



Generation Y Consumer's Attitude toward the Uses of Smartphone in Northern Area of Bangladesh

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Abstract

This study has been intended to know the generation Y consumer's attitude toward the uses of Smartphone in Bangladesh on the basis of different features. It also reveals which attributes are most important considerable for using a Smartphone. This study is quantitative research approach. Both primary and secondary data are used here. The sample size of the study is 300 Smartphone users whose age under 15-30 years who regularly operates the Smartphone. Through questionnaire in the respondents were asked about 10 main variables those are usually considered for Smartphone. The collected data are analyzed by various statistical tools and techniques including frequency distribution, reliability test, Chi-square tests, and cross tabulation through the data processing software SPSS (Statistical Package for the Social Science) 20.0 version. The outcomes of the study express that 46.0% of respondents spend time on their Smartphone daily 2-4 h, 17.0% of 4-6 h. Gender, occupation, education, and income level of consumer have a strongly significant influence on attitudes toward the usage of Smartphone in Bangladesh. Functional features and apps, power supply, compatibility, and reasonable price are very important factors for choosing the Smartphone by both male and female young consumer. Nearly 61.4% of female user thinks that camera resolution and various options of Smartphone are very important factors for them. This study also indicates that almost 65% of male and female are facing the same problems to use their Smartphone. Nearly 33.90% of customer faced problems of charging of battery, 23.20% of hanging problems, 21.40% of touch problems, and 5.40% of heat problems of Smartphone. In addition to the outcomes of the study may helpful to the user and the marketer for reengineering of Smartphone. The results of the study may generate new thoughts for the researchers and find improvement areas for Smartphone producer and seller to serve better and achieve progress in the long term.

Keywords: Generation Y Consumer, Attitude, Smartphone, Smartphone Attributes, Brand Image, Bangladesh

1. Introduction

In the age of information and communication technology, Smartphone is the inseparable and essential part of our daily life. It is the best friend which helps to communicate with each other. A Smartphone is considered as a specialized device as well as an immaculate buddy that can solve many problems. An attitude is an expression of favorable or unfavorable toward something. Positive attitude of Smartphone user is very important for attracting new users and retaining existing consumers. Understanding the generation Y consumer segment is vital for mobile technology-related industries due to its spending power and heavy usage of mobile devices and services (Kim and Hahn, 2012). Generation Y is the second largest generational cohort growing up in a world infused with brands (Martin and Turley, 2004). A cohort is defined by particular boundaries, that is, years of birth or age. Generation Y comprises people born between the years 1977 and 2000 (Noble et al., 2009) and are aged between 14 and 31 years old

(Sullivan and Heitmeyer, 2008). Other authors shorten this interval to years 1980-1994 (Bednall et al., 2012). Generation Y consumers are characterized by the norms of high discretionary income, quality seekers, early adopters of new technology and socially conscious, willing to pay more for brands (Sullivan and Heitmeyer, 2008; Lee, 2009; Cross-Bystrom, 2010), and heavy users of the Internet with online behavior, for example, on social networks or in online shops (Bilgihan et al., 2013). In this study, generation Y comprises people born between 1980 and 2000 and aged under 15-30 years old. Mobile telephones have turned into a numerous operations on advanced cells, which we use to do an indivisible piece of human life. According to Cassvoy (2012), "Smartphone can be defined to be a device that enables the users to marketable phone calls and at the same time has some features that permit the user to do some activities that in the past was not possible unless using a computer or a personal digital assistant such as sending and receiving emails or amending an office document. The essential idea of cellular phones originated in 1947 in the US, but public trials of the first cellular communication system began in Chicago in 1970, and cellular telephone services were introduced in the US in 1980s and by the 1980s, cellular services had popular in many developed nations over the world. In 1993, the era began with the arrival of Smartphone "Simon" which was the first Smartphone. Blackberry, as the revolutionary device of this era, had presented numerous components such as email, internet, fax, web browsing, and camera. This stage was generally centered around focusing on endeavors. The second stage was the iPhone Smartphone period began with a noteworthy achievement Smartphone showcase in 2007 which was the first time ever industry presented the Smartphone for general buyers. Google introduced Android Operating System Smartphone with the purpose to approach the consumer market at the end of 2007. Google highlighted more on features such as email, social website, audio, video, and internet access that mostly liked by general consumers at a very low cost. The third phase of Smartphone was mainly targeted to reduce the gap between enterprise customer and general consumer requirements by improving the display quality, technology, stable the mobile operating system, more powerful batteries, and enhance the user friendly operating system, etc., The Smartphone market today is very much challenging for all manufacture companies. The Smartphone is not only they want but also a need in the modern area because Smartphone helps to connect with people everywhere throughout the world (Nagarkoti, 2014). There are different Smartphone brands available in the world as well as Bangladesh. Smartphone now something for connecting to the internet, taking photos, watching television, listening to music, sharing information, gaining knowledge, finding locations, paying the bills, and many other tasks and of course the simple phone calls. The consumer has a set of preferences which dependents on culture, education, and individual tastes (Maran and Rani, 2013). There are three giants' operating systems of Smartphone on the market: Apple with its IOS, Google with Android, and Microsoft with Windows Phone. They fight for the market share is very intensely competitive. The Bangladesh market is dominated by different versatile companies such as Nokia, Samsung, Sony, HTC, Xiaomi, OPPO, Huawei, Panasonic, Motorola, LG, Symphony, Micromax, and Walton. The customer preference of mobile phone attributes such as design, price, internet connection, speed user friendly, battery life, gaming, e-mail, photo shooting, SMS, video quality, apps downloading, operating system, and social networking is very much popular. The main objective of the study is to identify the customer attitude toward Smartphone. This study can be able to provide a better learning about Smartphone usage that can be helpful for consumers to use the phone properly as well as pave the way of profitability of Smartphone marketers. In addition, the study can also be included activities to deepen users' understanding and can be helped to marketers to apply theories and concepts. Therefore, the study that will be designed can help to find out the attributes that affect the consumer's usage pattern of a Smartphone.

