Study of Consumer Behavior towards Self-Treatment of Common Ailments using OTC Medicines and Factors Influencing the Same

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Abstract: *Self-treatment of mild to moderate ailments such as pain, acidity, cough & cold etc using OTC (over the counter) medicines is very common in India. There are several medicines which are out of patent being sold as branded generics or unbranded generics and some of them are easily available in the market without the prescription of medical practitioners.*

Schedules H and X of the Drug and Cosmetics Rules mention about the medicines those are consumed only against prescriptions of registered medical practitioner. Currently, non-drug-licensed stores (e.g. non-pharmacists) can sell a few medicines classified as "Household Remedies" listed in Schedule K in few places subject to certain other conditions.

Increasing disposable income of the people along with a shift in the consumer attitude towards self-medication and increasing geriatric population with new social diseases in the region are the two major factors driving the market in the region. Increasing awareness about the cost effectiveness of self-medication and OTC medicines is also a crucial factor fuelling the market growth.

The attempt has been made in this study to find out the type of ailments being preferred for self-treatment and the factors influencing the same.

The association between demographic factors & factors influencing self-treatment as well demographic factors and type of medicines being preferred was also tested

Keywords: Consumer Behavior, Self-Treatment, OTC Medicines, Common Ailments

I. INTRODUCTION

The Indian pharmaceutical sector was valued at US$ 33 billion (US$ 16 billion domestic) in 2017. The country's pharmaceutical industry is expected to expand at a CAGR of 22.4 per cent over 2015–20 to reach US$ 55 billion. India's Non Prescription Medicines Market was worth $6292 million in 2016 and estimated to be growing at a CAGR of 14.6%, to reach $12440 million by 2021.

Currently only 6% of the total revenue of OTC pharmaceutical products in India is sold through online mode. USA being the biggest market for OTC pharma products valued around US$ 24,000 closely followed by China around US$ 20,000

Regulatory Bodies:

The office of the Drugs Controller General of India (DCGI) has the primary responsibility for approving new drugs, molecules and standards, new usage and claims, new method of administration, clinical research and trials, introductions of a new unique formulation and granting import and export licences.

However, power to provide manufacturing and selling licences belongs to each individual State Government through its Food and Drug Administration (FDA). These Food and Drug Administrations (FDAs) also carry out enforcement of the DCA (Drugs and Cosmetics Ac, 1940)t and the DCR (Drugs and Cosmetics Rules).

Drugs presently used for self-medication:

- Digestives and Antacids
- Anti-cold/cough,
- Analgesics, Antipyretics
- Vitamins/tonics/Health supplements/Glucose
- Medicated skin treatment, Medicated dressings
- Antiseptic creams/liquids
- Ayurvedic medicines and preparations

II. OBJECTIVES OF THE STUDY

1. To study the sources of awareness among people believing in self-treatment

2. To study the reasons for self-treatment among respondents.

3. To study the preference towards self-treatment areas (common ailments) among respondents.

III. HYPOTHESIS

1) There is no association between the factors influencing the self-treatment and the age of the people

2) There is no association between the type of medicines used and the gender of the people

3) There is no association between the type of medicines used for self-treatment and age of the people

IV. RESEARCH METHODOLOGY

Data Collection:

- Primary Data: Primary data was collected using structured questionnaire
- Secondary Data: Secondary data was collected from Books, Internet, Newspapers and Journals
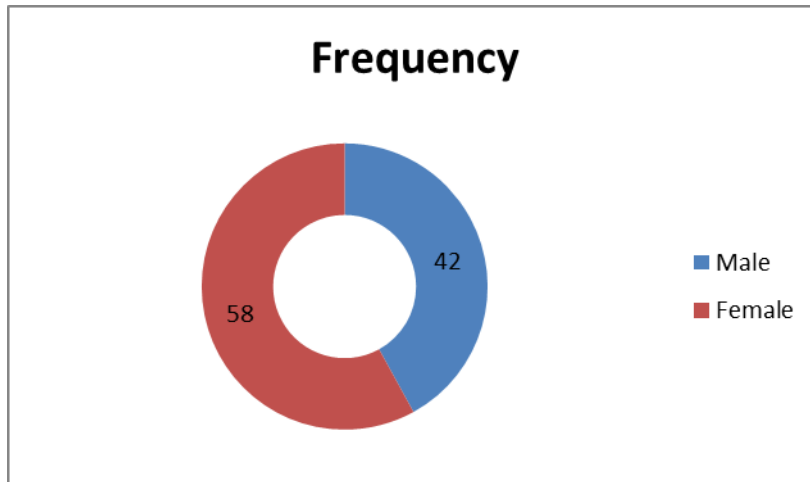
Sample Size: For the purpose of this study 100 respondents were selected based on convenience.

