Youth Buying Behaviour towards Smartphone's: A Study in Ludhiana City

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Abstract: - The perception of customers regarding smart phones is progressively becoming an issue of study for marketing research professionals. Consumer behaviour regarding perception towards smart phone's, buying choices; to post-usage behaviour is a subject of research for marketers. India is a standout amongst the developing economies due to its high growth rate, large population, high aspiration levels, increasing disposable incomes, and a large proportion of population being below thirty five. With a constant increment in disposable incomes, there is likely to be an increase in yearning of young consumers towards consumer products like smart phones. Smartphone is not only considered as a basic phone in its utility but also a complete entertainment package, business aid, as well as lifestyle statement.

This study investigates the external and internal variables which aid in influencing the young purchaser acquiring a smart phone. This work also concentrates on purchaser state of mind towards smart phones and impact of brand on customers purchase decision as well as key components which influence consumer's attitudes and practices towards smartphone buy.

Key-Words: - Consumer Behaviour, Smartphone, Purchasing Attitude, Branding, Price, Consumer Preferences, Usage Behavior.

1 Introduction

The invention of wired telephones by Alexander Graham Bell in 1876 followed by cellular phones are the two developments that have revolutionized communication and have had a earthshaking impact on economy and social order in the 20th and 21st centuries. IBM's Simon Personal Communicator (IBM Simon) was the first cellular phone which included a telephone and personal digital assistant (PDA) in one device. It was a handheld, touch screen mobile which was distributed by the BellSouth Cellular Corp. in the United States between August 1994 and February 1995, selling 50,000 units [1].

The global smart phone business segment grew by over 13 percent in 2015 with 341.5 million units being dispatched in second quarter (http://www.idc.com/prodserv/smartphone-market-share.jsp). The market share of smart phones is shown in Fig. 1. It is seen that companies like Samsung, Apple, Huawei, Xiaomi, Lenovo etc. command a major share of the market. They together have around 55 percent share of the total smart phone pie.

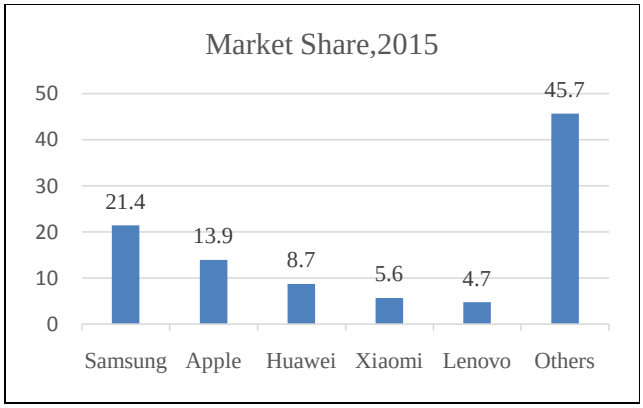

Fig.1. Market Share of Smart phones, 2015
Source: (idc.com, Aug 2015).

Different researchers have studied this topic from various angles. Namin *et al.* (2012) in their study say that the process of choosing a brand may be prejudiced by circumstances and content [2]. The conclusions imply a significant association amidst the variables "brand attitude", "corporate attitude", and "product (cell phone) choice". In addition, no major connection was found between individual

decision making processes (independent or mediated) and product choice.

A study highlighted another measurement in data and innovation concerning young people in Spain [3]. This article looks at the relationship of Information and Communication Innovations and Spanish youths. In particular, analysts have examined, through subjective strategy, the attributes of young people's entrance and employment of mechanical gadgets. Despite what might be expected, there is an under-use of every one of these gadgets for educating and learning purposes.

Another research in literature examined that the impact of various showcase endeavours on brand value in smart phone industry [4]. The outcome demonstrates that there is a positive and significant relationship between advertising blend endeavours and brand value. At the end of the day, more promotions could offer better market access, which implies clients will have more mindfulness on business sector qualities. Among various virtues of brand value, item exclusivity plays a critical part.

In another paper, it is stated that numerous studies confirm that clients select their items due to brand name [5]. Items likewise maintain their own qualities, which make them differentiable from others. In this paper, specialists have presented an experimental study to decide vital variables impacting clients' acquiring plan for PDAs in capital city of Iran, Tehran. The after effects of the study demonstrate that there are some positive connections between selective name and quality discernment, between elite name and informal ad, between quality discernment and constancy, between informal ad and brand name and between brand name picture and brand name.

