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Consumer Buying Behavior in Chandigarh and Shimla Cities

Rishabh Singh Chauhan[1], Dr Kapil Kathuria[2] and Akhil Sharma[3]

[1] Research Scholar, Department of Business Management, Dr Yashwant Singh Parmar University of Horticulture and Forestry Nauni, Solan, HP (173230) India

[2]Professor and Head, Department of Business Management, Dr Yashwant Singh Parmar University of Horticulture and Forestry Nauni, Solan, HP (173230) India

[3] Research Scholar, Department of Business Management, Dr Yashwant Singh Parmar University of Horticulture and Forestry Nauni, Solan, HP (173230) India

Abstract

The purpose of this paper is to analyse factors of consumer buying behavior for Herbal Products in Chandigarh and Shimla cities. The present study was based on the pre structured questionnaire and collected from 400 respondents of Shimla and Chandigarh. Factor analysis, Principal Component analysis, KMO and Bartlett's Test, Factor Loading, Eigen Values, Factor Score, Rotation method using for the present study. The data revealed that respondents influenced by advertisements while buying herbal FMCG products Mean (3.02). Thus four factors were identified during the study.

Keywords: Consumer buying behavior, Herbal Products, FMCG

1. Introduction

Consumer buying behavior examines how individuals, groups, and institutions select, pay for, and discard goods, concepts, experiences, or services in order to satisfy their needs and wants. Consumer behavior can be defined as a person's decision-making process and physical actions when they buy, evaluate, use, or discard goods and services to truly understand the relevance of this phrase, a few points need to be clarified and explained. It is the process by which people make decisions about what goods and services to purchase, use, and discard in order to satisfy their needs and desires. The Fast Moving Consumer Goods (FMCG) business has an impact on every aspect of human existence. This industry contributes significantly to consumer expenditure across all countries. The Indian market for fast-moving consumer products started to take shape throughout the preceding fifty years. The market is booming thanks to consumers who are getting richer and more willing to spend money on goods that will raise their standard of living (Srivastava & Kumar, 2013).

1.2 Importance of Study

The study will contribute to current knowledge of consumer buying behavior .The objective of the study is to analyze factors of consumer buying behavior for Herbal FMCG Products.

2. Material and Methods

The research area was located in Chandigarh and Shimla cities which were purposively chosen because of the market intensity in both cities. Through multistage random sampling in both of the cities the first stage included selection of these cities. Second stage included the selection of ward in the both urban cities randomly. Total 400 respondents were taken into account and primary data was collected using pre scheduled structured questionnaire. After the collection of the data table and analysis was done using factor analysis.

2.1 Factor analysis

A lot of variables can be reduced to a manageable amount of pieces by using factor analysis. This is used to extract the lowest common variances among all the variables and combine them into a single score. Factor analysis, which is part of the general linear model, also makes a number of other assumptions, such as the presence of real correlation between variables and factors, the absence of multi-co linearity, the existence of linear relationships, and the inclusion of relevant variables in the analysis. The most popular method is principal component analysis, though there are others as well.

They are types of factoring i.e., types of method used to extract the factor from data set.

Principal Component analysis: Removing as much variance as possible from the data and putting it in the first component is the most commonly utilised strategy. Once the variation indicated by the first factors has been eliminated, the highest variance for the second component is retrieved. This allows one to reach the top floor.

Common factor analysis: The second most popular approach among academics is this one, which lists variation into factors and eliminates common variation. The unique volatility of each variable is not taken into consideration by this method.

Image factoring: essentially bases its prediction of the factor on a correlation matrix.

Maximum likelihood method: this method incorporates using the maximum likelihood formula while working with correlation metrics.

2.1.1 Factor Loading

It is the correlation coefficient between the factor and the variable. Factor loading shows the variance on that particular factor that the variable explains. In general, factor loading of 0.7 or above using the SEM approach means that the factor extracts sufficient variance from the variable.

2.1.2 Eigen Values

Eigen values, also known as characteristic roots, display the portion of the overall variance that is explained by that particular factor. The first element in the commonality column can be used to calculate the percentage of the overall

variation that it explains. For example, if one component accounts for 68% of the variance in general, the other factor will account for 32% of the variance.

2.1.3 Factor Score The factor score is also known as the component scores. Every row and every column in this score is included, allowing for further analysis and usage as an index for all variables. To standardize the score, you might multiply it by a common phrase. All factors that behave and move as factor scores were assumed in any analysis that was done, and it was based on factor scores.