Sampling Area: The study was conducted among people residing in Mumbai

Data Analysis: Frequency analysis was done using excel whereas Chi-square and Anova tests were performed using SPSS
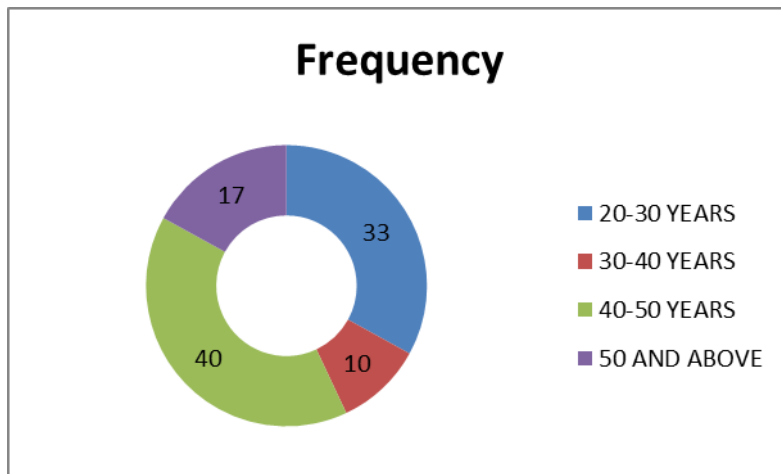
1) **Distribution of Gender**

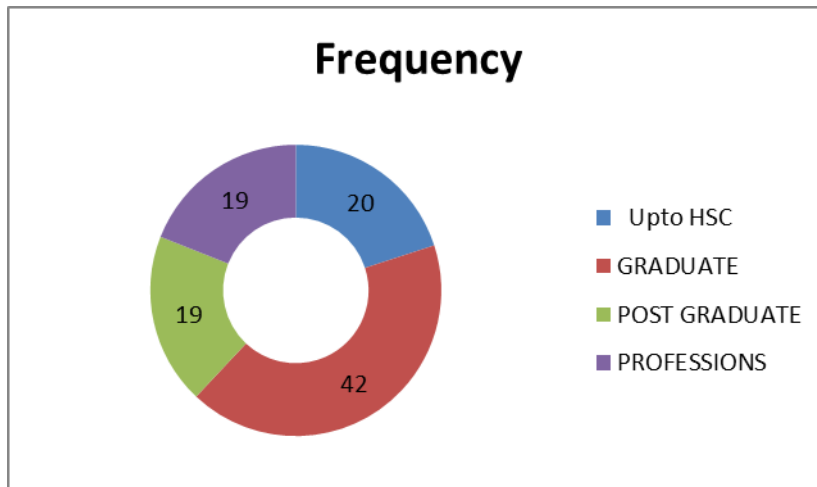| Gender	Frequency
Male	42
Female	58
Total	100

2) **Distribution of Age:**

Age	Frequency
20-30 YEARS	33
30-40 YEARS	10
40-50 YEARS	40
50 AND ABOVE	17

3) **Distribution of qualification**

Qualification	Frequency
Upto HSC	20
GRADUATE	42
POST GRADUATE	19
PROFESSIONS	19

4) **Distribution of Income levels**

Family Income per Year	Frequency
Upto Rs. 2 Lakh	12
Rs. 2 to 4 Lakh	25
Rs.4 Lakh to 6 Lakh	32
Rs.6 Lakh and above	31
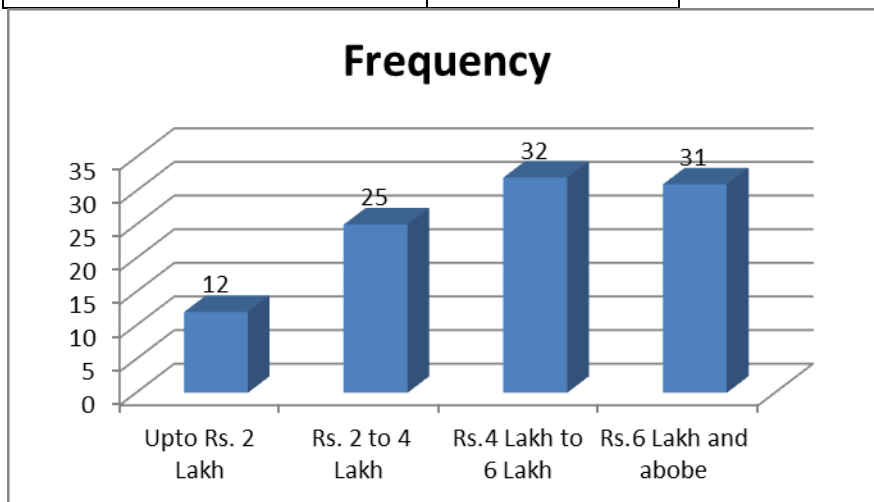
5) **Sources of Awareness about Medicines Brands**

