A STUDY ON CONSUMER PREFERENCE TOWARDS HEALTH FOOD DRINKS IN TRICHY CITY

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Abstract

One in three babies born in India weigh significantly low because their mothers are undernourished. Some low-weight babies die and some survive and those who survive adapt to malnutrition and scarcity. That is, the biological adaptation is programmed to maximize every calorie the body gets. This adaptation that helped a malnourished baby survive suddenly turns out to be a mal-adaptation when the baby becomes an adult. The adult, who was malnourished in the past, gains extra weight even when he takes only normal amount of food because of the biological adaptation.

Thus intake of healthy food becomes necessary right before the birth. This study becomes more important which focuses on the consumer preference towards ‘Health Food Drinks’, which is the primary need for adults as well as children, based on various aspects.

INTRODUCTION

India, the world’s largest malt-based drinks market, accounts for 22% of the world’s retail volume sales. These drinks are traditionally consumed as milk substitutes and marketed as a nutritious drink, mainly consumed by the old, the young and the sick.

The Health food drinks category consists of white drinks and brown drinks. South and East India are large markets for these drinks, accounting for the largest proportion of all India sales. The total market is placed at about 90,000 ton and is estimated to be growing at about 4%. These Malt beverages, though, are still an urban phenomenon.

White drinks account for almost two-thirds of the market. GlaxoSmithKlime(GSK) Consumer Healthcare is the market leader in the white malt beverages category with a 60.7% overall market share. Heinz’s Complan comes in second (in this segment, third overall) with a market share of 12-13%. Market leader GSK also owns other brands such as Boost, Maltova and Viva.

Currently, brown drinks (which are cocoa-based) continue to grow at the expense of white drinks like Horlicks and Complan. The share of brown drinks has increased from about 32% to 35% over the last five years. Cadbury’s Bournvita is the leader in the brown drink segment with a market share of around 15%. Other significant players are Nestlé’s Milo and GCMMF’s Nutramul.

OBJECTIVE OF THE STUDY

• The objective of this study is to understand the customer behavior in the “Health Food Drink (HFD)” product category.
• To identify the factors those influence a person into making a decision to buy a certain brand of malt-based health drink.
• The objective of the study also included identifying the determinant purchase factors, the customer segments and the sources of information they rely on.

India has Enormous Under-Nutrition and Over-Nutrition Problems

Asia has the largest number of malnourished children in the world. The Double Burden of Malnutrition in Asia was inspired by the massive challenge that this situation currently poses for Asia. It describes the main driving forces behind the groundswell of under-nutrition, while shedding light on the emerging double burden of co-existing underweight and overweight, and the linkages between these two different forms of malnutrition.

There are two types of nutritional problems - one is under-nutrition and another is over-nutrition. Emphasis should be given not only to food but also to care and health, the reason being that even if children in the age group of 0-2 years are able to get food, they may have mothers who do not have enough time to pay attention to their children. Similarly, if there is no health-guaranteeing environment, and children suffer from diarrheal diseases, no amount of food will help prevent malnutrition.

Over-nutrition, on the other hand, means either too many calories or the wrong types of calories such as saturated fats or highly processed sugar that lead to obesity, vascular diseases, etc. Many developing countries have under-nutrition and those in Europe and North America have over-nutrition problems. There is this in-between category with countries like India that still have an enormous amount of under-nutrition and significant over-nutrition problems. In India, for instance, around 50 per cent of its children under the age of five are undernourished or malnourished. But in urban areas, the over-nutrition problem is shooting up, thanks to the change in lifestyle and food habits. As a result, health systems are under huge stress.

Nutrition in India

In India, each State is practically equivalent to a country with its specific socio-economic level, different ethnic groups, food habits, health infrastructures and communication facilities. Thus, the nutritional status of the population shows significant variation between states since it results from a varying combination of factors.

In the last 20 years, there have been no significant changes in patterns of dietary intake. Cereals remain the staple food in India providing most of the energy intake. Since the seventies the consumption of foods like pulses, roots and tubers has fallen, while those of other foods like sugar, "jaggery" (unrefined brown sugar), fats and oils and green leafy vegetables have slightly increased. The average Indian diet remains largely deficient in green leafy vegetables, meat, fish, milk and milk products. Moreover, it also remains deficient in some micronutrients such as vitamin A, iodine and iron.

