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## A GENDER PERCEPTION STUDY ON CONSUMER PURCHASING BEHAVIOR OF COUGH SYRUP: AN EMPIRICAL INVESTIGATION

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### Abstract

To know the consumer's perception is need of hour for marketers. This paper is an effort to know that consumer purchase behavior varies with different gender and also to analyze consumer's purchasing behavior is different or same in the students studied B.Sc. Biotech and students who had studied Social science and engineering. 47 males & 47 females were interviewed to identify purchasing behavior of cough syrup with gender perspective. This paper also reveals various attributes of cough syrup.

**KEYWORDS:** OTC Drugs, Consumer, Cough Syrup, Purchasing Behavior.

### INTRODUCTION:

India currently represents just U.S. \$6 billion of the \$550 billion global pharmaceutical industry but its share is increasing at 10 percent a year. The objective of this research paper is to study the consumer buying behavior regarding OTC product.

As of now the Indian OTC market (counting frank OTC drugs which are promoted and considered OTC brands, and ones that are non-publicized or Rx showcased however with vast OTC deals part) is evaluated to value around USD 1,914 million (euro 1461 million) with a yearly increase rate of 11.7% toward the end of schedule year 2010.

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an Empirical Investigation

MAIN SELF-MEDICATION PRODUCT GROUPS CATEGORY	2006	2007	2008	2009	2010
<b>OTC sales India</b>	1243.4	1371.4	1491.0	1638.9	1813.4
<b>Analgesics</b>	178.8	192.9	201.7	223.4	258.6
<b>Cough, Cold &amp; Allergy</b>	227.2	250.7	269.7	295.1	318.1
<b>Gastrointestinal</b>	231.4	256.7	281.0	301.2	332.6
<b>Vitamins, Minerals &amp; Supplements</b>	447.1	494.3	538.6	583.0	634.5
<b>Dermatological</b>	144.1	160.3	181.9	212.4	236.5
<b>Lifestyle OTCs</b>	14.8	16.4	18.1	23.9	33.1

According to OPPI (Organization of Pharma producers of India) cough, cold & allergy drugs are contributing 318.1 US\$ Million out of total OTC drugs sales. Thus cough syrups are integral part of OTC drugs market.

#### **LITERATURE REVIEW:**

As indicated by USFDA, OTC medications are characterized as medications that are protected and viable for use by general population without appearing for treatment by medical professionals.

#### **Cough syrup:**

a medicated, syruplike fluid, usually flavored and nonnarcotic or mildly narcotic, for relieving coughs or soothing irritated throats.

Buyer behaviors are part of the purchasing process in both consumer markets and business-to-business transactions. The goal is to tailor marketing messages to target audiences in the appropriate media.

The consumer buying decision-making process consists of five steps.

Problem recognition

Information seek

Evaluation of alternatives

Buy decision

Post buy assessment

According to "Utilizing shopper's rationale to persuade OTC purchasing behavior by Susan Josi and Anil Khanna" When it comes to imparting to the customer, over-the-counter (OTC) prescriptions communication generally takes after a uniform guidelines .express the issue (in a

reasonable or overstated way) or the buyer's anguish or unhappiness because of the problem, then present the product, indicate how it works (rational strategy), then the help, finishing with the brand advantage.

### **OBJECTIVES:**

To know whether purchasing behavior of cough syrup varies with gender or not.

To know whether there is any difference in the purchasing behavior of students who had studied Biology in the graduation (Pharmacy & medical graduates not included, only B.Sc. Biotech students) & students who hadn't studied biology in graduation. (Social science and Engineering).

### **RESEARCH METHODOLOGY:**

This study is an exploratory type of research which explores above mention purposes. Respondents were administered a structured questionnaire of using a set of 15 questions measured on a Likert type scale designed & standardized by the researcher himself.(Reliability test: cronbach's Alpha value= 0.640) This study has been done by the convenient sampling method where total 94 respondents have been interviewed which contains 47 male respondents & 47 female respondents. Further profile of respondents that they have done B.Sc. biotech as their graduation and even respondents were from other than B.Sc. biotech students likewise students who have done their graduation in social sciences or engineering. This study involved Factor Analysis & Independent-samples T tests were runned in SPSS 16.0 software version.

### **ANALYSIS:**

#### **Factor Analysis**

The study involves principal components analysis using Varimax rotation with the Kaiser criterion to extract and truncate components from 94 respondent evaluating responses to the questionnaire. The generated score of KMO was 0.591 and Bartlett's test is highly significant which further support the appropriateness of using of Factor analysis.