Source	Frequency
TV Ads	35
Past Knowledge	28
Chemist	30
Others	7
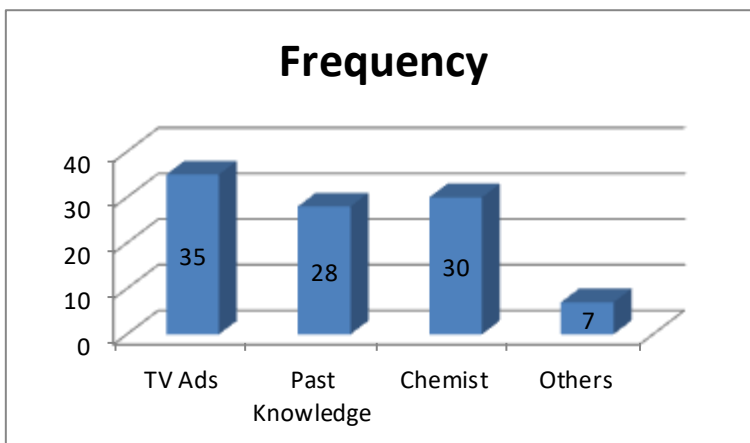
6) **Type of Products used**

Products Used	Most Preferred	Preferred	Least/ Not Preferred
Pain Killers	46	34	22
Antacids/Digestives	33	31	32
Cold & Cough	21	35	46
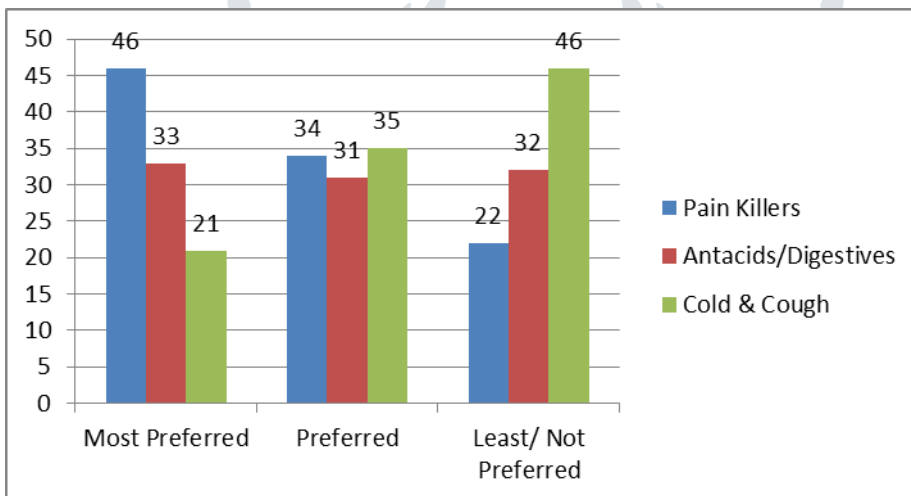
7) **Factors Influencing Self Treatment**

Factors	High Influence	Medium Influence	Low Influence
Convenience	60	27	14
Economy	13	48	36
Effectiveness	27	25	50
Total	100	100	100
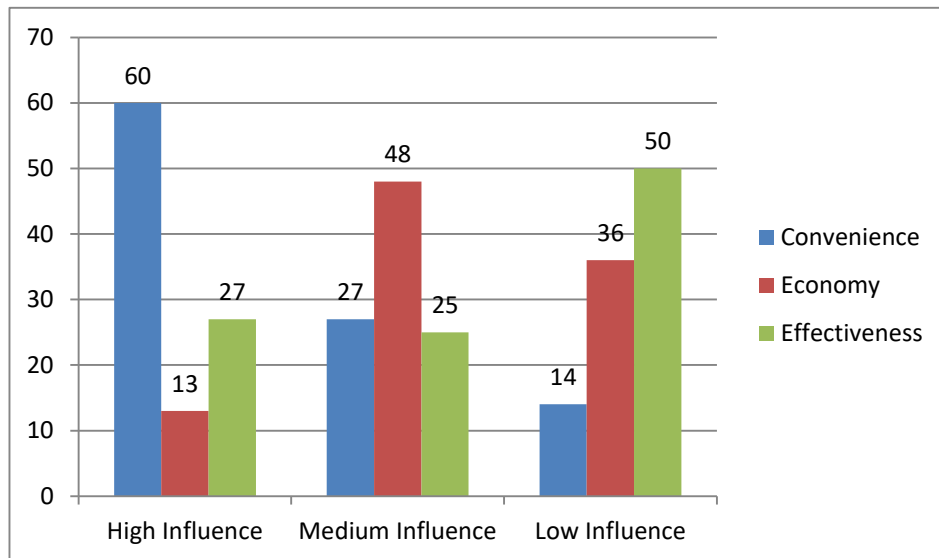
V. HYPOTHESIS TESTING