Adolescents who are undergoing rapid growth and development are one of
the nutritionally vulnerable groups who have not received the attention they deserve. In under-nourished children rapid growth during adolescence may increase the severity of under-nutrition. Early marriage and pregnancy will perpetuate both maternal and child under-nutrition. At the other end of the spectrum among the affluent segment of population, adolescent obesity is increasingly becoming a problem.

METHODOLOGY OF THE STUDY
The principal method used was Personal Interviewing of the respondents. In-Home interviews were conducted by us at various locations in Trichy. Our target population involves the users, deciders and buyers of health food drinks. The users include the old and the young population. The deciders and the buyers mostly include the housewives who buy the product from the market. A mixture of quota and stratified method was used for sampling, with care being taken to get responses from customers of different age groups and different family sizes. Due to time constraint, a sample of 57 respondents was only taken for study.

FINDINGS
Sources of Information influencing the Purchase Decision
a) Advertisement
b) Children
c) Doctor
d) Family
e) Past experience
f) Retailer
g) Word of mouth

The respondents were asked to rank the factors in order of importance. A t-test was conducted on the results of the survey in order to compare the means of the ranks for the factors. We can say from the results that there is a significant difference between the ranks of the factors with a 95% confidence.

The two most important factors that emerge out of the tests overall are the “Family doctor” and the influence of the “Family”. This finding is an important implication for product placement. We can say that the health food drinks should appeal to the complete family rather than only a particular age group. Doctors can also be an important influencer or opinion leader and hence should be targeted in the product promotions. Some products have been promoting their products using comparative advertisements including testimonials by the doctors.

A second test can be conducted in the same manner taking only the cases where the people are having kids in the family. We observed that the two most important factors differ from the first scenario. The two most important factors that emerge out of the test are “Family Doctor” and “Advertisement”. Thus it can be concluded that advertisements have an important influence on the families having kids or in turn the kids. This can be easily observed from the large number of advertisements directed towards the well being of kids.

Product Attributes Influencing the Purchase Decision
The following product attributes were identified as influencing the purchase decisions of the customers:
a) Nourishment
b) Colour
c) Palatability
d) Economy
e) Shelf-presence
f) Packaging
g) Brand Image
h) Promotions

The respondents were asked to score the importance of the factors on a scale of 1 to 5, with 5 being the most important. A t-test was conducted on the scores of the factors in order to find the most important factors. The t-test shows there is a significant difference between the scores of the various factors with a 95% confidence.

We observed from the results that the two most important product attributes in making a purchase decision are the “Palatability” and the “Nourishment” perception in the minds of the customers. These factors turn out to be the same irrespective of whether there are children in the family or not.

We then studied the variance of these factors among various demographic groups by conducting the one way Anova test on the scores of these 8 factors. We studied the variance of the mean scores of these attributes among the various groups differentiated by the following factors:- Income, Education, Age and Family size

From the analysis it is observed that there are no significant differences in the scores of the product attributes in different groups as classified by “Income”, “Education” and “Family size” within a 95% confidence interval.

However there is a significant difference on the “Nourishment” and “Economy” product attributes of health food drinks. As is observed from the mean scores, the “Nourishment” aspect becomes particularly important for people above the age of 60. It is also important for people who are young in age i.e. less than 20. However it does not seem to be very significant for people in the age group 33-45.

The factor analysis of these attributes is done in the following section.

Factor Analysis of Purchase Considerations

The factor analysis of the 8 product attributes yields the following 3 factors:

Factor I: Promotion, Shelf-Presence, Packaging & Economy
Factor II: Palatability, Brand
Factor III: Nourishment, Colour

As factor I encompasses the accessibility and affordability of the product, it can be termed as ‘Purchase Feasibility’.

As factor II encompasses the palatability and brand value of the product, it can be termed as ‘Likeability’.

