

**MOBILE PHONE USAGE AMONG YOUTHS IN  
COIMBATORE CITY**

**BY**

**R.KALPANA**

**(Reg.No:14PEC002)**

**A Dissertation submitted to Avinashilingam Institute for Home Science  
and Higher Education for Women, Coimbatore – 641 043.**

**In Partial Fulfilment of the Requirement for the Degree of Master of Arts  
in Economics**

**(April – 2016)**

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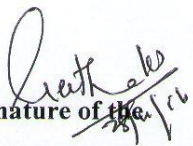
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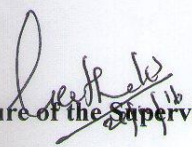
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**CERTIFIED AS BONAFIDE RESEARCH WORK**

  
Signature of the  
Head of the Department

  
Signature of the Supervisor

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## ACKNOWLEDGEMENT

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# **INTRODUCTION**

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## **CHAPTER I**

### **INTRODUCTION**

Consumers are individuals and households that buy the firm's product for personal consumption (Kotler, 2004). It often used to describe two different kinds of consuming entities: the personal consumers and the organizational consumers (Krishna, 2010). The activities these consumers undertake when obtaining, consuming, and disposing of products and service is known as consumer behavior. Consumer behavior involves studying how people buy, what they buy, when they buy and why they buy. When a consumer wanted to make the purchase decision, they will pass through the process through recognition, search information, evaluation, purchase, feedback (Blackwell, Miniard, and Engel, 2006). At last, the consumer will choose a product or brand to consume from various choices in the market. However, these factors affecting the buying behaviour of consumers vary due to diverse environmental and individual determinants. Consumer buying behaviour is influenced by two major factors. These factors are: individual and environmental. The major categories of individual factors affecting consumer behaviour are demographics, consumer knowledge, perception, learning, motivation, personality, beliefs, attitudes and life styles. The second category of factors is environmental factors. Environmental factors represent those items outside of the individual that affect individual consumer's decision making process. These factors include culture, social class, reference group, family and household. The above mentioned factors are the major determinants behind the decision of consumers to opt a given good or service (Blackwell, Miniard, and Engel, 2006).

India is the world's 12th largest consumer market. It is projected that by 2025, it will be ahead of Germany and will become the fifth largest economy of the world. There is an explosive growth in almost all the areas of consumer goods and services. Communication that accounts for 2 percent of consumer's spending today will be one of the fastest expanding categories with growth of about 13 percent (McKinsey, 2007). Mobile telecommunication industry has shown a tremendous growth over the last few years and at present there are about twenty crore subscribers of the mobile telecom services in the country. The market for the mobile handset is also growing with the growing demand for mobile telecom services. This demand will continue to grow in future also. India at present is the second largest market for mobile handsets (Indian Brand Equity Foundation, 2005).

The growth in this sector has been improved due to liberalization of telecommunication laws and policies. The consumers of both rural and urban areas, from college - going students to mature elders, of almost all income groups have started using mobile telecom services.

Although mobile phones have become a fundamental part of personal communication across the globe during the past ten years, consumer research has devoted little specific attention to motives and choice underlying the mobile phone buying decision process. There are numerous complex factors that need to be taken into account when exploring mobile phone buying decision process, including both macro and microeconomic conditions that affect the evolution of mobile phone market in general and individual consumer's motives and decision-making in particular. Moreover, it is important to distinguish between buying behaviour referring to the choice between different mobile phone models and brands and change aspects referring to reasons that affect change. As the mobile phone market is a typical technology push driven market where products are created ahead of the recognition of existing recognized consumer needs (e.g., Gerstheimer and Lupp, 2004), mobile phone development is based on consumers' possible future needs and thus companies that best hunch the technologies and services of future will be the leaders in the discipline.

The mobile phone industry has been one of the fastest growing industries of recent times. At present, India has 287 million mobile phone users and nearly 1, 15, 000 towers which emit electromagnetic radiations. By the end of 2010, the number of mobile phone users is estimated to rise to 500 million (Govt. of India, 2008). Mobile phones account for 88 percent of all telecommunication users and the rural sector accounts for more than 25 percent of all wireless phone users and this proportion is bound to grow as the access and affordability of mobile phones continues to increase. India's mobile market is making strong strides with the improvement of economy and consumer sentiment. The total market for ICT products and services in India is expected to increase from \$16.3 billion in 2010 to \$34.3 billion in 2014 which will influence the mobile industry in the country. In spite of excessive government regulations, mobile industry growth continues to be strong. As of December 2010, India had 791,381,574 mobile phones, equating to roughly 66.36 percent of the population (Business Monitor International, 2010). The ratio of landlines and mobile phones is significant (35.77 million landlines when compared with 791 million)

considering that the GNI of the country in 2008 was only \$1,040 (Business Monitor International, 2010).

In terms of strengths, the Indian market has a large number of mobile phone users. The Indian cell phone market has benefited from competition. The market plays host to a large number of strategic investors including Singapore's SingTel, Vodafone of UK, Telekom of Malaysia, Norway's Telenor, Etisalat of UAE, Japan's NTT and DoCoMo, and Russia's Sistema. Demand for mobile value-added services is strong and expected to grow. Finally, there is also an abundant availability of skilled and technically qualified workforce with English language proficiency (Business Monitor International, 2010). In terms of weaknesses, the mobile market is still highly skewed towards prepaid users –as such, high inactivity levels may be bringing down revenue. There are some delays in 3G licensing due to conflicts between government bodies. The mobile network infrastructure in rural areas remains limited. Multinationals dominate, which has significantly hampered the development of successful local ICT hardware and software manufacturers. India occupies seventh place in regional ranking. India's infrastructure is overall inadequate to support the large population and number of ICT users. There is weak ICT patent protection and high piracy and patent violation rates. The government has been slow to enact regulations and guidelines for the mobile sector. Finally, security issues increasingly weigh on the minds of investors (Business Monitor International, 2010).

The increasing competition between the telecom service providers has increased demand for both mobile telecom services as well as the handsets. According to Indian Brand Equity Foundation (2005), the mobile handset market, which was worth about \$ 2 billion two years ago, had shown a growth of 60 percent per annum. The GSM (Global System for Mobile Communications) handsets had 84 percent share and CDMA (Code Division Multiple Access) handsets has 16 percent market share. There are various players in the GSM market. Nokia was leading the market with 59 percent market share (Prashant, 2005). Among the other players, the prominent are Sony Ericsson, Samsung, Motorola and LG. They are offering wide range of models for the users of different preferences. The manufacturers are introducing newer and newer models in quick succession of time. They are motivated to do so because Indian mobile subscribers are prepared to pay for upgrades, value-based services, and advanced models. The cut throat competition between manufacturers has forced manufacturers to reduce their costs and therefore, they are thinking of manufacturing handsets in India. The low wage rates will help manufacturers to

reduce their costs (Indian Brand Equity Foundation, 2005). Besides this, the service providers and manufacturers are offering value added services to make up losses in revenues, which have resulted due to decrease in tariff rates. Thus mobile value added services has become an important element in the growth of mobile telephony in India.

Mobile phones today have moved beyond their fundamental role of communications and have graduated to become an extension of the personality of the user. In spite of breeding of offers for content-rich mobile data services other than text messaging, the adoption of advanced services such as mobile phone payment, online mobile gaming and mobile email have yet to reach the noteworthy levels of usage in India. There is a discernible preference for mobile phones with colour screens over those with black and white displays. Short Message Service (SMS) is very much popular and its importance is increasing further as the subscribers can now participate in large number of contests/polls etc. Consumers are also making wide use of handsets for clicking photographs, playing games, downloading icons/screensavers/logo/ring tones, sending camera-phone taken photos, and playing offline games with their mobile phones. And yet the consumers are expecting much more from their mobile phones.

As stated above, mobile phones in India not only provide wireless interpersonal communication, but they have now evolved into multi-media devices that allow for a host of different communication and multi-media functions. In this study, mobile phones are seen as multi-media technology that can be used for communication and media-related activities. As a communication technology, mobile phones facilitate various kinds of communication through voice calls, text messages, picture messages and video messages. As media devices, mobile phones can be used for various media-related activities such as accessing news alerts and video clips or listening to music and taking pictures. In this study, it is assumed that young people use mobile phones for both these activities.

## **Research Gap**

Previous studies have identified a number of reasons for owning or using a mobile phone as well as choice of phone operator (Hamel and Prahalad, 1991; Kumar, 1997; Nagel, 2003; Gerstheimer and Lupp, 2004; Chakraborty, 2006; Donner, 2007; de Silva and Zainudeen, 2007). Apart from expanded mobile phone usage, there has also been an increase in the number of network providers. According to Hansen (2003), the mobile handset market has experienced between five percent and ten percent growth and a

substantial growth in operator subscribers. Despite many studies on consumer decision process in the purchase of mobile phones (Riquelme,2001; Lui, 2002; Jones, 2002; Bradner, 2002; Wagstaff, 2002; Karjaluoto et al., 2005), these studies have basically been limited to issues related to factors for choice the of mobile brand. Those factors associated with adoption and choice of mobile operators; factors that affect the introduction of mobile payment systems; and factors affecting adoption of mobile content services has not received any attention, which creates a gap in the literature. Research carried out in the past revealed the associations of demographic factors such as sex, age, and psychographic factor like self-esteem with mobile phone use.

Researchers attempted to find out previous research on youth and adolescents in Indian context but much research related to it has not been carried out There exist few studies on the mobile phones and the mobile phone users at International, National, Regional even District level also; like on India, China, Japan, Africa, Kenya, USA, Pakistan, Uganda and on district level Ahmadabad, Delhi, Pune, Mumbai etc but researcher could hardly find any study specifically done on Coimbatore District or in other words one can say that there has been no attempt made to study mobile phones users in Coimbatore District and their perception towards mobile phone services. Hence to fill up the gap in earlier studies, an attempt has been made in the present research to study the perception of mobile phone users on mobile phone usage and services. The study's specific objectives were to find the extent of use of multiple mobile phone services by youth, factors that affect the choice and their perception about the benefits and problems in using mobile phones.

### **Rationale for the study**

The popularity of cell phones among young people is not unique to India, but it is a worldwide phenomenon. The formation of a global youth culture around mobile phones is an emerging topic of academic interest and research. Several studies have been conducted on the use of mobile phones among young people in different countries across the world such as Japan, Norway, Finland, USA, and Britain. This study adds to the growing body of research by providing empirical information about the use of mobile phones by young people in India. Academic research on mobile phone usage among young people in different countries has looked at various issues such as their use as fashion items, for communication with friends and family, to access news and their use for personal entertainment. However, in India the studies have only looked at few of these issues such

as their use for supporting romantic relationships (Wei, 2007). This case study of youth in Coimbatore provides information about the mobile phone usage by the youth such as their use for communication, personal entertainment, news and age-related needs such as maintaining privacy, expressing individuality, and maintaining friendships.

### **Scope of the Study**

The use of technology is a global imperative due to its contributions to human existence and has enhanced the socio-economic relations globally. Wireless communication has emerged as one of the fastest diffusing media on the planet, fuelling an emergent “mobile youth culture” (Castells, Fernandez-Ardevol, Qiu, and Sey, 2007). As cell phones have become more available, they are increasingly owned and used by the youths. Further, as handsets become more loaded with capabilities ranging from video recording and sharing, to music playing and internet access, teens and young adults have an ever-increasing repertoire of use. Indeed, we are moving into an era when mobile devices are not just for talking and texting, but can also access the internet and all it has to offer (Pew Research Center, 2010). Thus, increased popularity of cell and smart phones in recent years has attracted research attention. Cell phones are seen as a mixed blessing. Youths say phones make their lives safer and more convenient. Yet they also cite new tensions connected to cell phone use (Pew Research Centre, 2010). This area of interest was chosen because of the unregulated usage and over dependent attitude on these devices. The study was limited to Coimbatore city as it was felt a micro level approach would bring to the fore the perception and issues involved in using mobile phone by the youth.

### **Objectives**

The specific objectives of the study are:

- To ascertain the socio-economic profile of mobile users among the youths.
- To identify brand preferences of mobile handsets and service operators.
- To examine the factors that triggers the purchase and influencers at the time of purchase.
- Enumerate the usage pattern and arrive at peculiarities age-wise, if any.
- To find out the perceptions of the teens and youths on the benefits, problems and medical side effects of mobile usage.
- To suggest measures for proper usage of mobile phones among the teens and the youth.

## **Hypotheses:**

In the course of the study the following hypotheses were examined.

- There were no significant differences in the amount spent on mobiles across age groups.
- The respondents did not differ in the ranking of the reasons for using mobile phones.
- The major factor attracting youth to mobile phones was internet services, followed by communication services and media services.
- There were no significant differences in the usage pattern of mobile phones across age group
- The youth looks on the mobile as a means to ensure their safety/security, safeguard their privacy and as a means of entertainment.
- The major problems in mobile usage were health risk, poor family ties and lower language skill.

The results of the study are expected to facilitate the mobile handset manufacturing companies in designing their future product and marketing systems. This study can also contribute to the existing literature in discovering customer buying behaviour in mobile handset market. This will open new rooms for future research in the field of communication technology.

# **REVIEW OF LITERATURE**

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## **CHAPTER II**

### **REVIEW OF LITERATURE**

The review of literature for the present study is presented and discussed under the following heads:

- I. Usage of mobile phones
- II. Mobile users preference for service providers
- III. Factors determining usage of mobile phones
- IV. Related studies.

#### **I. USAGE OF MOBILE PHONES**

Cova (1994) proposed that youngsters seek peer group acceptance by using their mobile phones. Many researchers, Chapman and Schofield (1998); Taylor and Harper (2001); Carroll et al. (2002) emphasized on its use to increase the sense of security in case of emergency. Tjong et al. (2003) proclaimed that this technology provides means for social fulfillment of young people such as access, convenience and mobility. Frissen (2000) and Matthews (2004) suggested that mobility also put busy working parents at ease because through this technology they can in touch with their children. Ling and Yttri (2002) proclaimed that mobile phone technology has revolutionized the patterns of correspondence and coordination among peer groups, colleagues and family member.

Palen, Salzman and Youngs (2001) have looked into the perception of mobile phone usage in the public. They studied the behaviour of new mobile users over a period of six weeks after acquisition of phones. Using interviews and voice-mail, their study noted that patterns of mobile phone usage varied over time and there was significant deviation between the user-predicted usages to their actual usage. The researchers also studied how the perception of mobile phone usage in public contexts varied over the duration of the study. Initially, the perception was overwhelmingly negative. However, they noted that new users over a period of time became more accepting of the use of mobile phones in

public places. Their study found people initially adopted cell phones for safety/security and business or job-related reasons instead of social reasons. However, nearly all subjects in their study reported the use of their cell phones for social interactions had grown over a period of time.

Weilenmann, A., and Larsson, C. (2001) conducted field studies of public use of mobile phones among teenagers in Sweden. Their study shed light on how the mobile phone has come to be used as a tool for local social interaction, rather than merely as a device for communication which dislocated others. Their observations pointed towards the collaborative nature of mobile phone use. The researchers examined how phones were shared and how their field data could be of use when designing new mobile technology and services for the youth.

But researchers, Bianchi and Phillips (2005), Paragras (2003), Monk et al (2004), Palen et al. (2001), also recognized the problematic dimension of excessive usage of mobile phone in young people. Griffiths and Renwick (2003) stated that higher usage of mobile phone leads towards being in debt and other financial worries of adolescents. Aoki and Downes (2003) conducted a research on students in United States. They proposed that majority of the students tend to make calls at night. This can lead to sleep loss and other adverse outcomes. Warner (2003) proposed that, young people use SMS to be in touch with their belongings and to feel a sense of their presence all the time.

Matthews (2004) concluded that Australian adolescents do not make more than 5 calls a day on an average and 85 percent of them used SMS less than 5 times a day. Situation becomes more pathetic when serious social, educational and health hazards come up as a consequence of excessive cell phone usage. Power and Horstmansh (2004) proposed that mobile phone usage provides young people with an opportunity to create new relationships with others and to sustain them. Ling (2005) identified a linkage between its usage and criminal activities like alcohol, fighting, theft and narcotics use. James and Drennan (2005) conducted a study on Australian students and identified a higher usage rate of 1.5 hours - 5 hours a day. They also highlighted the financial costs, emotional stress, damaged relationships and falling literacy as adverse consequences of excessive usage.

Srivastava (2005) claimed that students even use their mobile phones while attending their lectures. McEvoy et al. (2005) proposed that young people are often prone to serious safety hazards as they use their mobile phone simultaneously while driving. Markett (2006) suggested that learning in classroom can be promoted through increased

interactivity among the students during the lecture and using the short messaging service (SMS) can promote this interactivity. Chen et al. (2007) proposed that having mobile phone was necessary for college students to keep in touch with their family. Also they use mobile phones to fulfill their family roles by sharing their experiences with and getting an emotional and psychic support from their family. Bianchi and Phillips (2005) and Palen et al. (2008) stated that youngsters also use their cell phones at prohibited places like petrol stations, planes and hospitals.

Sayan Chakraborty (2006) investigated usage patterns of, and attitude about, cell phones among university students in a mature market (United States) and a rapidly growing new market (India) by surveying students in each country. Key findings from the study include similarities in the usage of phones to communicate with others and in the perception of mobile phone usage in public settings, and differences in the use of text messaging and opinions regarding driving and mobile phone usage. Overall these results suggest students in India use mobile phones differently from their American counterparts. In a developing market like India, mobile phones may be the primary and only phone to which students have access.

Similarly, Ito et al. (2006) claimed that, young people seem to be desperate to be in touch with their friends. Thompson and Ray (2007) emphasized security of children using mobile phone. They pinpointed the potential risks of uncontrolled expenditures, exposure and access to prohibited, damaging or adult material and bullying via mobile phone. Age matters when we talk about the extent of mobile phone usage. Niaz (2008) proposed that addictive mobile use has now become a public health problem and awareness about the dangers associated with excessive usage and addictive behaviors must be extended among common people. There must be consideration on securing the children and young cell phone users from the abuses and addiction of this technology. Kurniawan (2008) claimed a passive usage of mobile phone among older people because they got a fear of getting familiar with new technology. Walsh et al. (2011) conducted a qualitative research to explore the behavioral patterns of young mobile users in Australia. He proposed that young people are too much attached to their mobile phones that they demonstrate the symptoms of behavioral addiction.