It is postulated that connected to the brand choice of cell phone is the clients' perception of security issues [6]. Clients show diverse conduct on a variety of aspects, compatible to the brand of the cellular telephone they are utilizing. Awareness of security issues can make telephone makers upgrade their cellular telephones with respect to security.

There are 11 predecessors of brand inclination; these can be hypothetically bunched into three groups: mindfulness predecessors (controlled correspondence (promoting), and uncontrolled correspondence (reputation, informal)); picture forerunners (administration esteem characteristics (value, quality), supplier properties (brand identity, nation of inception, administration (worker + area)), corporate status (corporate picture, corporate notoriety)); and, client quality forerunners (fulfillment, saw hazard, and reference bunch) [7].

In their study, published in 2010,Hafeez *et al.*, stated that customer fulfilment is a key component for the accomplishment of all organizational goals [8]. One of the greatest difficulties for a business sector is the means by which to fulfil and hold the clients. This study has been done on Mobilink's prepaid clients. It is seen that general consumer loyalty and client faithfulness is relatively low among the clients of Mobilink. The Customer faithfulness in Pakistan's portable product business is generally low since it is a rising industry, new players are entering in this business sector, and clients are more intrigued to try other suppliers. Nonetheless it is normal that when the business will be settled, the results will be more practically identical to different studies.

Another paper investigated the variables influencing the state of mind towards the social acknowledgment of cellular telephones and also how this mentality influences its utilization [9]. Results of the investigation demonstrate that the states of mind about cellular telephone use out in the open spots rely on upon nation, and age elements. This state of mind thus altogether influences the use recurrence of cell telephones. What's more, use recurrence likewise is influenced by sex and work status.

The general components (high power separation, gentility, high instability shirking) describing Russian society power favoured cell phone outline is viewed. Long haul qualities are seen, for instance, in team introduction, which influences the utilization of cell phones. Changing social and financial components are found to strictly divide buyers into particular sections. The developing Russian markets appear to comprise of in general different customer groupings and all the while interact with both old and new social elements and standards [10].

Martensen inspects tweens' (8-12 year-olds) sense of fulfilment with and dependability of their cell phones and the relationship between these [11]. The outcomes show that tweens are much more satisfied by their cellular phones than grown-ups are and that the multi featured telephones satisfy kids' desires to a much higher degree. Still, brands are not able to transform tweens into steadfast clients who will recommend their cellular phones to companions. Tweens' dependability is lower than what is experienced for grown-ups and the relationship between fulfillment and reliability is exceptionally frail.

Aydin *et al.* (2005) concentrated on gauging the impact of consumer loyalty and trust on client dependability, and the direct and indirect impact of exchanging expenditure on client steadfastness [12]. The discoveries of this study demonstrate that the exchanging cost figure straightforwardly influences

devotion, and has an intermediary impact on both client fulfilment and trust.

Other studies by Srinuan [13], Robins [14], Liu [15], and de Silva [16] also dwell into various aspects of cell phone adaption in varying cultural, age and technology setups.

The review of previous work brings out that even though a lot of work has been done in this field, still there is a dearth of empirical studies in North West India and also no specific studies targeted at youth were found. With a massive proportion of population of India being young, empirical data on their consumer behaviour is of particular interest to marketing professionals. Therefore this study is done in Ludhiana, the largest city north of Delhi and also the commercial capital of the region.

2 Research Methodology

2.1 Objectives of the Study

Based on research gaps identified by review of literature, the study has been under taken to achieve the following objectives:-

- To recognize and evaluate the attitudes and beliefs that influence consumer's buying behavior towards smart phones in Ludhiana.
- To analyse the components which affect and motivate the consumer to purchase the smart phone.
- To examine and study the effect of smart phone brands on purchase decision.

2.2 Research Design

Descriptive study is used in this empirical study. The sources which are used for this research are primary data and secondary data. Primary data is collected through the structured questionnaire or through mail questionnaire. Secondary data is made available by scanning published research papers, trade magazines, economic newspapers, websites etc.