As factor III encompasses the nutritional value and colour, an indicator of quality, of the product, it can be termed as ‘Utility’.
Factor Analysis of Product Attributes/Considerations
KMO and Bartlett's Test

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</th>
<th>.592</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bartlett's Test of Sphericity</td>
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</tr>
<tr>
<td>Approx. Chi-Square</td>
<td>94.019</td>
</tr>
<tr>
<td>df</td>
<td>28</td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
</tr>
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</table>

Rotated Component Matrix(a)

<table>
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<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROMOTIO</td>
<td>.741</td>
<td>.017</td>
<td>-.178</td>
</tr>
<tr>
<td>SHELF</td>
<td>.707</td>
<td>-.065</td>
<td>.286</td>
</tr>
<tr>
<td>PKG</td>
<td>.686</td>
<td>.392</td>
<td>-.223</td>
</tr>
<tr>
<td>ECONOMY</td>
<td>.586</td>
<td>.170</td>
<td>.512</td>
</tr>
<tr>
<td>PLTY</td>
<td>-.125</td>
<td>.876</td>
<td>.184</td>
</tr>
<tr>
<td>BRAND</td>
<td>.233</td>
<td>.862</td>
<td>-.047</td>
</tr>
<tr>
<td>NOURISH</td>
<td>.135</td>
<td>.147</td>
<td>.820</td>
</tr>
<tr>
<td>COLOUR</td>
<td>.179</td>
<td>.060</td>
<td>.703</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Equamax with Kaiser Normalization.
A Rotation converged in 5 iterations.

Customer Segmentation
The set of respondents was segmented on the basis of the demographic information namely ‘age-group’, ‘income-group’, ‘education’, ‘family size’ etc. The cluster analysis on these demographic variables yields the following 2 clusters:

Cluster 1: The members are almost uniformly distributed across all age segments except under-20 in which no member lies. However, the family size is large than 3 for all the members and a majority of members having 1-2 child in the family. The cluster size is 27 respondents.

Cluster 2: All the members in this cluster are less than the age of 32 yrs, with the majority being less than 20 yrs. Around 90% of the members were either single or couple thus suggesting that the members were either students, or bachelor/newly-married young working professionals. The cluster size is 30 respondents.

As the consumption in cluster 2 would be lower than the large families comprising kids & older persons because of less health concerns and preference for alternative beverages, the price sensitivity of cluster 2 would be low while cluster 1 is concerned about economy.

Thus, cluster 1 could be termed as ‘value-seekers’ while cluster 2 could be termed as ‘quality-seekers’.

Exhibit 4:
Cluster Analysis on Demographic Variables
Final Cluster Centers

<table>
<thead>
<tr>
<th></th>
<th>Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>AGE</td>
<td>3</td>
</tr>
<tr>
<td>FMLY_SZ</td>
<td>3</td>
</tr>
<tr>
<td>NUM_CHILD</td>
<td>2</td>
</tr>
<tr>
<td>INCOME</td>
<td>2</td>
</tr>
<tr>
<td>EDUCN</td>
<td>4</td>
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</table>

Number of Cases in each Cluster

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>27.000</td>
</tr>
<tr>
<td>2</td>
<td>30.000</td>
</tr>
<tr>
<td>Valid</td>
<td>57.000</td>
</tr>
<tr>
<td>Missing</td>
<td>.000</td>
</tr>
</tbody>
</table>
**Different Brands on Product Attributes**

Five major selling brands were tested on the various product attributes mentioned. The brands included in the test were:

a) Boost  
b) Bournvita  
c) Complan  
d) Horlicks  
e) Milo

The respondents were asked to score each of the brands on the various product attributes on a scale of 1 – 5. T-test was conducted on the various product attributes for different brands.

**Sample Procedure**

The results of the various brands on different attributes are as follows:

**Nourishment:** Horlicks scores well above all the brands as far as the nourishment attribute of the product is concerned. The second brand surprisingly turns out to be Complan above Bournvita although there are not many takers for the brand in our survey.

**Colour:** The two brands with highest main scores are again Bournvita and Horlicks. This means that the dark brown shining colour of Bournvita is the most liked.

**Palatability:** Bournvita scores much higher than others going with the traditions of Cadburys tradition of taste. The second brand is Horlicks.

**Economy:** Bournvita scores the highest on the economy aspect closely followed by Horlicks. This means that the price being offered for the product is perceived as being competitive in the healthcare drink market.

**Shelf presence:** The mean score of this aspect of Horlicks is the best followed by Bournvita. This has to do with the distribution of the brands which appears to be the best for Horlicks.

**Packaging:** Horlicks and Bournvita score again above the rest of them on the packaging aspect perception. This may be due to the range of SKU’s available and also with the different types of packaging containers like plastics.