Studies also showed gender related differences among young users of mobile phone. Rice and Katz (2003) revealed that mobile phone usage was associated with income, work status, and marital status of the potential users. But few studies proved a non-

significant relationship among gender of the mobile phone users and its usage. Prezza (2004) claimed that mobile phone usage among adolescents was almost independent of type of class (computer science or not), gender and socio-economic status. Many studies prove excessive usage of mobile phone just as an abuse or a necessity of the time. Carbonell et al. (2008) proclaimed that excessive usage of mobile phones does not lead to the rapid emotional changes so it can be considered abuse but not addiction. Turner et al. (2008) proposed that phone-related behaviors are differentially associated with user's personality and individual attributes (age, gender etc.). Devis et al. (2009) studied the pattern of usage of new technology among school students. They concluded that boys spend more time in using mobile phone than girls do. Also, adolescents consume more time on using mobile phones on weekend than on casual week days. It reflects that various factors contribute towards the extent of mobile phone usage.

Scott w. Campbell (2007) in his study undertook a cross-cultural comparison of perceptions of mobile phone use in select public settings, including a movie theatre, restaurant, bus, grocery store, classroom, and sidewalk. A sample of participants from the U.S. Mainland, Hawaii, Japan, Taiwan, and Sweden was surveyed for social acceptability assessments of talking on a mobile phone in each of these locations. As hypothesized, settings involving collective attention were considered least acceptable for talking on a mobile phone. Results also revealed numerous cultural similarities and differences. Taiwanese participants tended to report more tolerance for mobile phone use in a theatre, restaurant, and classroom than did participants from the other cultural groupings. Japanese participants also tended to be more tolerant of mobile phone use in a classroom, but less tolerant of use on a sidewalk and on a bus than were the other participants.

Matanhelia Priyanka (2010) explored the use of mobile phones among young adults in India. The study used the theoretical frameworks of uses and gratifications approach from media studies, social cognitive domain theory from human development literature and social construction of technology (SCOT) from Science and Technology studies. The main objective of the study was to examine the use of mobile phones to fulfil communication, media and age-related needs by young people in India and to investigate regional and gender differences. The study was conducted in two phases using a mixed-methods approach. In the first phase, in-depth interviews were conducted with 30 college-going young adults (18 – 24 years) in Mumbai and Kanpur in December 2007 and January 2008. In the second phase, a survey was conducted with 400 college-going young adults (18 – 24

years) in Mumbai and Kanpur. The qualitative analysis of the data showed that young people in both the cities used cell phones for a variety of communication, news and entertainment needs. Additionally they considered cell phones as personal items and used them to store private content, maintain privacy and have private conversations. Further, the analysis showed that they used cell phones to negotiate independence from parents and to maintain friendships and create friendships with members of opposite sex. The quantitative analysis of the data revealed that young people in the two cities used cell phones differently due to the differences in their lifestyles and socio-cultural factors. Additionally, the study found there were only a few gender differences in the use of cell phones by young people, mainly in the use of cell phones for entertainment purposes, negotiation of independence from parents and in forming friendships with members of opposite sex. Finally the study concluded that young people in India mainly use cell phones for private communication and needs.

Singla Sheetal (2010) investigated the behaviour of consumers of mobile phones in Ludhiana district and the Sangrur District. The study tried to capture their satisfaction level influenced by various technical and non technical factors. The study indicates that while price and features are the most influential factors affecting the purchase of a new mobile phone, its price, audibility, network accessibility are also regarded as the most important in the choice of the mobile phones. The prime objective of the study was to understand the difference in the importance given by different gender groups to the selected factors while buying mobile handsets. The study concludes 57 percent of males have given importance to quality of mobiles followed by price, features, brand and style of mobiles.

Ishfaq Ahmed, Tehmina Fiaz Qazi and Khadija Aijaz Perji (2011) In their study focused on exploring the pattern of mobile phone usage among youngsters in Pakistan to delineate the extent of addictive behavior towards its usage. For this purpose questionnaires were used to elicit the responses. University students were selected as population and simple random sampling technique was used. Sample was consisting of 500 students out of which 400 students responded back comprising 80 percent response rate for this research. Findings of this study revealed that majority respondents are able to have definite priorities between their responsibilities and commitments and their cell phone usage. Very few are those who always exhibit the extreme addictive behaviors and rest is the majority who are not frequently involved in addictive usage patterns. Thus, youngsters use their cell phones

under reasonable limits and do not tend towards extreme behaviors leading towards addictive cell phone usage.

Matti Haverila (2011) investigated cell phone use and broad cell phone feature preferences among youth in Finland. Of particular interest was the issue of gender differences regarding the behavioral aspects of the cell phones, and their conceptualization. The participants of the study were undergraduate students from a large university located in Tampere, Finland. Significant differences between genders regarding the behavioral factors and specific behaviors were identified in three out of six behavioral factors and in 14 out of 30 specific behaviors. The conceptualization of the cell phone behaviors by different genders was analyzed, and differences in the conceptualization were discovered. Finally a cluster analysis was performed with both genders in order to discover distinct and unique user groups on the basis of the differences in the behavioral variables. Designers and marketers of cell phones should pay attention to behavioral aspects of cell phone usage. In addition gender differences in these behaviors and their conceptualizations should be carefully appraised.

Atul Patel and Harishchandra Singh Rathod (2011) attempted to carry out an exploratory study of rural youths pursuing graduation from educational institutions located in a nearby town- Visnagar in Gujarat State (India) on the usage pattern of mobile phones. Opinions of students regarding various brands of mobile handsets, mobile operators and functions of mobile phones were investigated. Family's income and gender were not the influential factors in mobile phone usage as most of the students spend a meager amount of just Rs. 100 per month. An extremely strong brand preference for Nokia existed in this market which could be a learning lesson for follower brands like Sony Ericsson, LG and other Indian brands of mobile handsets. The most used feature of the mobile phone was SMS and the most credible explanation for usage of SMS was that it's cheaper and students with limited financial resources can communicate effectively. Findings from the study also showed that male students send more text messaging than the female students. Idea and Vodafone have created a good image among the undergraduate management and computer students by providing good services.

Deepti Garg and Ajay K. Garg (2011) focused on Botswana's users' usage pattern, awareness and adoption of 3G mobile services amongst university students. A structured questionnaire was administered and the results (n=66) indicate high (98%) saturation level in terms of usage of mobile phones compared to several countries while the 3G mobile

service usage rate was found to be low (8%) in comparison to other parts of the world. While the perception of respondents towards its usage, ease of use and intention to use was highly motivating, the respondents reported that they were not influenced by peer usage. In addition, they were found to be sensitive to price and were not willing to use 3G service if it were expensive. The study also found that security of 3G services and usefulness of the service was the dominating factors in the adoption of these services in Botswana. TV and friends were the dominating awareness media for 3G related information. The findings have future implications for the marketing strategy by the operators and security aspects of 3G mobile services in Botswana.

Murthy, T.S.R and D. Sivarama Krishna (2011) have made a systematic survey through a well prepared questionnaire on the usage of mobile phones. A total of 2131 people were made to participate in this survey. Only 1804 of these people are using mobile phones and the remaining 327 are non-users of cell phones because of their own reasons. These samples are from various economical groups across a population of over one-lakh people. Investigation has proved that majority of users are men. Business persons and employees are also using the cell phones more than the others. There was only one mobile company 'Brand-A' which was selling the maximum number of cell phones and was far ahead of others. The people who are buying it are very intelligent and taking their own decisions in the choice of cell phones. The other factors like friends, neighbors, cell cost and advertisements are less influencing factors in the purchase of cell phones. The people that have been taken into account are both mobile users and non-mobile users. Out of this number, a negligible or a very few percentage of people was not using the cell phone for their own reasons. People are also selecting network connections with different options in mind. Prepaid connection has influenced the most mobile users. Majority users have optimized with regard to the usage of cell phone. The minimum expenditure was less than Rs.300/- per month. Only low percentage of the users spends more than Rs.1200/- per month.

Emeka Ezemenaka (2013) looked into the usage and perceived effect implications of internet enabled phones have on the academic performance of the tertiary students using University of Ibadan students in Nigeria as a case study. The study was carried out in order to understand and bring to fore if the students' academic performance was affected due to the time channelled to the phone during class hours which has a general perception as a medium of distractions to students. The retrieval of the information gotten from this study

was done with structured questionnaires administered to 200 students to obtain their personal opinions, while 15 in-depth interviews were conducted to have a grounded knowledge opinions of the students simultaneously with the data gathered during the course of this study. The analysis of the students' perception showed that the internet enabled phone usage does not affect the academic performance of the students but distractions by the usage of phone were notably admitted.

Krithika. M and S. Vasantha (2013) focused on exploring the pattern of mobile phone usage among teens and young adults in Chennai. The study also attempted to examine the extent of addictive behaviour towards the usage of mobile phones. Questionnaire survey method was used to elicit the responses. Higher secondary students and first year college students were considered as population and simple random sampling technique were used to select the sample of 201 students. There are indications that there are several aspects of mobile phone usage which are similar in both college students and higher secondary students. Staying in touch with friends / family was the highest ranked usage. Another similarity across the students was that most respondents indicated that they own their own phones and when it comes to sharing phones, most respondents do not share their phones. Most parents had stipulation around their frequent texting, talking in late nights etc. This study also highlights the importance of understanding the cognitive behavioural association that young people have with their mobile phones. According to Chi-square analysis poor academic performance was due to their extensive usage of mobile phone.

Albert Akanlisikum, Akanferi Lawrence and Kwami Aziale Isaac Asampana (2014) investigated the usage of mobile phones among young adults of public tertiary institutions in Ghana. A quantitative research approach was used. Accidental sampling technique was used to select 1000 participants. A self-administered questionnaire was used to collect data from participants. It was found that young adults use their mobile phones more frequently for making and receiving calls, for browsing the internet, chatting on websites like Whatsapp, multimedia messaging and listening to music and radio. Young adults use mobile phones for entertainment rather than business and education-related functions. They have therefore become obsessed to functions of the mobile phone such as listening to music and messaging with Watsapp, facebook and the like. There was the need for young adults to gear mobile phones towards doing more of academic and career-related works.

Maryam Amidi Mazaheri. A, Fariba Mohamed and Mojtaba Karbasi (2014) investigated the mobile phone usage among students in Iran. In this descriptive analytical study 1,180 students were selected. Data were collected by self-report questionnaire and were analyzed by SPSS18. Sixty-five point six percent of participants were female, 88% were single. Average of total duration of calls per day was varying with age, gender, father's education, and socioeconomic status of family. Mobile phone usage patterns in male students were different from female students. The study stressed on the need to provide appropriate educational programs about proper use of the mobile phone especially for female students.

Saxena Yogesh, Shrivastava Abha and Singh Priyanka (2014) assessed the extent of mobile phone use amongst medical students and finding correlation if any between the hours of usage of mobile to sleep pattern and quality. About 100 medical students grouped as cases (n=57) (>2 hours/day of mobile usage) and control (n=43) ( $\leq$ 2 hours/day of mobile usage) were examined for their sleep quality and pattern by Pittsburg sleep Quality Index (PSQI). Differences between groups were examined with the Mann Whitney "U" test for proportions (Quantitative values) and with Student 't' test for continuous variables. The association of variables was analyzed by Spearman Rank's correlation. Probability was set at  $<0.05$  as significant. Sleep disturbance, latency and day dysfunction was more in cases especially females. A significant association of hours of usage and sleep indices were observed in both genders (males  $r=0.25$ ;  $p=0.04$ , females  $r=0.31$ ;  $p=0.009$ ). Evening usage of mobile phone in cases showed a statistically significant negative association ( $-0.606$ ;  $p=0.042$ ) with sleep quality (higher PSQI means sleep deprivation). Students using mobile for  $> 2$  hours/day may cause sleep deprivation and day sleepiness affecting cognitive and learning abilities of medical students.

Cilliers, M.J. and M.B. Parker (2015) elaborated on the concerns that face users, including security and speaking in public as well as advertising campaigns to lure teenage girls into buying a particular mobile phone brand. A questionnaire was distributed amongst students of a high school to get results, first hand. The questionnaire was divided into three parts namely demographics, sexually explicit material and mobile instant messaging. The results raised definite issues that need to be addressed by parents and guardians. From whichever perspective it is observed, mobile phones have most definitely changed the way that society and teenagers in particular, conduct themselves socially.

Eserinune McCarty Mojaye (2015) examined the evolution of mobile phones in Nigeria and the concomitant positive and adverse effects of its usage amongst students in tertiary institutions. It identified the positive effects to include easy access to information, instructional usage and personal convenience; while the adverse effects include distraction in the classroom, reduced cognitive ability, cheating during examinations, cyber bullying, poor writing skills and addiction. The study then concluded that though mobile phones have positive effects on the educational and socio-economic development of Nigerian students, university authorities should take a more proactive role to reduce its adverse effects by either prohibiting the use of mobile phones during lecture hours or encouraging students to switch off their phones or put them on silence mode while receiving lectures.

## **II. MOBILE USERS PREFERENCE FOR SERVICE PROVIDERS**

Banumathy, and Kalaivani (2006) studied the customer' attitude towards cell phone services in communication system on the basis of survey method. The study was based on primary data, collected by way of survey from 300 respondents, consists of 189 from prepaid and 111 from post-paid schemes. This study attempt to know the type of calls attended, period and nature of usage, effect on landline connection, use of SMS, reasons for choosing a cell phone and level of satisfaction of services. The study concludes that the overall consumers' attitude towards cell phone services was that they were satisfied with the existing services but they will still want more services to be provided.

Muthumani, M., N. Thangavel and Y.L. Choudary (2007) examined on the consumer preference on various mobile connections and buyer behaviour in Chennai with special reference to Reliance Infocomm (RIM). The study was undertaken to know the preference level of consumers towards various mobile connections. Both primary and secondary data was collected by interview method and referring the company manual and website of the company. The statistical tool used in the study was percentage analysis, weighted average method, chi square test, one sample run test. Major factors influencing respondents while using the particular mobile service are coverage (34.1%), tariff (31%), schemes (6.5%), brand name (14.1%), performance (7%) and others (6%). Influencing factors while purchasing RIM are coverage (63.3%), schemes (11.7%), tariff (10%), performance (8.3%), brand name (6.7%).

Shalini N Tripathi and Masood H Siddiqui (2010) in their article attempts to aid mobile service providers in developing an insight into how consumers trade off among

available attributes while selecting a mobile service package. It also provides concrete information about the specific attributes to be incorporated into mobile services, as per customers' preferences. Unlike past focus on the self-elicitation of the importance of mobile services, this study uses a well-established methodology to derive the relative importance accorded to the identified six salient attributes namely connectivity of network, customer service, tariff of mobile services, variety of plans, value added services and technology deployed by network. The results of the co-joint analysis indicate that customers go through a complex multi-attribute decision-making process by trading off among a relatively large number of attributes to select a mobile service package. The customers accorded the greatest importance to the connectivity of network attribute, followed by customer service and tariff of mobile services. However, they placed relatively less value on variety of plans; value added services and technology deployed by network.

Rajkumar Paulrajan and Harish Rajkumar (2011) in their study attempted to understand the Indian consumers' perception choice in selecting cellular mobile telecommunication service providers. Consumers' perception was widely varied in accordance with the communication quality, call service, facilities, price, customer care and service provider's attributes. A structured questionnaire was developed to collect the required primary data from the consumers. The study shows communication and price were most influential and most preferential factors in selecting telecommunication service provider. However, product quality and availability has a significant impact on consumer perception choice in selecting cellular mobile service provider.

Rajpurohit, R.C.S and Vasita, M.L (2011) in their study deals with consumer preferences and their satisfaction level towards the mobile phone service providers available in Jodhpur city, Rajasthan. The study was conducted on 250 mobile phone users of various mobile phone service providers such as Vodafone, Airtel, BSNL, Reliance, Idea, Tata Indicom and few other players. The results derived from the study indicate that the factor that induces the consumers to buy a particular mobile phone operator was call tariffs followed by network coverage and brand image. The study also highlights that majority of respondents are satisfied with the value added services offered by their mobile phone service providers. The study reveals that BSNL was the most preferred mobile phone service providers among consumers followed by Airtel and Vodafone.

Shah Chintan (2012) using factors analysis highlights the factor considered by the customers to shape their preference for mobile service providers (MSP). Further, the study

evaluates the impact of motivators on subscription decision for a particular service operator, and gives a guideline to the marketers of MSPs to increase their subscriber base. In order to study the consumers' preference for MSP, both primary and secondary data were collected. The secondary data was collected from internet, marketing journal, books. The primary data was collected by using the survey method with the help of structured questionnaire. For this purpose, a sample size of 150 mobile users of Bardoli city and its outskirts was drawn at random for a period of 2 month from March 2012 to April 2012. The results reveal that customers are very keen on service quality and brand image. Service charge and plan was the next most important factor in choice making toward service provider, followed by network quality. It was found that a large proportion of the respondents have chosen an MSP because the operators were recommended by family members, friends and peers

Madhuri Ajit Chaudhari and Sachin Ashok Ambekar (2013) conducted a study to know exactly customer requirement about service provider and also examine factors influencing decision making process. The study reveals that consumers prefer a particular mobile phone service provider on the basis of call tariffs, network coverage and value added services. The consumers are highly influenced by their family members. They generally use their mobile phone for their personal use and for both incoming and outgoing calls. The study reveals that BSNL was the most preferred mobile phone service providers.

Silky Vigg Kushwah and Ahuti Bhargav (2014) attempts to analyse the gap in service quality of Telecom sector in terms of customers' expectations and perceptions regarding mobile phone services. The primary data was collected with the help of a standardized questionnaire of service quality of Parsuraman et al. (1998) which was administered to a quota sample of 500 respondents accessing mobile phone service of telecom services in New Delhi, the capital of India. The data collected was analyzed with the statistical tool of 'Z' test. The study revealed that, there was a statistically significant gap between customers' expectations and perceptions of mobile phone services, with the arithmetic mean of expectations being 6.4413 and that of perceptions 5.8393. The study concludes that, in view of the stiff competition in the global business arena where businesses have to survive and grow on the basis of volume instead of margin, service quality will constitute an essential plank of service marketing. This implies that telecom companies will have to focus on the reduction of the gap in customer expectations and perceptions about their service quality if they are to compete globally. To this end, telecom

companies should continually assess and reassess how customers perceive their services and to implement appropriate corrective action for retaining the existing customers and getting new customers.

### **III. FACTORS DETERMINING USAGE OF MOBILE PHONES**

A prospective buyer's decision of buying a product or brand may be influenced by personal preferences and perspective of buying may have a greater effect on brand choice if the customer has little subsequent knowledge or experience about the product. The conventional problem solving technique that is used in making purchasing decision that affects buyers' preference might not be the best approach in all conditions. Mobile phone selection can either be based on functional/ primary/ rational factors or it can be based on emotional factors such as: fun, pleasure, excitement etc. (Batra and Ahtola, 1990).

A lot of consumer's choice may be having 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 (Wilska, 2003). Customers' decisions of purchasing mobile phone depend on rational as well as emotional factors. Requelme (2001) conducted an experiment to identify the quantity of self-knowledge consumers have when choosing between mobile phone brands. The study was built upon six key attributes (telephone features, access cost, connection fee, mobile to mobile phone rates, call rates and free calls) related to mobile phone purchasing respondents had to rate.