The rest of the paper progress as follows: The first focuses the review of the literature. The literature review includes reviewing some important theories review of the previous study is presented. It attempts to differentiate the present study from the past studies. The second throw light on the hypotheses development. Then, the methodology deals with the selection of sample of respondents, sources of data, methods of data collection, research questionnaire, measurement techniques, and processing and analysis of data. The analyses comprise demographic analysis of respondents, descriptive analysis of data, frequency distribution, reliability test, Chi-square tests, Pearson's correlation, and cross

tabulation. Finally, a summary of the main findings of the study has been presented and conclusion as well as suggestions.

1.2. Objectives of the study

The main objective of this study is to measure generation Y consumer's attitude toward the usage of Smartphone. This study also possesses following three immediate objectives:

1. To explore the variables that are the most important generation Y consumer consider for using a Smartphone.
2. To analysis whether is there any significant distinction behavior between Y male and female respondents regarding the consideration of the most important characteristic while using of Smartphone?
3. To identify which types of problems are faced by Smartphone generation Y consumers.

2. Relevant of Literature Review

Consumer attitude on Smartphone has been extensively studied by scholars such as Batra and Ahtola (1990) express that mobile telephone choice can either be found on functional/primary/rational factors or it can be based on emotional factors such as fun, pleasure, and excitement. Generation Y consumers outnumbered all other age groups regarding mobile (voice) minutes used, text messages sent/received, and wireless data transmitted (Lenhart et al., 2010). Generation Y consumers, mobile phones are also used as an important means to stay connected with peers and family through social media sites (Kolsaker and Drakatos, 2009), as well as to extend existing social relationships (Pertierra, 2005). This generation expresses good use in technology behaviors, for example, texting, tweeting, and web surfing (Rhynes and Students, 2011).

Abdullah (2011) stated that originally used for business purposes, smart phones have evolved into social and lifestyle devices that keep generation Y consumers in touch with everything that matters to them. Price, quality, and style functions are the most important factors affecting the choice of mobile phones (Işıklar and Büyüközkan, 2007; Kumar, 2012; Malviya et al., 2013). Researchers studied that price, brand, interface, and properties are the important factors which are affecting the actual decision among mobile phone brands (Karjaluoto et al., 2005; Liao, 2012; Sethi and Chandel, 2015). Liu (2002) stated the decision of a cell phone is described by two particular states of mind toward brands: Attitudes toward the mobile phone brand and attitudes toward the network. Customer choice of mobile phone brand is influenced to a great extent by new features more than size. Wilska, (2003) stated that a great deal of buyer's decision might have both rational features (e.g., communication time management) as well as emotional features (e.g., games, music, camera, and application). The younger the consumer, the more he would prefer emotional rather than rational features in mobile phones.

Bhatt (2008) studied that the mobile phone usage among the postgraduate student researcher investigated the vital factor for mobile phone which affected the behavior at the time of mobile phone purchased. The factors are mobile phone carrier, service provider, equipment development. Ashaduzzaman et al. (2011) carried out a study in Bangladesh and found that brand image is extremely important to 42% of the total respondents and price is the second most important factor to the consumer. Mokhlis and Yaakop (2012) stated that innovative features, brand image, price, recommendation, durable and portable features, media influence, and after sales service. Muhanna and Abu-Al-Sha'r (2009) aims at investigating students' attitudes toward the learning environment where cell phones are used as learning tools in the classroom and also reveals that cell phone has more influence on male students than on female students. Paulrajan and Rajkumar (2011) indicated that mobile phone quality and availability have a significant impact on consumer perception choice in selecting a mobile manufacturer.

