

Socio-Psychological Dimensions of Mobile Phone Addiction and Usage Patterns amongst Teenagers in Higher Institutions of Learning in Kwara State

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ABSTRACT

Mobile phone addiction is now a common phenomenon in the 21st century, especially among teenagers due to the unusual cravings in the use of technological devices. In view of this phenomenon, the study examined the socio-psychological dimensions of mobile phone addiction and usage patterns amongst teenagers in three Higher Institutions of Learning in Kwara State, Nigeria. Descriptive and inferential statistical tools were utilized to analyze data collected on a sample size of 321 undergraduate teenage students whose selection were based on simple random sampling technique across three Higher Institutions of Learning which were the University of Ilorin, Kwara state University, and Al-Hikmah University respectively. Findings from the data analyses revealed uniformity in the usage patterns of teenagers in the use of their mobile devices. Significant positive relationships were also established between mobile addiction and socio-psychological dimensions such as loneliness, boredom, egoism, and self-independence at varying significant levels.

Keywords: *Cell Phones, Dimensions, Handsets, Institutions, Mobile Addiction, Mobile Devices, Social Psychological, Technology, Teenagers, Usage Patterns*

INTRODUCTION

Mobile phone revolution dates back to the 1950's and since its inception mobiles have been evolving from one generation to the other with quantifiable improvements in the phones' capacities and functionalities. These generations of mobile phones that have evolved so

far are often referred to as 1G, 2G, 3G, and 4G respectively.

Undoubtedly, the introduction of the 3G mobile phones fondly referred to as smart phones have brought about a wide acceptability among the youth, and in particular teenagers. Smart phones have special features such as Internet access and video capabilities that make them

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distinct from other generations of phones that were previously designed (Baron, 2010). Mobile phones do have similar features irrespective of the brand such as address book, variety of ring tones, alarm clock, calendar, radio, wallpaper, games, and music (Baron, 2010). This has necessitated the mobile phone as a must-to have tool for teenagers based on its attractiveness and usefulness in varying dimensions (Nasir, Hecht, & Wenner, 2007). The reduction in the cost of handsets and portability of most mobile phones has also led to the rapid adoption rate by young people (Ling, 2001; 2003).

In a National survey conducted on youths, it was revealed that mobile phones were reliable platforms for communication for young people that had further accentuated its acceptance and use (Ishii, 2011). Interestingly, teenagers today depend extensively on mobile phones as a means of communicating with friends, family members, and colleagues at school through various platforms such as facebook, twitter, and yahoogroups just to mention a few. Unequivocally, mobile phones have the tendency of changing the way teenagers conduct themselves at home, in the school's environment, and in public places due to the individuality that comes with mobile phone usage and peer group influence. For instance, negative behaviors such as disruptions in classroom, bullying other students, cheating during tests, and intrusion into others privacy are rampant amongst teenagers (Obringer & Coffey, 2007). Others include sleep disturbances, disturbance in public places, major and minor accidents, loneliness, and egoism among others. These and many other forms of negative behaviors constitute the social psychological dimensions of mobile phone addiction. These dimensions are slightly curbed in colleges and higher institutions due to individuality that comes with mobile phone usage and lack of policies and general rules guiding the use of mobile devices. Mobile phone addiction has become a common phenomenon amongst teenagers most specially and has resulted to social and psychological issues such as loss of concentration at home and in school, loneliness, disturbance in sleep,

anxiety, domestic accidents, boredom, and egoism. There is the need to create a balance in the lifestyle of teenagers to check excessiveness and abuse in the use of mobile devices.

STATEMENT OF PROBLEM

Because mobile phones are indispensable tools to teenagers, exposure to these devices could lead to addictive behavior with underlying social and psychological implications. Mobile addiction had been on the increase due to the usefulness and attractiveness of this device to teenagers in particular. More so, mobile addiction may affect the psychological, emotional, and social well-being of teenagers that could lead to deviant behavior. The focus of this research paper is to unravel the social psychological dimensions influencing mobile phone addiction and usage patterns amongst teenagers to check the excessiveness in mobile phone use. This current study is relevant due to the dearth of empirical studies on mobile phone addiction amongst teenagers in Nigeria's Higher Institutions of Learning. More so, the literature has revealed that most of the research investigations on mobile phone addiction amongst youths emanate from countries outside Nigeria; therefore this study concentrates on the Nigerian environment and its peculiarities to teenagers. In view of this, the overall objective of this current study is to delve into social- psychological dimensions underlying mobile phone addiction and usage patterns amongst teenagers in Higher Institutions of Learning in Ilorin, Kwara State.