2.1.4 Rotation method

It makes the output easier to read. Eigen values have no effect on the rotation method, however they do have an impact on the retrieved variance or Eigen values. There are a number of different rotation procedures, including the direct Oblimin rotation method, the promax rotation method, the varimax rotation method, the Quartimax rotation, and no rotation method. With SPSS, it is easy to select each of them and compare how well those particular strategies explain the variance. The study employed the varimax rotation strategy, which maximises the variance of squared loadings within the components. The most popular rotation method simplifies the loading matrix's columns. This tactic is to make the loadings big or little in order to aid comprehension.

The factor analysis model is:

$X = \mu + L F + e$

where X= p x 1 vector of measurements

μ=p x 1 vector of means

L=p × m matrix of loadings

F=m × 1 vector of common factors, e=p × 1 vector of residuals.

The number of measurements (p) and the number of common components (m) for a topic or object would be used in measurement. It is thought that each F is independent of the others and that F and e are independent as well. The diagonal matrix Cov(e) = 1, the identity matrix Cov(F) equals 1, and the mean of F and e is 0. Because of the presumptions regarding the independence of the F, this factor model is orthogonal (Joreskog, 1977)

3. Results

Factors influencing Consumer buying behavior in Shimla and Chandigarh cities by constructing different factors on Consumer buying behavior. Factor analysis using the principal component method has been reducing the number of variables and synthesis factors which influenced the consumer behavior in the study area.

	ean	d. Deviation
purchase FMCG herbal products when I need omething without adverse effects.	87	049
take health into account while buying herbal MCG products.	94	125
am influenced by advertisements while buying erbal FMCG products.	02	004
follow my friends' advice when purchasing erbal FMCG products.	99	23
follow advice from family to purchase herbal MCG goods.	97	046
follow advice from a doctor while buying erbal FMCG products.	88	073
rely on pharmacist's or retailer's advice when urchasing Herbal FMCG goods.	86	88
take into account the price when purchasing erbal FMCG products.	91	027
or herbal FMCG products, I prefer to go a shop here no one can identify me.	54	084
ackaging of the FMCG herbal product affects y decision to buy them.	87	95
am a brand-loyal consumer of FMCG herbal roducts.	89	82
purchase branded FMCG herbal products ecause you are familiar with the brand.	90	77
the absence of a better alternative, I continue urchasing the same FMCG herbal product.	94	44
ake brand image into account while purchasing MCG herbal products.	00	015

efore purchasing herbal FMCG products, I take uantity into consideration	92	042
buy FMCG herbal products for common needs.	00	006
buy FMCG herbal products for persistent needs.	95	022
shop for FMCG herbal products to address asonal ailments/needs	97	87
shop for FMCG herbal products at a particular utlet	90	82
hen visiting the Herbal FMCG outlet, I think e location is important	79	037
hile making a purchase, the behavior of the utlet personnel matters to me]	91	043
ne product range influences my buying of rbal products from an outlet	84	038
he extra service offered at the outlet are portant to me	88	049
prefer purchasing branded herbal products ecause of their effectiveness	98	103

Table 3.1

Data represents the descriptive statistics analysis of the important Variable influencing buying behavior.

MO and Bartlett's Test

aiser-Meyer-Olkin Measure of Sampling Adequacy.	11
pprox. Chi-Square	180.907
artlett's Test of Sphericity f	76
g.	00

Communalities: Communalities measure the proportion of the variance in a given variable explained by all factors and are interpreted as the reliability of the indicators. Communality is the extent to which an item correlates with all other items, as higher communalities indicate a larger amount of variance in the variable and the variables with high extraction values are suitable whereas low extraction values are not suitable for factor analysis. Communalities for the selected variables have been found reliable for conducting factor analysis. Variable " I purchase FMCG herbal products when I need something without adverse effects, For herbal FMCG products, I prefer to go a shop where no one can identify me." has the highest extraction value (0.666) and variable "Packaging" has the lowest extraction value (0.409)

Communalities of Consumer behavior	itial	xtraction
purchase FMCG herbal products when I need something without adverse ffects.	000	66
take health into account while buying herbal FMCG products.	000	22
am influenced by advertisements while buying herbal FMCG products.	000	92
follow my friends' advice when purchasing herbal FMCG products.	000	56
follow advice from family to purchase herbal FMCG goods.	000	43
follow advice from a doctor while buying Herbal FMCG products.	000	01
rely on pharmacist's or retailer's advice when purchasing Herbal FMCG oods.	000	44
take into account the price when purchasing herbal FMCG products.	000	71
or herbal FMCG products, I prefer to go a shop where no one can entify me.	000	66
ackaging of the FMCG herbal product affects my decision to buy them.	000	09
am a brand-loyal consumer of FMCG herbal products.	000	08
purchase branded FMCG herbal products because you are familiar with e brand.	000	35
the absence of a better alternative, I continue purchasing the same MCG herbal product.	000	36
take brand image into account while purchasing FMCG herbal products.	000	85
efore purchasing herbal FMCG products, I take quantity into onsideration	000	36
buy FMCG herbal products for common needs.	000	50
buy FMCG herbal products for persistent needs.	000	49
shop for FMCG herbal products to address seasonal ailments/needs	000	76
shop for FMCG herbal products at a particular outlet	000	89

