated beverages.

Keywords: *Carbonated soft Drinks, Fat tax, Goods and Services tax*

Introduction: The market for carbonated (fizzy drinks as it's often termed by the industry) in India is booming. Indian market for such drinks or beverages has been predominantly focused on sugary drinks or drinks with high amount of calories. Scientific studies have proved that inordinate consumption of sugary drinks heavily increases the likelihood of heart ailments and other diet related diseases such as Diabetes. All these contribute to large number of deaths each year caused due to uninformed consumption of sugary fizzy drinks such as Pepsi and Coke.

Sale of health drinks in the current market scenario will attract higher rates of speed and volume in the form of consumer transactions. The consumption of fizzy (carbonated) drinks has decreased by 15-20% over the last few years, whereas the market for non-fizzy drinks is expected to soar by 35% annually. Additionally, over 75% of the urban consumers prefer non-carbonated drinks. Indian population, historically, has been low on the awareness scale about healthy diets and the local cuisine of each region in India innately focuses more on high cholesterol contributing diets. This along with consumption of fizzy drinks doubles the rate of cholesterol and other lifestyle related diseases. As the rural / urban population becomes more educated, the whole spectrum of young individuals is now shifting to a more disciplined diet regime with high focus on healthy foods and drinks. This "lifestyle correction" as we would like to term it is highly instrumental in transforming the wellbeing of the nation. Ultimately, it's imperative that awareness about healthy foods and drinks be spread amongst the young in India, for they are the future of a healthy tomorrow. Healthy dietary practices will sustain for time to come and the proof lies in the manufacturers of fizzy drinks themselves. We can see most of the big FMCG players coming out with healthy drinks such as 7up Revive, Fiesta, Tata Gluco plus, Tata Water plus, etc. The paper will investigate the psychological factors that drive consumption of healthy drinks and how we can migrate current consumers of sugary fizzy drinks to much healthier alternatives.

Methodology of Literature Review: We analyzed over 30 research papers, empirical studies and articles from EBSCO, Google Scholar, Emerald / ProQuest databases to arrive at the following factors (or independent variables) that can engage consumer purchase of a healthy drink. A procedural method was followed and we narrowed down to 9 key independent variables which will drive adoption and consumption of healthy drinks in India. Individual/Combined interaction effects of these variables will also be studied through this empirical project.

Literature Review

Brand Image: Brand image is the set of information, consumers associate with a brand in their memory, commonly referred to as brand image associations (Keller KL, 2003). It was discussed by Keller that these associations could originate from customer's direct experience or from information obtained on a market offering. Brand image is, therefore, the mental image or perception of a brand and include symbolic meanings that consumers associate with that brand. (Dobni and Zinkhan, 1990; Padgett and Allen, 1997). Brand image represents "the rational or emotive perceptions consumers ascribe to particular brands" (Low and Lamb, 2000,) a set of beliefs held by customers about a brand, based upon his or her past exper ience (Aaker, 1994) (Garcia Rodriguez, 2001). In the context of healthy drinks and other assorted products, brand image is of high importance as the consumers generally

tend to prefer products manufactured or marketed by a brand that they are familiar with. Brand names are a source of differentiation. Brand image propels the consumers to consume more value on the specific brand having an established image in the market. A reliable brand image helps foster long term relationships between the product and end users. It is productive way to make better brand personality in the market for the purpose to increases the sale of the product. Branding does influence a customer's choice. In today's dynamically evolving technological landscape, at times the only strong differentiation point is the brand image. Through exploratory research, it has been verified that the brand image is significantly and positively related with the purchase intention (Chi, Yeh and Huang, 2008).

Product Advertisements, Offers and Other Assorted Promotions: Marketers are increasingly depending on short term strategies such as sales promotions to achieve their objectives in the market. The evidence of increasing use of sales promotions can be seen from a study conducted by Jha-Dang and Koshy (2004). Her study analysed different consumer promotion schemes launched in India over an eight -year period and found that FMCG sector was the highest contributor to consumer promotion schemes followed by consumer durables. The use of sales promotions as short term tactics is now a regular fixture at most FMCG companies. In the context of healthy drinks, advertisements should ensure that they communicate the health benefits of the drinks in a visible and clear way. Advertisements can be through online channels, or through more traditional channels such as print media or televisions. Promotions are designed to elicit positive responses. Manufacturers and retailers frame promotions in different ways to appeal to their customers. The manner in which promotions are presented also helps consumers to infer estimations of price savings. For healthy drinks, providing company merchandise in the form of accessories or gifts to end-consumers (through nationwide competitions) can also pique customer interests. However, this needs to be done post assessing available consumer demographics. Healthy drinks can also substitute other sugary drinks such as Coke or Pepsi.