Null Hypothesis01: There is no association between the factors influencing self-treatment and age

Alternate Hypothesis11: There is an association between factors influencing self-treatment and age

Chi-Square test: Factors influencing Self-treatment and Age

For testing the first hypothesis bi-variet frequency table of factors influencing self-treatment and age of the respondent was obtained.

Crosstab

		HIGH_INFLUENCE			Total
		CONVENIENCE	ECONOMY	EFFECTIVENESS	
AGE	20-30 YEARS	24	3	6	33
	30-40 YEARS	10	0	0	10
	40-50 YEARS	19	7	13	39
	50 AND ABOVE	7	3	8	18
Total		60	13	27	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.589[a]	6	.024

As the p-value is less than 0.05, the hypothesis is rejected.

This proves that there is an association between the age and the factor influencing self-treatment. Respondents with lesser age (younger population) are more inclined towards self-treatment of common ailments due to convenience

Null Hypothesis02: There is no association between the gender and the type of medicines consumed

Alternate Hypothesis12: There is an association between the gender and the type of medicine consumed

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
ANTACID	Between Groups	.148	1	.148	.225	.636
	Within Groups	64.602	98	.659		
	Total	64.750	99			
PAIN_KILLERS	Between Groups	.442	1	.442	.773	.381
	Within Groups	55.998	98	.571		
	Total	56.440	99			
COUGH__COLD	Between Groups	.869	1	.869	1.464	.229
	Within Groups	58.131	98	.593		
	Total	59.000	99			

Report

Mean

GENDER	ANTACID	PAIN_KILLERS	COUGH__COLD
Male	1.9048	2.2619	1.8095
Female	1.9828	2.3966	1.6207
Total	1.9500	2.3400	1.7000

Since the calculated value is more than 0.05, the hypothesis is accepted.

Thus there is no association between the gender and the type of medicines consumed

Null Hypothesis03: There is no association between the age and the type of medicine consumed

Alternate Hypothesis13: There is an association between the age and the type of medicines consumed

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
ANTACID	Between Groups	9.641	3	3.214	5.599	.001
	Within Groups	55.109	96	.574		
	Total	64.750	99			
PAIN_KILLERS	Between Groups	8.415	3	2.805	5.607	.001
	Within Groups	48.025	96	.500		
	Total	56.440	99			
COUGH__COLD	Between Groups	2.893	3	.964	1.650	.183
	Within Groups	56.107	96	.584		
	Total	59.000	99			

Report

Mean

AGE	ANTACID	PAIN_KILLERS	COUGH__COLD
20 TO 30 YRS	1.6667	2.5455	1.7879
30 TO 40 YRS	2.2000	1.7000	2.1000
40 TO 50 YRS	2.2821	2.1795	1.5385
50 TO 60 YEARS	1.6111	2.6667	1.6667
Total	1.9500	2.3400	1.7000

Since the calculated value is less than 0.05, the hypothesis is rejected and the null hypothesis is accepted.

Thus there is an association between the age and the type of medicines consumes. The younger and older population is more inclined towards consuming pain killers while the middle aged population is more inclined towards consuming antacids when it comes to self-treatment. No specific age group showed high preference for cough syrup though.

VI. LIMITATIONS

The study was conducted in small population size of 100 and one part of the city Mumbai and therefore results are suggestive in nature, for more conclusive results the study needs to be undertaken in larger population size covering bigger geographical area.

The study highlighted the association between demographic factors such as gender, age and few categories of pharmaceutical products such antacids, Anti cold/cough and pain killers therefore the results may vary if self-treatment using other categories of pharmaceuticals products are associated with same or other demographic factors.

VII. CONCLUSION

TV advertisements and past experiences are the major sources of awareness for self-treatment. Convenience is the major factor influencing self-treatment especially among younger people. Pain killers is the major category of medicines preferred for self-treatment especially among younger and elderly population while meddle aged people had preference for antacids.

Self-medication is on the rise due to various reasons that are connected to the environment, demographic factors, changing consumer lifestyle, Government policies and strategies of the pharmaceutical industry. People get the feeling that the benefits of OTC drugs outweigh their risk.

While self-treatment is easy way to save time and money for treating mild ailments, it is always advisable to go visit a medical practitioner for accurate investigations and treatment

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