LITERATURE REVIEW

In recent times, mobile phones have improved and enhanced communication from one person to the other in society. Majorly, mobile devices are communication tools that cut across different categories of people irrespective of age, culture, economic class, and so on (Katz, 1997). Mobile phones have been largely accepted by young people especially teenagers; it has become an essential part of their daily life (Ishii, 2011).

Mobile phones are easy and inexpensive for teenagers to contact friends and access information (Reid & Reid, 2007) probably due to the financial support received by their parents and guardians. Parents also do encourage the uptake of mobile phones by teenagers as a means of monitoring and ensuring their safety.

Past researches have revealed both positive and negative sides of mobile phone usage on the life styles of teenagers. Leng and Wei (2000) identified seven social dimensions to mobile phone usage which are fashion and status, affection and sociability, relaxation, mobility, immediate access, instrumentality, and reassurance. These dimensions are responsible for teenagers' rapid uptake of mobile phones. Mobile phones are associated with maintaining of friendship through various communication channels such as voice call, short message services (SMS), and mobile instant messaging (MIM) among teenagers in various social circles. Other social dimensions associated with mobile phones are a symbol of freedom and independence from the grip of their families especially their parents (Ishii, 2011), as a social enabler for youth (Campbell, 2006), as an enhancer of romantic relationships (Jins & Pena, 2010), and a reinforcer of peer ties and sense of security (Hakoama & Hakoyama, 2011).

It is a known fact that teenagers struggle with identifying who they are, what group or class they belong, and whom they want to be (Hakoama & Hakoyama, 2011). However, due to trends of fashion, style, and uniqueness, teenagers are interested in the adoption of technological devices such as mobile phones to show a sense of belongingness to their peer groups. Mobile phones are not without their ills to society just like any other technological devices. It has to some extent impacted negatively on teenagers' private and social life. The use of mobile phones in the lives of teenagers is responsible for the manifestation of awkward behavior that has to be managed and controlled especially in a school's environment (Cilliers and Parner, 2008). Such negative behavior such as intrusion into others students' privacy by

snapping of pictures via camera and videotaping events and situations without due consent occur. These pictures and other sexually explicit materials are most times shared via Bluetooth and other data transfer technologies (Obringer and Coffey, 2007). The results can be devastating as the victim become embarrassed, harassed, terminated from jobs and from organizations, expelled from school, and sometimes even death.

Uses of Mobile Telephony

Myriad of Internet enabled phones perform almost similar functions irrespective of brand name of the mobile device. In recent times, teenagers' use of mobile phones has accentuated based on the proliferation of 3G mobile phones in the market with Internet enabled facilities and other special functions that have been incorporated into these devices. These facilities enable teenagers to undertake similar activities such as browsing, chatting, gaming, and the likes on their mobile phones. The major activities are enumerated below:

1. **Short Messaging Service (SMS):** SMS involves sending textual information from one mobile device to another. This type of service is backed up by Internet service providers (ISP's). Teenagers employ this tool a lot to communicate with their friends and family members. Text messaging is a preferred option as a means of communication for teenagers due to its quickness, cheapness, and convenience (Eldrige and Grinter, 2001);
2. **Internet Browsing:** One of the uses of mobile phones is Internet browsing. Teenagers browse the Internet through common platforms on their phones such as yahoo mail, gmail, social networking services via facebook, twitter, 2Go, Eskimi, and others. Chatting and blogging are other means of communicating on the Internet to share ideas with friends around the globe;

3. **Voice call:** Voice call is the commonest means of communicating from one person to another by exchanging pleasantries and conveying important information to friends, family members, and the other contacts;
4. **Data transfer via Bluetooth:** Bluetooth is a technology that enables the sharing of data such as music, video, and images (Erasala and Yen, 2002). Teenagers are fond of this device because they can easily transfer multimedia such as audio and video data to their friends, acquaintances, and other important contacts;
5. **Mobile Instant Messaging:** Instant messaging is an Internet enabled facility. Teenagers utilize this type of facility for chatting with their colleagues and friends online. Messages are sent and received online real time.