In this highly competitive world, companies are striving very hard for their market share. Therefore, it becomes very crucial for the companies to retain their customers. Survival of the companies depends on consumer satisfaction, which depends on perception about the product in the consumer's mind. Companies spend 35 % of the total cost on advertisements, promotions and discounts to increase their customer base and revenue. Consumers have become very volatile, their preferences and the attitudes change with the time. Media of Advertisements also play a crucial role in promoting the products among the masses. Above the line (ATL) marketing activities like TV advertisements not only done with the intention to increase the sale but also to increase the awareness about the brand

and positioning the product in consumer's mind etc. (Monica P, 2013).

Soft drinks become indispensable in routine of the people in the culture. Companies also has acknowledged the power of advertisements, use of celebrities etc. in influencing consumer's buying behaviour. Various Sports players and Actors are hired to endorse the Soft Drink Brand. People who are very conscious about for the products, their buying behaviour get influenced more by getting the information about drink through promotion. Consumers who are highly immersed in an advertisement message are more likely to hold attitudes of brand while less involved receivers are more temporary (Laczniak and Muehling, 1988). The influence of external variables such as brand, store and price promotions have been studied by Grewal et al (1998) who studied their influence on consumer evaluations and purchase intentions. Primary factor that contribute to sales is the type of promotional tool employed, e.g., coupons, price promotions, and point -of-purchase (POP) displays. Additionally, a host of other dependants have been studied which may attribute the promotion and brand relationship, including challenger promotions (Moriarty, 1985), brand loyalty (Massy and Frank 1965), consumer characteristics (Cotton and Babb, 1978), and product price and sales volume (Curhan, 1974).

Consumer Awareness about benefits of healthy drinks: The materialistic consumption culture of today has promoted multiple negative habits in daily routines, which are characterised by physical inactivity, a stressful lifestyle, and unhealthy food consumption (Veloso, Matos, Carvalho, & Diniz, 2012). The enormous promotion of high fat products, sugar, energy snacks and fizzy drinks is considered to be one of the main reasons behind escalating unhealthy food consumption Most adolescents who rely largely on unhealthy foods tend to observe rising level of chronic ailments and obesity related diseases, and this becomes normal in their respective eating habits (Lobstein, Baur, & Uauy, 2004). The prevalence of obesity has been witnessed equally in both developed and developing countries. According to Schrempf (2014), the negative health consequences of obesity exceed those of smoking, while other statistics showed that 70 percent of world deaths are related to obesity and chronic diseases (Räihä, Tossavainen, Turunen, Enkenberg, & Halonen, 2006). Moreover, delivering awareness programs about dangers of consuming sugary (high calorie) drinks and carbonated (fizzy) drinks with caffeine is suggested as a potential tool to support healthy food consumption. The power of health and wellness awareness as a dominant method to promote healthy food consumption is agreed upon by many research studies (Sinkler & Toft, 2000).

Taste, Texture and Flavour of the Healthy Drink Product: For a market that is continuously reinventing the industry relevant success strategies, reliance on "Carbonated fizzy drinks" is still high. They often tend to be a popular go-to

beverage. As the consumers look for more natural and standard products that are low in sugar, and calorie, it is challenging for companies to develop drinks that have more authentic taste and flavours. In the recent time, things have changed, the consumers are now sophisticated, which has shifted the focus of the companies on developing the product that can cater to the taste buds of the consumers. The flavour and texture of the drink needs to be familiar and satisfying to the end user. Different technologies for flavour-texture interactions are used by the companies to meet the budding demand of the consumers.