The sample size of 100 was taken amongst cell phone users and respondents were chosen using convenience sampling method. 55 percent of the respondents were male and 45 percent were female. 92 percent of respondents were in the age group of 21 to 25, 6 percent in 16 to 20, while 2 percent lay in the 18 to 21 age group bracket.

All the respondents were smart phone users.

2.3 Tools Used for Statistical Analysis

Percentage Analysis which refers to specific kind of ratio which helps in making comparison between two or more sources of data is used. It is also used to describe relationships.

$$\text{Percentage} = \frac{\text{No. of respondents}}{\text{Total No. of respondent}} \times 100 \quad (1)$$

Chi-Square Test for Independence**:** Those tests may be joined when you bring two class variables from a single number. It will be used to make sense that there is an enormous relationship the middle of the two variables.

$$X^2 = \Sigma \left[(O_{r,c} - E_{r,c})^2 / E_{r,c} \right] \quad (2)$$

where $O_{r,c}$ is the observed frequency count at level *r* of Variable A and level *c* of Variable B, and $E_{r,c}$ is the expected frequency count at level *r* of Variable A and level *c* of Variable B.

Independent t-Test: The independent t-test looks at the methods between two irrelevant gatherings on the same consistent, subordinate variables.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\left(\frac{s_1^2(n_1-1) + s_2^2(n_2-1)}{n_1+n_2-2} \right)\left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad (3)$$

variance

df

Whereby:
n: Sample size
s^2 = variance
$\bar{x}$:Sample mean
subscript$_1$ = sample 1 or group 1
subscript$_2$ = sample 2 or group 2

3 Data Analysis and Interpretation

The responses obtained from the survey are presented and analysed in this section. The interpretation is given after application of relevant statistical tools.

3.1 Satisfaction Level with Present Smartphone

From the survey it is found that eighty seven percent of respondents were satisfied with the smart phone being used by them whereas 13 percent were not satisfied.

In Table 1, cross tabulation between genders regarding satisfaction level with smart phone being presently used is given. In order to find out if there was any difference in usage pattern on gender basis . Chi-square test was performed taking gender as variable in Table 2.

Table 1. Cross Tabulation between Gender * Satisfaction level with presently owned Smartphone.

	Fulfilled	Total

			Yes	No	
Gender	Male	Count	48.0	7.0	55.0
		Expected Count	47.9	7.2	55.0
	Female	Count	39.0	6.0	45.0
		Expected Count	39.2	5.9	45.0
Total		Count	87.0	13.0	100.0
		Expected Count	87.0	13.0	100.0

Table 2. Chi-Square Tests of Satisfaction level with presently owned Smartphone.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.008[a]	1	.929

In order to find out if there was any difference in usage pattern on gender basis; Chi-square test was performed taking gender as variable in Table 2. For this the following hypothesis was set up:

Null hypothesis: There is no significant distinction among the reactions of male and female respondents with respect to the use of smart phones.

Alternative hypothesis: There is a significant contrast among the reactions of male and female respondents on the premise of use of smart phones.

Pearson chi-square came out to be 0.008 and the significant value as .929. This value being more than .05 (significance level), clearly indicates that there is no distinction in the reactions on the premise of gender which implies the Null hypothesis.

3.2 Purchasing a Smartphone in near Future

Sixty four percent of respondents indicated that they may purchase a new smart phone in near future. The remaining thirty six percent had no such inclination.

Table 3 shows the Cross Tabulation between Gender * Purchasing intent of Smartphone in near future.

Table 3. Cross Tabulation between Gender * Purchasing intent of Smartphone in near Future.

			Fulfilled		Total
			Yes	No	
Gender	Male	Count	34.0	21.0	55.0
		Expected Count	35.2	19.8	55.0
	Female	Count	30.0	15.0	45.0
		Expected Count	28.8	16.2	45.0
Total		Count	64.0	36.0	100.0
		Expected Count	64.0	36.0	100.0

In order to find out if there was any difference in pattern of purchasing intent on gender basis, Chi-square test was performed taking gender as variable. Results are shown in Table 4.

For this the following hypothesis was set up:-

(Null hypothesis): There is no significant distinction among the reactions of male and female respondents with respect to the purchasing intent of smart phones.