Mobile Phone Addiction in Teenagers

Mobile phone addiction has been used interchangeably with terms such as cell phone addiction or mobile phone dependence. Psychologists are of the opinion that addiction means excessive dependence on an activity. For instance, excessive smoking, drinking, and other types of activities are examples of addictive behavior. Excessive use of technology such as Internet and, mobile phones may also be perceived as addiction. Excessive use of the mobile phone is quite alarming especially among teenagers and it may have a negative impact on their social, academic, and private life. In view of this, some researchers have emerged to understudy mobile phone addiction among students in various capacities and have determined the level of impact on their lifestyle e.g. (Katz, 1997; Reid & Reid, 2007; Ishii, 2011).

In one of the earlier studies, Van den Bulck (2003) reported the effect of addictive mobile phone usage on students' sleeping patterns. Addictive mobile phone usage causes teenagers to

stay up late in the night engaging themselves on one activity or the other on their phones. According to this study, sleeping patterns of teenagers were disrupted due to making of night calls, text messaging their friends, and browsing online. In this study the symptoms of addiction in teenagers was measured by the degree of inconsistencies in the sleeping pattern. Lopez (2007) also investigated mobile phone addiction among several hundreds of 18 to 25-year-old young adults from the city of Granada. In this study, the distinction made between mobile addiction, and other forms of addiction such as alcoholism and drug-addiction is that mobile phones do not apparently cause physical effects, but psychological ones. According to Lopez, mobile-addicts manifested negative behavior such as neglecting obligations of important activities (e.g., job or studies), drifting apart from friends and close family, increasing anxiety on account of switching off their phones, experiencing irritability, sleep disorders, or sleeplessness, and even shivering and digestive problems.

Sherren (2009) also explored mobile phone use, and its correlation and relationship to psychological health amongst students of the Universiti Putra, Malaysia. A self-administered questionnaire was distributed to 386 students selected by multi-stage cluster sampling. The result revealed that adolescents who spent time on their mobile phones were vulnerable to psychological disturbance such as depression, anxiety, and lower self-esteem. In this study, there was an association between excessive phone use and lower self-esteem.

Sanjay (2010) conducted a survey on two hundred medical students from Mahatma Gandhi Memorial Medical College in India to determine their mobile phone dependence. In his study, a mobile addict was referred to as nomophobic that means fear of being free of mobile contacts. Nomophobic students were measured on some psychological variables based on the level of anxiety and stress experienced by students due to low battery, faulty connections, lack

of credit, and so on. Nomophobics are always troubled when their mobile phones are not in use for one reason or the other. Results revealed a small proportion of the medical students were mobile addicts. Results indicated that 19.26% of students in the hostels and 17.58% in day schools were found to be nomophobes. In this study there was no significant difference in relation to gender. Students in medical schools are heavily engrossed in their profession, and this may have accounted for the small percentage of mobile addicts in this study. Mobile addiction in students from other disciplines may likely reveal a larger proportion in this category.

Similarly, Thomee, Harenstam, and Hagberg (2011) conducted a follow up study by examining the association between psychosocial aspects of mobile phone use and mental health symptoms among young adults between 20-24 years. In this study, a distinction was made between high and low mobile users. High mobile users manifested symptoms associated with one's mental health that include sleep disturbances, or symptoms of depression. The result of this study was similar to previous findings on excessive phone use and their psychological manifestations. Other psychological manifestations such as loneliness, boredom, and loss of concentration at home and in school may also be associated with mobile phone addiction in teenagers.

Some studies have also concluded that students who are preoccupied with their mobile phones are likely to experience psychological disturbances and addictive behavior that are detrimental to their psychological and social well-being and functioning (Roberts, Roberts, & Chen, 2001; Kawasaki et al. 2006; Ling, 2005). The results from these studies have clearly revealed that addiction in the use of technology is a reflection of psychological imbalances such as anxiety, lower self-esteem, and loneliness. These studies have established the fact that mobile phone addiction among teenagers is not a mirage but a reality that must be curtailed to achieve a balance in the social and academic lifestyle of teenagers.