Product Packaging: Packaging is an important and significant factor which affects the consumer buying behaviour. Packaging is an important attribute of marketing mix, plays an important role in developing product pricing, specific characters of new products and in promotional campaigns. Packaging also has direct relation to on shelf availability and advertising of product. It shows the level of creativity, innovation, modernism, cutting - edge qualities the brand might possess (Misbah Ehsan, 2015). Packaging can support a brand to position itself in minds of consumer and in the market place. Attractive packaging shape and other aesthetics attributes can make a brand unique, differentiate and can create an iconic brand image. The size of the pack and quantity can have direct impact on the sales volume and on shelf availability of a product. Labelling done on packaging of the product provides information which can impact consumer buying behaviour. Information provided make consumers aware about how to use product, its name, and price, content and appropriate information, which influences choices of consumers to purchase the product.

Reference Groups: In our day to day life, we all get influenced by a lot of people around us while we make our decision to buy a product. A reference group is an individual or set of people whose perspective we consider while making our purchases. The reference group can be very large or very small, primary or secondary groups. In case of healthy drinks consumption, the reference group might include people such as our family, friends, to the doctors, fitness experts, gym trainers, a motivational leader or a celebrity endorsement. They set the levels of lifestyle, purchasing patterns, etc. Other influence can be due to advertisement, or the influence of social status.

In-mall / In-store product placements and availability: On-shelf Availability: On-Shelf Availability (OSA) is a critical performance indicator for FMCG industry, retail industry, which impacts sales. OSA is an output of a successful logistics and supply chain planning and distribution system. Consumer access to products is generally through the retail outlet and if the product is not on the shelf then both the retailer and the manufacturer lose. If the product is not available, people opt for substitutes, either a different size in the same brand or another brand entirely or

purchase at a different store, delay the purchase. Any of these five actions directly affect the sale of a retailer or distributor, attitude of a consumer towards a product, reduction in customer loyalty and might possibly lead to change in customer preference towards other available products available in the market place. One of the critical strategies that can be employed by a retailer to improve the availability within a product category is to allocate more shelf space to a product. This is because the number of available shelves is often limited to the area of market or the geographical location. It also tends to be more expensive than ambient shelves.

Product Price: Consumer purchase is a purely subjective terminology in the field of marketing. There can be several supporting factors that can influence buying decision for a product or a basket of products. Individual tastes and preferences of customers play a major role in understanding how brand loyalty develops and manifests in the minds of the consumers. Product Pricing strategies contribute towards retaining customer loyalty to a particular brand (William J. Allender and Timothy J. Richards, 2012). Planning of Promotion strategies depends on two factors: Reduction in the price of a product and its associate deviation from the prevalent market price, and degree of promotion frequency (William J. Allender and Timothy J. Richards, 2012). These methods will help identify how many customers can be swayed to a different brand by reducing the price of the product. Even in cases of healthy drinks, it is possible that consumers might go for a healthy drink product offered by a rival brand to which they are loyal. Price perceptions have always had an impact on how consumers evaluated products. Price in a positive role has a positive relationship with quality and in its negative role has had a negat ive relationship on purchase probabilities. Several dimensions such as Value consciousness; coupon proneness; sale proneness etc. are included below price in a damaging role as they impact purchases where no other entity exists (Lichtenstein et al, 1993).

Presence of a Healthy Ingredient Mix: With the people becoming more health conscious nowadays, the labelling of product ingredients is under the spotlight. The consumer of today tries to analyse what they eat or drink. This makes the manufacturers understand the necessity of conducting appropriate market research studies to analyse the current health trend amongst consumers in the context of health drinks. Generally, healthy energy drinks are preferred by consumers in the age group 15-25. With more youngsters focusing on maintaining a healthy lifestyle, it becomes imperative that manufacturers of health drinks add requisite vitamins and minerals and other health promoter ingredients in their products. The challenge also lies in creating a healthy and natural drink by maintaining the taste, flavour, and texture of the drink. Drinks labelled to be containing vitamins or minerals are seen more favourably by health conscious consumers. Artificial flavour, colour, and preservatives also deter today's healthy consumers from buying

the product. Low sugar content is also crucial nowadays as more consumers are either suffering from diabetes, obesity or other diet related ailments. Health drink companies try to attract people by adding more organic content into their dr inks. This enhances the consumers' likelihood to consume the product more often.

