

# A STUDY OF CONSUMER'SMOTIVATION AND ATTITUDE ABOUT MEDICINE BUYING

### THROUGH MOBILE APPS

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#### ABSTRACT:

The Indian E - pharmacy market is growing as a result of some direct reasons such as the rise in the number of Indian populations suffering from chronic clinical indications like diabetes, hypertension, Asthma and Obesity, leading to an increased demand for therapeutics. Besides, government initiatives and programmes such as the digital India, Jan Aushadhi programmes for promotion of generic medicines, telemedicine and E - healthcare initiatives to provide quality healthcare and medications to reach the rural parts of India, where more than 60% of the Indian population resides. These are the key parameters that make the epharmacy segment, a burgeoning market of the future. Recently it has emerged as a novel segment in the Indian E - commerce industry. Thisonline mobile app-based pharma segment is anticipated to grow at a CAGR of over 20% by 2024.

As per the data report of Google search trends', India is among the top five countries where people are searching online medicines buying apps, with some commonly search terms used by them such as 'buy online medicine', 'medical app', 'buy medicines. Indian population is reported searching for 'online medicine apps' more than any other country (Google Trends). Google's analytical platform and a dominant internet search engine indicated that following to India, Pakistan, UAE and Nepal are the countries in the ranking list where those users are reported searching the medicines and healthcare services by on-line platforms.

This study attempts to determine the consumer's attitude and behavioural associations with their demographic characteristics towards online pharma buying. This paper also tries to contribute theoretical frame work with respect to the Indian context.

**KEYWORDS:** Pharma buying, Medicines online, E-Pharma, FDA, Google trends, Search for Medicines.



### **INTRODUCTION:**

The present size of Indian pharmacy market is gigantic, it is estimated to be about Rs. 1.2 lakh crore in size. There are more than 850,000 independent pharmacy retail stores catering only 60% of the total domestic therapeutic drug demand. These traditional Brick and Mortal retail pharmacies are responsible for 99% of the pharmaceutical sales and online pharmacy contributing to only 1% of the total therapeutic drug sales. The large rural market is either underserved or ignored due to number of reasons pertaining to commercial if not logistics. The central government is forced to initiate some pathbreaking remedies, such as Aushadhi program. Besides, the digital mode may be expected to operate for elimination of some pain areas.

The online pharmacy market estimated to be a fraction of that at Rs. 700-800 crore. There are more than 200 e-pharmacy startups with major players such as, 1mg.com, Bookmeds, mChemist, Medidart, Medlife, Medstar, Netmeds, Pharmeasy, Zigy.com, SaveOnMedicals and Savemymeds.

There are two models which operate in this category:

• The market place model, where a technology company brings the neighbor-hood licensed pharmacies to the end users by using an internet enabled platform like mobile app or a web site.

• The inventory-based model, where e-pharmacy is the online service of an offline licensed pharmacy.

The growth in the Indian E - pharmacy market is propelled as a result of some life style related direct reasons causing in thesize of populations suffering from chronic clinical indications like diabetes, hypertension, Asthma and Obesity, leading to an increased demand for therapeutics. Besides, government initiatives and programmes such as the digital India, Jan Aushadhi programmes for promotion of generic medicines, telemedicine and E - healthcare initiatives are targeted to provide quality healthcare and medications to rural parts of India. Since more than 60% of the Indian population resides, are key parameters that make the e- pharmacy segment, a burgeoning market of the future. In spite of being a novel segment in the Indian E - commerce industry, it is anticipated to grow at a CAGR of over 20% by 2024.



According to The Associated Chambers of Commerce of India, the pharmaceutical sector is poised to grow to an estimated USD 55 billion by 2020, from the USD 28 billion currently (ASSOCHAM, Report, 2018).