**Brand Image:** The mean score for brand image is the highest for Bournvita followed by Horlicks. This means the advertising and image associations with Bournvita are very strong.

**Promotional schemes:** Bournvita scores the highest on this aspect. The other closely following brand Horlicks seems to be lagging on this aspect. Boost on the other hand scores high on this attribute.

Thus we can well say that the market leaders are the brands who are scoring high on all of the above attributes.

Though the above analysis reveals the relative performance of the brands on different parameters, ‘attribute-based Multi Dimensional Scaling (MDS)’ would indicate the overall positioning of these brands. These results are discussed hereunder.

**Attribute-Based MDS**

The tool used for this analysis is MDSX. The analysis was performed on the overall samples as well as on the 2 segments individually so as to gauge the difference in their perceptions.
The MDS on overall sample suggests that

<table>
<thead>
<tr>
<th>Brand</th>
<th>Positioning Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horlicks</td>
<td>Brand, Nourishment, Shelf-presence</td>
</tr>
<tr>
<td>Bournvita, Complan</td>
<td>Palatability, Shelf-presence</td>
</tr>
<tr>
<td>Milo, Boost</td>
<td>Promotion, Economy, Colour</td>
</tr>
</tbody>
</table>

While the analysis on ‘value-seekers’ Cluster 1 suggests that

<table>
<thead>
<tr>
<th>Concerns</th>
<th>Brand</th>
<th>Positioning Attributes</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economy, Value-for-money</td>
<td>Complan, Horlicks</td>
<td>Brand, Shelf-presence, Packaging, Nourishment</td>
<td>Weak</td>
</tr>
<tr>
<td></td>
<td>Bournvita</td>
<td>Palatability, Brand</td>
<td>Weak</td>
</tr>
<tr>
<td></td>
<td>Milo, Boost</td>
<td>Economy, Promotion</td>
<td>Strong</td>
</tr>
</tbody>
</table>

The above table summarizes the existing positioning in minds of ‘value-seekers’ and also indicates the relative strength of brands on the basis of match between the segment concerns and the positioning attributes.

While the analysis on ‘quality-seekers’ Cluster 2 suggests that

<table>
<thead>
<tr>
<th>Concerns</th>
<th>Brand</th>
<th>Positioning Attributes</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality, Little concern for economy</td>
<td>Horlicks</td>
<td>Brand, Nourishment</td>
<td>Somewhat Strong</td>
</tr>
<tr>
<td></td>
<td>Bournvita</td>
<td>Shelf-presence, Palatability</td>
<td>Somewhat Strong</td>
</tr>
<tr>
<td></td>
<td>Boost</td>
<td>Colour</td>
<td>Weak</td>
</tr>
<tr>
<td></td>
<td>Milo, Complan</td>
<td>Promotion</td>
<td>Weak</td>
</tr>
</tbody>
</table>

The above table summarizes the existing positioning in minds of ‘quality-seekers’ and also indicates the relative strength of brands on the basis of match between the segment concerns and the positioning attributes. None of the brands is perceived to be better on ‘economy’ and ‘packaging’.

**Brand Personality**

The attribute-based MDS of the trait-brand matrix suggests that

- ‘Horlicks’ & ‘Bournvita’ are perceived to be ‘Modest’, ‘Honest’, ‘Reliable’ & ‘Cheerful’. Thus, these brands can be personified as a **reliable** and **helping** friend.
- ‘Complan’ is perceived to ‘Sophisticated’ thus it can be personified as a **charming, suave and chivalrous gentleman**.
- ‘Milo’ & ‘Boost’ are perceived to be ‘Bold’ & ‘Spirited’. Thus, these brands can be personified as **fun-loving, adventurous and daring youth**.
- None of the brands is perceived to be ‘tough’ & ‘rugged’ as is desired for a health product.
CONCLUSION
The study has been carried out the consumer preference towards the ‘Health Food Drinks’ and what are the attributes they look for in their health drinks and how they select a health drink. It revealed us many things which can be used for improving the health food drinks and reaching out to the customers. Since nutritional level in India is less compared to other countries, the people should take necessary steps to maintain their daily nutritional level which can be done through balanced diet, nutrional food and health drinks. This may reduce many physical problems which they may face in the future.

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