Lui (2002) investigated factors affecting the brand decision in the mobile phone Industry in Asia. The study found attitudes towards the mobile phone brand and attitudes towards the network as the two distinct attitudes that determined consumer phone selection decisions. While choices between mobile phone brands were affected by new technology features such as memory capacity and SMS options; price and regularity of services determined choice of network providers.

In-Stat/MDR Research Institute (2002) examined consumer choice of mobile phones and found color displays as a driving force behind consumer decisions. Consumers considered a color display more important choice criteria than high data rates or new features. The report also revealed a real demand for color display handsets. Another study was conducted in Finland where 397 respondents from selected educational institutions in Finland were surveyed. The study found price and properties as the most important motives affecting the decision to purchase a current mobile phone model (Karjaluoto et al., 2005).

These findings suggest that consumer decision processes on the choice of mobile phone may be economy-specific; technology-specific; cultural-specific; and person or buyer-specific.

Heikki Karjaluoto et al., (2005) observed that it is of growing concern to look at consumer buying decision process and cast light on the factors that finally determine consumer choices between different mobile phone brands. On this basis, the article deals with consumers' choice criteria in mobile phone markets by studying factors that influence intention to acquire new mobile phones on one hand and factors that influence on mobile phone change on the other. With the use of a series of focus group interviews (Study 1) with 79 graduate students followed by a survey (Study 2) of 196 respondents, it was found that although the choice of a mobile phone was a subjective choice situation, there are some general factors that seem to guide the choices. The two studies show that while technical problems are the basic reason to change mobile phone among students; price, brand, interface and properties are the most influential factors affecting the actual choice between brands.

Ling, Hwang and Salvendy (2006) surveyed college students to identify their preference of their current mobile phone. The results of their survey indicated that the physical appearance, size and menu organization of the mobile phones are the most determinant factors affecting the choice of mobile phones. Mack and Sharples (2009) showed that usability is the most important determinant of mobile choice; other attributes particularly features, aesthetics and cost are other factors that have implication on the choice of mobile phone brand. Moreover, Saif et al, (2012) selected four important factors i.e. price, size/shape, new technology features and brand name and analyzed their impact on consumers' buying behavior. According to the study results, consumer's value new technology features as the most important variable that influences consumers' to go for a new mobile phone purchase decision.

Jagwinder Singh and B B Goyal (2009) examined the variation in the importance given by different age and gender groups to the select factors while buying mobile handsets in India. The study concludes that the mobile handset users of age group of 18-30 years are less price sensitive than consumers of other groups; rather they consider 'physical appearance', 'brand', 'value added features', and 'core technical features' more important than users of any other age groups. On the contrary, the consumers of age group 50 years and above have given greater importance to 'price' than consumers of other age groups.

There were significant differences between different age groups as regards to the importance given to all the factors except 'post - purchase services'. The difference was highest for the 'brand' closely followed by 'core technical features' of the handset. Gender differences have also existed for these factors.

Pakola et al. (2010) attempted to investigate consumer purchasing motives in cellular phone markets. The results indicated that while price and properties were the most influential factors affecting the purchase of a new mobile phone, price, audibility and friends' operator were regarded as the most important in the choice of the mobile phone operator.

Chai-Lee Goi and Poh-Yen Ng (2011) explored the perception of young consumers on mobile applications in Malaysia. The perception of consumers on M-Commerce applications seems to be positive, especially communication, emergency, entertainment, content delivery and transaction. However, there was less preference on location factor. The correlations for most of mobile applications are correlated and it was significant either at 0.01 or 0.05. The third finding shows that emergency, entertainment, content delivery, transaction and location have a positive impact on M-commerce. Finally, there was a need for service providers carefully take the needs and considerations of various users into account to provide better services and attract them to MCommerce because this study found that the overall research model can be considered as not a perfect-fit model.

Hui-Jen Yang and Yun-Long Lay (2011) investigated the factors affecting the mobile phone dependence and anxiety. A valid questionnaire survey of 435 college students in Taiwan found strong support for the research model. In accordance with the research model, usage rate, habit, and dependence have an individual impact on mobile phone communication anxiety. Usage rate had a direct influence on habit. Usage rate and habit had direct effect on mobile phone dependence, respectively. Additionally, usage rate, habit, dependence are separately affected the communication anxiety. Implications of these findings are discussed for educators, researchers and telecommunication practitioners.

Das (2012) conducted an empirical research based on survey method on factors influencing buying behavior of youth consumers towards mobile handsets in coastal districts of Odisha located in India. According to the study, a handset of reputed brand, smart appearance, and with advanced value added features, pleasurability and usability was is the choice of young consumers; females in gender-group, post-graduates in level of

education-group, students in occupational group, urban residents in geographical area group plays most prominent role in buying decision of a mobile handset.

Subramanyam and Venkateswarlu (2012) conducted a study on factors influencing buyer behavior of mobile phone buyers in Kadapa district in India. The researchers studied the various types of marketing strategies adopted by market to acquire the attention and cognition of both existing and potential customers, and to study what role these marketing strategies play in consumer buying process. According to the results, income, advertising and level of education in a family are the determining factors of owning a mobile phone set.

Malasi (2012) examined the influence of product attributes on mobile phone preference among undergraduate university students in Kenya. The study indicated that varying the product attributes' has an influence on the undergraduate students' preferences on mobile phones. Various aspects of product and brand attributes considered were color themes, visible name labels, and mobile phone with variety of models, packaging for safety, degree of awareness on safety issues, look and design of the phone.

Solomon A. Keelson (2012) examined student selection of mobile phone services. The author surveyed some 500 University and Polytechnic students in Ghana and found that the basic reason for changing phone servers was reliability and cost savings. The findings identified unreliability of service, different call rate for difference operators, and reference group influence as some of the factors affecting choice of multiple services. The study also found increased mobile phone expenditure, the pain of looking for other sources of funding of mobile services, and missing important calls while receiving other calls as major prices to be paid for the use of single mobile phone services. The main source of financing multiple choices of mobile phones was 'self-financing'; that is from consumers' own income. The author also finds that reference group influence, social reputation and regular contact with others were also influential factors.

Khan, Shahzad and Sobi Rohj (2013) in their study intends to determine all those factors which affect the youth's brand choice for purchase of mobile phones. The data for the study was collected from the private university students of City University and Sarhad University, Peshawar. The study used a self administered questionnaire, which was distributed randomly among 110 students, to measure their brand choice criteria. The responses were measured by using descriptive statistics, regression and coefficient analysis. The findings of the study show that quality, brand image and recommendations by family

and friends are the key variables that influence the brand choice of youths for mobile handset purchase in Peshawar Pakistan.

Shalini Nath Tripathi and Monika Mittal (2013) attempted to study consumer responsiveness to mobile marketing, in terms of its impact on purchase decision making. The primary objective being to gain an insight into the perception of mobile users, towards mobile marketing/advertising and their utility value in terms of impact on the purchase decision. The major findings reveal that the perception of consumers towards mobile marketing can be broadly categorized into three factors: 1) lack of contextualization and personalization of mobile ads 2) disruptive nature of mobile ads 3) perceived usefulness of mobile ads. Further results indicate that mobile marketing/ advertising (in its current format) does not have a significant impact on the purchase/brand decision of consumers. Distinct preferences were expressed by customers regarding the desirable content of such messages. Customers are looking for customization of mobile marketing messages as per their individual requirements, tastes and preferences.

Mesay Sata (2013) investigated the factors affecting the decision of buying mobile phone devices in Hawassa town. In order to accomplish the objectives of the study, a sample of 246 consumers were taken by using simple random sampling technique. Both primary and secondary data were explored. Moreover, six important factors i.e. price, social group, product features, brand name, durability and after sales services were selected and analyzed through the use of correlation and multiple regressions analysis. From the analysis, it was clear that consumer's value price, followed by mobile phone features as the most important variable amongst all and it also acted as a motivational force that influences them to go for a mobile phone purchase decision. The study suggested that the mobile phone sellers should consider the above mentioned factors to equate the opportunity.

Neema Negi and Naveen Kumar Pandey (2013) studied the factors influencing brand preference for mobile phones among the youths of Dehradun (20-25 years) to identify the brand preference for mobile phones. The data was collected to elicit information on demographic and psychographic aspects of the respondents. The demographic variables included age, gender and education. It has been found out that the factors which influence more was the long battery backup among 20-25 years of age. Only 24 percent considers mobile as a status symbol and they don't care about battery backup since for them the appearance was more important. Comparatively girls also prefer long battery backup phones and 60 percent of those with family income above Rs. 35,000 have

bought leading brand in the market or prefers multimedia smart phones. Rest goes for other cheap brands like Zen, Karbon, Micromax and Lemon. Overall the youth with a good occupational income go for the leading costly brands and use phone as a status symbol, while the rest go for other functions of the phone like long battery backup and low price.

Md Reaz Uddin, Nusrat Zahan Lopa and Md. Oheduzzaman (2014) in their study have put efforts to uncover the underlying factors that affect customers in choosing mobile phone. Data were collected from those people living in Khulna city, maintaining equal ratios of various groups like male, female, businessmen, employees, students and others (mostly housewives). To select desired respondents, convenience sampling method was used. A structured questionnaire designed based on previous study with five point Likert scale was used to interview respondents. Factor analysis was applied to extract the underlying factors affecting mobile phone purchase decisions. The results show that the most important factor is physical attributes. Some other factors are pricing, charging and operating facilities, size and weight, friends' and colleagues' recommendations, neighbours' recommendations and advertising.

Mishra and Woungang (2015) investigated the behaviour of consumers of mobile phones in Varanasi district and the Allahabad District. And further capture their satisfaction level that is influenced by various technical and non- technical factors. The study indicates that while price and features are the most influential factors affecting the purchase of a new mobile phone, its price, audibility, network accessibility, are also regarded as the most important in the choice of the mobile phones. The prime objective of the study is to understand the difference in the importance given by different gender groups to the selected factors while buying mobile handsets. The study concludes 57 percent of male has given importance to quality of mobiles followed by price, features, brand and style of mobiles.

Maheswari, V. (2015) analyzed the brand preferred most by mobile phone users in Chidambaram town while purchasing mobile phones and the impact of the technical, economical, social and personal criterion in the decision for choosing and purchasing the branded mobile product and the current satisfaction level on the particular brand owned. To achieve this purpose, a total sample of 250 respondents was selected from mobile recharge centres, mobile phone shops and public places in Chidambaram town. The collected data were analysed by using simple percentage analysis and chi-square test. From the study it was found that the factors which was opined as 'important' by the respondents for their

brand preference were advertisement, appearance, price, mobile features, brand image, service availability and friend's recommendation. The respondents also opined that advertisement, appearance, desired features, quality and brand image will be the most influencing factors at their next purchase of mobile phone.

Muhammad Alshurideh, Abdallah Bataineh, Barween Alkurdi and Ned Alasmr (2015) examined the main factors affecting mobile phone brand choice from a behavioural perspective, through analyzing a set of pre-behaviour and post-behaviour factors from a Jordanian customer's perspective. Using a structured questionnaire consisted of a pre-tested set of questions, which were distributed to a hundreds of respondents in three main Jordanian universities. A Multinomial Logistic Regression analysis was used to investigate the predetermined factors that affect mobile phone brand choice as proposed by the BPM. The results showed that regulatory and social setting was the main factors affecting mobile brand choice. The main studied element that were found to be critical for mobile brand choice behaviour was warranty condition and after sale service for the regulatory setting. The second behaviour setting that influences mobile brand choice was the physical setting. The main factors contributing to an explanation of mobile brand choice behaviour are sales person explanation and friend opinions and recommendations. In addition, the temporal behaviour setting factor was found to have influence on mobile brand choice. However, the study participants opinion indicated that the physical behaviour setting was found have a positive influence on mobile brand choice.

#### **IV.RELATED STUDIES**

Shanthi Vaidyanathan Ravichandran (2009) in her study examined parents/caregivers' (PACG) perceptions of their teenagers' mobile phone usage. A mixed methods approach was employed to explore the research problem. Quantitative data was collected through questionnaires (18 closed and 2 open-ended questions) and qualitative data through interviews (approximately 21 questions). Parents/caregivers of this study express both positive and negative impact towards teenagers' mobile phone usage. On a positive note, PACG perceive that mobile phones are very useful devices for communication and co-ordination of activities. They also find that they are compulsory as they are used as safety devices especially in emergencies. Voice and text features are considered as the basic required facilities in teenagers' mobile phones by PACG. On the negative side, PACG express that teenagers are addicted and obsessed with texting, while

some of the PACG feel that it distracts the teenagers from their study time and other important activities. Some PACG hold the service providers responsible for this because of texting plans. Bullying and abusive messages have been perceived as the major problem mediated by mobile phones. PACG express that teenagers with their mobile phones are out of control for them. They also add that teenagers lose control over the information enabled by their mobile phones. Every interviewed PACG expressed concerns on internet access via teenagers' mobile phones. The overall findings from this study reveal that parents/caregivers' perceptions of teenagers' mobile phone usage was not satisfactory. Although they express a mixed opinion, they lean towards negative impacts. A very high number of interview participants expressed the view that negative impacts outweighing positive purposes with teenagers' mobile phone usage.

Ankur Sarin and Rekha Jain (2009) using a survey of 1774 users and non-users in 84 slums in three metropolitan cities (Delhi, Ahmadabad and Kolkata), tried to understand the impact of mobiles on their social and economic lives. Urban slum dwellers spend significant amounts on communications, both for a first time acquisition of handset and SIM (nearly 40% of the average household earnings per month), as well as ongoing expenditure. However, a majority of respondents believe that the use of mobiles had led to an improvement in their economic situation and that these benefits are greater than ownership and usage costs. Mobile also appears to change how slum residents interact with each other. Despite reducing face-to-face interactions, mobile usage was associated with stronger social relationships. In comparing users and non-users, the study find differences between users and non-users in terms of income, education and other social characteristics. They also find evidence of hierarchies within households, with women far more likely than men to be only infrequent mobile users or not to have access at all. While cost of a handset was the primary barrier to owning a mobile, non-owners report difficulty in using a mobile, clarity of charges for call-plans and information dissemination as other barriers to ownership.

Ishfaq Ahmed, Tehmina Fiaz Qazi and Khadija Aijaz Perji (2011) focused on exploring the pattern of mobile phone usage among youngsters in Pakistan to delineate the extent of addictive behaviour towards its usage. For this purpose questionnaires were used to elicit the responses. University students were selected as population and simple random sampling technique was used. Sample was consisting of 500 students out of which 400 students responded back comprising 80% response rate for this research. Findings of this

study revealed that majority respondents are able to have definite priorities between their responsibilities and commitments and their cell phone usage. Very few are those who always exhibit the extreme addictive behaviours and rest were the majority who are not frequently involved in addictive usage patterns. Thus, youngsters use their cell phones under reasonable limits and do not tend towards extreme behaviours leading towards addictive cell phone usage.

Islam, (2011) works on farmers' mobile phone adoption process in rural area. Author develops Rural Technology Acceptance Model (RUTAM) and identifies that social factor than technology plays key influential role in early stage adoption. This paper also finds Nokia as highest preferred brand because of affordable price.

Surabhi Mittal and Mamta Mehar (2012) explored how mobile phones and mobile-enabled agricultural services have impacted the farmers. As mobile penetration continues to increase among farming communities and information services and to adapt and proliferate, the scope exists for a much greater rural productivity impact in the future. To leverage the full potential of information dissemination enabled by mobile telephony along with supporting infrastructure and capacity building amongst farmers it was essential to ensure the quality of information, its timeliness and trustworthiness.

Jimmy E. Kihwele and Theodora A.L. Bali (2013) examined parents', teachers' and students' perceptions of the effects of students' access to mobile phones on students learning performance. It was conducted in four selected secondary schools in Dodoma municipality. Both qualitative and quantitative research methods were employed as data were collected from 280 respondents through questionnaire, interview schedule and documentary review. Cross-tabulation and Chi-square tests were among data analysis techniques employed in the understanding of different perceptions of respondents. The findings show that, parents and teachers agree that students with mobile phones perform poorly and misbehave more often than students without mobile phones. Also, in order to have value-based control system for appropriate use of mobile phones, providing proper education on mobile phone use and re-introducing censorship board to control the quality of contents on websites are recommended.

Md. Zillur Rahman, Siddique Md., Abdullah Al Jamil and Md. Borak Ali (2013) analyzed the features of mobile handsets affecting buying decision of consumers in tertiary student segment. In the study, sixteen diverse features of mobile handsets have identified under five factors. The purposes of this study are to find out the effect of specific features,

to explore relationship between purchase decision and features and to estimate variation in purchase decision for various features through the consumers. Data has been collected from randomly selected 80 respondents from the students of the Comilla University, Bangladesh. Results suggest that internet facility, multimedia, long lasting battery, camera, brand recognition, performance and colour of mobile handset mostly persuade purchasing decision and external memory capacities, warranty period, price, customer-care service, phone memory capacities, country of origin have some influence over purchase decision. It is expected that the findings will be useful to improve our understanding about the features of mobile handset. Mobile handset manufacturers also will grasp idea for innovating features for their brands.

Soyemi Jumoke, Oloruntoba S. A., and Okafor Blessing (2015) examined phone usage and identified the effects internet enabled mobile phones have on the academic performance of students at the tertiary institutions using the Federal Polytechnic students of Ilaro, Ogun State in Nigeria as a case study. The research work was performed so as to understand and also find the correlation between academic performance of students and the usage of mobile phone during class hours which was generally believed to be an avenue of distractions to students. The information from this work was carried out using structured questionnaires administered to 45 students to get their individual views. In addition 15 extensive interviews were done concurrently to have a grounded knowledge of the students with the data gathered during the course of this study. The findings indicated that students are influenced negatively to a great extent by the mobile phone because attention was focused on chatting, music and others while their academic activities are neglected and left to suffer. Also, this study discovered that the use of mobile phone was uncontrollable among students which are the leading cause of poor academic performance among students.

### **Conclusions:**

The literature review shows that the usage of mobile phone technology has a significant societal influence. The ubiquitous and always-connected nature of the technology is shaping attitudinal changes regarding public and private space of mobile phone users. There exist few studies on the mobile phones and the mobile phone users at International, National, Regional even District level also; like on India, China, Japan, Africa, Kenya, USA, Pakistan, Uganda and on district level Ahmadabad, Delhi, Pune,

Mumbai etc but researcher could hardly find any study specifically done on Coimbatore District or in other words one can say that there has been no attempt made to study mobile phones users in Coimbatore District. The literature review also showed that there have only been a few systematic, survey-based studies providing insights on factors that drive adoption, usage and social impact of mobiles in developing countries, like India and especially in small cities like Coimbatore. This study has been designed with intention to identify the factors which makes customers to choose their mobile phone and the perception of the youth on mobile usage.