#### LITERATURE REVIEW:

As per Google search trends' data report, India is among the top five countries where people are searching online medicines, with some commonly search terms such as 'buy online medicine', 'medical app', 'buy medicines' among others. Indian population is searching for 'medicine buying apps' more than any other country (Google Trends). Google's analytical platform and a dominant internet search engine indicated thatfollowing to India, Pakistan, UAE and Nepal are the countries in the ranking list who are leading in the searching for the medicines and healthcare service through online platforms.

Proving access to basic healthcare is becoming a challenge because of inadequate infrastructure and resources, mainly due to lack of smart data management and efficient logistics support. But on the other hand, the population is getting more tech-savvy and demanding convenient ways to receive their needs in the area of conventional healthcare services.

The estimated size of ePharmacy market in India is Rs 1,000 crore which is just 1 per cent of traditional Indian pharma market. The e-pharmacy volume is estimated by 2025 to grow and reach up-to 10-15 per cent of the total market size. It is observed that West Bengal, Haryana, Delhi, Jharkhand and Odisha have been as the top searching places for online medicines. These are the five states where people have googled for online medicines and medical apps (J. Vignesh and Sobla Khan, 2018, Agarwal, 2012).

The latest spurt in mobile based app driven activities has delivered a trend in India in which consumers are inclined to purchase medicines by using an app on their hand set mobile phones, it is a handy format of e-pharmacies. It is fueled by some tangible reasons but unfortunately there is no specific studies conducted to assess and analyze consumer's motives and attitudes and attempt to establish the behavioural responses towards this newly budding app-based buying model of pharmacies. The present study is an attempt particularly for evaluating the consumer's attitude and behavioural associations with their demographic characteristics towards online pharmacies. It may be able to bridge the gap regarding the lack of literature with respect to the Indian context.



It was reported in the previous studies that the online purchases acceptance had been very limited and was restricted up to only 4% to 6% of people (Baker, 1986 and Fox, 2004).

According to a definition by Fung et al, an online pharmacy is an internet-based vendor (legal or illegal), which sells medicine and may operate as an independent internet-only site, an online branch of "brick-and-mortar" pharmacy, or sites representing a partnership among pharmacies. Briefly, an online pharmacy is a website offering to deliver, distribute, or dispense medication on the internet directly to consumers.

The convenience factor associated with e-pharmacies happens to be one of the major determinants for attracting more and more consumers. Against the routine purchase of pharmaceutical products from physical outlets, the respondents were enquired as to how much convenience online purchase of medicines using a mobile based application would potentially bring to them.

All the perceived benefits expected from an app-based pharmacy purchaser can be classified in-to three groups such as, the convenience, the potential to save money, and privacy. Among the commonly preferred benefits of online pharmacies are convenience, speed, discounts, privacy, not visiting the physician, bulk orders and discounts, bonus medicine as a gift. Since all the E-pharma apps provides ease of purchase at discounted prices, added with door step delivery at no extra charges.

Therapeutic category of drugs isalso available through this app-based model, along with the performance and image-enhancing and "lifestyle drugs" (Desai, 2016), such drugs can be purchased with less obstacles such as a doctor's prescription freely over the mobile app.

### **RESEARCH METHODOLOGY:**

Since, this paper's focus is to assess the attitude about online pharma buying preferences by the consumers specifically located at Mumbai and its extended suburban city areas; the comparative usage preference is measured for the three formats of stores such as; the conventional community pharmacy shops, pharmacies at non-conventional locations; such as malls, and 3) internet operated e pharms sourcing apps.

The respondents were asked to respond to each sentence on a scale, for measuring their intension of medicines buying online. The core part of the indicators had been, adopted from the study conducted by Fittler A, Lankó E, Brachmann B, Botz L. in the year, 2013, and titledas, Behaviour analysis of patients who purchase medicines on the internet: can



hospital pharmacists facilitate online medication safety? subsequently, the researcher developed additional indicators to measure.

#### **RESEARCH INSTRUMENT:**

The consumer responses were collected on a 5-point Likert-type scales. The questionnaire used for this survey has been provided as supplementary material (Appendix 1). Statistical analyses were conducted using the SPSS software version 22. Descriptive statistics was used to describe respondent characteristics and their socioeconomic profiles.