(Alternative hypothesis): There is a significant contrast among the reactions of male and female respondents on the premise of purchasing intent of smart phones.

Table 4 Chi-Square tests of Purchasing intent of Smartphone in near Future.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.253[a]	1	.615

Pearson chi-square came out to be 0.253 and the significant value as .615. This value being more than .05 (significance level), clearly indicates that there is no distinction in the reactions on the premise of gender which implies the Null hypothesis.

3.3 Level of Impact of different attributes on purchasing decision of Smartphone

On a Five point Likert scale, the response was evaluated by assigning the scores as Strongly Influential SI-1, Influential I-2, Neutral N-3, Non-influential NI-4, Strongly Non-influential SNI-5. Mean scores for all these statements were calculated and are being presented in Table 5.

Table 5. t-test on Impact Level of different attributes on Buying decision of Smartphone.

Impact level	gender	N	Mean	Std. Deviation	Std. Error Mean
Word of Mouth (WOM)	Male	55	2.6000	.89443	.12060
	female	45	3.0222	1.13796	.16964
Finance	Male	55	2.5273	1.10310	.14874
	female	45	2.5333	1.05744	.15763
Brand Name	Male	55	1.9091	1.00504	.13552
	female	45	1.8222	.96032	.14316
Quality	Male	55	1.8909	.89593	.12081
	female	45	1.6222	.88649	.13215
Previous Satisfaction Level	Male	55	2.2364	1.03573	.13966
	female	45	2.1111	.80403	.11986

Perceived Position in Society	Male	55	2.3091	.97890	.13200
	female	45	2.3778	.86047	.12827
Technical Aspects	Male	55	2.1455	.84805	.11435
	female	45	2.0667	.96295	.14355
Advertisement	Male	55	2.1455	1.02593	.13834
	female	45	2.3778	1.07215	.15983
After Sales Service	Male	55	2.2545	1.00403	.13538
	female	45	1.9556	1.12726	.16804

To further analyze the responses "t-test" for independent samples was carried out. 'Levenue`s test' for equality of variance was used and the F values were calculated. Corresponding to this the't' value and the significant value (95%) confidence limit was calculated. The F,'t" & significant value corresponding to each statement is discussed. Careful analysis of various values shows that for statement "WOM to after sales services", the following inferences can be drawn:

Word of mouth: The F-value of WOM comes out to be 1.085 and the significant value is .0300. This value is not significant at .05% level of significance which shows that gender wise males and females are neutral towards impact level of word of mouth.

Finance: The F-value of finance comes out to be .271 and the significant value is .0604. This value is not significant at .05% level of significance which shows that gender wise males and females are neutral towards impact level of finance.

Brand Name: The F-value of brand name comes out to be 0.003 and the significant value is .954. This value is not significant at .05% level of significance which shows that gender wise males and females are strongly influential towards impact level of brand name.

Quality: The F-value of quality comes out to be 0.271 and the significant value is .604. This value is not significant at .05% level of significance which shows that gender wise males and females are strongly influential towards impact level of quality.

Previous Satisfaction level: The F-value of previous satisfaction comes out to be 1.699 and the significant value is .195. This value is not significant at .05% level of significance which shows that gender wise males and females are influential towards impact level of previous satisfaction.

Perceived position in society: The F-value of your position in public comes out to be 1.314 and the significant value is .254. This value is not significant at .05% level of significance which shows that gender wise males and females are neutral towards impact level of your position in public.

Technical aspects: The F-value of technical aspect comes out to be .751 and the significant value is .388. This value is not significant at .05% level of significance which shows that gender wise males and females are influential towards impact level of technical aspect.

Advertisement: The F-value of advertisement comes out to be .472 and the significant value is .414. This value is not significant at .05% level of significance which shows that gender wise males and females are neutral towards impact level of advertisement.

After Sales Service: The F-value of after sales services comes out to be .157 and the significant value is .693. This value is not significant at .05% level of significance which shows that gender wise males and females are influential towards impact after sales services.