## **METHODOLOGY**

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## **CHAPTER – III**

### **METHODOLOGY**

The methodology for the present study is discussed under the following heads:

- I. Locale of the study
- II. Selection of the sample
- III. Data base of the study
- IV. Period of the study
- V. Technique of analysis
- VI. Limitations of the study

#### **I. Locale of the study**

Coimbatore, the third largest city of Tamil Nadu, is also an important district of the state. Due to the presence of several textile industries, it is sometimes referred to as the textile capital of South India or the 'Manchester of the South'. The district city is situated on the banks of the river Noyyal. The total area of the district is 7469 sq.kms which is divided into three revenue divisions, nine Taluks, 19 blocks and 482 revenue villages. The district lies in the southern part of the Indian peninsula. It lie between 10°10' - 11°36' northern latitude and 76° 46' – 77° 36' eastern longitude, on the extreme west of Tamil Nadu. It is surrounded by the Nilgiris in the western and south western side, Erode district in its northern and Dindigul district in its eastern side. It shares part of its boundaries with neighbouring state of Kerala.

Population of this district is 3472578 of which 1735362 are males and 1737216 are females (Census, 2011). The sex ratio as per 2011 census is 1001. The total rural population in the district is 839408 and urban population is 2820203. Scheduled castes and Scheduled tribe accounts for 13.8 per cent and 0.6 per cent of the total population.

The rich black soil of the region has contributed to Coimbatore's flourishing agriculture industry and, it is in fact the successful growth of cotton that served as a foundation for the establishment of its famous textile industry. The first textile mills came as far back as 1888 but there are now over a hundred mills. The result has been a strong economy and a reputation as one of the greatest industrial cities in South India.

There are more than 25,000 small, medium, large scale industries and textile mill. Coimbatore is also famous for the manufacture of motor pump sets and varied engineering goods, due to which it has earned the title "Detroit of the South". The Development of Hydro electricity from the Pykara Falls in the 1930s led to a cotton boom in Coimbatore. The result has been a strong economy and a reputation as one of the greatest industrial cities in South India. The major industries include textiles, textile machinery, automobile spares, motors, electronics, steel and aluminium foundries. Tirupur - a neighbouring town has carved a niche for itself in the garments market. Agriculture however remains the major occupation. The rich fertile soil and tropical climate is excellent for the growth of millet, paddy, cotton, tea, oil seeds and tobacco.

The city is also known for its educational institutions. The district comprises of a number of universities and schools including five universities, more than 1,400 primary schools, 420 middle schools and 165 higher secondary schools. Coimbatore is well connected with other cities and States through a vast road network across 322 kms of National Highways and 4,058 kms of State Highways.

Coimbatore has also emerged as a tier-II destination for the IT sector. There are about six notified Special Economic Zones (SEZs) in the region, of which five are occupied by the IT/ITES (Information Technology Enabled Services) sector and one by hi-tech engineering. Factors such as a sound industrial base with adequate infrastructure, connectivity, top grade educational institutions and skilled workforce have made Coimbatore a favourable destination for IT companies.

Coimbatore has a well-connected communications infrastructure. Till the 1990s the state owned Bharat Sanchar Nigam Limited (BSNL) was the only telecommunication service provider in the city. In the 1990s, private telecom companies too started offering their services. As of 2010, BSNL, Reliance Communications, Bharti Airtel and Tata tele services offer broadband service and fixed line services. MTS offers mobile broadband services. Cellular telephony was first introduced in 1997 and mobile telephone services available. Coimbatore is the headquarters of the Tamil Nadu circle of cellular service providers. Tamil Nadu has 71.81 million subscribers, according to the TRAI data (Telecom Regulatory Authority of India, 2013). In this context, a micro level study assumes immense significance to assess the perception of the consumer on the usage of mobile phones.

## **II. Selection of the samples**

The universe of the study consisted of young population who were using mobile in Coimbatore city. From this universe 100 mobile phone users were selected by adopting purposive sampling technique as not all the mobile phone users were willing to cooperate with the investigator, and due to time constraints. Hence, the investigator approached only those peoples were willing to cooperate and supply the needed information.

## **III. Data base of the study**

Relevant and required data for the present study were collected from the primary source by administering an interview schedule to the selected mobile phone users. The interview schedule was first pre-tested to check for clarity and specificity and the necessary modifications were made on the basis of the experience gained during pre-testing. The finalized schedule used in the study is given in Annexure I.

## **IV. Period of the study**

The field investigation and data collection for the study was carried out during the period December- January (2015).

## **V. Techniques of Analysis**

Data collected were tabulated and analysed for giving precise and concise information. Besides, percentages and graphs, the following tools were used.

### **Analysis of Variance (ANOVA) Test**

ANOVA to a collection of Statistical models used to analyse the differences among group means and their associated procedures (such as “Variations” among and between groups). The Statistical significance is tested by comparing the F test statistics

$$F = \frac{\text{Variancebetween groups}}{\text{Variancewithingroups}}$$

The value of F is compared with critical value of F for the given degrees of freedom. If  $F \geq F_{\text{critical}}$  the null hypothesis is rejected.

In the present study ANOVA test was done to test these was significant difference in the average expenses on mobile across age groups.

### Garrett's Rating Scale

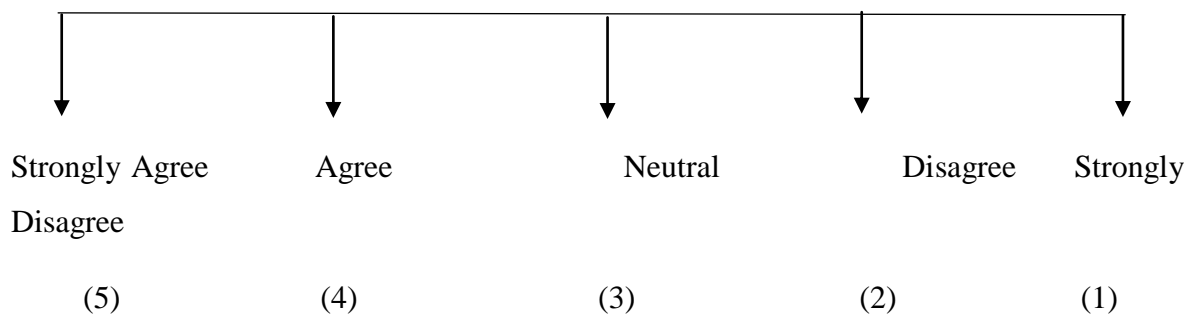
To determine the order of merit of the motives for taking up the mobile phone users, the respondents were asked to rank the various reasons. The ranks were converted into percent by using the following formula:

$$\text{Percent Position} = 100 \frac{(R_j - 0.5)}{N}$$

Where  $R_j$  is the rank given by the  $j^{\text{th}}$  respondents for the reasons for using mobile phones and  $N$  is the number of item ranked. Based on the percent position, individual score was determined, on a scale of 100 by using Garratt' scoring table. (Garrett, 2005).

### Likert's summated Scale

The Likert's Summated Scale was used to scale the characteristics of various usages of mobile phones, benefits of mobile phones, problems of mobile phones and some statements on mobile phones. In the Likert scale, the respondent was asked to respond to each of the statements in terms of five degrees of agreement or adjustment.



Each point on the scale carries a score. Response indicating the lowest favourable degree of satisfaction is given the least score (say 1) and the most favourable is given the highest score (say 5). This way the instrument yields a total score for the respondents which would then measure the respondents' favourableness or otherwise towards the given point of view.

### Kruskal-Wallis H test

The Kruskal Wallis one-way analysis of variance or the H-test helps in testing the null hypothesis that  $k$  independent random sample come from identical population against the alternative hypothesis that the mean of these samples are not equal. The test statistics is given by

$$K = \frac{12}{N(N+1)} \left[ \frac{\sum R_i^2}{n_i} \right] - 3(N+1); \quad (i= 1,2,\dots,k)$$

where  $R_i$  is the rank of observation in group  $i$

$n_i$  is the number of observations in group  $i$

$N$  is the total number of observations across all groups

Chi-square with  $k-1$  (number of groups – 1) degrees of freedom can be used to approximate the significance level for the test. Kruskal Wallis test was applied to find out whether the respondents differed in their opinion on the reasons for possessing a mobile phone.

### **Cronbach's Alpha**

Cronbach's alpha evaluates the unidimensionality of a set of scale items. It's a measure of the extent to which all the variables in a scale are positively related to each other. In fact, it is really just an adjustment to the average correlation between every variable and every other. The formula for alpha is

$$\alpha_{standardized} = \frac{K \cdot \bar{r}}{(1 + (K - 1) \cdot \bar{r})}$$

where  $k$  is the number of variables and  $\bar{r}$  is the average correlation among all pairs of variables. Cronbach's alpha values ranges from 0 to 1. The higher the score, the more reliable the generated scale is. Nunnally (1978) has indicated 0.7 to be an acceptable reliability coefficient but lower thresholds are sometimes used in the literature. In the study, the reliability testing was done for benefits, problems and perception about mobile phones.

### **Factor Analysis**

Factor analysis is a multivariate statistical analysis whose objective is to define the underlying structure in the data matrix. Broadly speaking, it addressed the problem of analysing the structure of interrelationship (correlation) among a large number of dimension and the explanation of each variable are determined, so that the two primary uses for factor analysis, namely summarization and data reduction can be achieved. In summarizing the data, factor analysis derives underlying dimensions that, when interpreted

and understood, describe the data in a much small number of concepts than the original individual variables.

Factor analysis was used in the present study to identify the underlying pattern of relationship between the various dimensions of usage of mobile phones, benefits of mobile phones, problems of using mobile phones and some statements on mobile phones and whether these factors can be grouped in terms of a composite variable.

### **Limitations of the study**

- The study seeks to provide a helicopter view of the field reality and hence inference drawn do not provide conclusive evidence to any social characteristics in particular albeit they aid us in spotting an underlying trend.
- The findings are based entirely upon the research conducted in Coimbatore and hence may not be applicable directly to other metropolitan cities of socio-cultural diversity and contextual factors.
- Due to constraints of time, certain topics have not been touched upon at all during the course of the study while some of them like the actual purchase pattern have been explored in a 'limited' manner. An in-depth analysis may be further taken up in each of sub-topics covered.
- Moreover the survey is not representative of the whole Coimbatore. The sample was collected only from the city. Therefore, caution needs to be taken when generalizing these research results to user groups in other geographical areas and environment.

These limitations in no way negates the findings of the study and offer scope for further research in future

## **RESULTS AND DISCUSSION**

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## **CHAPTER IV**

### **RESULTS AND DISCUSSION**

The major findings of the study are presented and discussed under the following heads:

- I. Socio-economic profile of the selected respondents.
- II. Details on mobile used, service providers and quality of services.
- III. Monthly spending on mobile phones.
- IV. Usage of mobile phones.
- V. Awareness on the usage of mobile phones
- VI. Benefits and inhibitors of mobile usage.

#### **I. Socio-Economic Profile of the Selected Respondents**

In the traditional and structured society, socio-economic factors play a significant role in shaping the personality and characteristics of an individual. Hence, to develop a proper perspective analysis, all the components of social and economic environment must be considered. The general notion is that the social environment is a combination of factors such as gender, age, religion and community, while economic environment is made up of factors such as education, occupation and income. The socio-economic characteristics of the respondents are presented in the table 4.1

#### **Gender:**

Out of the 100 respondents, 87 per cent of the respondents were females and the remaining 13 per cent were males. There was predominance of female respondents among the selected respondents.

#### **Religion and Community:**

Data pertaining to the religion of the respondents unravel that the majority (84 per cent) of the sample respondents, owned allegiance to Hindu religion, 12 per cent were Muslims and the remaining 4 per cent were Christians. Thus the surveyed samples were predominantly Hindus.

Community- wise, among the surveyed population, the largest single group (46 per cent) were backward community. The next important group were Most Backward class (31 per cent), followed by other class (18 per cent) and Scheduled class and Scheduled tribes (5 per cent). Thus the respondents were mostly Hindus belonging to backward community.

**TABLE 4.1**  
**SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS**  
(in percentages)

S.No	Particulars	Proportion of respondents
1	<b>Gender</b>	
	Male	13
	Female	87
2	<b>Religion</b>	
	Hindus	84
	Muslims	12
	Christian	4
3	<b>Community</b>	
	Backward caste	46
	Most Backward caste	31
	SC/ST	5
	Other caste	18
4	<b>Age</b>	
	18-20 years	33
	20-25 years	57
	25-30 years	10
5	<b>Education</b>	
	Illiterate	7
	Primary	0
	Middle	0
	Secondary	12
	Higher Secondary	23
	Under-graduate	40
	Post-graduate	18
6	<b>Occupation</b>	
	Private Sector	7
	Public Sector	25
	Business/ Self-Employed	18
	Students	48
	Home-makers	2
7	<b>Family Income (in)</b>	
	Less than ₹.10,000	17
	₹.10,000 - ₹.20,000	33
	₹.20,000 - ₹.30,000	25
	₹.30,000 - ₹.40,000	8
	₹.40,000 - ₹.50,000	9
	₹.50,000 and above	8

Source: Field survey, December- January, 2015

**Age group:**

Data pertaining to the age composition of the mobile users reveals the main concentration of the respondents were in the age group of 21-25 years (57 per cent). While 33 per cent of the respondents belonged to the age group of 18-20 years, another 10 per cent belonged to the age group of 26-30 years. Thus, most of the surveyed samples were in the age group of 21-25 years, categorised as Young Adults.

**Education Status:**

Education not only creates knowledge and understanding but also generates attitude and behaviour patterns and thereby plays an important role in all kinds of decisions. Information concerning the highest level of education of the respondents unravels that 40 per cent of the sample respondents had completed under-graduation level. About 23 per cent of them had completed higher secondary level and 18 per cent of the respondents had completed post-graduations level and 12 per cent had completed secondary level education. It was noted that only a negligible proportion (7 per cent) of the sample respondents was illiterate. Thus the general education status of the sample respondents was under-graduation level.

**Working Status:**

Among the surveyed respondents there was equal proportion of employed and unemployed persons. Of the employed respondents, 25 per cent were working in Private concerns, 13 per cent in Public Sector, 7 per cent were Businessmen and the remaining 5 per cent were Self – employed. In the non-working group, 48 per cent were students and 2 per cent were home makers. Thus there was predominance of students among the surveyed population.

**Total Family Income:**

Level of income is an important indicator of economic welfare. The analysis of the total income of the respondents reveals that 33 per cent of the households had monthly family income of ₹.10,000 - ₹.20,000, 25 per cent were earning ₹.20,000- ₹.30,000, 17 per cent were earning less than ₹.10,000 as monthly family income, 9 per cent of the households were earning ₹.40,000- ₹.50,000 as their monthly family income, 8 per cent were earning ₹.30,000- ₹.40,000 and the remaining 8 per cent of the households were earning above ₹.50,000 as their monthly family income.

### **Details on Mobile Brand, Service Providers and Quality of Services**

The growth of mobile phones in India and in particular their popularity and use by young people in India has been the object of international and national media attention in the past few years. In 2004, British Broadcasting Corporation (BBC) reported that “youth drives India’s mobile phone revolution” (Ahmed, 2004). The Telecom and Regulatory Authority of India (TRAI, 2008-09) reported that over the last year, cell phone subscriptions have grown almost 50 percent - from 261 million to 506 million. The lowering of costs, which encouraged price wars among the cellular operators, and their promotion as fashionable technology has led to a massive boom in the mobile phone subscription levels, especially among the younger population (Fraunholz and Unnithan, 2006). An attempt was made to examine the brand preferences, service providers and quality of service among different age groups. For purpose of comparisons, the respondents were divided into three age groups, namely 18 -20 years, 20 -25 years and 25 – 30 years. Table 4.2 presents the above details age-wise.

#### **Brand Used**

The analysis of the mobile phone brand used by the respondents reveal 40 percent of them were using Samsung , followed by Nokia (28 %) , Lava (15 %) ,Sony (9 %) and the remaining 8 per cent of the respondents were preferring the other brands like Reliance, Micro max, Lenovo, Honor, Asus and Blackberry. Age-wise, Samsung was being used the most by all age groups, percentage being 60 in the age group of 25- 30 years, 39 in 18 -20 years and 37 in 20- 25 years. The second preferred choice among the young adults (below 25 years) was Nokia, the percentage being 36 in the age group 18- 20 years and 26 in 20-25 years, while the respondents above 25 years of age went for other models like Motorola, Asus, Blackberry, etc. This is so because large majority of below 20 years are not economically independent till the age of 22-24 years. Further, it is also likely that respondents patronised Samsung and Nokia at a relatively high extent as a result of their quality, functions and/or price.

**TABLE 4.2**  
**BRAND PREFERENCE, SERVICE PROVIDER AND QUALITY OF SERVICE**  
**ACROSS AGE GROUPS**

S.No.	Particulars	Age (in years)			
		18-20	20-25	25-30	Total
1	<b>Brand Used</b>				
	Samsung	13 (39.4)	21(36.8)	6 (60.0)	40 (40.0)
	Nokia	12 (36.4)	15 (26.3)	1 (10.0)	28 (28.0)
	Lava	4 (12.1)	10 (17.5)	1 (10.0)	15 (15.0)
	Sony	4 (12.1)	5 (8.8)	0 (0.0)	9 (9.0)
	Others	0 (0.0)	6 (10.5)	2 (20.0)	8 (18.0)
2	<b>Service Provider</b>				
	Dual Sim	7 (21.2)	26 (45.6)	6 (60.0)	39 (39.0)
	Airtel	10 (30.3)	18 (31.6)	2 (20.0)	30 (30.0)
	Idea	5 (15.2)	2 (3.5)	0 (0.0)	7 (7.0)
	Aircel	6 (18.2)	1 (1.8)	1 (10.0)	8 (8.0)
	Others	5 (15.2)	10 (17.5)	1 (10.0)	16 (16.0)
3	<b>Network Satisfaction</b>				
	Excellent	3 (9.1)	7 (9.1)	0 (0.0)	10 (10.0)
	Very Good	11 (33.3)	29 (50.9)	6 (60.0)	46 (46.0)
	Good	16 (48.5)	20 (35.1)	3 (30.0)	31 (31.0)
	Poor	2 (6.1)	0 (0.0)	0 (0.0)	2 (2.0)
	Very poor	1 (3.0)	1 (1.8)	1 (10.0)	3 (3.0)

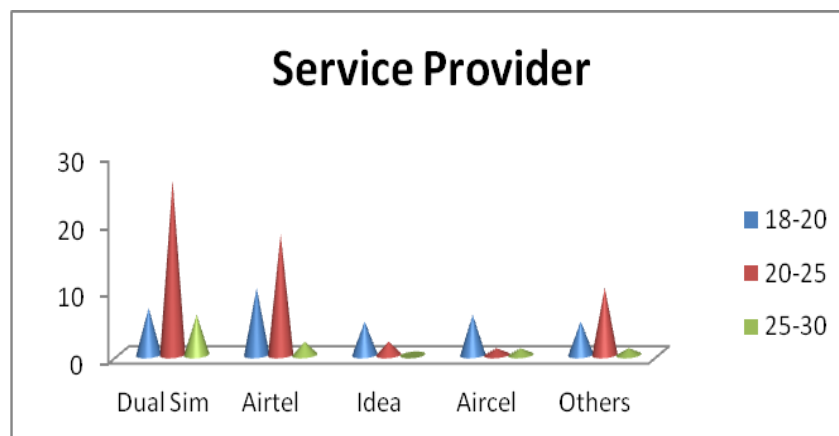
Source: Field survey, December- January, 2015.