Based on the results of the pilot study, 7statementsregarding the perceived benefits and perceived obstacles were selected to measure the attitude along with the factors influencing the attitudes toward online medicine purchase. The respondents were asked to evaluate each statement (**Appendix-I**) on perceived benefits and perceived disadvantages regarding their own attitudes on a 5-point Likert scale. A score of 1 was assigned as "I strongly disagree" and 5 for indicating "I strongly agree."

#### SAMPLING:

Participants were considered eligible if they were 16 years of age or elder than that and were excluded if they were not willing to participate. A total 1212 number of respondents were collected for this study. The data had been collected at all major railway stations located on the three main local railway lines such as Central, Western and Harbor, during March, 2018 to July, 2018. Trained research scholars had collected the data. The details of the sample and their first choice for buying medicines has as described in Table No.1 above.

### SCOPE OF RESEARCH (DVS):

Attitudes towards ePharmacy app as a supply channel in comparison with the other two prominent models were evaluated. Attitudes towards the 3 main supply chain retail formats e.g. 1) the conventional community pharmacy shops, respondents were asked to rate 2) pharmacies at non-conventional locations; such as malls, and 3) internet operated e pharms sourcing apps.



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Table No. 1 Sample Details									
		First Choice fo	r Buying						
Demographic	Category Measure	Conventional	Stores at	E-					
Characteristics		Stores	Malls	Shops	Total				
	I	348	772	92	1212				
Total		(28.71%)	(63.69%)	(7.59%)	(100%)				
	Up to 25 Years	83	164	15	262				
Age Group	26-35 Years	201	133	51	385				
Age droup	36-45Years	64	311	26	401				
	46 Years and Above	0	164	0	164				
	Up to Highschool	85	273	0	358				
Education	College Attended/								
Level	Graduate	199	143	66	408				
	Graduate and above	64	356	26	446				
	Up to Rs. 30,000	205	347	0	552				
Income Group	30,000 to 40,000	0	69	15	84				
(Monthly)	40,000 to 50,000	64	356	13	433				
	50,000 Above	79	0	64	143				
Gender	Male	242	480	68	790				
Gender	Female	106	292	24	422				
Residential	South Mumbai	80	244	79	403				
Location	Central & Harbor Line	99	425	13	537				
Location	Western Line	169	103	0	272				
	1mg.com	34	107	11	152				
	Bookmeds	55	69	23	147				
Mobile App	mChemist	49	175	15	239				
(Name) used	Medidart	114	143	20	277				
	Medlife	58	160	14	232				
	others	38	118	9	165				

(Source: Primary data)



### **INDEPENDENT VARIABLES (IVS):**

Five independent variables were selected to study in this research out of these five variables were measured through the consumer's demographic characteristics and one variable to know their behavioural characteristics (1) gender, (2) age, (3) level of education, (4) place of residence, (5) average income.

### DATA ANALYSIS:

The respondents were asked to express, their opinion, about how appropriate they were about the sourcing regarding the purchase of medication through mobile based apps. A score of 1 was given for "not appropriate at all" and 5 for "entirely appropriate." The research was aimed to associate any specific demographic factor which significantly influences the attitude about the three medicines distribution channels.

The reliability of the answers on the benefits and disadvantages were estimated, and the Cronbach's alpha was determined (benefits alpha=0.76), indicating the reliability values were satisfying.

A linear regression analysis was conducted using a stepwise method to measure the effect of correlating factors on willingness to purchase medications online.

### **RESULTS:**

Three independent predictive models were tested each one for the type of shop preferred by the buyers, such as the conventional stores, stores at malls and the e-shops, as shown in Table No. 2, 5 and 6 respectively, and shown below. These models were tested for the five independent variables e.g. age group, education level, income group, gender and residential location of the respondents contacted for this study.