Other factors affecting brand loyalty (Co-variates): Age, gender, education, and income also appeared to be significant variables affecting the consumer buying behaviour towards health drinks. More than 65% of India's current population is below the age of 35. The rise in health consciousness and consumer awareness can also be seen in the form of increase of spending on health (increasing at a CAGR of 14 %). (Deloitte, 2013). Moreover, it was also found that consumers with high income chose the health drink brand carefully.

List of Testable Hypotheses: Dependent variable: Customer Purchase of Healthy Drinks.

PHASE 1: Survey Research

Independent variables:

S.NO	Construct name	Literature Review
1.	Brand Image	Yes
2.	Product Advertisements, Offers and other Assorted Promotions	Yes
3.	Consumer awareness about benefits of healthy drinks	Yes
4.	Taste, Texture and Flavour of healthy drinks	Yes
5.	Product Packaging and Design	Yes
6.	Reference Groups	Yes
7.	Favorable In-mall / In-store placements and availability	Yes
8.	Product Price	Yes
9.	Display of product ingredients on packages	Yes
10.	Socio-demographic variables	Yes

PHASE 2: Experimental Research (Based on EPPM/PMT theoretical model)

S.NO	Construct name	Literature Review
1.	Fear	No
2.	Severity	No
3.	Susceptibility	No
4.	Response Efficacy	No
5.	Self-Efficacy	No
6.	Intention	No
7.	Attitude	No

Below are the hypotheses that we have defined from the literature review for each of the two phases:

PHASE 1: Survey Research

H1: There is a positive relationship between Brand Image **and** Customer Purchase Intention.

H2: There is a positive relationship between Product Advertisements/Offers/ Promotions **and** Customer Purchase Intention.

H3: There is a positive relationship between Consumer awareness **and** Customer Purchase Intention.

H4: There is a positive relationship between Taste / Texture / Flavour of the drink **and** Customer Purchase Intention.

H5: There is a positive relationship between Product Packaging / Design **and** Customer Purchase Intention.

H6: There is a positive relationship between Reference Groups **and** Customer Purchase Intention.

H7: There is a positive relationship between Favourable In-mall product placements **and** Customer Purchase Intention.

H8: There is a negative relationship between Product Price **and** Customer Purchase Intention.

H9: There is a positive relationship between Display of product ingredients **and** Customer Purchase Intention.

H10: There is no significant relationship between socio demographic variables (segmentation variables) **and** consumer buying behaviour towards health drinks.

PHASE 2: Experimental Research: We have identified above factors which will function as independent variables. We intend to perform quantitative analyses (Multi-linear regression, Logistic Regression, Factor and Cluster Analysis, Conjoint Analysis, etc.) to further analyse and assess the trend of consumer behaviour. We will study the different sampling techniques available and choose the best-fit method based on the scope of this empirical study. Questionnaires will be framed taking into account the independent and dependant variable(s) to be studied. In the course of the empirical study, we will account for any ***co-variates or extraneous*** variables that we may encounter and factor them into the quantitative study in order to get a holistic view of the consumer pattern of buying healthy drinks.

Method: The aim of this section is to highlight the method used for data collection, sampling design, research tools, scale/construct designs and future steps related to additional live experiments that will be conducted to further corroborate the findings. Market research includes collection of information about customers, channels, competitors, or marketing partners to understand marketing phenomena and to predict future behaviour. ("Marketing Research", Aug 29, 1991 Harvard Business Review 9-592-013).We propose to perform the following types of market research for this empirical study:

Qualitative Research: It is most frequently used at the *exploratory* stage of situation assessment ("Marketing Research", Aug 29, 1991 Harvard Business Review 9-592-013) as part of the hypothesis building process. We have performed exploratory research in the form of a literature review to identify the various factors that can enhance consumer preference towards healthy drinks.

Quantitative Research: This type of research is used at the *confirmatory stage* of situation assessment as part of the hypothesis testing process. More structured questions are asked. The objective is to test specific hypotheses about how the customers or channels will behave. Furthermore, we can divide this type of research into two additional sub-types:

Survey Research: In survey research we can gather information by distributing questionnaires to the respondents. The goal is to ask variety of questions that cover the independent variables that we have defined and assess how the target survey population respond. Quantitative and statistical analysis will then be conducted to identify the significant parameters or factors that can drive the consumption of healthy drinks.