Malasi (2012) has studied the factor influence of product attribute on mobile phone in university among the undergraduate student in Kenya. Different attributes such as color, name visibility, and mobile phone of different models, safety, physical appearance, design, and price of mobile phone

influence over the undergraduate student on various brands and product considered. Osman et al. (2012) conducted research on a study of the trend of Smartphone and its usage behavior in Malaysia. They found that the most important factor that affects consumer purchase decision of Smartphone is not price, but some other factors, such as design, connectivity, and performance.

Hence, the consumers are more eager to pay a premium price if Smartphone provides better quality and features. Nagle et al. (2002) and Sata (2013) quoted that social influence is the major factors which affect consumer's decisions while purchasing a Smartphone. Malviya et al. (2013) suggested four factors price, brand preference, social influence, and features having a dominant influence on the purchase decision of consumers in Indore. Sata (2013) has researched on factor affecting consumer buying behavior on mobile phone devices. The purpose of the study to find motivational forces that influence for mobile phone purchase decision. Uddin et al. (2014) have studied that physical qualities, advertising, charging and functional facilities, size and weight, recommendations by friends, neighbors, and colleagues are the most important factors which influence the customers during purchase decision. Mohan (2014) found out four important factors that affect the consumer purchase decision for Smartphone such as social factors, self-actualization, brand concern, price concern, and product features concern. Kaushal and Kumar (2016) four major factors - product features such as price, quality, reliability, after sales service and latest features, prestige, usage, and social influence which are playing a crucial role while purchasing Smartphone. Sujata et al. (2015) originate out of six important factors such as price, brand image, technology, functional factors, perceived value, and referrals those affect senior citizens purchasing decision. The major finding was the senior citizens were more conscious about technology. Kumar and Chaubey (2015) indicate that there is no significant difference on the customer preferences of product as well as functional attributes across the different demographic status of respondents.

However, above studies do not cover all the variables that are commonly considered by the generation Y users. Besides, no studies have yet been conducted in the Northern area of Bangladesh. Hence, current contribution of this study would like to strive to fulfill it by conducting generation Y consumer attitudes toward the Smartphone in the Northern area of Bangladesh.

2.1. Hypothesis development

H₁: There is a positive significant relationship between gender of the generation Y consumers and attitude toward the usage of Smartphone in Bangladesh.

H₂: There is a significant relationship between the occupation of the generation Y consumers and attitude toward the usage of Smartphone in Bangladesh.

H₃: There is a significant relationship between the education of the generation Y consumers and attitude toward the usage of Smartphone in Bangladesh.

H₄: There is a significant relationship between the income of the generation Y consumers and attitude toward the usage of Smartphone in Bangladesh.

Theory to be followed: Fishbein multiattribute attitude model was developed by Fishbein in 1963. The overall attitude toward an object is a function of two factors: The strength of the salient beliefs associated with the object and the evaluation of those beliefs. It was expressed where:

$$A_o = \sum_i^n b_i e_i$$

Where,

A_o = Attitude toward Smartphone

b_i = Strength of belief that the Smartphone has attribute

e_i = Evaluation of attribute

n = Number of salient attribute

Here, b_i = Overall beliefs of generation Y consumer's attitude toward the factors of Smartphone

e_i = Overall evaluation of generation Y consumer's attitude toward the factors of Smartphone

3. Methodology

Nature of research	This study has been intended to know the generation Y consumer's state of mind toward the Smartphone in Bangladesh. This study is descriptive in nature. It is directed in view of essential and optional information
Sampling plan and study area	Target population: The designated population for the study includes all generation Y consumer ages of under 15-30 years who is regularly using a Smartphone. Sample sizes: Add up to the sample size of the study is 300 consumer young who routinely operate the Smartphone
Survey area and duration	The data are collected from the Rangpur City Corporation in Bangladesh. Primary data were gathered over two months from July to August 2016
Types of data	This research has piloted with the primary and secondary data. Primary sources: The resolve of the study, field survey method is used to collect primary data by taking direct interviews through the questionnaire and observation from the young Smartphone user Secondary sources: The secondary data are collected from different sources such as previous articles, different-related publications, news, sales record, reports, and websites
Data collecting instruments	Questionnaire development A questionnaire was designed which has been considered as the major tool of study. In the questionnaire in respondents were asked 10 main variables those are usually considered by consumer for Smartphone. Some questions are selected for measuring the consumer present satisfaction and perception about Smartphone. Here, 5-point Likert scale was used to measure the related questions. Where (1) strongly disagree, (2) disagree, (3) neither agree nor disagree (neutral), (4) agree, and (5) strongly agree. But here, we have used dichotomous question. A dichotomous question has only two response alternatives; yes or no and so on (Malhotra and Dash, 2011) The questionnaire was designed in two parts. In the first part, particular demographic criteria; in the second part, incorporates 18 estimation inquiries of recognizing few attributes that are brand image, features and apps, power supply, compatibility, durability, price, service, outlooks, operating system, camera resolutions, and attitude
Survey method or style	For this research, data are collected directly through the questionnaire. In this study, researcher distributes 400 questionnaires to respondent for measuring young consumer perception and behaviors on the Smartphone in Bangladesh. Among them, 345 respondents returned the filled-up questionnaires. Because of respondent's powerlessness, obviousness, and unreasonable missing qualities 45 surveys were dropped. So finally, the size of the sample stands at 300 (three hundred)