The highest values had been for the equation designed for conventional stores on the basis of the five independent variables e.g. age group, education level, income group, gender and residential location of the respondents contacted for this study had been at 0.634 indicating 63.4% accuracy in predictability for preference.

The type of stores under study i.e. e-pharma stores had been found the lowest on the basis of the five independent variables e.g. age group, education level, income group, gender and residential location of the respondents contacted for this study had been at the lowest at 0.283 indicating 28.3% accuracy in predictability for preference.



A correlation analysis had been conducted to estimate significant correlation of online medicines buying withtheir demographic characteristics such as gender, age, level of education, location of residence and average income with media habits such as average time spent on the internet, preferred mode of internet access, preferred other products purchased online.

ANOVA test conducted to estimate the resultant of each demographic characteristic being studied in this research. And the results showed that age is found significant in the formation of attitude about e-pharma shops.

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Table No. 2ANOV	Table No. 2ANOVA Table									
			Sum of	df	Mean	F	Sig.			
			Squares		Square					
		(Combined)	6.000	3	2.000	6.784	0.000			
Attitude of e-	Between	Linearity	0.272	1	0.272	0.924	0.337			
Pharma * Age Group	Groups	Deviation from Linearity	5.727	2	2.864	9.713	0.000			
·	Within Grou	ps	356.148	1208	.295					
	Total		362.148	1211						

(Source: Primary data)

The correlation between age of respondents with attitude about e-pharma shops had been established negative and measured at -0.027, it had a weak relation.

Table No. 3 Measures of Association								
	R	R Squared	Eta	Eta Squared				
Attitude of e-Pharma * Age Group	-0.027	0.001	0.129	0.017				

(Source: Primary data)



ANOVA test conducted to estimate the resultant of each demographic characteristic being studied in this research. And the results showed that education level is found significant in the formation of attitude about e-pharma shops.

Table No.	Table No. 4 ANOVA Table										
					Sum	of	df	Mean	F	Sig.	
					Squares			Square			
				(Combined)	20.053		2	10.027	35.435	.000	
Attitude Pharma	of	e-	Between	Linearity	6.011		1	6.011	21.245	.000	
		*	Groups	Deviation from Linearity	14.042		1	14.042	49.625	.000	
Education Level			Within Grou	ips	342.095		1209	.283			
			Total		362.148		1211				

(Source: Primary data)

The correlation between education of respondents with attitude about e-pharma shops had been established positive and measured at 0.129, it had a weak relation.

Table No. 5 Measures of Association							
	R	R Squared	Eta	Eta Squared			
Attitude of e-Pharma *	0 1 2 9	017	235	0.055			
Education Level	0.125	.01/	.200				

(Source: Primary data)

ANOVA test conducted to estimate the resultant of each demographic characteristic being studied in this research. And the results showed that income level is found significant in the formation of attitude about e-pharma shops.



Table No. 6 ANOVA Table									
			Sum Squares	of	df	Mean Square	F	Sig.	
		(Combined)	94.475		3	31.492	142.120	.000	
Attitude of e-	Between	Linearity	52.987		1	52.987	239.130	.000	
Pharma * Income Group	Groups	Deviation from Linearity	41.487		2	20.744	93.616	.000	
Within Gro		os	267.673		1208	.222			
	Total		362.148		1211				

(Source: Primary data)

The correlation between income level of respondents with attitude about e-pharma shops had been established positive and measured at 0.129, it had a strong relation.

Table No. 7 Measures of Association	on			
	R	R Squared	Eta	Eta Squared
Attitude of e-Pharma * Income Group	0.383	.146	.511	0.261

(Source: Primary data)



ANOVA test conducted to estimate the resultant of each demographic characteristic being studied in this research. And the results showed that gender of respondent found significant in the formation of attitude about e-pharma shops.