RESEARCH QUESTIONS

The following research questions below are relevant to this present study:

1. Is there any relationship between the age of teenagers and mobile phone usage patterns such as mode of communication, amount on airtime per month, average number of call made and received daily, and average number of text messages sent and received daily?
2. Are there uniformities in the usage patterns of teenagers such as phone types, Internet service providers, and amount expended on airtime?
3. What are the daily, weekly, and monthly activities/usages engaged by teenagers on their mobile phones?
4. What are the challenges faced by teenagers in the use of mobile devices?

Research Hypothesis

There will be significant positive relationships between mobile phone addiction and socio-psychological variables such as (loss of concentration, boredom, loneliness, egoism, self independence, and major/minor accidents) by teenagers.

In view of the above, the following objectives will be given prominence:

1. Determining the relationship between age of teenagers and mobile phone usage patterns such as mode of communication, average amount on airtime per month, average number of calls made and received daily, and average number of text messages sent and received daily;
2. Determining the level of uniformity in the usage patterns of teenagers such as phone types, Internet service providers, and amount expended on airtime;
3. Determining daily, weekly, and monthly activities/usages of mobile phones by teenagers;

4. Identifying the challenges faced by teenagers in the use of mobile devices;
5. Determining whether there will be significant relationships between mobile phone addiction and socio psychological variables such as (loss of concentration, boredom, loneliness, egoism, self independence, and major/minor accidents) by teenagers;
6. Suggestions on policy options for teenagers in the prevention of mobile phone abuse.

METHODOLOGY

The methodology adopted for this study was the survey method using a well-structured questionnaire to capture data. Inferential and descriptive analyses were used to analyze the collected field data such as frequencies, percentages and correlational analysis. The target population for this study comprised of teenage undergraduate students from the three main Higher Institutions of Learning in Kwara State which were University of Ilorin, Kwara State University, and Al-Hikmah University respectively. The researcher employed the simple random sampling technique in the selection of students from the six faculties that were randomly selected cutting across the three Institutions. These faculties included Arts, Business and Social Studies (BSS), Communication and Information Sciences (CIS), Sciences, Engineering, and Education respectively.

The questionnaire comprised of three sections: Section A captured students' demographic variables such as Age, Gender, Course of study, and Name of Institution. Section B comprised of a checklist identifying the specific tasks performed on the mobile phone by teenagers based on daily, weekly, and monthly usages. Section C comprised of six item scale measuring mobile phone addiction. This scale was originally developed by Ishii (2011) establishing the Cronbach Alpha as 0.843, Mean score= 13.2, STD= 4.3 respectively. This present study fur-

ther re-established the reliability measure for the Mobile Phone Addiction scale (MPAS) through a pilot study conducted on 100 teenagers that revealed a Cronbach Alpha score of 0.70, Mean score=13.1 and STD=3.7. Section D consisted of items developed by the researcher measuring social and psychological dimensions influencing mobile phone addiction. The questionnaire items were tested for high content validity by 3 experts in the field of Information Communication Technology.

This study was conducted in the first semester of 2012/2013 session by the researcher with the assistance of two research assistants in the direct distribution of the questionnaires to teenagers. From the 350 questionnaires distributed, 321 valid ones were used for this study, while the remaining 29 questionnaires were not used due to non-completeness. A total number of three hundred and twenty one (321) students between the age ranges of 15-19 years were used for this study irrespective of tribe, course, and level of study which amounted to 107 students from each of the three universities selected for this study.

Demographic Features of the Sample Size

The sample size of 321 students used for this current study comprised of 121 Male students (37.7%) and 200 female students (62.3%). There were two age groupings for this study comprising of 87 teenage students (27.1%) between 15- 17 years, and 234 teenage students (72.9%) between 18 -19 years. A comparison of the two age groupings revealed that teenagers between the age of 18 and 19 years had the highest in all the three usages (daily, weekly and monthly). Overall, 238 teenagers (74.1%) frequently engaged in daily browsing on their mobile phones, 96 students (29.9%) engaged in downloading as a weekly usage, and 103 (32.1%) were involved in conference calling as a monthly usage.