Figures within parentheses indicate column percentages

## Service Provider

Data pertaining to the service providers in the mobile phone usage unravel that the majority (39 per cent) of the respondents were using Dual Sim, followed by 30 percent using Airtel and 16 preferring other service providers like Vodafone, Tata Docomo, BSNL, Reliance, etc. Only 8 percent preferred Aircel and 7 percent Idea. It is interesting to note that the preference for dual sim card was more in the age group of 25 – 30 years ( 60%) and between 20 -25 years (45.6%). A large proportion of the respondents in the age group of 18 – 20 years preferred Airtel (30.3%), followed by dual sim (21.2%), Aircel (18.2%), Idea (15.2%) and the remaining 15.2 percent preferred other sim like Vodafone, Tata Docomo, BSNL and Reliance. Under dual sim, Aircel and Vodafone were the popularly used services, followed by Aircel and Reliance. Thus, in the popularity chart the most preferred service providers were Airtel and Aircel among the younger generation, as shown in figure 4.1.

**CHART 4.1**  
**SERVICE PROVIDER**



## Network Satisfaction

With the rapidly changing technologies, customer needs and increased customer awareness, it becomes imperative to review the quality of service parameter for mobile communication. Moreover, the forces of liberalization and globalization of telecommunication market have pressurized the companies to maintain their market share by focusing on retaining their current customer base. Thus, the ability to retain existing customers is in this industry. This is possible only by improving the quality of services to the customers. The perception of the respondents on the quality of service provided by the service providers was rated as 'very good' by 46 percent of the

respondents , followed by ‘good’ by 31 percent, ‘excellent’ by 10 percent, ‘very poor’ by three percent and ‘poor’ by two percent. Age-wise, while nearly half of the respondents in the age group of 20 -25 years (51 percent) and nearly two-thirds in the age group of 25- 30 years have rated the quality of service to be ‘very good’, only 33.3 percent in the age group of 18 -20 years have given the same rating and a large proportion (49%) have rated it as ‘good’. The proportion of respondents who rated service quality to be ‘very poor’ was higher in the age group of 25- 30 years (10 %) and least in 20-25 age group (1.8%). Only 6 percent in the age group of 18-20 years have rated the service to be ‘poor’. Overall nearly 50 percent of the customers were happy with the quality of service provided by their service providers.

## **II. Monthly spending on mobile phones.**

Despite the growing spread of mobiles, a question that policy makers and researchers seek to answer is to what extent is mobile telephony affordable for the youth? Studies indicate that price and income elasticities of demand are high (Coyle, 2005; Samuel et.al., 2005) – suggesting that mobiles are perceived to be “luxury” items and not necessities. However, other studies (De Melo (2000) cited by Forestier ,2003) have indicated that costs for telecom use have been higher than what households have spent on essential services such as electricity and water. For example, the poorest households in Chile spent a little less than 4% on telecom, a little more than 2 percent on water and a little less than 4 percent on electricity. The study hypothesized that since the youth saw the benefits and saw telecommunication as a basic need, they were willing to incur higher costs. Table 4.3 shows the details on the type of plan, recharge pattern and recharge amount per month.

### **Plan**

Plan of the network used play an important role in determining mobile phone satisfaction. All the respondents (100 per cent) were using prepaid plan. Thus, youth preferred prepaid services.

### **Recharge Pattern**

Recharge pattern defers according to the plan used. As seen above, every respondent were using prepaid plan. Out of 100 sample respondents a large proportion (88 per cent) of the respondents were filling the card monthly, 11 percent every two months

and only one respondent ( in the age group of 18 -20 years) was recharging yearly. The proportion of respondents who were recharging monthly was highest in the age group of 18 -20 years (97%), followed by 25 -30 years (90%) and 20 -25 years (83 %). Only 17.5 percent in the age group of 20 -25 years and 10 percent in 25- 30 years group were recharging every two month. Thus, recharging every month was a common trend seen among the young mobile users.

**TABLE 4.3**  
**TYPE OF PLAN, RECHARGE PATTERN AND RECHARGE AMOUNT PER MONTH**

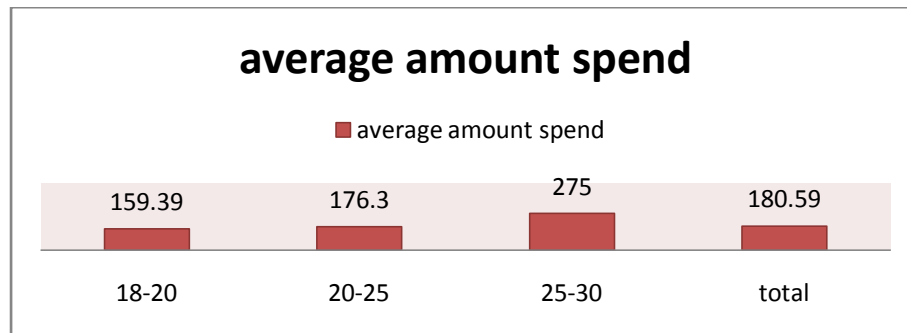
S.NO	Particulars	Age ( in years )			
		18-20	20-25	25-30	Total
1	Type of Plan				
	Prepaid	33(100.0)	57(100.0)	10(100.0)	100(100.0)
	Post-paid	0(0.0)	0(0.0)	0(0.0)	0(0.0)
2	Card Filling				
	Monthly	32(97.0)	47(82.5)	9(90.0)	88(88.0)
	Every 2 Months	0(0.0)	10(17.5)	1(10.0)	11(11.0)
	Yearly	1(3.0)	0(0.0)	0(0.0)	1(1.0)
3	Amount Recharged Per Month				
	Below ₹.100	6(18.2)	7(12.3)	0(0.0)	13(13.0)
	₹.100 - ₹.200	12(36.4)	28(49.1)	3(30.0)	43(43.0)
	₹.200 - ₹.300	13(39.4)	17(29.8)	2(20.0)	32(32.0)
	₹.300 - ₹.400	0(0.0)	2(2.5)	2(20.0)	4(4.0)
	₹.400 - ₹.500	0(0.0)	0(0.0)	1(10.0)	1(1.0)
	₹.500 and above	2(6.1)	3(5.3)	2(20.0)	7(7.0)
4	Average amount spend per month				
	In (₹.)	159.39	176.30	275.00	180.59
5	Usage of Talk Time Fully				
	Yes	20(20.6)	43(75.4)	7(70.0)	70(70.0)
	No	13(39.4)	14(24.6)	3(30.0)	30(30.0)

Source: Field survey, December- January, 2015.

Figures within parentheses indicate column percentages

## CHART 4.2

### AVERAGE AMOUNT SPEND



#### Amount expended per month

The analysis of the amount spend per month on mobile phones across three age groups reveals that while 39 percent in 18-20 years spend ₹.200 - ₹.300 per month, this percentage was around 30 in the age group of 20 -25 years and 20 in 25-30 years. In contrast, the amount expended on mobile phones for a large proportion of the respondents in the age group of 20 -25 years (49.1%) and 25 -30 years (43%) was ₹.100 - ₹.200. The proportion of mobile users spending more than ₹.500 was highest in the age group of 25 - 30 years (20%), followed by 18 -20 years (6.1%) and least in 20 -25 years (5.3%). The analysis of the average amount spent on mobile recharge was highest (₹.275.00) in the age group of 25 -30 years and least in the age group of 18 -20 years (₹.159.39) figure 4.2. This might be attributed to financial independence of 25 -30 age group when compared to 18 -20 age group.

#### ANOVA Test

ANOVA test was used to verify if there was a significant difference between the amounts spent on mobile phones per month by the three age groups. It can be seen from table 4.3 that amount spent on mobile phones increased down the group. Thus increasing age comes with an increased level of spending. The null hypothesis tested was:

$H_0$ : There were no significant differences in the amount spent on mobiles across age groups.

$H_a$ : There were significant differences in the amount spent on mobiles across age groups.

The results are presented in table 4.4.

**TABLE 4.4**  
**ANOVA**

Source of variations	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	13.938	2	6.969	5.029	.008
Within Groups	134.422	97	1.386		
Total	148.360	99			

**Source: Estimation based on field survey December- January, 2015.**

The analysis of the results reveals that there was significant difference between spending of the three age groups at 5 percent significance level ( $F=5.029$ ;  $p = .000$ ). Therefore, it can be concluded that spending on mobile phone increases with increasing age of young adults. Albert Akanlisikum Akanferi, et al., (2014) also found that amount spent on mobiles increased with age.

### **Talk Time Usage**

The analysis of talk time usage (Table 4.3) reveals that the proportion of respondents who fully used their talk time was higher in the age group of 20 -25 years (75.4%), followed by 25 -30 years (70.0%) and 18 -20 years (60.6%). The low utilisation of talk time by the youngest age group may be attributed to the attitude of the Gen Y to use mobile as an entertainment media than as a communication device.

### **III. Usage of mobile phones**

The adoption of the cell phone especially, by young people is a global phenomenon in recent years. It has turned from a technological tool to a social tool and now a fully integral part of young adults' daily lives. According to Campbell (2005), the youth was very quick in the adoption of the mobile phone even before it has been in existence for about a decade. Reduction in costs, size and the introduction of the pre-paid phone card in the 1990's contributed to the surprisingly rapid adoption rate by young people (Ling, 2004). The world over, the rates of mobile phone use amongst young people is on the increase. In this section an attempt is made to examine various aspects in the usage of mobile phone by the young adults.

### Age of initial mobile phone usage

The age of initial mobile phone usage is a determinant to the choice of mobile technology data features. According to Sarkar and Wells (2004) “age, or stage in life, seemed to influence the manner in which the mobile device users balanced the expenses and convenience associated with mobility. The degree to which a mobile phone user has the confidence in using high-tech devices also predicts the behaviour of a mobile phone adopting; this is referred to as Technology self-efficacy. Table 4.5 presents details on the age of adopting mobile phone technology.

**TABLE 4.5  
AGE OF INITIAL MOBILE PHONE USAGE**

Age (in Years)	Age (in years)			
	18 -20	20 -25	25 -30	All
Below 18 years	22 (66.7)	26 (45.6)	5 (50.0)	53 (53.0)
18 – 20 years	11 (33.3)	31 (54.4)	5 (50.0)	47 (47)
Average Age (in years)	17.9	18.2	18.5	18.10

**Source: Field survey, December- January, 2015.**

**Figures within parentheses indicate column percentages**

From the table it was inferred that 53 percent of the respondents were initiated into mobile technology when they were less than 18 years of age and the remaining 47 percent started using the technology at the age of 18 – 20 years. The proportion of respondents who started using the technology below 18 years was maximum in the age group of 18 – 20 years (67%), and least in the age group of 20 -25 years (46%). In contrast, late adopters were more in the age group of 20 -25 years (54%) and least in 18 -20 years (33%). However, the average age of initiation into technology was more or less the same (18 years) across all age groups. It is possible that respondents in the oldest age brackets have been more recent adopters, while those in younger brackets have had a longer history of exposure, no doubt spurred by their parents’ decisions to put a mobile phone in their hand. In any case, what is apparent here was that the mobile phone boom of the last six years has left few segments of the youth market out.

## Reasons for using a mobile phone

Literatures abound on the subject of reasons on the use of mobile phones but are mostly in relation to its impact on society rather than on the individual (Tian,L., et.al.,2009). They have put the reasons into simple (convenience, personal efficiency and security) and complex (information immediacy, contactability, social interaction and social control). The subject of reasons that influence why people acquire and use mobile phones has been blurred by its prevalence and impact on their everyday lives and becoming a necessity. The mobile phone is now viewed as an extension of people's personality, reflecting their personal preferences and identity (Tian,L., et.al.,2009). In the present study, the respondents were asked to rank the reasons for using a mobile phone and rank were converted into percent position by using the formula:

$$\text{Percent position} = \frac{100 (R_j - 0.5)}{N}$$

where  $R_j$  is the rank of the  $i^{\text{th}}$  item and  $N$  refers to the number of items ranked. The percent position was converted into score by using Garrets' Rating scale and the average score obtained for differential reasons are tabulated and presented in table 4.6

Irrespective of age, all respondents have stated 'personal safety' (1<sup>st</sup> rank) as a prime reason for using mobile phones. The other reasons were 'to keep in touch with parents' (2<sup>nd</sup> rank), 'to keep in touch with friends' (3<sup>rd</sup> rank) and 'information access' (4<sup>th</sup> rank) for the respondents in the age group of 18 -20 and 20 -25 years. In contrast, the ranking for the 25 -30 age group were 'to keep in touch with friends' (2<sup>nd</sup> rank), 'business reasons' (3<sup>rd</sup> rank and 'to keep in touch parents' (4<sup>th</sup> rank). The reasons which were of least priority was 'business reason'(8<sup>th</sup> rank) in the age group 18 -20 years, 'everyone had one'(8<sup>th</sup> rank) in the age group 20 -25 years and 'offers good value (8<sup>th</sup> rank) in the older youth (25 -30 year).

Kruskal-Wallis H test was applied to test whether the respondents differed in their ranking of their reasons for using mobile phones. The calculated Chi-square value was 0.009 with a asymptotic significance of 0.998 indicating that there was no significant differences in assigning ranks for reasons for using mobile phones across age groups.

**TABLE 4.6**  
**REASONS FOR USING MOBILE PHONES**

S.No	Reasons	Scores under different age group							
		18-20years		20-25years		25-30years		All	
		Score	Rank	Score	Rank	Score	Rank	Score	Rank
1	Personal safety	73.5	1	71.2	1	71.9	1	72.0	1
2	Everyone had one	43.8	5	34.2	8	40.3	7	37.96	8
3	Touch with friends	56.6	3	54.4	3	56.8	2	55.35	3
4	Touch with parents	59.2	2	58.4	2	52.4	4	58.0	2
5	Business reasons	36.7	8	42.4	7	56.6	3	41.95	7
6	Information access	47.2	4	50.4	4	42.9	6	48.6	4
7	Good value	40.7	6	43.3	6	38.9	8	41.99	6
8	Privacy management	39.81	7	44.4	5	43.5	5	42.7	5

**Source: Estimation based on field survey December- January, 2015**

## Mobile Phone Calling Pattern

The majority of young people like their older counterparts like to have some control over their level of accessibility. This type of control can be achieved easily by circumventing the controlling tendencies of protective parents' .and simply switching the device off, or avoiding calls when .caller-id signals an unwanted name. Table 4.7 presents the details on the accessibility of the respondents in terms of attending calls and in keeping their mobiles on.

**TABLE 4.7**  
**ACCESSIBILITY OF THE RESPONDENTS TO CALLS**

S.No	Particulars	Age (in years)			
		18 -20	20 -25	25 -30	All
1	Is your phone always on?				
	Yes	17(51.5)	44(77.2)	9(90.0)	70(70.0)
	No	76(48.5)	13(22.8)	1(10.0)	30(30.0)
2	Do you answer				
	All calls	21(63.4)	40(70.2)	7(70.0)	68(68.0)
	Selected calls	12(36.4)	17(29.8)	3(30.0)	32(32.0)
3	How often do you place your mobile on silent mode or vibrate mode?				
	Never	9(27.3)	7(12.3)	0(0.0)	16(16.0)
	Rarely	8(24.2)	10(17.5)	5(50.0)	23(23.0)
	Sometimes	13(39.4)	34(59.6)	5(50.0)	52(52.0)
	Often	2(6.1)	4(7.0)	0(0.0)	6(60.0)
	Always	1(3.0)	2(3.5)	0(0.0)	3(30.0)

**Source: Field survey, December- January, 2015.**

**Figures within parentheses indicate column percentages.**

In response to the question whether their mobile phone is always on, 70 percent of the respondents indicated that more often than not, their phones were indeed on and only 30 percent have stated that they kept their mobile phone off. Age-wise, the proportion of the respondents who kept their mobile on was higher in the age group of 25 – 30 (90%) and least in the age category of 18 -20 years (52 %). The divergence in answers can be attributed to the differences in the work status of the respondents. The older youth being employed have greater accountability than their younger counterparts.

From the above table it is apparent that more than 68 per cent of young people answer all calls, while 32 percent answer only selective calls. Age does not have an impact on attending calls as nearly two-thirds of the respondents' answer all calls, while one-third abstain from answering their phone when it rings, thereby lending considerable to the importance to basic call screening

functionality. Thus, irrespective of age, youth does not seem to practice discretion in attending calls.

Majority (52 %) of the respondents have stated that they keep their mobile phone either in vibrant / silent mode sometimes, while 39 percent have stated that they do it rarely or never. Age-wise, more than 50 percent of the respondents in the age groups of 20 -25 years (60%) and 25 -30 years (50%) stated they do this sometimes, while 53 percent of 18 -20 mobile users have stated they do this rarely or never. The need to keep in touch with their parents or friends may be the reason why the youngest adults do not keep their phone on silent or vibrant mode.

### **Mobile phone functionality and calling minutes**

The development of mobile phones is leading the market into a situation where the basic need, communication, is actually broadened to new means of interaction and personal digital assistance. Thus, communication is not the only need mobile phones fulfill. Beyond voice, three main trends shaping the so-called mobile culture have been identified: (1) communication services such as voice, text and pictures, (2) wireless internet services such as browsing, corporate access and e-mail, and (3) different media services such as motion pictures, games and music (Hansen, 2003). The features and functionalities on a mobile phone influences the decision of users to use the phone (Hakoama and Hakoyama, 2011). Table 4.8 presents details on the mobile phone functionality used by the respondents and average time spend on the mobiles.