Table No. 8 ANOVA Table <sup>a</sup>									
	-	-	Sum	of	df	Mean	F	Sig.	
			Squares			Square			
	Between	(Combined)	1 1 2 1		1	1 1 2 1	3 755	053	
Attitude of e-	e of e-Groups	(combined)	1.121		Ŧ	1.121	5.755	.055	
Pharma * Gender	Within Group	S	361.027		1210	.298			
	Total		362.148		1211				
a. With fewer than three groups, linearity measures for Attitude of e-Pharma * Gender									
cannot be computed									

# (Source: Primary data)

The correlation between gender of respondents with attitude about e-pharma shops had been established positive and measured at 0.056, it had a weak relation.

Table No. 9 Measures of Association						
	Eta	Eta Squared				
Attitude of e-Pharma * Gender	.056	.003				
Source: Primary	(ctch					

(Source: Primary data)

ANOVA test conducted to estimate the resultant of each demographic characteristic being studied in this research. And the results showed that residential location of respondent found significant in the formation of attitude about e-pharma shops.

Table No.	Table No. 10 ANOVA Table										
					Sum	of	df	Mean	F	Sig.	
					Squares			Square			
Attitude	of	e-	Between	(Combined)	27.828		2	13.914	50.318	.000	
Pharma		*	Groups	Linearity	23.097		1	23.097	83.526	.000	



Residential Location		Deviation from Linearity	4.731	1	4.731	17.110	.000
	Within Grou	ups	334.319	1209	.277		
	Total		362.148	1211			

(Source: Primary data)

The correlation between residential location of respondents with attitude about e-pharma shops had been established negative and measured at -0.253, it had a weak relation.

Table No. 11 Measures of Association									
	R	R Squared	Eta	Eta Squared					
Attitude of e-Pharma * Residential Location	-0.253	0.064	.277	0.077					
(Source: Primary data)									

Predictive analysis for estimating the attitude about the three formats of shops were tested with the five demographic characteristics. Table No. 12 had estimated results about the conventional format of medicine shops.

Table No. 12 Model Summary

Model	R	R	Adjusted	Std.	Change Statistics				
	First Choice	Square	R Square	Error of	R	F	df1	df2	Sig. F
	for Buying =			the	Square	Change			Change
	Conventional			Estimate	Change				
	Stores								
	(Selected)								
1	0.796 <sup>ª</sup>	0.634	0.629	0.15932	0.634	118.517	5	342	0.000

(Source: Primary data)

a. Predictors: (Constant), Residential Location, Gender, Age Group, Income Group, Education Level

The R square value for the equation had been at 0.634 indicating 63.4% accuracy in predictability for preference for conventional stores on the basis of the five independent



variables e.g. age group, education level, income group, gender and residential location of the respondents contacted for this study as indicated in Table No. 12.

# Table No. 13 ANOVA <sup>a,b</sup>

M	odel	Sum of Squares	df	Mean Square	F	Sig.
	Regression	15.042	5	3.008	118.517	0.000 <sup>c</sup>
1	Residual	8.681	342	0.025		
	Total	23.722	347			

(Source: Primary data)

a. Dependent Variable: FA

b. Selecting only cases for which First Choice for Buying = Conventional Stores

c. Predictors: (Constant), Residential Location, Gender, Age Group, Income Group, Education Level

Table No. 13 showed the test results about the ANOVA test, the regression model statistically significantly predicts the favorable attitude about conventional shops (i.e., it is a good fit for the data) as indicated in Table No. 13.