DATA ANALYSIS AND PRESENTATION OF RESULTS

Data collected were analyzed in line with the objectives of the study using the statistical package for social sciences (SPSS). The first objective was to determine the relationship between the age groupings (15-17 years) and (18-19 years) on the usage patterns such as mode of Communication, average number of calls made and received, and average number of text messages sent and received. This objective was analyzed using cross tabulation alongside frequencies and percentages.

Table 1 revealed that a relationship exists between the age ranges and the mode of communication such as voice call, text messaging, and email platforms utilized by teenagers on their mobile phones. Across the two age groupings, voice calling was the major mode of communication (75.7%), followed by text messaging (18.7%), and emailing (5.0%) respectively. The results have shown a trend of the same sequence across the two age grouping (15-17) and (18-19) years. Older teenagers (18-19 years) had the highest frequencies in the three communication channels (phone calling, text messaging, and emailing).

Similarly, Table 2 revealed that the average number of calls made and received daily were between 5-10 calls across the two age groupings; while an average of 5 text messages and below were sent and received daily across the two groupings. Overall, the older teenagers recorded the highest daily calls made (76.0%),

calls received (75.0%), sent text messages (73.9%), and received text messages (68.6%) respectively.

The second objective was to determine whether there was uniformity in the usage patterns of teenagers such as number of phone lines used, patronized Internet service providers among others. In Table 3, uniformity in the usage patterns of the teenagers was also confirmed in the number of phone lines used, patronized Internet service providers, average airtime per month, and phone brands utilized. It has further revealed that majority of the teenagers exhibited common usage patterns in the following manners: (a) 159 (49.5%) had two phone lines as a form of fashion, prestige, and peer belongingness.; (b) 222 (69.2%) of the Teenagers indicated MTN as the preferred Internet Service Provider, followed by GLO (33.0%) and ETISALAT (27.7%) amongst all the other ones.; (c) 205 teenagers (63.9%) expended an average amount of below N2000 on airtime per month.; and (d) lastly, 205 (63.9%) indicated the Nokia Brand of phone as the most preferred among all other brands due to its longevity and durability,; followed by the Blackberry brand (26.5%) being the second highest in the order of preference for phone brands.

The third objective was to determine the major activities engaged by teenagers on their mobile phones. Table 4 has revealed major activities engaged on mobile phones by teenagers distributed along daily, weekly, and monthly usages. These activities include Browsing, Mobile Instant Messaging, Email, Chatting,

Table 1. Showing the relationship between the age groupings and mode of communication

Age Range	Mode of Communication	Frequency	Percentage (%)
15- 17	Voice call	66	27.2
	Text Message	17	28.3
	Email	3	18.3
	Total	86	-
18- 19	Voice call	177	72.8
	Text Message	43	71.7
	Email	13	81.8
	Total	233	-

Table 2. Showing the relationship between the age groupings and average number of calls made and received, average number of text messages sent and received

Age Range	Average No. of Calls Made	Frequency	Percentage (%)
15-17	Below 5 calls	26	30.6
	Between 5-10 calls made	40	24.0
	Above 10 calls made	21	30.4
18-19	Below 5 calls made	59	69.4
	Between 5-10 calls made	127*	76.0
	Above 10 calls made	48	69.6
Age Range	Average No. of Calls Received	Frequency	Percentage (%)
15-17	Below 5 calls received	17	25.0
	Between 5-10 calls received	41	25.0
	Above 10 calls received	29	33.0
18-19	Below 5 calls received	51	75.0
	Between 5-10 calls received	123*	75.0
	Above 10 calls received	59	67.0
Age Range	Average No. of Sent Messages	Frequency	Percentage (%)
15-17	Below 5 messages sent	60*	26.1
	Between 5-10 messages sent	22	36.7
	Above 10 messages sent	5	17.2
18-19	Below 5 messages sent	170*	73.9
	Between 5-10 messages	38	63.3
	Above 10 messages sent	24	82.8
Age Range	Average No. of Received Messages	Frequency	Percentage (%)
15-17	Below 5 received messages	53*	31.4
	Between 5-10 received messages	21	20.2
	Above 10 received messages	13	27.7
18-19	Below 5 received messages.	116*	68.6
	Between 5-10 received messages	83	79.8
	Above 10 received messages	34	72.3

Music, Video, Games, Downloading, Social Networking, Picture taking, Conference calling, Text messaging, and so on.