Sampling technique: We will use Simple Random Sampling as it helps in detecting unobserved heterogeneity. The greater the ability to capture heterogeneity the greater is the representation of the sample. We are targeting a sample belonging to the age group of 15 to 40 as it is representative of the population and the results from the research can be extrapolated for the completed target population.

Method for Phase 2: We created a questionnaire incorporating all the scales related to the hypothesised independent variables and dependent variable. We targeted a sample belonging to age group of 15 to 50 for our questionnaire survey. 32.3% of survey respondents belonged to the age group of 20-25 and 66.1% respondents belonged to the age group of 26-35. The age group of 20-35 closely mirrors the real life target consumer group. Respondents included 76.6% males and 23.4% females. We floated the questionnaire online and collected 120+ responses and closed the response window after receiving sufficient responses. We performed preliminary statistical analysis and the results reveal that "**Brand Image**",

"**Awareness**" and "**Reference Groups**" are significant in predicting "**Consumer purchase behaviour**". We executed in-depth online experimental survey by including concepts of "**Extended Parallel Process Model (EPPM)**" and "**Motivation Protection Theory (MPT)**". The steps are detailed below:

Experimental Research: In experimental research, we plan to manipulate one or more variables to measure the quantum of effect on the other variable. The important distinguishing feature of experimental research is that the researcher tries to manipulate the environment with the intent of measuring the effect of that change. ("Marketing Research", Aug 29,1991 Harvard Business Review 9-592-013). We plan to conduct experiments by dividing the sample subjects into two distinct groups:

Control Group: The variable that we manipulate is called the "treatment". We will then "measure" the responses based on the treatment. In the control group, the experiment subjects will not be exposed to any "treatment".

Test Group: In the test group, the subjects will be exposed to a multiple phases of "treatment(s)". We propose to study the *utilitarian* (extrinsic) and hedonic (intrinsic) aspect of consumer behaviour. Holbrook and Zirlin (1983) said that utilitarian value tends to result from beliefs about the way product imagery serves consumption needs whereas *hedonic* value tends to hinge on an emotional response to the sign or significate appreciated for its own sake. Apart from traditional approach of survey data collection to identify significant variables, we are planning ahead to adopt the **experimental survey approach** to identify impact of factors such as mild and severe fear appeal. We will select a group of people and try to observe how individuals will react when confronted with fear inducing stimuli, using the **Extended Parallel Process Model (EPPM)** framework and the **Protection Motivation Theory (PMT) approach**. By showing them ads and posters, we will attempt to persuade respondents to frame their behaviour and / or attitude towards healthy drinks and try to manipulate their selection of drink.

Possible Output Scenarios

Danger control – When an individual perceives that the severity and susceptibility are high but they have ability to take mitigating action, they are likely to change their behaviour.

Fear control – On the other hand, if the respondent perceives his ability to control the risk is low, even if the severity and susceptibility is perceived as high, they are likely to get manipulated and pick a healthy drink when offered. This is maladaptive change, or counter-productive behaviour.

No Response – The severity or susceptibility of the danger was perceived as low. Hence, the respondent might not react to the process.

In our online experimental research, the "treatments" may include some of, and are not limited to, the following:

- Expose subjects to an advertisement/poster that utilizes low/moderate/high fear appeal and then subsequently ask the subjects to pick up a drink of their choice.
- Expose subjects to a television advertisement of a healthy drink and then subsequently ask to pick up a drink of their choice. (a healthy drink or a sugary fizzy drink such as Coke or Pepsi)
- Expose subjects to a sensory/hedonic advertisement of a sugary drink (Coke or Pepsi) and then subsequently ask to choose a drink of their choice.
- Show subjects videos related to wellness and/or fitness and then subsequently ask to choose a drink of their choice.
- Expose subjects to two healthy drinks belonging to different brands and subsequently ask to pick one of the two.
- Expose subjects to healthy drink brands with different packaging styles and ingredient / product attribute displays and ask to pick up a drink of their choice.
- Enable reference points for comparison of relative *health factor* between two healthy drinks and subsequently expose subjects to these reference conditions.