Table	No.	14Coefficients	a,b
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Model	Unstandardized		Standardized	t	Sig.	95.0% Co	onfidence
	Coefficients		Coefficients			Interval f	or B
	В	Std. Error	Beta			Lower	Upper
						Bound	Bound
(Constant)	3.750	0.053		70.380	0.000	3.646	3.855
Age Group	-0.201	0.021	-0.498	-9.648	0.000	-0.242	-0.160
Education	0 1 4 4	0.024	0.260	E 0.90	0.000	0 102	0.007
Level	-0.144	0.024	-0.300	-3.969	0.000	-0.192	-0.097
1 Income	-0.010	0.010	-0.096	2 000	0.045	-0.028	0.000
Group	-0.019	0.010	-0.090	-2.009	0.045	-0.056	0.000
Gender	0.011	0.019	0.020	0.605	0.545	-0.025	0.048
Residential	-0.042	0.012	.0 120	2 250	0.001	-0.067	0.017
Location	-0.042	0.015	-0.130	-3.330	0.001	-0.007	-0.017



# (Source: Primary data)

- a. Dependent Variable: FA
- b. Selecting only cases for which First Choice for Buying =

**Conventional Stores** 

The results of the predictive statistics result as showed in Table No. 14 that gender is not significant in predicting favorable attitude about conventional shops.

The regression equation for predicting favorable attitude about conventional shops is:

favorable attitude about conventional shops =

=3.750- 0.201(Age)-0.144(Education)-0.019(Income)+0.011(Gender)-0.042(Residential Location)

# Table No.15 Model Summary

Model	R	R	Adjusted	Std. I	Error	Change S	tatistics			
		Square	R Square	of	the					
	First Choice			Estima	ate	R	F	df1	df2	Sig. F
	for Buying =					Square	Change			Change
	Stores at Malls					Change				
	(Selected)									
1	0.610ª	0.373	0.368	0.3532	15	0.373	90.958	5	766	0.000

(Source: Primary data)



a. Predictors: (Constant), Residential Location, Gender, Income Group, Age Group, Education Level

The R square value for the equation had been at 0.373 indicating 37.3% accuracy in predictability for preference for stores locate at malls on the basis of the five independent variables e.g. age group, education level, income group, gender and residential location of the respondents contacted for this study.

Table No. 16 ANOVA <sup>a,b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	56.718	5	11.344	90.958	.000 <sup>c</sup>
1	Residual	95.530	766	.125		
	Total	152.248	771			

(Source: Primary data)

a. Dependent Variable: FA

b. Selecting only cases for which First Choice for Buying = Stores at Malls

c. Predictors: (Constant), Residential Location, Gender, Income Group, Age Group, Education Level

The ANOVA test indicate that, overall, the regression model statistically significantly predicts the favorable attitude about Stores at Malls (i.e., it is a good fit for the data) as indicated in Table No. 16.



# Table No. 17 Coefficients <sup>a,b</sup>

Model	Unstandardized		Standardized	t	Sig.	95.0% Confidence	
	Coefficie	ents	Coefficients			Interval f	or B
	В	Std. Error	Beta			Lower	Upper
						Bound	Bound
(Constant)	3.684	0.056		66.209	0.000	3.574	3.793
Age Group	-0.074	0.023	-0.173	-3.162	0.002	-0.120	-0.028
Education	0 270	0.025	0 562	9 017	0.000	0 211	0.247
Level	0.279	0.055	0.505	8.017	0.000	0.211	0.547
1 Income	-0 313	0.025	-0.672	-12 427	0 000	-0 362	-0.263
Group	-0.515	0.025	-0.072	-12.427	0.000	-0.302	-0.205
Gender	-0.024	0.026	-0.027	-0.924	0.356	-0.076	0.027
Residential Location	-0.247	0.022	-0.359	-11.030	0.000	-0.291	-0.203

(Source: Primary data)

a. Dependent Variable: FA

b. Selecting only cases for which First Choice for Buying = Stores at Malls

The results of the predictive statistics result as showed in Table No. 17 that Gender is not significant in predicting favorable attitude about Stores at Malls.

The regression equation for predicting favorable attitude about Stores at Malls is:

favorable attitude about Stores at Malls =

=3.684- 0.074(Age)+0.279(Education)-0.313(Income)-0.024(Gender)-0.247(Residential Location).