**TABLE 4.8**

#### **MOBILE PHONE FUNCTIONALITY AND HOURS OF USAGE PER DAY**

S.No.	Particulars	Age (in years)			
		18-20	20-25	25-30	Total
1	<b>Mobile phone functionality</b>				
	All Functions	19 (57.6)	22 (38.6)	5 (50.0)	46 (46.0)
	All excluding news updates	9 (27.3)	28 (49.1)	3 (30.0)	40 (40.0)
	Calling only	5(15.2)	7 (12.3)	2 (20.0)	14 (14.0)
2	<b>Hours of usage per day</b>				
	less than 30min	11 (33.3)	5 (8.8)	1 (10.0)	17 (17.0)
	30min – 1hour	8 (24.2)	9 (15.8)	2 (20.0)	19 (19.0)
	1hour – 2hour	6 (18.2)	5 (8.8)	1 (10.0)	12 (12.0)
	2hour – 3hour	5 (15.2)	23 (40.0)	3 (30.0)	31 (31.0)
	more than 3 hours	3 (9.1)	14 (26.4)	3 (30.0)	21 (21.0)

**Source: Field survey, December- January, 2015.**

**Figures within parentheses indicate column percentages.**

Table 4.8 indicates that majority of the respondents in the age group of 18 – 20 years (58 %) and 25 -30 years (50%) were using all the features of mobile phones, namely calling, texting, playing games, downloading, reading news and entertainment. Among 20 -25 age group, 49 percent of them were using all features of the mobile phone excepting getting news updates. This proportion was 30 percent in 25 -30 age group and 27 percent in the 18- 20 age group. The percentage that used mobiles for calling only was maximum in the 25 -30 age group (20 %) and least in 20 -25 age group (12.3%). Thus youngest adults seem to use all features of mobile phones when compared to their older counterparts.

The analysis of the average time spent on mobile phones reveals an overwhelming proportion of respondents in the age group of 20 -25 years (76 %) and 25 -30 years (60%) spends 2 or more hours on mobiles per day. In contrast, the respondents in the 18 -20 age group (88%) spend less than 2 hours per day on mobile phone. The respondents being mostly females may be the reason for low usage of mobile phones.

### Factor Analysis

To understand the underlying dimensions in the features of the mobile phone, factor analysis was done. Various features of mobile phones were listed and the respondents were asked to rate these usage of these features as ‘always’, ‘often’, ‘sometimes’, ‘rarely’ and ‘never’. The scales start with 5 as maximum for always and end with minimum 1 for never. To determine the appropriateness of applying factor analysis the KMO and Bartlett’s test measures were computed and the results are presented in table 4.9.

**TABLE 4.9**  
**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.743
Bartlett's Test of Sphericity	Approx. Chi-Square	165.095
	Df	21
	Sig.	.000

The KMO statistics for all respondents was 0.743 signifying higher than acceptable adequacy of sampling. Bartlett’s test of sphericity was also found to be significant at 1 percent level providing evidence of the presence of relationship between the variables to apply factor analysis.

Table 4.10 enlists the Eigen values their relative explanatory powers and the factor loadings for 8 components identified within the data set. The Eigen values greater than one alone was considered for inclusion in the analysis.

**TABLE 4.10**  
**ROTATED COMPONENT MATRIX**

S.No	Functions	Components		
		1	2	3
1	Calling		.706	
2	News Updates	.711		
3	Downloading	.872		
4	Entertainment	.882		
5	Photos	.735		
6	Texting		.732	
7	Games			.963
Eigen values		2.652	1.218	1.026
Percentage of variance		37.892	17.396	14.655
Cumulative percentage		37.892	55.288	69.943

**Extraction Method: Principal Component Analysis,  
Rotation Method: Varimax with Kaiser Normalization,  
Rotation converged in 4 iterations.**

**Source: Estimation based on Field Survey, December- January, 2015.**

The above result indicates the first three factors alone was greater than one for all respondents, indicating that these factors alone were appropriate for inclusion in the analysis. The three factors together accounted for nearly 70 percent of the variations.

Factor 1 has significant loadings for four dimensions namely entertainment, downloading and news updates, together constituting internet services and photos, (communication services). Factor 1 was more powerful because it explains nearly 37 percent of the variance. Factor 2 has significant loading for two dimensions namely texting and calling, together constituting communication services and it explains 17 percent of the variance. Factor 3 had significant loadings for one dimensions namely games constituting media services and it explains nearly 14 percent of the variance.

Thus, the major factor attracting youth to mobile phones was internet services, followed by communication services and media services. Albert Akanlisikum Akanferi, et.al.,(2014 ) also observe in their study that an overwhelming majority of young adults use their mobile phones always for making and receiving calls (N = 921), texting and

multimedia massaging (N = 867), browsing the internet (N = 928), chatting on an instant messenger such as Watsapp (N = 926) and listening to music or radio (N = 921).

### **Perception regarding Privacy of Information**

The respondents were asked about their perceptions regarding the privacy of the information stored in the mobile. The details are presented in table 4.11.

**TABLE 4.11  
PERCEPTIONS REGARDING PRIVACY OF INFORMATION**

S.No.	Particulars	Age (in years)			
		18-20	20-25	25-30	All
1	Very Private	6 (18.2)	11(19.3)	2(20.0)	19 (19.0)
2	Somewhat Private	18 (54.5)	33 (57.9)	6(60.0)	57(57.0)
3	Not private	9 (27.3)	13 (22.8)	2 (20.0)	24(24.0)
	Total	43 (100.0)	57 (100.0)	10 (100.0)	100 (100.0)

**Source: Field survey, December- January, 2015.**

**Figures within parentheses indicate column percentages.**

Majority (57%) of the mobile users felt that information stored in the mobile was ‘somewhat private’, 24 percent perceived it was ‘not private’ and 19 percent felt it was ‘private’. Age-wise also similar pattern prevailed with around 20 percent perceiving the information was private, 54 – 60 percent stating it was somewhat private and 20 -27 percent felt it was not private. Despite the provision for locking the mobile phone with password, the respondents across all age groups felt the lack of privacy in the information stored in the mobile phones.

### **Use of mobile Phones in Common Places**

The widespread adoption and use of the mobile phone has brought about an array of new social implications. Whether or not one owns a mobile phone, one has to deal with this rapidly emerging technology because it is used everywhere, including sidewalks, buses, trains, grocery stores, restaurants, movie theaters, temples/churches, and classrooms. With the appropriation of the mobile phone ‘across more settings and places, the social norms associated with the use of wireless technology in different places fail to become differentiated and clear’ (Gant and Kiesler, 2001). The uncertainty surrounding norms for mobile phone use in public stems from the conflicting nature of private and public space. That is, norms for particular locations often conflict with norms for interaction during a phone call (Love and Kewley, 2005; Palen,

Salzman, and Youngs, 2001), causing mobile phone use in public to be as intrusive for some as it is convenient and rewarding for others. In the present study the respondents were asked the places where they used mobiles and their opinion on using mobiles while driving. The results are presented in table 4.12.

**TABLE 4.12**  
**USAGE OF MOBILES PHONES IN PLACES AND WHILE DRIVING**

S.No.	Particulars	Age (in years)			
		18-20	20-25	25-30	All
1	<b>Places where mobiles were commonly used</b>				
	All places	14 (42.4)	18(31.6)	3 (30.0)	35 (35.0)
	All places other than theatre	9 (27.3)	24(42.1)	5 (50.0)	38 (38.0)
	At work place	0 (0.0)	0 (0.0)	1 (10.0)	1(1.0)
	Travelling	0 (0.0)	1 (1.8)	0(0.0)	1( 1.0)
	At home only	10 (30.3)	14(24.6)	1 (10.0)	25 (25.0)
2	<b>Using mobiles while driving</b>				
	Never	23(69.7)	35 (61.4)	2 (20.0)	60 (60.0)
	Rarely	3 (9.1)	9 (15.8)	4 (40.0)	16 (16.0)
	Sometimes	5 (15.2)	12 (21.1)	2 (20.0)	19 (19.0)
	Often	2 (6.1)	1 (1.8)	0 (0.0)	3 (3.0)
	Always	0 (0.0)	0 (0.0)	2 (20.0)	2 (2.0)

**Source: Field survey, December- January, 2015.**

**Figures within parentheses indicate column percentages.**

From the table it is evident that 35 percent of the respondents had no inhibition in using mobile phones in public places (shopping mall, bus stand, work place, theatres, travelling) , 38 percent used the devices in all places excepting theatres, and 25 percent used it at home only and one percent each in travelling and at work place. Age-wise, the proportion of respondents using mobile at all places was more in the age group of 18 -20 years (42.4%) and least in the age group of 25 -30 years (30%). The percentage of youth using mobiles in all places excepting theatres was more in the age group of 20 -25 years (42%). The percentage of users using the device at home only was 30 percent in the age group of 18- 20 years, followed by 25 percent in 20 -25 years and 10 percent in 25 -30 years. Thus, most of the youth are not

bothered by mobile phone usage in public areas. This is not to say that there are not many people who would find overpoweringly loud voices a serious annoyance and a faux-pas in the world of mobile phone protocol. But it is likely that increased awareness about appropriate protocol in public places (in libraries, movie theatres, and places of worship) can have its own self-regulating effect in society.

The question of whether one can/should use a mobile phone while driving is one that in many places in the world has been solved by the law. Many countries including India have restrictions on mobile phone use while driving. According to a Gallup Poll Survey in November 2003, 1004 adults were asked whether they agreed with the statement that using a mobile phone while driving is safe. The majority disagreed strongly, 23 per cent disagreed somewhat, and only about 15 per cent roughly agreed. In the present study when the respondents were asked if they used mobiles while driving, 60 percent stated that never do it. It is heartening to see that the young adults (18 -20 years) more vociferous in stating this (70%) than 20 -25 (61%) and 25 -30 (20%) age groups. The violation of this was more prevalent in the age group of 25 -30 with nearly 40 percent saying they do it ‘sometimes’ and ‘always’.

#### **Ability to Live without a Mobile Phone**

Young adults have become obsessed to functions of the mobile phone such as listening to music and messaging with Whatsapp, face book and the like, that mobile has become an integral part of their life. This gadget has been transformed from a technological tool to a social tool and now fully integrated into the daily lives of people of all walks of lives, especially the younger generation. Table 4.13 indicates if young adults are able to live without mobile phones for a day.

**TABLE 4.13  
ABILITY TO DO WITHOUT A MOBILE FOR A DAY**

S.No.	Particulars	Age (in years)			
		18-20	20-25	25-30	All
1	Yes	26 (78.8)	46 (80.7)	7 (70.0)	79 (79.0)
2	No	7 (21.2)	11 (19.3)	3 (30.0)	21 (21.0)
	Total	33 (100.0)	57 (100.0)	10 (100.0)	100 (100.0)

**Source: Field survey, December- January, 2015.**

**Figures within parentheses indicate column percentages**

In this regard, a majority of 79 percent of all respondents agreed that they can live without mobile phones for a day. Thus most respondents would be able to live without mobile phones, though most of them use mobile phones for entertainment rather than business and education-related functions. However, about 21 percent of all respondents agreed that they cannot live without mobile phones. The proportion of users who said they cannot live without mobile was more in the age group of 25 -30 years (30%) and least in the age of 20 -25 years(19%). Thus elder youth was more addicted to mobiles than the young adults.

### III. Awareness about Latest Mobile Phone

To understand the awareness of the youth about the developments in the mobile markets, the respondents were asked whether they were aware about the latest models available in the market. The details are presented in table 4.14.

**TABLE 4.14**  
**AWARENESS ABOUT LATEST MOBILE MODELS**

Particulars	Age (in years)			
	18-20	20-25	25-30	All
Aware of latest model				
Yes	9 (27.3)	10 (17.5)	2 (20.0)	21 (21.0)
No	24 (72.7)	47 (82.5)	8 (80.0)	79 (79.0)
Total	33 (100.0)	57 (100.0)	10 (100.0)	100 (100.0)

**Source: Field survey, December- January, 2015.**

**Figures within parentheses indicate column percentages**

Seventy-nine percent of the respondents were not aware about the latest mobile models available in the market. Age-wise also similar trend was seen with lack of awareness being 80 percent in the age groups of 20 -25 and 25- 30 years and 73 percent among 18 -20 years. Lack of interest in the product developments in the mobile markets may be due to the fact that majority of the surveyed respondents were females (87%).

### Best Aspects in having a Mobile Phone

There are a number of reasons accounted for the inclination of customers to possess a mobile phone. Aspects such as aesthetic look, easier to handle, and safety influence the customers. These are brought out in the table below 4.15.

**TABLE 4.15**  
**BEST ASPECTS IN HAVING A MOBILE PHONE**

Particulars		Age (in years)			
		18-20	20-25	25-30	Total
Best Aspects in Mobile	Stylish	11 (33.3)	1 (1.8)	2 (20.0)	14 (14.0)
	Easier	9 (27.3)	10 (17.5)	1 (10.0)	20 (20.0)
	Safer	5 (15.2)	10 (17.5)	2 (20.0)	17 (17.0)
	Stylish & Safer	2 (6.1)	13 (22.8)	2 (20.0)	17 (17.0)
	All	6 (11.2)	23 (40.4)	3 (30.0)	32 (32.0)

**Source: Field survey, December- January, 2015.**

**Figures within parentheses indicate column percentages**

From the above table it is seen that 32 percent of the mobile users gave priority to all the three features namely, aesthetic look, easier to handle, and safety and 17 percent to both being stylish and safety aspects. It is interesting to see that respondents in the 18 -20 age group gave higher priority to stylish looks, while those in the age group of 20 -25 and 25 -30 years gave priority to all three aspects.

### **ANOVA Test**

Anova was done to determine whether the nature of usage of mobile phone differed across age groups. The hypothesis framed was:

$H_0$ : There were no significant differences in the usage pattern of mobile phones across age group

$H_a$ : There were significant differences in the usage pattern of mobile phones across age group

The results are presented in table 4.16.

**TABLE 4.16**  
**ANOVA OF PATTERN OF USAGE OF MOBILE PHONES**

S.No	Variables	F Value	Significance
1	Hours of using mobile	7.941	.001
2	Best aspects of using mobile	5.892	.004
3	Using mobile while driving	4.688	.011
4	Is mobile always ON	4.609	.012
5	Age of initial usage of mobile phone	2.584	.081
6	Keeping in silent	1.844	.164
7	Aware of the latest models in the market	.847	.432
8	Common place of using mobiles	.373	.690
9	Can do without a mobile for a day	.287	.751
10	Answering calls	.210	.811
11	Various uses of mobiles	.111	.895
12	Storing information's as private	.106	.900

**Source: Estimation based on field survey December- January, 2015.**

The results reveal that there were significant differences across the age group with respect to hours of usage, best aspects of mobile, using mobile while driving and in keeping mobile on. With regard to other pattern of usage like age of initial use, putting mobile in silent mode, awareness on latest models, using mobiles in public places, live without a mobile, answering calls, various uses of mobiles and storing information, there was no difference across age groups. Thus, younger youths deferred from their elder counterparts in terms of hours of usage, style of mobile, using mobile while driving and keeping mobile on.

#### **Opinion about Following Statements**

Various statements have been listed below related to the mobile phones and phone connections and the customer opinions related to them in the five point scale have been observed. The scaling has been distributed as strongly agree, agree, no

opinion, disagree and strongly disagree. The scales start with 5 as maximum for strongly agree and end with minimum 1 for strongly disagrees. The reliability of the constructs was checked by computing Cronbach's alpha coefficient. Cronbach's Alpha reliability statistics helps to evaluate whether the number of individual items contains the same characteristics to explain the characteristics of constructs. For higher reliability, 0.7 or higher is required for the data for further analysis. To check the reliability of the statements Cronbach's alpha value was calculated and was found to be 0.74. These findings indicate that factor score has adequate internal consistency, above the conventional standard of  $\geq 0.70$ .

To understand the underlying dimensions in the statements, factor analysis was done. To determine the appropriateness of applying factor analysis the KMO and Bartlett's test measures were computed and the results are presented in table 4.17.

**TABLE 4.17**  
**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.480
		120.010
Bartlett's Test of Sphericity	Approx. Chi-Square	
	df	45
	Sig.	.000

The KMO statistics for all respondents was 0.480 signifying acceptable adequacy of sampling. Bartlett's test of sphericity was also found to be significant at 1 percent level providing evidence of the presence of relationship between the variables to apply factor analysis.

Table 4.18 enlists the Eigen values their relative explanatory powers and the factor loadings for 8 components identified within the data set. The Eigen values greater than one alone was considered for inclusion in the analysis.

The above result indicates the first five factors alone was greater than one for all respondents, indicating that these factors alone were appropriate for inclusion in the analysis. The five factors together accounted for nearly 70 percent of the variations.

**TABLE 4.18**  
**ROTATED COMPONENT MATRIX**

S.No	Functions	Components				
		1	2	3	4	5
1	Mobile has become 'necessity' today					
2	I feel more confident to go out by myself after I had my mobile phone.	0.768				
3	It is cheaper to use mobile phone than to use landline phone.					
4	I am not afraid of getting lost after I had my mobile phone.					0.922
5	I know I can always call somebody on my mobile phone when I am in trouble.				0.775	
6	Phone numbers/ message stored in mobile are 'Private'			0.707		
7	Using a mobile phone while driving is OK		0.801			
8	Lengthy conversations on a mobile are OK		0.849			
9	I have more friends after I had my mobile phone.					
10	It is fun to use mobile phone				0.738	
Eigen values		1.995	1.619	1.197	1.141	1.053
Percentage of variance		19.953	16.188	11.972	11.404	10.534
Cumulative percentage		19.953	36.141	48.113	59.517	70.051

**Extraction Method: Principal Component Analysis,**  
**Rotation Method: Varimax with Kaiser Normalization,**  
**Rotation converged in 14 iterations.**

**Source: Estimation based on Field Survey, December- January, 2015.**

Factor 1 has significant loadings for one dimension namely 'I feel more confident to go out by myself' constituting **safety measures**. Factor 1 was more powerful because it explains nearly 20 percent of the variance. Factor 2 has significant loading for two dimensions namely 'Using a mobile phone while driving is OK' and 'Lengthy conversations on a mobile are OK' together constituting **intrusive behaviour** and it explains 16 percent of the variance. Factor 3 had significant loadings for one dimensions namely 'Phone numbers/ message stored in mobile are Private' constituting **privacy** and it explains nearly 12 percent of the variance. Factor 4 had significant loadings on two dimensions, namely 'I know I can always call somebody on my mobile phone when I am in trouble' (**safety measures**) and 'It is fun to use mobile phone' (**entertainment**) and it explains 11 percent of the variance. Factor 5 had significant loadings on one dimension namely 'I am not afraid of getting lost after I had my mobile phone' (**safety measures**) and it explains 11 percent of the variance.

Thus the youth looks on the mobile as a means to ensure their safety/security, safeguard their privacy, as a means of entertainment and not repenting about their intrusive behaviour.

### Health Issues in Using Mobile phone

The fame of the cell phones is followed by an alarm towards the detrimental effects of cell phone radiation. Fatigue, headache, decreased concentration and local irritation and burning are the major effects of excessive usage of cell phones, as stated by various researches (Vasudev, et.al, 2012). The respondents were asked whether they knew about the health risk involved in using mobile phones. The information is presented in table 4.19.