We intend to execute the aforementioned experiments using online forms. The subjects will be exposed to a series of **advertisements/posters** that will attempt to influence the loss/gain appeal of consumers and try **to manipulate their selection of healthy drinks over carbonated sugary drinks.** The following questions will be addressed via experimentation. The list of questions may be expanded or altered as the empirical study progresses and as and when more information becomes available:

a. Do advertisements or posters impact the selection of healthy drinks?

b. If yes, how does the fear appeal factor into the consumer decision making process?

c. Does simulating an environment that is conducive to fitness impact the selection of healthy drinks over sugary drinks?

d. Do packaging and/or display of product information on the package impact healthy drink selection?

e. How does the utilitarian and hedonic psychology of consumers impact the selection of healthy drinks over fizzy drinks?

f. What is the general health consciousness index of the subjects or the target sample population?

g. Quantify the interaction effects between the test group and the control group, if any, and draw appropriate scientific inferences and/or recommendations.

h. Do cognitive/hedonic reference points have any impact on the selection of a particular healthy drink over fizzy drink?

Results: As part of Preliminary Data Analysis of the Survey Research, we performed Linear Regression Analysis followed by Factor Analysis in IBM SPSS.

Below are the high level results:

- The Regression Model was significant (p=0.000) with R square value of .568 (56.8% of variations in Dependent Variable is explained by Independent Variables)
- Brand Image, Awareness and Reference Group turned out to be significant.
- Principal Component Analysis created four significant factors. 71.83% data is accounted for by Factor Analysis.
- Below factors were extracted:

o Factor 1: Brand Image, Offers/Advertisements (Most important)

o Factor 2: Awareness, Display

o Factor 3: Prices

o Factor 4: Reference Groups

Post Phase 1, we proposed to conduct **Experimental Research in Phase 2.** We designed experimental posters based on the **Extended Parallel Process Model (EPPM) and Protection Motivation Theory (PMT).** Furthermore, we also analysed the data in order to test the application for fitment based on the **Theory of Reasoned Action.** We proposed to test *manipulation* of **Fear Appeal** and **Efficacy** among experiment's subjects. Below are the variables we tested:

Dependent Variable: Choice of the drink. (Out of Healthy and Carbonated Drink) –> ***Categorical data (0 or 1).***

Independent Variable(s): Fear, Severity, Susceptibility, Response Efficacy, Self-Efficacy, Attitude and Purchase Intention –> ***Continuous Data.***

- Once the data was collected, we performed Linear Discriminant Analysis in R Studio.
- The correlation ratio was highest for ***Purchase Intention*** (0.732) followed by ***Attitude*** (0.527). This is also confirmed by the p-values and the Wilks Lambda score.
- One Fisher's Discriminant Function (DF1) was created and 100% of data was explained by the function (DF1).
- The discriminant value is the highest for ***Purchase Intention*** followed by ***Fear*** and ***Attitude.***
- The discriminant correlation value is the highest for ***Purchase Intention*** followed by ***Fear.***
- The model has a hit ratio of 100% as it accurately predicted all groups' memberships.
- The inferences substantiate the observation that ***Purchase Intention (IV)*** drives the ***Choice of the drink (DV).***
- Now, in order to understand the sources or drivers of ***Purchase Intention,*** we performed a **Linear Regression** taking *Fear, Severity, Susceptibility, Response Efficacy, Self-Efficacy, and Attitude* as independent variables.
- Adjusted R square value is 0.736 suggesting that this is a **good** statistical model. 73.6% of the variation in Purchase Intention is *explained* by the independent variables.
- ANOVA is significant (p=0.000)
- ***Fear*** and ***Attitude*** play a major role in influencing the ***Purchasing Intention*** of the consumer. They are statistically significant at 95% confidence intervals with p-values of 0.015
- And .017 respectively. ***Response Efficacy*** is only marginally significant with a p-value of 0.07.
- ANOVA is significant for all independent variables except "***Health Consciousness***". This substantiates that the Fear/Efficacy posters used in the experiments have been successful in manipulating varying levels of ***Purchase Intention*** and *independent variable* outcomes.

We further executed a Factor Analysis (Varimax) to drill down the factors that are significant.