These activities were categorized along daily, weekly, and monthly usages. Under the daily usage, three activities such as Browsing (74.1%), Music (71.0%), and Chatting (70.7%) frequently occurred, while social networking media (59.2%) and Text messaging (59.2%) were also often engaged by teenagers on their mobile phones. Weekly usages involved activities such as Downloading (30%), Email (28.7%), Video (28.3%) and Text messaging (26.5%) respectively. Lastly, monthly usages included conference calling (32.1%), Games (20.6%), and Downloading (19.3%). Overall,

the activities most often engaged by these teenagers were communication and entertainment related usages.

The fourth objective was to ascertain the challenges faced by teenagers in the use of mobile phone devices. Table 5 revealed the frequent challenges most often faced by teenagers in the use of mobile phone devices and through their various Internet service providers (ISP's). The most frequent challenges faced by teenagers as indicated in Table 5 are network problems (64.5%) often times revealing in lack of network signals on phones, inability to receive, make calls and send text messages, loading of credit card on phones (19.3%), safety of mobile devices (7.2%), recharging of battery phones

Table 3. Frequency table showing uniformity in the usage patterns: Phonelines, service providers, airtime and phone types

Pattern of Usage	Category	Frequency	Percentage (%)
Phone lines	One	87	27.1
	Two	159	49.5
	Three	58	18.1
	Above Three	14	4.4
Internet Service Providers	MTN	222	69.2
	Airtel	81	25.2
	Glo	106	33.0
	Etisalat	89	27.7
Amount on Airtime	Below N2000	205	63.9
	Between N3000 –N5000	88	27.4
	Between N5000-N10000	17	5.3
	Above N10000	5	1.6
Phone Brands	Nokia	205	63.9
	Samsung	25	7.8
	Blackberry	85	26.5
	Ipad	8	2.5
	Android	5	1.6
	LG	10	3.1
	Tecno	5	1.6
	Iphone	2	0.6

Table 4. Frequency table showing activities on the mobile phones distributed along daily, weekly and monthly usages

Mobile Phone Activities	Daily Usage (F)	Percentage (%)	Weekly Usage (F)	Percentage (%)	Monthly Usage (F)	%
Browsing	238 *	74.1	45	14	18	5.6
Instant messaging	161	50.2	68	21.2	22	6.9
Email	93	29.0	92*	28.7	57	17.8
Chatting	227*	70.7	42	13.1	16	5.04
Music	228*	71.0	44	13.7	14	4.4
Video	102	31.8	91*	28.3	46	14.3
Games	93	29.0	80*	24.9	66	20.6
Downloading	102	31.8	96*	30	62	19.3
Social Networking	190*	59.2	73	22.7	19	5.9
Taking Pictures	161	50.2	81	25.2	34	10.6
Conference call	35	10.9	44	13.7	103*	32.1
Text messaging	190*	59.2	85	26.5	22	6.9

regularly to keep the mobile devices functioning (7.2%), and lastly Internet access problems on mobile phones (7.2%) due to no-accessibility to Internet service providers' network.

The sixth objective hypothesized that there will be a significant relationship between mobile phone addiction and some identified socio-psychological dimensions. Table 6 has revealed

Table 5. Challenges faced by teenagers in the use of mobile phones

Challenges	Frequency	Percentages (%)
Cost of recharge	62	19.3
Network problem	207	64.5
Safety Problem	23	7.2
Recharging problem	23	7.2
Internet access problem	3	0.9

Table 6. Pearson correlation table showing the relationship between mobile phone addiction and some socio-psychological dimensions

Socio-Psychological Factors	Mean	Cases (N)	Mobile Phone Addiction
Loss of concentration	.18	321	.074
Involvement in major/minor accidents	.15	321	.157**
Egoism	.41	321	.226**
Communicating to friends	.23	321	.204**
Self Independence	.62	321	.231**
Boredom	.82	321	.155**
Loneliness	.82	321	.273**

**Correlation is significant at the 0.01 level (2 tailed)

significant positive correlations between mobile phone addiction and some socio-psychological dimensions such as Involvement in major/minor accidents (.157), Egoism (.226), Communicating to friends (.204), Self independence (.231), Boredom (.155), and Loneliness (.273). In the order of sequence, loneliness had the highest positive correlation followed by self-independence and communication with friends. This depicts that teenagers are addicted to mobile phones on account of loneliness, self –independence, egoism, and communication through various platforms such as Facebook, Twitter, Email and so on.