**TABLE 4.19  
AWARENESS ON HEALTH RISK IN USING MOBILE PHONES**

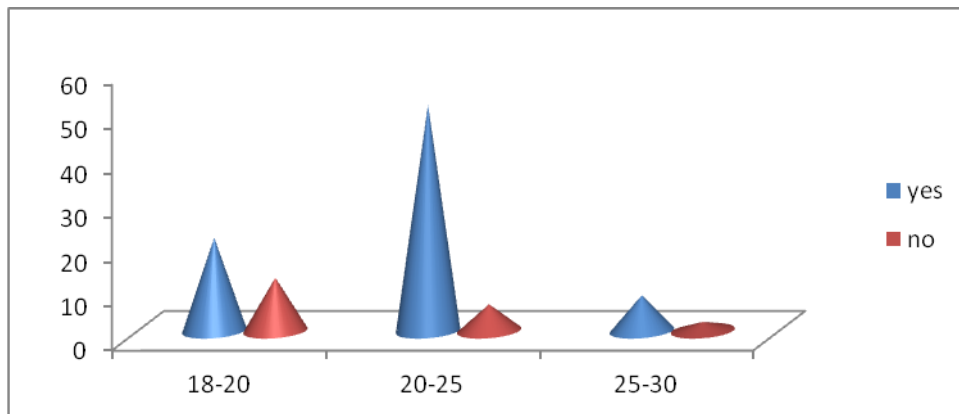
Particulars	Age (in years)			
	18-20	20-25	25-30	Total
Medical side effects	21	51	8	80
Yes	(63.6)	(88.5)	(80.0)	(80.0)
No	12	6	2	20
No	(36.4)	(10.5)	(20.0)	(20.0)
Types of Health problems				
Radiation problem	13(39.4)	15(26.3)	4(40.0)	32(32.0)
Headache	8(24.2)	16(28.1)	1(10.0)	25(25.0)
Stress	5(15.2)	14(24.6)	4(40.0)	23(23.0)
Ears Ache	7(21.2)	12(21.1)	1(10.0)	20(20.0)

**Source: Field survey, December- January, 2015.**

**Figures within parentheses indicate column percentages**

In our study, 80 percent of the youth were aware of the ill effects of the mobile usage on health but, this fact does not stop them from using mobile phone. Nearly 36 percent of the youth in the age group of 18 -20 years were not aware of the hazardous effects of using mobiles, which is critical, given that health risk is on the rise these days, as shown in figure 4.3.

**CHART 4.3**  
**AWARENESS OF MEDICAL SIDE EFFECTS**



Fatigue, headache, decreased concentration and local irritation and burning are the major effects of excessive usage of cell phones, as stated by various researches (Sandstrom *et al.*, 2001). The respondents were asked to state the major health issues in using mobile phones. About 32 percent stated radiation as a major health issue, followed by headache (25%), stress (23%) and earache (20%). Age-wise, while the major health issue for the elderly youth was radiation problem (40%) and stress(40%), it was headache for 20 -25 age group and radiation for 18 -20 age group.

## **V. Benefits and Inhibitors of mobile usage**

### **Benefits of Using Mobile Phones**

Individual's reaction and response are based on their perceptions. As marketing concept is built on the premise that marketing first identifies consumer needs and then develops products and services to satisfy the needs, a study attempted to know the benefits derived by the customers from the mobiles they possess. Various statements have been listed below related to benefits of using the mobile phones and the respondents were asked to rate the statements on a five point scale. The scales start with 5 as maximum for strongly agree and end with minimum 1 for strongly disagrees. Factor analysis was used to identify the underlying dimensions among the factors which make usage of mobile phone enjoyable. To determine the reliability of applying factor analysis the Cronbach's alpha test was applied and was estimated to be 0.870, which was greater than 0.7 indicating the reliability of the constructs. To determine the appropriateness of applying factor analysis the KMO and Bartlett's test measures were computed and the results are presented in table - 4.20.

**TABLE 4.20**

**KMO AND BARTLETT'S TEST MEASURES**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.764
Bartlett Test of Sphericity	Approx. Chi-Square	743.131
	df	120
	Sig.	.000

**Source: Estimation based on Field survey, December- January, 2015.**

The KMO statistics for all respondents was 0.764, signifying higher than acceptable adequacy of sampling. The Bartlett's test of sphericity was also found to be significant at 1 percent level providing evidence of the presence of relationship between the variables to apply factor analysis.

The table 4.21 enlists the Eigen values, their relative explanatory powers and the factor loadings for 17 components identified within the data set. The Eigen values greater than one alone was considered for inclusion in the analysis.

**TABLE 4.21****FACTOR LOADINGS FOR THE BENEFITS OF USING MOBILE PHONES**

S.No	Functions	Components					
		1	2	3	4	5	6
1	Easy to connect people						.938
2	Used at any time						
3	Portable						
4	Very useful in emergency situations						
5	Gaining knowledge			0.699			
6	Get to know what happens around the world						
7	Means of entertainment				0.809		
8	Applications and the All-in-one device					0.837	
9	If you are lost, you can call for directions		0.742				
10	You can check your mails	0.771					
11	You don't miss important calls						
12	Can take photos	0.734					
13	Keep in touch with friends through Aps						
14	Share information quickly		0.853				
15	Facilitate social networking		0.837				
16	Store information						
Eigen values		5.680	1.859	1.348	1.184	1.131	1.07
Percentage of variance		33.415	10.936	7.932	6.962	6.654	6.298
Cumulative percentage		33.415	44.351	52.283	59.245	65.900	72.917

**Extraction Method: Principal Component Analysis.**

**Rotation Method: Varimax with Kaiser Normalization,**

**Rotation converged in 13 iterations.**

### **Source: Estimation based on Field Survey**

The above results indicates the first six factors alone was greater than one for all respondents taken together indicating that these factors alone were appropriate for inclusion in the analysis. The six factors together accounted for 72 percent of the variations. Factor 1 had significant loadings on two dimensions, namely 'You can check your mails' (**internet facilities**) and 'Can take photos' (**communication facilities**), Factor 1 was the most important factor and accounted for 33 percent of the variance. Factor 2 had significant loadings on three dimensions, namely 'Share information quickly', 'Facilitate social networking' (together constituting **internet facilities**) and 'If you are lost, you can call for directions' (**security** aspects) and it explains nearly 11 percent of the variance. Factor 3 had significant loadings on one dimension, 'Gaining knowledge', (**internet facilities**) and it explains eight percent of the variance. Factor 4 had significant loadings on one dimension, namely 'Means of 'entertainment', constituting **media services** and explains seven percent of the variance. Factor 5 had significant loading on one dimension, 'Applications and the All-in-one device' constituting **media services** and it explains 7 percent of the variance. Factor six had significant loadings on one dimension, 'Easy to connect people', constituting **communication facilities** and it explains nearly seven percent of the variance. To sum up, the major factors that motivate youth to possess a mobile phone is the facilities it offers like internet, quicker communication, media services and security.

### **Inhibitors of Mobile Usage**

There are many things to like about mobile phones: the convenience, the functionality, even the fashion component. But there are also aspects that users dislike. Beyond obvious issues such as dead batteries, dropped calls, costs, and possible effects from radiation, there are considerations involving social interaction and personal wellbeing. All of these concerns constitute what we might call the "dark side" of mobile phones. An attempt was made to gauge attitude of the respondents on the problems they faced in using mobile phones. Various statements were listed relating to the problems in mobile usage and the respondents were asked to rate the statement on a five point scale, with maximum point five given most favourable statement and a minimum of one given to least favourable statement. Factor analysis was used to identify the underlying dimensions among the factors which inhibit the usage of mobile phone. To determine the reliability of applying factor analysis the Cronbach's alpha test was applied and was estimated to be 0.863, which was greater than 0.7 indicating the reliability of the constructs.

To determine the appropriateness of applying factor analysis the KMO and Bartlett's test measures were computed and the results are presented in table 4.22.

**TABLE 4.22  
KMO AND BARTLETT'S TEST MEASURES**

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		.759
<b>Bartlett's Test of Sphericity</b>	<b>Approx. Chi-Square</b>	859.397
	<b>df</b>	136
	<b>Sig.</b>	.000

**Source: Estimation based on Field survey, December- January, 2015.**

The KMO statistics for all respondents was 0.759, signifying higher than acceptable adequacy of sampling. The Bartlett's test of sphericity was also found to be significant at 1 percent level providing evidence of the presence of relationship between the variables to apply factor analysis.

The table 4.23 enlists the Eigen values, their relative explanatory powers and the factor loadings for 17 components identified within the data set. The Eigen values greater than one alone was considered for inclusion in the analysis.

**TABLE 4.23**  
**FACTOR LOADINGS FOR MOBILE USAGE INHIBITORS**

S.No	Inhibitors	Components			
		1	2	3	4
1	Radiation problem	.843			
2	Health problem	.910			
3	Causes stress	.873			
4	Addiction				
5	Hinder real human interaction				
6	Sleepless nights and get tired				
7	Reduce family bonding				.784
8	Network problem				
9	Battery problem			.825	
10	Lead to accidents				
11	Breaches of privacy and security			.763	
12	Disrupts studies				
13	Cyber bullying				
14	Low Interaction skill		.838		
15	Lost track of time		.801		
16	Texting impaired my language skill		.833		
17	Decreased parental control		.712		
Eigen values		5.525	2.545	1.933	1.090
Percentage of variance		32.499	14.972	11.373	6.411
Cumulative percentage		32.499	47.471	58.844	65.255

**Extraction Method: Principal Component Analysis.**  
**Rotation Method: Varimax with Kaiser Normalization,**  
**Rotation converged in 5 iterations.**  
**Source: Estimation based on Field Survey**

The results given in the table 4.23 indicates the first four factors alone was greater than one for all respondents taken together indicating that these factors alone were appropriate for inclusion in the analysis. The four factors together accounted for 65 percent of the variance. Factor 1 had significant loadings on three dimensions, namely 'Health problem', 'Causes stress' and 'Radiation problem, together constituting **health risk**. Factor 1 was the most important factor and accounted for nearly 33 percent of the variance. Factor 2 had significant loadings on four dimensions, namely 'Texting impaired my language skill' (**language skill**), 'Low Interaction skill', 'Lost track of time' (**Mobile dependency**) and 'decreased parental control' (**poor family ties**) and it explains nearly 15 percent of the variance. Factor 3 had significant loadings on two dimension, namely 'Battery problem' (**technical issue**) and 'Breaches of privacy and security' (**security measure**) and it explains eight percent of the variance. Factor 4 had significant loadings on one dimension, namely 'Reduce family bonding' (**Poor family ties**) .and it explains eight percent of the variance. Thus, major problems in mobile usage were health risk, poor family ties, lower language skill, increases mobile dependency, and creates technical and security issues.

## **SUMMARY AND CONCLUSION**

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## **CHAPTER V**

### **SUMMARY AND CONCLUSION**

Mobile phones have become an indispensable tool of communication not only in the developed world, but also in developing countries. The number of mobile phone users in the world is expected to pass the five billion mark by 2019. In 2014, nearly 60 percent of the population worldwide already owned a mobile phone. The mobile phone penetration is forecasted to continue to grow, rounding up to 67 percent by 2019. The number of mobile connections is also expected to increase over the next few years, projected to reach almost of eight billion worldwide in 2015. China had just over 1.2 billion mobile connections in 2014, while India reached almost one billion. By 2019, China is predicted to reach 1.4 billion mobile connections and India almost 1.1 billion. Most of the mobile market growth can be attributed to the increasing popularity of smart phones. In 2012, about a quarter of all mobile users were smart phone users. By 2018, this number is expected to double, reaching 50 percent. The number of smart phone users worldwide is expected to grow by one billion in a time span of five years, which means the number of smart phone users in the world is expected to reach 2.6 billion by 2019. Samsung and Apple are the leading smart phone vendors, with about a quarter and 15 percent of the market share respectively.

Today, mobile phones have moved beyond their fundamental role of communications and have graduated to become an extension of the personality of the user. Mobile phones in India not only provide wireless interpersonal communication, but they have now evolved into multi-media devices that allow for a host of different communication and multi-media functions. In this study, mobile phones are seen as multi-media technology that can be used for communication and media-related activities. As a communication technology, mobile phones facilitate various kinds of communication through voice calls, text messages, picture messages and video messages. As media devices, mobile phones can be used for various media-related activities such as accessing news alerts and video clips or listening to music and taking pictures. In this study, it is assumed that young people will use mobile phones for both of these activities.

## **Earlier Studies**

Previous studies have identified a number of reasons for owning or using a mobile phone as well as choice of phone operator (Hamel and Prahalad, 1991; Kumar, 1997; Nagel, 2003; Gerstheimer and Lupp, 2004; Chakraborty, 2005; Donner, 2007; de Silva and Zainudeen, 2007). Despite many studies on consumer decision process in the purchase of mobile phones (Riquelme, 2001; Lui, 2002; Jones, 2002; Bradner, 2002; Wagstaff, 2002; Karjalainen et al., 2005), these studies have basically been limited to issues related to factors for choice of mobile brand. Those factors associated with adoption and choice of mobile operators; factors that affect the introduction of mobile payment systems; and factors affecting adoption of mobile content services has not received any attention, which creates a gap in the literature. The study's specific objectives were to find the extent of use of multiple mobile phone services by the youth, factors that affect their choice and their perception about the benefits and problems in using mobile phones.

## **Scope of the Study**

The use of technology is a global imperative due to its contributions to human existence and has enhanced the socio-economic relations globally. Wireless communication has emerged as one of the fastest diffusing media on the planet, fuelling an emergent "mobile youth culture" (Castells, Fernandez-Ardevol, Qiu, and Sey, 2007). As cell phones have become more available, they are increasingly owned and used by the youths. Further, as handsets become more loaded with capabilities ranging from video recording and sharing, to music playing and internet access, teens and young adults have an ever-increasing repertoire of use. Indeed, we are moving into an era when mobile devices are not just for talking and texting, but can also access the internet and all it has to offer (Pew Research Center, 2010). Thus, increased popularity of cell and smart phones in recent years has attracted research attention. Cell phones are seen as a mixed blessing. Youths say phones make their lives safer and more convenient. Yet they also cite new tensions connected to cell phone use (Pew Research Centre, 2010). This area of interest was chosen because of the unregulated usage and over dependent attitude on these devices. The study was limited to Coimbatore city as it was felt a micro level approach would bring to the fore the perception and issues involved in using mobile phone by the youth.

## **Objectives**

The specific objectives of the study are:

- To ascertain the socio-economic profile of mobile users among the youths.
- To identify brand preferences of mobile handsets and service operators.
- To examine the factors that triggers the purchase and influencers at the time of purchase.
- Enumerate the usage pattern and arrive at peculiarities age-wise, if any.
- To find out the perceptions of the teens and youths on the benefits, problems and medical side effects of mobile usage.
- To suggest measures for proper usage of mobile phones among the teens and the youth.

## **Hypotheses:**

In the course of the study the following hypotheses were examined.

- There were no significant differences in the amount spent on mobiles across age groups.
- There were no significant differences in the amount spent on mobiles across age groups.
- The respondents did not differ in the ranking of the reasons for using mobile phones.
- The major factor attracting youth to mobile phones was internet services, followed by communication services and media services.
- There were no significant differences in the usage pattern of mobile phones across age group
- The youth looks on the mobile as a means to ensure their safety/security, safeguard their privacy and as a means of entertainment.
- The major problems in mobile usage were health risk, poor family ties and lower language skill.

## **Methodology:**

The location of the study was confined to Coimbatore city. The universe of the study consisted of young population who were using mobile in Coimbatore city. From

this universe 100 mobile phone users were selected by adopting purposive sampling technique as not all the mobile phone users were willing to cooperate with the investigator, and due to time constraints. Hence, the investigator approached only those peoples were willing to cooperate and supply the needed information. Relevant and required data for the present study were collected from the primary source by administering an interview schedule to the selected mobile phone users. The interview schedule was first pre-tested to check for clarity and specificity and the necessary modifications were made on the basis of the experience gained during pre-testing. The field investigation and data collection for the study was carried out during the period December- January (2015).Data collected was analysed by using techniques like, Garrett's Rating Scale, Likert's summated Scale, Kruskal-Wallis H test, Cronbach's Alpha and Factor analysis.

### **Empirical Findings:**

The major findings of the study are summarized below:

#### **Socio-economic profile of the selected respondents**

- Out of the 100 respondents, 87 percent of the respondents were females and the remaining 13 percent were males. There was predominance of female respondents among the selected samples.
- The surveyed samples were predominantly Hindus belonging to backward community.
- Most of the surveyed samples were in the age group of 21-25 years, categorised as Young Adults and the general education status of the sample respondents was under-graduation level.
- There was equal proportion of employed and unemployed persons. Of the employed respondents, 25 per cent were working in Private concerns, 13 per cent in Public Sector, 7 per cent were Businessmen and the remaining 5 per cent were self – employed. In the non-working group, 48 per cent were students and 2 per cent were home makers. Thus there was predominance of students among the surveyed population.
- The analysis of the total income of the respondents reveals that 33 per cent of the households had monthly family income of ₹.10,000- ₹.20,000, 25 per cent were earning ₹.20, 000- ₹.30,000, 17 per cent were earning less than ₹.10,000

as monthly family income, 9 per cent of the households were earning ₹.40,000- ₹.50,000 as their monthly family income, 8 per cent were earning ₹.30,000-₹.40,000 and the remaining 8 per cent of the households were earning above ₹.50,000 as their monthly family income.

**Details on mobile used, service providers and quality of services:**

- The analysis of the mobile phone brand used by the respondents reveal 40 percent of them were using Samsung, followed by Nokia (28 %). Age-wise, Samsung was being used the most by all age groups. The second preferred choice among the young adults (below 25 years) was Nokia, the percentage being 36 in the age group 18- 20 years and 26 in 20-25 years, while the respondents above 25 years of age went for other models like Motorola, Asus, Blackberry, etc. The respondents patronised Samsung and Nokia at a relatively high extent as a result of their quality, functions and/or price.
- Data pertaining to the service providers in the mobile phone usage unravel that the majority (39 per cent) of the respondents were using Dual Sim, followed by 30 percent using Airtel and 16 preferring other service providers like Vodafone, Tata Docomo, BSNL, Reliance, etc. Only 8 percent preferred Aircel and 7 percent Idea. It is interesting to note that the preference for dual sim card was more in the age group of 25 – 30 years ( 60 %) and between 20 - 25 years (45.6%). A large proportion of the respondents in the age group of 18 – 20 years preferred Airtel (30 .3 %), followed by dual sim (21.2 %), Aircel (18.2%), Idea (15.2%) and the remaining 15.2 percent preferred other sim like Vodafone, Tata Docomo, BSNL and Reliance. Under dual sim, Aircel and Vodafone were the popularly used services, followed by Airtel and Reliance.
- The perception of the respondents on the quality of service provided by the service providers was rated as ‘very good’ by 46 percent of the respondents, followed by ‘good’ by 31 percent, ‘excellent’ by 10 percent, ‘very poor’ by three percent and ‘poor’ by two percent. Age-wise, while nearly half of the respondents in the age group of 20-25 years (51 percent) and nearly two-thirds in the age group of 25-30 years have rated the quality of service to be ‘very good’, only 33.3 percent in the age group of 18-20 years have given the same rating and a large proportion (49%) have rated it as ‘good’. The proportion of respondents who rated service quality to be ‘very poor’ was higher in the age

group of 25-30 years (10 %) and least in 20-25 age group (1.8%). Only 6 percent in the age group of 18-20 years have rated the service to be 'poor'. Overall nearly 50 percent of the customers were happy with the quality of service provided by their service providers.