3.4 Smartphone Brand preference in previous purchase

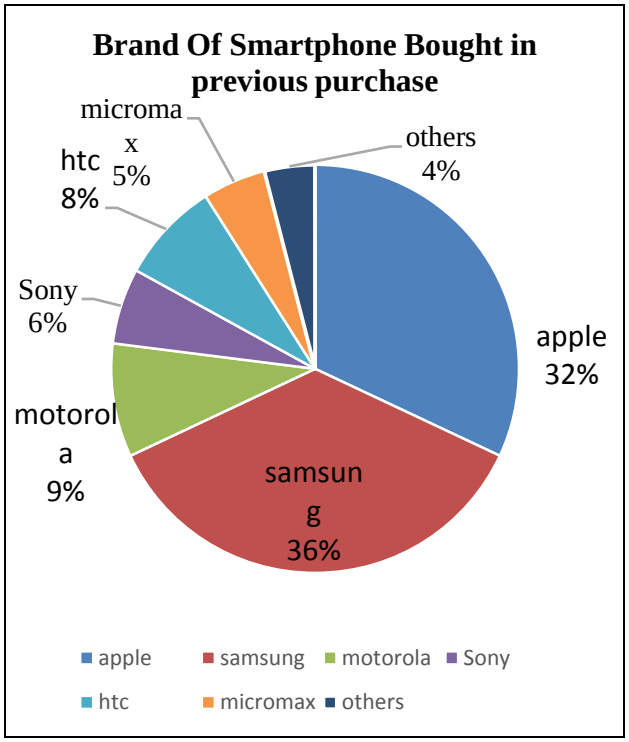

Fig. 2. Brand of Smartphone bought by Respondents in previous purchase.

Fig. 2 shows the brands bought by respondents during their previous purchase. Samsung with 36 percent share was the most preferred followed by Apple with a share of 32 percent. Other brands bought included Motorola (9 percent), HTC (8 percent), Sony (6 percent), Micromax (5 percent), and others (4 percent).

3.5 Change to another Brand with Additional Features

In response to above question it was found that 58 percent of respondents were not averse to changing the presently used brand if better features were available in some other brand of smart phone. However 42 percent indicated that they were not inclined to change the brand being presently used.

To study the gender preferences to this question, Cross Tabulation between Gender * Change Brand is presented in Table 6.

Table 6. Cross Tabulation between Gender * Change Brand.

			Fulfilled		Total
			Yes	No	
Gender	Male	Count	30.0	25.0	55.0
		Expected Count	31.9	23.1	55.0
	Female	Count	28.0	17.0	45.0
		Expected Count	26.1	18.9	45.0
Total		Count	58.0	42.0	100.0
		Expected Count	58.0	42.0	100.0

In order to find out if there was any difference in change pattern on gender basis , Chi-square test was performed with gender as variable in Table 7.

Table 7. Chi-Square Tests of Change Brand.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.599[a]	1	.439

For this the following hypothesis was set up:-

Null hypothesis: There is no significant distinction among the reactions of male and female respondents with respect to the change preference of smart phones.

Alternative hypothesis: There is a significant contrast among the reactions of male and female respondents on the premise of change preference of smart phones.

Pearson chi-square came out to be 0.599 and the significant value as .439. This value being more than .05 (significance level), clearly indicates that there is no distinction in the reactions on the premise of gender which implies the Null hypothesis.

3.6 Level of Switching Smartphone

Another interesting statistics which has a bearing on marketing and production targets is the frequency with which people change their smart phones. It was seen that 25 percent had a low frequency of switching, and 5 percent had extremely high frequency. The remaining 50 and 20 percent respondents had moderate to high frequency of changing their phones.

Cross Tabulation between Gender * Switching Level is presented in Table 8.

Table 8. Cross Tabulation between Gender * Switching Level.

			Switching level				Total
			low	moderate	high	extremely high	
Gender	Male	Count	14.0	25.0	14.0	2.0	55.0
		Expected Count	13.8	27.5	11.0	2.8	55.0
	Female	Count	11.0	25.0	6.0	3.0	45.0
		Expected Count	11.3	22.5	9.0	2.3	45.0
Total		Count	25.0	50.0	20.0	5.0	100.0
		Expected Count	25.0	50.0	20.0	5.0	100.0

In order to find out if there was any difference in usage pattern on gender basis, Chi-square test was performed taking gender as variable in Table 9.