Data analysis

The collected data are analyzed by various statistical tools and techniques including frequency distribution, reliability (Cronbach's alpha), Chi-square tests, Pearson's correlation, and cross tabulation through the data processing software SPSS (Statistical Package for the Social Science) 20.0 version

4. Results and Discussion

Table 1 summary of respondents demographic statistics shows that 56% (n = 168) male and 44% (n = 132) female. Here, the analysis also illustrations that 54.0% of respondents were students, 17.0% belonging to service holder, 23.0% business people, and rests on them are other professionals. About 30.0% of respondents of this study having postgraduation, 45% graduated, and 21% having HSC. The income level of 43% respondents is below 5000 TK, 15% 5000-10000 TK, and 18% above 20000 TK.

Bar Chart 1 shows that 31.0% of respondents use Samsung Smartphone, 29% Symphony, 21% Walton, and the rest of them use the other branded Smartphone such as Apple, HTC, Nokia, and Sony. 31.80% of female use Samsung. 25.00% of males use Symphony Smartphone.

Chart 2 shows that 32.0% of respondent used Smartphone more than 1 year but <2 years, 29% use from 1 year, and 14% use more than 2 years but <3 years

Chart 3 presents that 32.0% of the consumer use Smartphone for the purpose of internet browsing, 31.0% for variety of information, and 15.0% for the study. 34.10% of female use Smartphone for internet browsing, 29.5% for music and entertainment. On the other hand, 32.10% of males are using a Smartphone for variety of information. 3.00% of Y consumers use Smartphone for others purpose

Chart 4 shows that 16.0% of users use Smartphone mostly before sleeping, 78.0% users when they need. Most of the males are uses Smartphone before sleeping than female

Table 1: Summary of sociodemographic profile of respondents

Demographic variables	Frequency	Percentage of respondents
Gender		
Male	168	56.0
Female	132	44.0
Occupational status		
Service	51	17.0
Business	69	23.0
Student	162	54.0
Others	18	6.0
Education level		
SSC	12	4.0
HSC	63	21.0
Graduate	135	45.0
Postgraduate	90	30.0
Income level (TK)		
Below 5000	129	43.0
5000-10000	45	15.0
10000-15000	24	8.0
15000-20000	48	16.0
Above 20000	54	18.0

Chart 5 illustrates that 46.0% of respondent spend time on your Smartphone daily 2-4 h, 17.0% of 4-6 h, and 13% of spending 8 h or above

Pie Chart 6 shows that 65% of male and female are facing problems to use their Smartphone

Chart 7 exhibits that 33.90% of customer faced problems of battery longevity, 23.20% of hanging problems, 21.40% of touch screen problems, and 5.40% of heat problems of Smartphone

4.1. Reliability analysis

Reliability analysis is measured through Cronbach's coefficient alpha to check for internal consistency of the constructs. George (2003) provides a commonly accepted the following rules for reliability test as " $\alpha \geq 0.9$ - excellent, $0.9 > \alpha \geq 0.8$ - good, $0.8 > \alpha \geq 0.7$ - acceptable, $0.7 > \alpha \geq 0.6$ - questionable, $0.6 > \alpha \geq 0.5$ - poor, and $0.5 > \alpha$ - Unacceptable". Table 2 illustrates that calculated value of the Cronbach's alpha of the factors is 0.805 that means data are good, reliable because the pragmatic value is relatively