- Two factors (Eigen Values>1) have been extracted with **71.74%** data (cumulative) explained by these 2 factors.
- The important factor that has been uncovered are:

  Fear and Danger Control (Severity and Susceptibility) followed by Attitude.

  Efficacy is, however, insi gnificant when compared to Fear and Danger Control. As per the Factor Analysis and Discriminant Analysis results, ***Choice of the drink*** (Dependent Variable) is highly correlated with ***Purchase Intention.*** (Independent Variable). Furthermore, based on the data from Factor Analysis, ***Attitude*** and ***Fear*** drive the ***Purchase Intention.***

  Discussion: After completion of Phases 1 and 2 of the empirical study, we identified the following significant drivers that can boost consumption of healthy drinks by people:

1) Fear quotient
2) Attitude
3) Danger Control (Susceptibility)

In order to further reinforce the structural significance of the factors and to uncover latent psychological/behavioural influences, we decided to perform Phase 3a/3b of advanced quantitative analyses such as ***"3a: Structural Equation Modelling (SEM)"*** and ***"3b: Mediation/Interaction Effect Analysis"*** using statistical software's **IBM SPSS AMOS v25** and **Process Macro v3.0 by Andrew F. Hayes.** In order to collect data, we leveraged the previous questionnaire that was designed to elicit 160+ unique responses. Post collection of the responses, we identified pairs of variables (from a particular independent variable collection) and segregated them into unique blocks of independent predictors. Thereby, we compacted the total number of independent variables to lesser number of semantically similar variables. This ensured that the analysis of responses was limited to only those variables that are important for empirical significance (for Process v3.0 experiment). The exhaustive list of variables was used for AMOS study as explained below.

Results from Phase 3a: 'Structural Equation Modelling (SEM)' using IBM AMOS v25

Number of variables in the SEM model:	42
Number of observed variables:	17
Number of unobserved variables:	25
Number of exogenous variables:	24
Number of endogenous variables:	18

- Chi-square/DF = 1.185 indicating that the model is a good fit.
- P value is also significant at 0.148 (>0.05)
- The goodness of fit indices (in red) are also significant with values nearing 1.00

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	89	75.818	64	**.148**	**1.185**
Saturated model	153	.000	0		
Independence model	17	2542.874	136	.000	18.698

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.055	**.954**	**.889**	.399

Model	RMR	GFI	AGFI	PGFI
Saturated model	.000	1.000		
Independence model	.355	.255	.162	.227

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	**.970**	**.937**	.995	.990	.995
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Below are the key *latent* relationships that were uncovered. All relationships mentioned here are statistically significant.

1. **Fear, Attitude, Susceptibility, Health Consciousness and Response Efficacy** are playing significant roles in influencing the purchase decisions of respondents.
2. **Severity** and **Self Efficacy** did not come out as significant in influencing purchase decisions.
3. Fear appeal in the advertisement with a focus on ***inducing more Anxiety*** tends to increase Severity effect among respondents.
4. Fear appeal in the advertisement with a focus on ***scare factor*** induces a ***change in attitude*** in respondents. They tend to check their consumption of sugary drinks more when scare quotient of the advertisement is high.
5. Attitude and Health consciousness drives response efficacy (to avoid consuming carbonated drinks and switch to healthy drinks)
6. Availability of healthy drinks also induces self-efficacy to switch to healthy drinks.
7. Health consciousness plays a key role in Severity of effect judgment by respondents.