Table 9. Chi-Square Tests of Switching Level.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.788[a]	3	.425

In order to find out if there was any difference in usage pattern on gender basis .Chi-square test was performed with taking gender as variable in Table 9. For this the following hypothesis was set up:-

(Null hypothesis): There is no significant distinction among the reactions of male and female respondents with respect to the switching of smart phones.

(Alternative hypothesis): There is a significant contrast among the reactions of male and female

respondents on the premise of switching of smart phones.

Pearson chi-square came out to be 2.788 and the significant value as .425. This value being more than .05 (level of significance), clearly indicates that there is no distinction in the reactions on the premise of gender which implies the Null hypothesis.

3.7 Respondents Willingness to spend for a New Smartphone

			Buy same brand later			Total
			yes	no	maybe	
gender	male	Count	19	11	25	55
		Expected Count	17.6	12.1	25.3	55.0
	female	Count	13	11	21	45
		Expected Count	14.4	9.9	20.7	45.0
Total		Count	32	22	46	100
		Expected Count	32.0	22.0	46.0	100.0

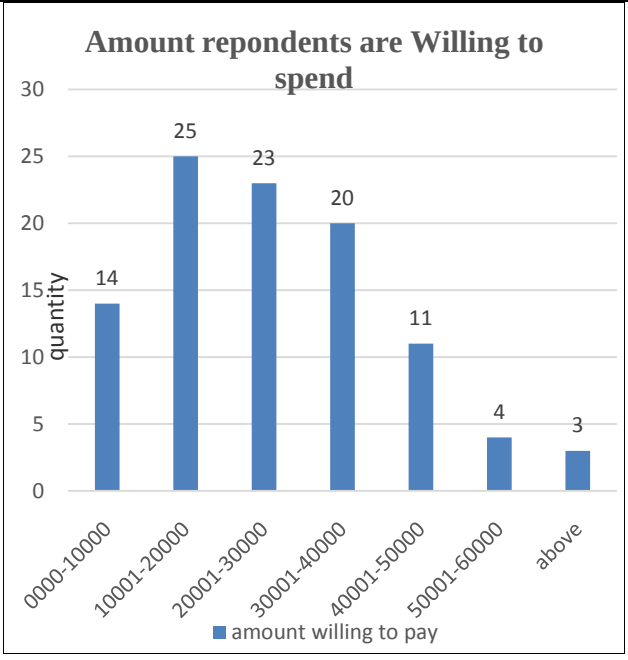

Fig.3 Respondents willingness to spend for a New Smartphone.

Fig. 3 shows the range within which respondents are willing to spend for a new smart phone. A maximum of 25 percent were willing to spend between Rs. 10,001 – Rs. 20,000 and 23 percent from Rs. 20,001-Rs.30, 000. Thus approximately 50 percent of respondents were aspiring for mid-range smart phones in the Indian smart phone sector. 20 percent were ready to shell out Rs. 30,001 to Rs. 40,000 and 14 percent could spend less than Rs. 10,000. This would be a low-end smart phone in the market. There are 11 percent consumers who are willing to pay Rs. 40,000-Rs. 50,000 for a cell phone which is for the above mid-level cell phone in the business sector. Only 7 percent could aspire for premium smart phone of Rs. 50,000 or more.

3.8 Preference regarding repeat buy of Same Brand of Smartphone Later

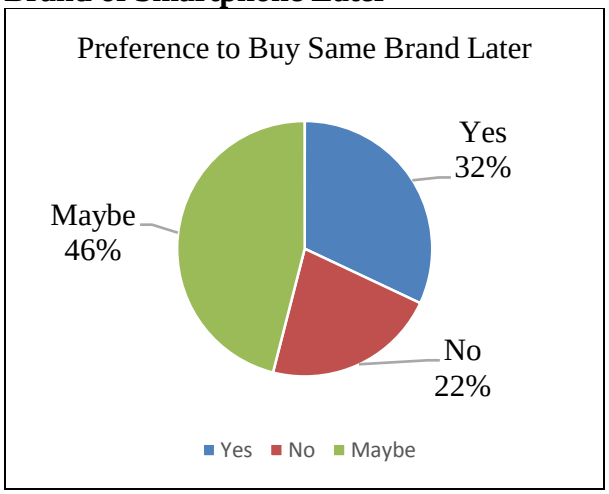

Fig.4 Data regarding preference for repeat Buy of Same Brand of smart phone later.