Chart 1: Which brand of Smartphone do you use

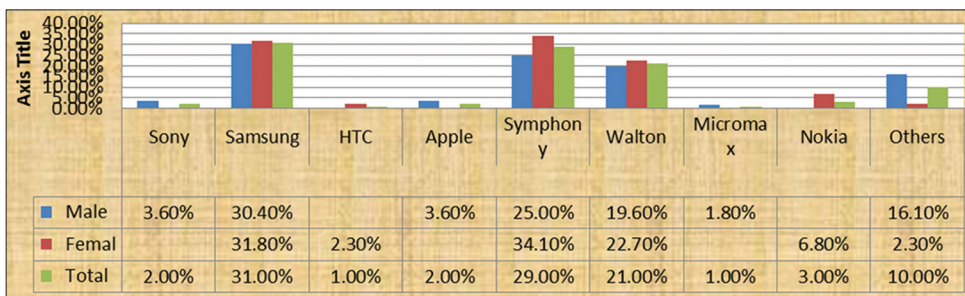


Chart 2: How many years have you used Smartphone

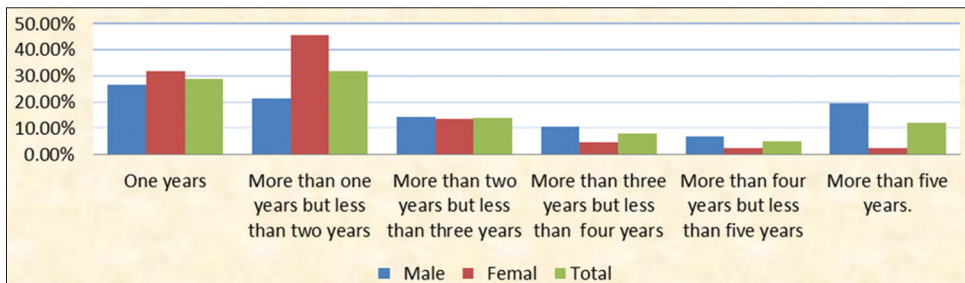


Chart 3: Excluding voice calls for which purpose do you use the Smartphone mostly?

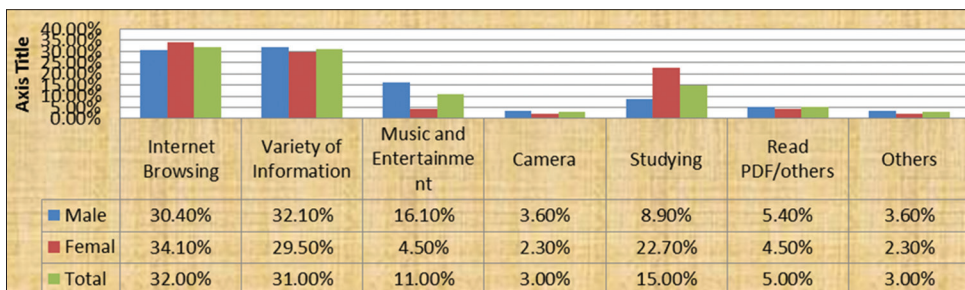
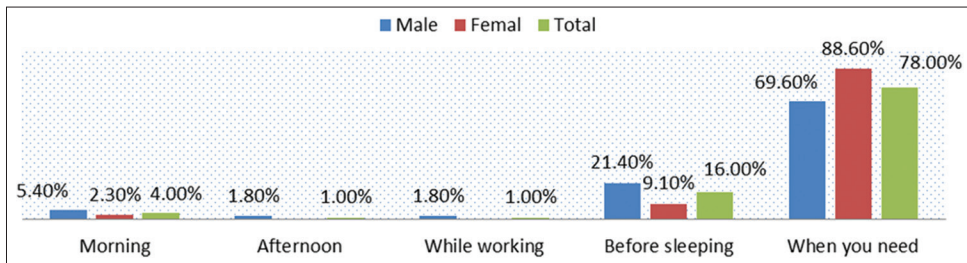
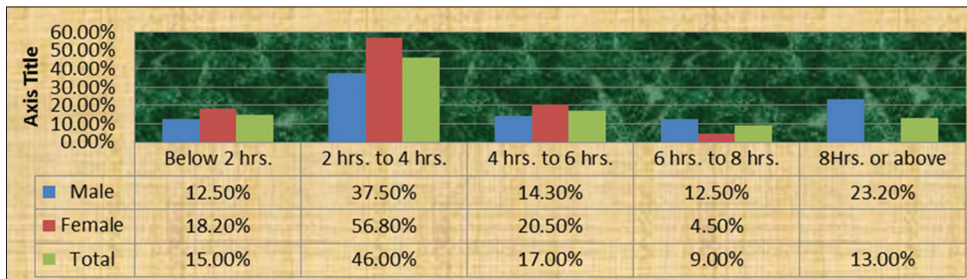
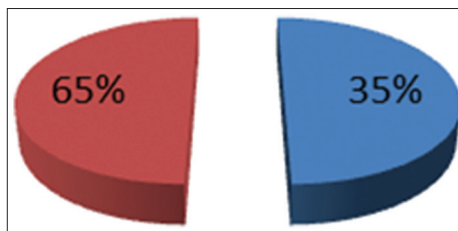
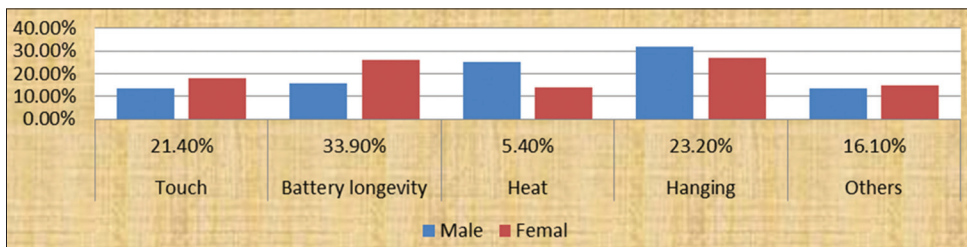


Chart 4: When do you use your Smartphone mostly**Chart 5:** How much time do you spend on your Smartphone daily**Chart 6:** Have you face any problem to use Smartphone**Chart 7:** What types of problem you have faced?

higher than the standard reliable value of Cronbach's alpha. Thus, the survey instrument is reliable to measure all constructs consistently and free from random error.