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.569
Bartlett's Test of Sphericity	Approx. Chi-Square	385.179
	df	130
	Sig.	.000

In every investigation, all of the objects having a loading of 0.5 or more were retained, the rest were wiped out, and factor analysis was carried again with Varimax revolution to see the loadings of items. Varimax rotation converged in twenty five iterations and six sub-scales were formed with the Eigen values of each is 2.927, 2.340, 1.734, 1.774, 1.34 and 1.129. The total variance after rotation was 67.250 %. SPSS 16.0 software version was used for performing all statistical analysis.

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Sums of Squared Loadings Rotation		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.870	17.936	17.936	2.870	17.936	17.936	2.487	15.545	15.545
2	2.406	15.036	32.972	2.406	15.036	32.972	2.189	13.683	29.227
3	1.534	9.589	42.562	1.534	9.589	42.562	1.608	10.049	39.277
4	1.424	8.901	51.463	1.424	8.901	51.463	1.484	9.278	48.554
5	1.286	8.040	59.503	1.286	8.040	59.503	1.415	8.844	57.398
6	1.063	6.647	66.150	1.063	6.647	66.150	1.400	8.752	66.150
7	.977	6.104	72.254						
8	.790	4.937	77.191						
9	.760	4.753	81.944						
10	.637	3.983	85.927						
11	.581	3.632	89.558						
12	.525	3.282	92.840						
13	.386	2.414	95.254						
14	.310	1.939	97.193						
15	.282	1.763	98.957						
16	.167	1.043	100.000						

EXTRACTION METHOD: PRINCIPAL COMPONENT ANALYSIS

Inspection of the components revealed that Component 1, which reported for 17.936 percent of the discrepancy, comprised of items such as color, taste and odour was labeled as '**Essential attributes**'.

Component 2, which accounted for 15.036 percent of the variance comprised of items such as effectiveness, safety and previous experience which was labeled as '**Important attributes**'.

Component 3, which reported for 9.589 per cent of the variance, consist of items such as price and quantity was labeled as '**Desirable attributes**'.

Component 4, which accounted for 8.901 percent of the variance, comprised of items such as labeling and packaging and were labeled as '**Required attributes**'.

Component 5 showing variance of 8.040 percent comprises of items such as company and brand name and these are labeled as '**Intangible attributes**'.

Also, component 6 comprises of generic version and ingredients which accounted for 6.647 percent of variance and were labeled as '**Least required attributes**'.

#### **A. INDEPENDENT-SAMPLES T TEST**

The study involved Independent-samples T Test using Gender and Graduation background as grouping variable one by one.

1) Gender as a grouping variable: Males were coded by 1 & Females were coded by 2.

Null Hypothesis: "There is no variety in the male and female's acquiring of cough syrup."

Levene's test was significant at 0.932 & p value for 2 tailed test was found to be 0.521 which is more than 0.05 so null hypothesis is **rejected**.

2) Graduation background as a grouping variable: Respondents who have studied biology in their graduation likewise B.Sc. Biotech only (Pharmacy & medical graduates were not

included) were coded as 1 & respondents who haven't studied biology in their graduation likewise social science and engineering graduates were coded as 2.

Null Hypothesis: "There is no dissimilarity in the purchasing behavior of Bio-background students & Non-bio background students." Levene's test was significant at 0.889 & p value for 2-tailed test was found to be 0.046 which is below 0.05 so null hypothesis is **not declined**.

### **CONCLUSION:**

The Null hypothesis is rejected in gender as a grouping variable so it is statistically proved that "There is difference between the purchasing behaviors of cough syrup by Males & Females." The other Null hypothesis is not rejected in graduation background as a grouping variable so it is statistically proved that "There is no difference in the purchasing behavior of Bio-background graduates (B.Sc. biotech graduates only) & Non-bio background graduates (social sciences and engineering graduates)."

This study deals with the extraction of various attributes of cough syrup and they are as under:

- Essential attributes: color, taste and odour
- Important attributes: Effectiveness, safety and previous experience
- Desirable attributes: Price and quantity
- Required attributes: Packaging and labeling
- Intangible attributes: Company, Brand name
  
- Least required attributes : Generic version, Ingredients

A marketer can make strategies while keeping in his mind the factor "Difference in the purchasing behavior of cough syrup by males & females". It is statistically proven that Bio-background graduates (B.Sc. Biotech only) & Non-bio background graduates are at one platform of knowledge when it comes to generic version of cough syrup. Generic version and ingredients

of cough syrup were 'Least required attributes' so marketer can give less attention to these attributes while making strategies. This study deals with the extraction of Essential Attributes, Important attributes, Desirable attributes, Required attributes, Intangible attributes and Least required attributes for purchasing behavior of cough syrup by consumers so such extraction can help a lot while making various marketing strategies for cough syrup.

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