hen visiting the Herbal FMCG outlet, I think the location is important	000	11
hile making a purchase, the behavior of the outlet personnel matters to e	000	20
he product range influences my buying of herbal products from an outlet	000	32
he extra service offered at the outlet are important to me	000	44
prefer purchasing branded herbal products because of their effectiveness	000	33

xtraction Method: Principal Component Analysis.

Table 3.3

	PCA 1	PCA 2	PCA 3	PCA 4	PCA 5
Before purchasing herbal FMCG products, I take quantity into consideration (X_1)	**634**	285	.022	198	112
buy FMCG herbal products for common needs. (X_2)	**519**	049	511	132	.001
buy FMCG herbal products for persistent needs. (X_3)	**524**	.084	481	141	128
shop for FMCG herbal products to address seasonal ailments/needs. (X_4)	**649**	138	154	036	106
shop for FMCG herbal products at a particular outlet. (X_5)	**657**	159	024	058	170
When visiting the Herbal FMCG outlet, I think the location is important. (X_6)	**594**	222	185	048	269
The product range influences my buying of herbal products from an outlet (X_7)	**536**	235	193	173	.149
am influenced by	252	**533**	374	065	.009

dvertisements vhile buying erbal FMCG roducts. (X_8)					
follow my riends' advice vhen purchasing erbal FMCG roducts. (X_9)	004	**521**	506	160	057
follow advice rom a doctor vhile buying Herbal FMCG roducts. (X_{10})	164	**581**	.090	283	222
take into ccount the rice when urchasing erbal FMCG roducts. (X_{11})	333	**633**	229	.084	004
am a brand- oyal consumer f FMCG herbal roducts. (X_{12})	199	**631**	030	153	216
follow advice rom family to urchase herbal FMCG goods. X_{13})	199	167	**664**	160	.098
rely on harmacist's or etailer's advice vhen urchasing Herbal FMCG oods (X_{14})	114	106	**697**	060	361
purchase FMCG herbal roducts when I eed something vithout adverse ffects. (X_{15})	186	031	044	**787**	094
take health into ccount while uying herbal FMCG roducts. (X_{16})	043	178	148	**590**	467
n the absence f a better lternative, I ontinue	306	189	262	**580**	031

urchasing the ame FMCG erbal product. X_{17})					
igen Value	.276	.537	.353	.164	.342
ariance (%)	7.816	0.569	.803	.017	.593
umulative ariance (%)	7.816	8.386	8.188	7.206	2.799

Table 3.4

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Table 3.4 revealed the factor pattern and summary of the principal component analysis of collected data. For this data, five out of seventeen components have Eigen values greater than one and these will play the main role in the analysis. Together they account for 52.79 percent of the variation of the original variables. The first component explains that variance of 17.81 percent. This factor accounts for maximum variability Consumer buying behavior. It means that Consumer buying behavior related to quantity, common needs, persistent needs, seasonal ailments/needs, particular outlet, location, range of the product. The second component explains the variance 10.56% this factor accounts influenced by advertisements, friends 'advice, advice from a doctor, price, brand of the product. The third component explains the variance 9.803 % this factor accounts advice from family, pharmacist's or retailer's advice, The fourth component explains the variance 9.017 % this factor accounts without adverse effects, health, absence of a better alternative**.**

4 Conclusion

Factor 1: - Statements in PCA 1 have coefficient values .634, .519, .524, .649, .657, .594, .536, respectively with factor 1. Cumulative variance explained by this factor is 17.816% and Eigen value is 4.276. This factor identifies those questions which are related to need of customer.

Factor 2: - Statements in PCA 2 have coefficient values 533, .521, .581, .633, .631 respectively with factor 2. Cumulative variance explained by this factor is 28.386% and Eigen value is 2.537. This factor identifies those question related to forces effecting consumer like (WOM) and marketing mix efforts.

Factor 3: - Statements in PCA 3 have coefficient values .664, .697. respectively with factor 3. Cumulative explained by this factor 38.188% and Eigen value is 2.353. this factor shows that the consumer is also influenced by WOM.

Factor 4: - Statements in PCA 4 have coefficient values .0787, .590, .580 respectively to factor 4. Cumulative explained by this factor is 47.206% and Eigen value is 2.164. this factor shows the safety

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