4.2. Descriptive analysis of the study

The descriptive analysis of the statistics Tables 3-5 illustrates that the mean and standard deviation value of all the questions which has been designed under 5-point Likert Scale considering as values

5 - strongly agrees and 1 - strongly disagrees feeling on the statement that was given to the respondent customers. The mean of all variables ranged from 3.5900 to 4.2600. Meanwhile, the standard deviation for the below variables ranges from 0.96176 to 0.85723. The observed mean value is experienced the generation Y consumer's approach to the Smartphone in Bangladesh. The overall result justifies that respondents are showing same related attitude toward the Smartphone usage.

4.3. Result of attitude

$$A_0 = \sum_i^n b_i e_i$$

Table 2: Reliability statistics

Cronbach's alpha	Number of items
0.805	18

Table 3: Overall attitude toward the Smartphone by generation Y consumers

The services Smartphone provides to you is high	300	4.00	3.9300	0.92083
Smartphone functional capability is high	300	5.00	4.2600	0.85723
Smartphone fulfills your esteem need	300	4.00	4.0300	0.74225
Smartphone helps you to connect with the world	300	4.00	4.2000	0.93965
Smartphone fulfills your all emergencies need	300	4.00	3.3900	0.98036
Your perception toward Smartphone is positive	300	4.00	3.3900	0.80002
The Smartphone is better than the regular phone to provide services	300	4.00	3.8700	0.70338
Your satisfaction level is high toward Smartphone	300	4.00	3.6200	0.75995
Valid n (listwise)	300			

Table 4: Overall beliefs toward the Smartphone by generation Y consumers

Variables	n	Mode	Mean±SD
Overall belief about brand image	300	4.00	4.0500±1.00542
Overall belief about functional features and apps	300	4.00	4.0700±0.76620
Overall belief about outlook and appearance	300	4.00	3.8700±0.83392
Overall belief about power supply	300	4.00	4.0600±0.88261
Overall belief about operating system	300	4.00	3.9400±0.88261
Overall belief about price	300	3.00	3.5900±0.96176
Overall belief about service	300	4.00	4.2000±0.89592
Overall belief about camera resolution	300	4.00	4.1100±0.91690
Overall belief about durability	300	4.00	3.9100±0.92994
Overall belief about compatibility	300	4.00	3.9500±0.95422
Valid n (list wise)	300		

SD: Standard deviation

Table 5: Overall evaluation toward the Smartphone by generation Y consumers

Variables	n	Mode	Mean±SD
Overall evaluation of brand image	300	4.0	4.0800±1.00942
Overall evaluation of functional features and apps	300	4.00	4.0100±0.76620
Overall evaluation of outlook and appearance	300	4.00	3.0100±0.71392
Overall evaluation of power supply	300	4.00	2.0600±0.624261
Overall evaluation of operating system	300	4.00	3.5000±0.85261
Overall evaluation of price	300	3.00	3.0000±0.63473
Overall evaluation of service	300	4.00	1.6429±0.65779
Overall evaluation of camera resolution	300	4.00	3.2000±0.75102
Overall evaluation of durability	300	4.00	3.5100±0.96994
Overall evaluation of compatibility	300	4.00	3.5500±0.92522
Valid n (list wise)	300		

SD: Standard deviation

$$A_0 = \sum 39.75 + 31.5629$$

$$= 71.3129$$

Where,

 A_0 = Attitude toward Smartphone. b_i = Overall beliefs of generation Y consumer's attitude toward the factors of Smartphone (39.75). e_i = Overall evaluation of generation Y consumer's attitude toward the factors of Smartphone (31.5629).

n = Number of salient attributes (10).

4.4. Correlation analysis

The interrelationships between gender and different features of Smartphone were observed using Pearson's correlation analysis. The average score of the multi-items for a construct was computed and the score was used in correlation analysis. Lind et al. (2010) stated that the correlations are strong when the value is $r = 0.50-1.0$ or $r = -0.50$ to -1.0 . A value near 1 indicates a direct or positive association and value near -1 indicates inverse or negative association between the variables. The correlation is an effect size, and so we can verbally describe the strength of the correlation using the guide that Evans and Karras (1996) suggest for the absolute value of r : 0.00-0.19 "very weak", 0.20-0.39 "weak", 0.40-0.59 "moderate", 0.60-0.79 "strong", and 0.80-1.0 "very strong". Results in Table 7 revealed that all variables were correlated together at the 0.01 level using the correlation test and the value ranges $r = 0.340$ to $r = 0.521$. Hence, there is no multicollinearity problem in this research.