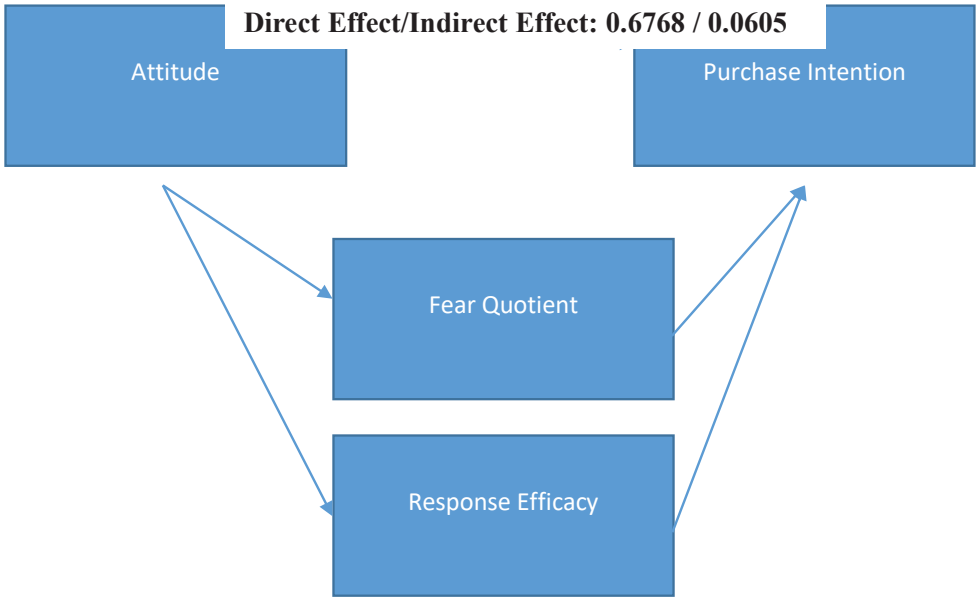
The insights are mostly in-line with results of Linear Regression/ Factor Analysis/ Linear Discriminant Analysis that we performed and submitted for previous empirical project milestones. Latent interaction diagram is appended in the Statistical output document attached. Thus, we have empirically established that **Fear, Attitude and Response Efficacy** are most important drivers to focus on. These factors will be crucial in deciding how we can target the consumer segment to move from consumption of fizzy drinks to healthy drinks.

Results from Phase 3b: 'Mediation Analysis' using Process Macro v3.0

The research motivation to perform mediation analysis came from the results of the AMOS study. We had concluded that Fear, Attitude and Response Efficacy are important factors that are actionable when deciding advertising campaigns. Large FMCG organisations like Pepsi Co., Coca Cola, etc. should focus on these parameters when designing advertising that are relevant to the consumer base for their latest health drink products. This will ensure that we can manipulate behavioural purchase patterns of profitable customer segments and shift them from consumption of fizzy drinks to healthy drinks.

Process Macro v3.0 is an observed variable OLS regression path analysis modelling tool for SPSS. It is used to assess direct/indirect effects of independent and mediator variables on the final outcome (dependent) variable.

We executed a Mediation Analysis with the following variables:



As predicted, the direct effect of Attitude (0.6768) on Purchase Intention was highly significant with an R-square value of 57.87% indicating a good fit. The indirect effect of response efficacy (0.0626) was minimal. An interesting insight was that Fear Quotient worked ***negatively*** (-0.0021) in influencing the respondent's purchase decision. **This indicates that when response efficacy is applied in an advertisement, Fear Quotient should not be used heavily as it can diminish the effect of the advertisement. It has been statistically proved that moderate fear appeal works best.** Finally, a **Univariate ANOVA Analysis** was performed which revealed the interaction effect between Fear Quotient and Attitude.

- At specific levels of Attitude, by increasing the fear quotient (scare/anxiety factor of the advertisement), the advertisement can have a **detrimental effect** on the final purchase intention of the consumer. Thus, only moderate fear application is advised.

- For every level of Fear quotient (scare/anxiety factor), the **inherent attitude** of the consumer plays the most important role in influencing the purchase intention of the consumer. Thus, create advertisements that can shape/influence the attitude of the consumer.

Conclusion: This empirical study has successfully identified the intrinsic psychological factors that can influence a consumer's preference towards purchase of healthy drinks. **By designing the right advertisement and incorporating a**

right balance of fear/attitude/response efficacy, coupled with a socially relevant message, health drink manufacturers can target the required consumer segment and boost sales of their health drinks in the global FMCG market.

We have focused on the consumer behaviour aspect of the empirical study and there are few areas of research that are outside the scope of this study and warrant further discussions:

1. How can health drink manufacturers design advertisements that combine the right balance of fear quotient and response efficacy without falling into the aforementioned "negative effect" scenario?
2. What are the psychographic components of a consumer's reaction to response efficacy? How can it be studied?
3. What other mediums can we look at while designing content for health drink advertisements?
4. How can we effectively re-position health drinks based on the consumer segments available in the FMCG market?

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