#### **Monthly spending on mobile phones:**

- All the respondents (100 per cent) were using prepaid plan. Thus, youth preferred prepaid services.
- About (88 per cent) of the respondents were filling the card monthly, 11 percent every two months and only one respondent (in the age group of 18-20 years) was recharging yearly. The proportion of respondents who were recharging monthly was highest in the age group of 18-20 years (97%), followed by 25-30 years (90%) and 20-25 years (83%). Thus, recharging every month was a common trend seen among the young mobile users.
- The amount spend per month on mobile phones across three age groups reveals that while 39 percent in 18-20 years spend ₹.200 -₹.300 per month, this percentage was around 30 in the age group of 20-25 years and 20 in 25-30 years. In contrast, the amount expended on mobile phones for a large proportion of the respondents in the age group of 20-25 years (49.1%) and 25-30 years (43%) was ₹.100- ₹.200. The proportion of mobile users spending more than ₹.500 was highest in the age group of 25-30 years (20%), followed by 18-20 years (6.1%) and least in 20-25 years (5.3%).
- The analysis of the average amount spent on mobile recharge was highest (₹.275.00) in the age group of 25-30 years and least in the age group of 18-20 years (₹.159.39). This might be attributed to financial independence enjoyed by the youth in age group of 25-30 when compared to 18-20 age group.
- The proportion of respondents who fully used their talk time was higher in the age group of 20-25 years (75.4%), followed by 25-30 years (70.0%) and 18-20 years (60.6%).
- ANOVA test was used to verify if there was a significant difference between the amounts spent on mobile phones in a month by the three age groups reveal that there was a significant difference between spending of the three age groups at 5 percent significance level ( $F=5.029$ ;  $p = .000$ ). Therefore, it can be concluded that spending on mobile phone increases with increasing age of

young adults. Albert Akanlisikum Akanferi, et al., (2014) also found that amount spent on mobiles increased with age.

- The proportion of respondents who fully used their talk time was higher in the age group of 20-25 years (75.4%), followed by 25-30 years (70.0%) and 18-20 years (60.6%). The low utilisation of talk time by the youngest age group may be attributed to the attitude of the youngest youth mobile as an entertainment media than as communication device.

#### **Usage of mobile phones:**

- About 53 percent of the respondents were initiated into mobile technology when they were less than 18 years of age and the remaining 47 percent started using the technology at the age of 18-20 years. The proportion of respondents who started using the technology below 18 years was maximum in the age group of 18-20 years (67%), and least in the age group of 20-25 years (46%). In contrast, late adopters were more in the age group of 20-25 years (54%) and least in 18-20 years (33%).
- The average age of initiation into technology was more or less the same (18 years) across all age groups. It is possible that respondents in the oldest age brackets have been more recent adopters, while those in younger age brackets have had a longer history of exposure, no doubt spurred by their parents' decisions to put a mobile phone in their hand. In any case, what is apparent here was that the mobile phone boom of the last six years has left few segments of the youth market out.
- Irrespective of age, all respondents have stated 'personal safety' (1<sup>st</sup>rank) as a prime reason for using mobile phones. The other reasons were 'to keep in touch with parents' (2<sup>nd</sup> rank), 'to keep in touch with friends' (3<sup>rd</sup> rank) and 'information access' (4<sup>th</sup> rank) for the respondents in the age group of 18 -20 and 20 -25 years. In contrast, the ranking for the 25 -30 age group were 'to keep in touch with friends' (2<sup>nd</sup> rank), 'business reasons' (3<sup>rd</sup> rank and 'to keep in touch with parents' (4<sup>th</sup> rank).
- Kruskal-Wallis H test applied to test whether the respondents differed in their ranking of their reasons for using mobile phones gave a calculated Chi-square value was 0.009 with a asymptotic significance of 0.998 indicating that there

was no significant differences in assigning ranks for reasons for using mobile phones across age groups.

- Majority (70 percent) of the respondents indicated that more often than not, their phones were indeed on and only 30 percent have stated that they kept their mobile phone off. Age-wise, the proportion of the respondents who kept their mobile on was higher in the age group of 25-30 (90%) and least in the age category of 18-20 years (52%). The divergence in answers can be attributed to the differences in the work status of the respondents. The older youth being employed have greater accountability than their younger counterparts.
- More than 68 per cent of young people answered all calls, while 32 percent answered only selective calls. Age does not have an impact on attending calls as nearly two-thirds of the respondents' answered all calls, while one-third abstain from answering their phone when it rings, thereby lending considerable importance to the basic call screening functionality. Thus, irrespective of age, youth does not seem to practice discretion in attending calls.
- Majority (52%) of the respondents have stated that they keep their mobile phone either in vibrant / silent mode sometimes, while 39 percent have stated that they do it rarely or never. Age-wise, more than 50 percent of the respondents in the age groups of 20 -25 years (60%) and 25 -30 years (50%) stated they do this sometimes, while 53 percent of 18 -20 mobile users have stated they do this rarely or never. The need to keep in touch with their parents or friends may be the reason why the youngest adults do not keep their phone on silent or vibrant mode.
- Majority of the respondents in the age group of 18-20 years (58%) and 25-30 years (50%) were using all the features of mobile phones, namely calling, texting, playing games, downloading, reading news and entertainment. The percentage that used mobiles for calling only was maximum in the 25-30 age group (20%) and least in 20-25 age group (12.3%). Thus youngest adults seem to use all features of mobile phones when compared to their older counterparts.

- The average time spent on mobile phones reveals an overwhelming proportion of respondents in the age group of 20-25 years (76%) and 25-30 years (60%) spends 2 or more hours on mobiles per day. In contrast, the respondents in the 18 -20 age group (88%) spend less than 2 hours per day on mobile phone. The respondents being mostly females may be the reason for low usage of mobile phones.
- To understand the underlying dimensions in the features of the mobile phone, factor analysis was done. The KMO statistics for all respondents was 0.743 signifying higher than acceptable adequacy of sampling. Bartlett's test of sphericity was also found to be significant at 1 percent level providing evidence of the presence of relationship between the variables to apply factor analysis.
- The overall inference drawn from the factor analysis was that the major factor attracting youth to mobile phones was internet services, followed by communication services and media services. These three factors together accounted for nearly 70 percent of the variations.
- Majority (57%) of the mobile users felt that information stored in the mobile was 'somewhat private', 24 percent perceived it was 'not private' and 19 percent felt it was 'private'. Age-wise also similar pattern prevailed with around 20 percent perceiving the information was private, 54-60 percent stating it was somewhat private and 20-27 percent felt it was not private. Despite the provision for locking the mobile phone with password, the respondents across all age groups felt the lack of privacy in the information stored in the mobile phones.
- About 35 percent of the respondents had no inhibition in using mobile phones in public places (shopping mall, bus stand, work place, theatres, travelling) , 38 percent used the devices in all places excepting theatres, and 25 percent used it at home only and one percent each in travelling and at work place. Age-wise, the proportion of respondents using mobile at all places was more in the age group of 18-20 years (42.4%) and least in the age group of 25-30 years (30%). Thus, most of the youth were not bothered by mobile phone usage in public areas.

- When the respondents were asked if they used mobiles while driving, 60 percent stated that they never do it. It was heartening to see that the young adults (18-20 years) more vociferous in stating this (70%) than 20-25 (61%) and 25-30 (20%) age groups. The violation of this was more prevalent in the age group of 25-30 with nearly 40 percent saying they do it 'sometimes' and 'always'.
- Majority (79 percent) of all respondents agreed that they can live without mobile phones for a day. The proportion of users who said they cannot live without mobile was more in the age group of 25-30 years (30%) and least in the age of 20-25 years(19%). Thus elder youth was more addicted to mobiles than the young adults.

#### **Awareness about Latest Mobile Phone:**

- Seventy-nine percent of the respondents were not aware about the latest mobile models available in the market. Age-wise also similar trend was seen with lack of awareness being 80 percent in the age groups of 20-25 and 25-30 years and 73 percent among 18-20 years. Lack of interest in the product developments in the mobile markets may be due to the fact that majority of the surveyed respondents were females (87%).
- About 32 percent of the mobile gave priority to all the three features namely, aesthetic look, easier to handle, and safety and 17 percent to both being stylish and safety aspects. It is interesting to see that respondents in the 18-20 age group gave higher priority to stylish looks, while those in the age group of 20-25 and 25-30 years gave priority to all three aspects.
- ANOVA was done to determine whether the nature of usage of mobile phone differed across age groups. The results reveal that there were significant differences across the age group with respect to hours of usage, best part of using mobile, using mobile while driving and in keeping mobile on. Thus the younger youth differed from their elders in terms of hours of usage, style of the mobile, using mobile while driving and keeping mobile on.
- The respondents were asked to rate various statement relating to mobile usage. To check the reliability of the statements Cronbach's alpha value was calculated and was found to be 0.74. These findings indicate that factor score has adequate internal consistency, above the conventional standard of  $\geq 0.70$ .

- To understand the underlying dimensions in the statements, factor analysis was done. The KMO statistics for all respondents was 0.480 signifying acceptable adequacy of sampling. Bartlett's test of sphericity was also found to be significant at 1 percent level providing evidence of the presence of relationship between the variables to apply factor analysis.
- The results indicate the youth looks on the mobile as a means to ensure their safety/security, safeguard their privacy, as a means of entertainment and not repenting about their intrusive behaviour.
- Majority (80 percent) of the youth were aware of the ill effects of the mobile usage on health but, this fact does not stop them from using mobile phone. Nearly 36 percent of the youth in the age group of 18 -20 years were not aware of the hazardous effects of using mobiles, which is critical, given that health risk is on the rise these days
- About 32 percent stated radiation as a major health issue, followed by headache (25%), stress (23%) and earache (20%). Age-wise, while the major health issue for the elderly youth was radiation problem (40%) and stress (40%), it was headache for 20-25 age group and radiation for 18-20 age group.

### **Benefits and Inhibitors of mobile usage**

- Factor analysis was used to identify the underlying dimensions among the factors which make usage of mobile phone enjoyable. To determine the reliability of applying factor analysis the Cronbach's alpha test was applied and was estimated to be 0.870, which was greater than 0.7 indicating the reliability of the constructs.
- The KMO statistics for all respondents was 0.764, signifying higher than acceptable adequacy of sampling. The Bartlett's test of sphericity was also found to be significant at 1 percent level providing evidence of the presence of relationship between the variables to apply factor analysis.
- The results of factor analysis indicate the major factors that motivate youth to possess a mobile phone was the facilities it offers like internet, quicker communication, media services and security. These factors together accounted for 72 percent of the variations.
- Factor analysis was used to identify the underlying dimensions among the factors which inhibit the usage of mobile phone. To determine the reliability

of applying factor analysis the Cronbach's alpha test was applied and was estimated to be 0.863, which was greater than 0.7 indicating the reliability of the constructs.

- The KMO statistics for all respondents was 0.759, signifying higher than acceptable adequacy of sampling. The Bartlett's test of sphericity was also found to be significant at 1 percent level providing evidence of the presence of relationship between the variables to apply factor analysis.
- The major problems in mobile usage were found to be health risk, poor family ties, lower language skill, increase in mobile dependency, and creates technical and security issues. These factors together accounted for 65 percent of the variance.

## **Conclusion**

Based on the findings of the study it is concluded that the most patronised mobile phones among young adults include Samsung and Nokia. Spending on mobile phone increased with increasing age of youths. The major factor attracting youth to mobile phones was internet services, followed by communication services and media services. The elderly youth were more addicted to mobile phones than their younger counterparts. Most of the youth were not bothered by mobile phone usage in public areas. The major factors that motivate youth to possess a mobile phone were the facilities it offers like internet, quicker communication, media services and security. The major problems in mobile usage were health risk, poor family ties, lower language skill, mobile dependency and technical and security issues.

Based on the above findings, the following recommendations are made:

- The marketers must be very clear about their customer base while offering the products. Different customers value a product or a firm differently. Therefore, all products are not meant for all customers. Therefore, the companies must translate preferences of their target segments into the diverse models meant for different segments.
- Manufacturers of different mobile brands are improving on the durability and quality of the brand, they should also consider the price of selling it so as to make it affordable to all persons. It is recommended that companies concentrate more on developing quality and affordable mobile phones and

spend more time on enhancing their products to offer it at lower prices which can be done by employing cost reduction measures.

- In this age of ever increasing competition, it is very important for mobile phone operators to keep a constant eye on preferences and behaviour of their consumers in order to capture the large untapped market both in rural and urban areas of India.
- Educators can teach young people about how to use mobile media effectively to collaborate and promote causes that are pertinent to them and to avoid situations which may be detrimental to their future.
- Media must take a lead role in bringing to the knowledge of the general public especially the youth about the negative consequences of mobile phone usage and tips to tackle such consequences.
- Greater urgency should be given in exploring the merits of curbing mobile phone use while driving, whether by education (highlighting the consequences of risks) and/or legislation (legally banning their use while driving).
- Above all, the youth should shoulder the responsibility for making the best possible use of the device.

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**ANNEXURE**

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## Mobile Phone Survey

### Personal Details:

Name :

Age :

Gender :

Education Qualification :

Religion :

Community :

### Family Background information: (Including the respondent)

Name	Age	Sex	Relationship	Occupation	Income

### SECTION I :

1. Do you own mobile? YES  NO
2. . If yes, currently you own

Company	Model
Nokia	
Sony	
Reliance	
Motorola	
Samsung	
Panasonic	
Asus	
Lava	
Micromax	

Apple	
Blackberry	
Honor	
Lenovo	

3. Service provider

Airtel  Aircel  Reliance  Tata Docomo  BSNL   
 Idea  Vodafone

4. How reliable is the service from your mobile network operator?

Excellent  Very good  Good  Poor  Very poor

5. You are into Pre-paid  Post-paid

Pre-Paid	Post-Paid
Do you fill the card <input type="radio"/> Monthly <input type="checkbox"/> <input type="radio"/> Every 2 months <input type="checkbox"/> <input type="radio"/> Every 3 months <input type="checkbox"/> <input type="radio"/> Yearly <input type="checkbox"/>	What is your average billing per month Less than 500 <input type="checkbox"/> 500 to 700 <input type="checkbox"/> 700 to 1000 <input type="checkbox"/> 1000 to 1500 <input type="checkbox"/> 1500 to 2000 <input type="checkbox"/> More than 2000 <input type="checkbox"/>
Refill amount : Rs.	
Do you typically use all your talk time? Yes <input type="checkbox"/> No <input type="checkbox"/>	

## SECTION II

6. . At what age did you start using a mobile phone?      Years.

7. Why did you acquire or start using a mobile phone? ( **Rank the items**)

S.No	Reasons for using mobile phone	Rank
1	To use in case of emergency or personal safety	
2	Everyone I know had one	
3	To keep in touch with friends and other social contacts	
4	To keep in touch with parents	
5	For business reasons	

6	For information access (phone numbers, internet, email, sports scores, etc)	
7	It offers good value	
8	Privacy management (I use it to stay in touch with close friends and/or family; others call me on my landline)	

8. Is your mobile phone always ON (including Night time)?

YES  NO

9. When the Cell phone rings you answer?

All the calls  only Selective calls

10. You use mobile for ( multiple marking permitted)

Calling  Texting  Games  Downloading   
 Reading news  Entertainment  photos

11. How much time do you spend on mobile phones on an average in a day?

Less than 30 minutes  30 minutes to 1 hour  1 hour to 2 hour   
 2 hours to 3 hours  More than 3 hours

12. Most common place where you use your mobile?

At home  Travelling  Shopping malls or stores  Bus stand   
 At work  At theatres

13. How private do you consider the information stored in your mobile phone?

Very private  somewhat private  Not private

14. How frequently do you use mobile phones for

Function	Always	Often	Sometimes	Rarely	Never
Texting /chatting					
Calling					
Games					
Getting news updates					
Downloading					
Entertainment					
For taking photo/ selfie					

15. How often do you place your phone on 'SILENT' or 'VIBRATE' mode?

No never  seldom / rarely  sometimes  often  yes   
always

16. Do you use mobile while driving?

No never  seldom / rarely  sometimes  often  yes   
always

17. Can you do without a mobile for a day? Yes  No

If NO, why not?

### SECTION III

18. Are you aware of the latest models available in the mobile market?

Yes  No

19. According to you, the best part of having a mobile is?

It is 'Stylish'  It make your life easier  You feel 'safer'

Any other (specify)

20. What do you think about the following statements?

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Mobile has become 'necessity' today					
I feel more confident to go out by myself after I had my mobile phone.					
It is cheaper to use mobile phone than to use landline phone.					
I am not afraid of getting lost after I had my mobile phone.					
I know I can always call somebody on my mobile phone when I am in trouble.					
Phone numbers/ message stored in mobile are ' Private'					
Using a mobile phone while driving is OK					
Lengthy conversations on a mobile are OK					
I have more friends after I had my mobile					

phone.					
It is fun to use mobile phone					

21. Do you think there are any medical side effects of using mobile phones?

Yes  No

If yes, kindly name at least three

- 1.
- 2.
- 3

22. Benefits of using Mobile Phone:

<b>Statements</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly disagree</b>
Easy to connect with people					
Used at any time					
Portable					
Constant internet access					
Very useful in emergency situations					
Gaining knowledge					
Get to know what happen around the world					
Means of entertainment					
Applications and the All-in-one device					
If you are lost, you can call for directions.					
You can check your emails					
You don't miss important calls					
Can take photos					
Keep in touch with friends through Apps					
Share information quickly					
Facilitate social networking					
Store information					

23. Problems of using Mobile Phone:

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Radiation problem					
Health problem (eye problem/ fingers problem)					
Causes stress					
Addiction					
Hinder real human interaction.					
Sleepless nights and get tired					
Reduce family bonding					
Sometimes the reception is poor in some areas, limiting your connectivity					
Battery problem					
Lead to accidents					
Breaches of privacy and security					
Disrupts studies					
Cyber bullying					
Texting has impaired my interaction skill					
Lost track of time					
Texting impaired my language skill					
Decreased Parental control					