Table 6 exhibits that a correlation value of $r = -0.165$ would be a weak negative correlation between gender of generation Y consumers and brand image of Smartphone where significant level is 0.01. There is a weak positive correlation between gender and functional features and apps of Smartphone where value $r = 0.077$. The correlation value of $r = 0.114$ expresses weak positive correlation of gender and outlook and appearance. Power supplies, operating system, camera resolution, and compatibility have weak negative relationship with gender of generation Y consumers. On the other hand, price ($r = 0.106$) and service ($r = 0.005$) have positive relationship with gender. Comparison of different features of Smartphone (brand image, functional features, outlook appearance, price, operating system, camera resolution, durability, power supply, and compatibility) shows multicollinear positive attitude each other.

4.5. Result of hypothesis test

The results of Pearson's Chi-square analysis of the alternative hypothesis H1, H2, H3, and H4 as presented in Table 7 indicated gender, occupation, education, and income level of generation Y consumer have a strongly

Table 6: Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11
Gender	1	-0.165**	0.077	0.114*	-0.015	-0.008	0.106	0.005	-0.261**	0.043	-0.228**
Brand image		1	0.477**	0.187**	0.234**	0.230**	0.094	0.356**	0.408**	0.327**	0.222**
Functional features and apps			1	0.313**	0.261**	0.437**	0.271**	0.272**	0.303**	0.333**	-0.009
Outlook and appearance				1	0.270**	0.139*	0.334**	0.048	0.334**	0.192**	0.105
Power supply					1	0.314**	0.159**	0.175**	0.203**	0.080	0.254**
Operating system						1	0.172**	0.383**	0.169**	0.140*	0.008
Price							1	0.014	0.290**	0.194**	-0.066
Service								1	0.340**	0.431**	0.246**
Camera resolution									1	0.341**	0.224**
Durability										1	0.391**
Compatibility											1

**Correlation is significant at the 0.01 level (two-tailed), *Correlation is significant at the 0.05 level (two-tailed)

significant influence on attitudes toward the usage of Smartphone in Bangladesh. The significance value for the hypothesis is (0.000), which is less than the level of significance $p = 0.05$. Hence, alternative hypothesis is accepted and null rejected. Hypotheses implying the significant positive relation among gender, occupation, education, income level of generation Y consumers and attitude toward the usage of Smartphone.

4.6. Result of hypothesis

HN	Hypothesis	Accepted or rejected
H ₁	There is a positive significant influence between gender of the generation Y consumers and attitude toward the usage of Smartphone in Bangladesh	Alternative (H ₀) ----- Accepted Null (H _a)----- Rejected
H ₂	There is a significant influence between the occupation and attitude toward the usage of Smartphone in Bangladesh	Alternative (H ₀) ----- Accepted Null (H _a)----- Rejected
H ₃	There is a significant influence between the education of the consumer and attitude toward the usage of Smartphone in Bangladesh	Alternative (H ₀) ----- Accepted Null (H _a)----- Rejected
H ₄	There is a significant influence between the income of the consumer and attitude toward the usage of Smartphone in Bangladesh	Alternative (H ₀) ----- Accepted Null (H _a)----- Rejected

5. CONCLUSIONS AND DISCUSSION

In Bangladesh, mobile phone has been introduced in the year 1993. It has exceptionally well-known communication to all professional persons; even students are using this product intensively for their personal and occupational purposes. On the premise of the result, it is reasoned that nowadays cell phone is an item to meet correspondence require, as well as it works a pointer of status, prestige, and lifestyle. This study tries to find out the generation Y customer attitude toward the uses of Smartphone. This study

Table 7: Chi-square tests

Variable	Value	Df	Asymp. Sig. (2-sided)
Gender with attitude			
Pearson's Chi-square	59.242 ^a	18	0.000
Likelihood ratio	76.306	18	0.000
Occupation with attitude			
Pearson's Chi-square	239.906 ^a	54	0.000
Likelihood Ratio	198.012	54	0.000
Education level with attitude			
Pearson's Chi-square	247.505 ^a	54	0.000
Likelihood ratio	209.633	54	0.000
Income with attitude			
Pearson's Chi-square	290.913 ^a	72	0.000
Likelihood ratio	281.406	72	0.000
Number of valid cases		300	

59.242^a: 19 cells (50.0%) have expected count less than 5. The minimum expected count is 1.32. 239.906^a: a. 57 cells (75.0%) have expected count less than 5. The minimum expected count is .18. 247.505^a: 55 cells (72.4%) have expected count less than 5. The minimum expected count is .12. 290.913^a: 75 cells (78.9%) have expected count less than 5. The minimum expected count is .24.