Table No. 18 Model Summary

Model	R	R	Adjusted	Std. Error	Change Statistics				
	First Choice	Square	R Square	of the	R	F	df1	df2	Sig. F
	for Buying =			Estimate	Square	Change			Change
	E-Shops				Change				
	(Selected)								
1	.532ª	.283	.250	.13530	.283	8.582	4	87	.000



# (Source: Primary data)

a. Predictors: (Constant), Residential Location, Gender, Income Group, Education Level

The R square value for the equation had been at 0.283 indicating 28.3% accuracy in predictability for preference for e-stores on the basis of the five independent variables e.g. age group, education level, income group, gender and residential location of the respondents contacted for this study.

### Table No. 19 ANOVA <sup>a,b</sup>

Model		Sum of Squares df Mean		Mean Square	F	Sig.
	Regression	0.628	4	.157	8.582	.000 <sup>c</sup>
1	Residual	1.593	87	.018		
	Total	2.221	91			

(Source: Primary data)

a. Dependent Variable: FA

b. Selecting only cases for which First Choice for Buying = E-Shops

c. Predictors: (Constant), Residential Location, Gender, Income Group, Education Level



The ANOVA test indicate that, overall, the regression model statistically significantly predicts the favorable attitude about e-pharma shops (i.e., it is a good fit for the data) as indicated in Table No. 19.

# Table No. 20 Coefficients <sup>a,b</sup>

Model	Model Unstandardized		Standardized	t	Sig.	95.0%	
	Coeffici	ents	Coefficients			Confidence	
						Interval f	for B
	В	Std. Error	Beta			Lower	Upper
						Bound	Bound
(Constant)	3.836	0.111		34.678	0.000	3.616	4.056
Education	0 100	0.042	0.215	2 5 6 5	0.012	0 102	0.024
Level	-0.109	0.042	-0.515	-2.505	0.012	-0.195	-0.024
Income	0.072	0.020	0.254	2 6 2 2	0.000	0 1 1 2	0.022
Group	-0.073	0.020	-0.354	-3.033	0.000	-0.112	-0.033
Gender	-0.035	0.032	-0.100	-1.086	0.280	-0.100	0.029
Residential	-0.070	0.057	-0 156	-1 228	0 222	-0.192	0.042
Location	-0.070	0.037	-0.130	-1.220	0.225	-0.103	0.043

(Source: Primary data)

# a. Dependent Variable: FA

b. Selecting only cases for which First Choice for Buying = E-Shops

The results of the predictive statistics result as showed in Table No. 20 that Gender and Residential location were not significant in predicting favorable attitude about e-pharma shops.

The regression equation for predicting favorable attitude about e-pharma shops is:

favorable attitude about e-pharma shops =

=3.684- 0.074(Age)+0.279(Education)-0.313(Income)-0.024(Gender)-0.247(Residential Location).



#### FINDINGS:

It is observed that attitude for e-pharma shops is negatively correlated with the age and residential location of the respondents. High age had shown negative attitude about e-pharma buying. While as it is positively correlated with education level, income level and gender of the respondents. Highly educated and having high income segment of respondent had shown more positive attitude about e-pharma buying. But among the five characteristics studied under this research only Gender found non-significant in forming the attitude about e-format of medicine buying.

Among the three formats of medicine buying estimation of consumer's preference for conventional shops were estimated with maximum accuracy with 63.4% while as the estimation for e-shops had been much lower at 28.3% accuracy with the five demographic characteristics.

Gender in all the three formats had shown no significance. Residential location has come out as a not significant in case of e-pharma buying along with gender. It had confirmed that the attitude about e-pharma is not influenced by buyer's gender and residential location.

#### SUGGESTIONS:

It is suggested to design income and education level specific campaign to derive more demand for modern channel of sales for pharmaceuticals. Ordering form any location has going to be a new challenge since residential location has emerged as non-significant, in this study.

New parameters need to be searched which may support the predictability for new models like e-pharma stores. Since among the five demographic characteristics studied under this research only three found to be significant. A more comprehensive advanced method for data collection is required to capture more variables so to build accurate predictive models.



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