Cross Tabulation between Gender * Buy Same Brand Later is plotted in Table 10.

Table 10. Cross Tabulation between Gender * Buy Same Brand Later

In order to find out if there was any difference in usage pattern on gender basis; Chi-square test was performed with taking gender as variable in Table 11.

Table 11 Chi-Square Tests of Switching Level.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.478[a]	2	.788

This analysis has been done to find if purchaser will buy same brand of smart phone during repeat purchase or not. As shown in Fig. 4, 32 percent of respondents said that they will buy same brand of smart phone in future also whereas 22 percent said that they won't buy the same brand. The remaining 46 percent were non committal. Results show that one third of young consumers were willing to be repeat customers which is a decent figure given that youngsters are more amenable to experimentation and smart phone market is dynamic in terms of technology and feature modification.

In order to find out if there was any difference in usage pattern on gender basis, Chi-square test was performed taking gender as variable in Table 12. For this the following hypothesis was set up:

(Null hypothesis): There is no significant distinction among the reactions of male and female respondents with respect to repeat purchase of smart phones.

(Alternative hypothesis): There is a significant contrast among the reactions of male and female respondents on the premise of repeat purchase of smart phones.

Pearson chi-square came out to be .478 and the significant value as .788. This value being more than .05 (significance level), clearly indicates that there is no distinction in the reactions on the premise of gender which implies the Null hypothesis.

3.9 Overall Experience with the Brand of Smartphone being used

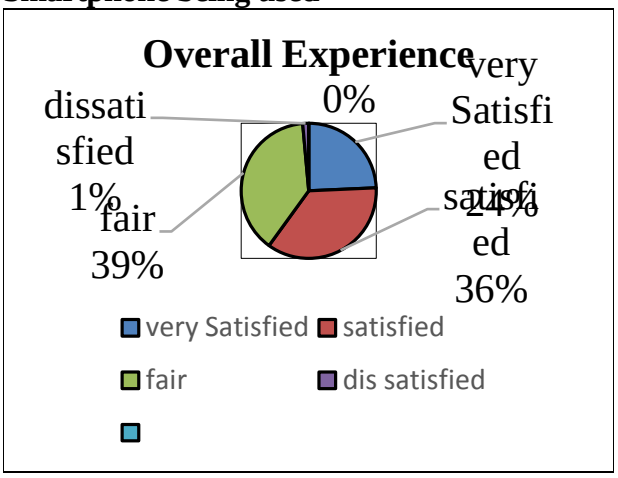

Fig.5 Data regarding overall experience with the brand of smart phone being used.

This data presented in Fig. 5 gives the level from fulfilment and satisfaction among respondents with the brand image of their smart phone. As indicated by Fig. 5, 24 percent of Respondents were very satisfied, whereas 36 percent were satisfied with the brand image and prestige associated with owning the smart phone. Only 1 percent of respondents were dissatisfied on this account.

4. FINDINGS AND CONCLUSION

4.1 Findings

In this study a sample size of 100 smart phone users was surveyed. A majority (55 percent) were male and the rest female. Most of them were in the age group of 21-25. A vast majority (87 percent) were satisfied with the smart phone being used by them. 64 percent of smart phone buyers were inclined to buy a new smart phone in near future. Brand name, previous user satisfaction, and after sales service had a strong impact on smart phone buying decision. Samsung and Apple are the most preferred brands. A majority of respondents were ready to consider change in brand if they found better features in some other brand. Approximately 50 percent of respondents were aspiring for mid-range smart phones in the Indian smart phone sector. A third of the respondents said that they will buy same brand of smart phone in future also. 24 percent of Respondents were very satisfied, whereas 36 percent were satisfied with the brand image and prestige associated with owning the smart phone. Only 1 percent of respondents were dissatisfied on this account. All the presented findings have been contrasted taking into account the gender.

4.2 Conclusion

The findings presented in the previous section shall help advertisers, marketing and sales professionals, as well as product designers to plan and execute their product plans in a professional manner. The study is targeted towards young male and female respondents which gives a clear idea about their smart phone usage and buying behaviour. Since youngsters are the most important segment for consumer electronics market the present study is of vital importance not only in the short term but also for in the long term.

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