revealed that 32.0% of young customers use Smartphone for the purpose of internet browsing, 31.0% for variety of information and 15.0% for the study purpose. 34.10% of female use Smartphone for internet browsing, 29.5% for music and entertainment. Nearly 16.0% of respondents use Smartphone mostly before sleeping, 78.0% use when they need. This study also indicates 33.90% of Y consumers faced problems of battery longevity, 23.20% of hanging problems, 21.40% of touch screen problems, and 5.40% of heat problems of Smartphone. Hence, Smartphone company needs to solve this common problems. Pearson's Chi-square analysis indicated gender, occupation, education, and income level of consumer have a strongly significant influence on attitudes toward the usage of Smartphone in Bangladesh. The study explained that 44.6% of males are strongly considered brand image using a Smartphone. On the other hand, 56.8% of females are considered brand image factors mostly using the Smartphone. Functional features and apps, power supply, and compatibility are very important factors for both male and female young consumer. Price is same important for both male and female consumer. Service of Smartphone is most considerable factor for the both the male and female. 42.9% of male user emphasis on service than female user. 61.4% female users believed that camera resolution is very important factors for them. Durability is very important mater for the 33.9% of male Smartphone users. In Bangladesh, Smartphone users are satisfied, but user faced different types of problems. About 33.90% of customer faced problems of battery longevity, 23.20% of hanging problems, 21.40% of touch screen problems, and 5.40% of heat problems of Smartphone (Appendix Table 1). Hence, Smartphone company should identify these internal and external problems and trail on laboratory to solve these internal problem. The marketer needs to provide after sales service. They need to emphasis on demand of young generation.

5.1. Practical implication of the study

Manufacturer and marketer of Smartphone need to offer high quality and satisfying generation Y consumers to get positive attitude in return. To do this, marketer needs to know about the important factors which has positive impact to increase the Y consumer satisfaction and loyalty. All the manufacturer should be more careful to design their marketing mix as per the demand of generation Y consumers. Generation Y consumers of Smartphone will be also benefitted from the study in case of Smartphone buying decision. On the other hand, the academic scholar's and students may get some sought of benefit from the study.

5.2. Limitations of the study

In the research area, the data collection only focused on the generation Y consumer in the Rangpur City Corporation. A sample of 300 generation Y consumers was considered for this study, which might not enough for generalization. The questionnaires could not be distributed to consumer in the other areas, such as Kurigram, Dinajpur, and Nilphamari. It would have the impact on the accuracy of study and cannot represent the attitude of the whole Northern area of our country. Sometimes respondents were very hurried, cannot understand, and answers were in answering not careful. Therefore, our future plan is to test the data extensively considering additional factors with large number of samples (more than 500). Moreover, researcher will try their level best to overcome all limitations for further course of action.

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Appendixes

Appendix Table 1: Attributes that consider mostly using Smartphone

Gender * with cross tabulation						
Variables	Gender	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Brand image	Male	1.8	5.4	8.9	39.3	44.6
	Female	4.5	11.4	2.3	56.8	25.0
Functional features and apps	Male	1.8	3.6	12.5	55.4	26.8
	Female			15.9	54.5	29.5
Outlook and appearance	Male	1.8	3.6	28.6	46.4	19.6
	Female		9.1	4.5	65.9	20.5
Power supply	Male	7.1	14.3	42.9	35.7	7.1
	Female	6.8	15.9	43.2	34.1	6.8
Operating system	Male	1.8	8.9	10.7	50.0	28.6
	Female		4.5	20.5	52.3	22.7
Price	Male	1.8	12.5	41.1	23.2	21.4
	Female	2.3	4.5	29.5	47.7	15.9
Service	Male	1.8	5.4	7.1	42.9	42.9
	Female	2.3	2.3	9.1	45.5	40.9
Camera resolution	Male	3.6	1.8	7.1	33.9	53.6
	Female		9.1	13.6	61.4	15.9
Durability	Male	16.1	14.3	35.7	33.9	16.1
	Female	2.3	22.7	52.3	22.7	2.3
Compatibility	Male		3.6	10.7	53.6	32.1
	Female	6.8	6.8	20.5	40.9	25.0

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Appendix Table 2: Frequency distribution of user behavior to the Smartphone

Variables	Frequency	Percentage of respondents
Which brand of Smartphone do you use?		
Sony	6	2.0
Samsung	93	31.0
HTC	3	1.0
Apple	6	2.0
Symphony	87	29.0
Walton	63	21.0
Micromax	3	1.0
Nokia	9	3.0
Others	30	10.0
How many years have you used Smartphone?		
1 years	87	29.0
More than 1 years but < 2 years	96	32.0
More than 2 years but < 3 years	42	14.0
More than 3 years but < 4 years	24	8.0
More than 4 years but < 5 years	15	5.0
More than 5 years	36	12.0
Excluding voice calls for which purpose do you use the Smartphone mostly?		
Internet browsing	96	32.0
Variety of information	93	31.0
Music and entertainment	33	11.0
Camera	9	3.0
Studying	45	15.0
Read PDF/others	15	5.0
Others	9	3.0
When do you use your Smartphone mostly?		
Morning	12	4.0
Afternoon	3	1.0
While working	3	1.0
Before sleeping	48	16.0
When you need	234	78.0
How much time do you spend on your Smartphone daily?		
Below 2 h	45	15.0
2-4 h	138	46.0
4-6 h	51	17.0
6-8 h	27	9.0
8 h or above	39	13.0