DISCUSSION

This present study has revealed uniformity and commonness in the usage patterns of teenagers across the three Higher Institutions of learning in Ilorin, Kwara State, Nigeria which are Uni-

versity of Ilorin, Kwara State University, and Al-Halikhmah University respectively.

The first objective that predicted a cross relationship between the age groupings and the usage patterns such as mode of communication, average number of calls made and received daily, and text messages sent and received daily was confirmed. Teenagers in the two age categories of 15-17 years and of 18-19 years used voice call as a preferred communication channel on their mobile phones followed by text messaging; while teenagers in the two age groupings sent and received an average of below 5 text messages on a daily basis. This has shown uniformity in the usage patterns as regards to the influence of age.

The second objective determined uniformity in the usage patterns such as phone brands, number of phone lines, Internet service providers, and average amount on airtime per month was supported. Majority of the teenag-

ers had common usage patterns as revealed in Table 3. The uniformity in the usage patterns of teenagers is a proof that teenagers are most times influenced by sense of belongingness and peer ties ((Hakoama & Hakoyama, 2011).

The third objective involved the categorization of the activities teenagers engage on their mobile phones into daily, weekly, and monthly usages. The findings revealed that teenagers engaged mostly in (a) daily activities such as browsing, music, and chatting, (b) weekly activities of downloading email and video, and (c) monthly activities tailored toward conference calls, games, and downloading respectively. Communication and entertainment usages were common denominators in all the activities on daily, weekly, and monthly basis. This confirms that mobile devices are indispensable tools to teenagers based on their usefulness and timeliness of engaging in various task at any point in time (Nasir, Hecht & Wenner, 2007).

The fourth objective examined the challenges most often experienced by teenagers in the use of their mobile phones. The most prominent challenge was the non availability of network by the Internet service providers which can be associated with high cost of generating electricity to maintain their telecommunications infrastructures, server downtime, and weather conditions among others. Cost of recharging was another challenge identified by the teenagers which can also be due to the financial commitment involved in the loading of credit cards almost on a weekly basis. On account of this, teenagers may tend to depend on parents, friends, family members, and acquaintances to sustain their mobile phone needs.

The fifth objective hypothesized that there will be a significant positive relationship between mobile phone addiction and socio psychological variables such as loneliness, involvement in major/minor accidents, boredom, loneliness was also confirmed except loss of concentration. A significant positive relationship was established between mobile addiction and socio- psychological dimensions such as loneliness, boredom, egoism, self independence, and involvement in major/minor

accidents at varying significant levels ($P < 0.01$). This depicts that excessive use of mobile devices is a function of socio-psychological dimensions that are inwardly, mentally, and environmentally driven.

CONCLUSION AND RECOMMENDATIONS

Socio psychological dimensions such as loneliness, self independence, boredom, egoism, communicating to friends, and involvement in major/minor domestic and car accidents are predictive of mobile phone addiction amongst teenage undergraduate students in the three Higher Institutions of learning comprising of University of Ilorin, Kwara State University and Al-Hikmah University, in Ilorin, Kwara state, Nigeria.

Interestingly, this study has revealed uniformity in the mobile phone usage patterns of teenagers which identifies with Leng and Wei (2000) on the seven social dimensions to mobile phone uptake of teenagers such as fashion and status, affection and sociability, relaxation, mobility, immediate access, instrumentality, and reassurance. These dimensions are equally responsible for the wide acceptability and uniformity in the usage patterns despite diversities in culture, tribe, background, and age differences in the use of this device by teenagers.

In view of this, it is recommended that future research should determine the influence of mobile addiction on the academic performance of teenagers when it is believed that addiction may influence academic performance negatively. Also, counseling sessions and workshops should be organized by counselors, mental health tutors in institutions of learning as a panacea in curbing mobile addiction by in teenagers.

In conclusion, due to the tendency of exhibiting mobile addiction amongst teenagers, it is recommended that Institutions of Learning must design usage policies which are fast rules on mobile phone use by teenagers within and outside the school's environment as a means

of curbing and controlling teenagers' excesses on the mobile phone. Also, proper monitoring and control by parents, guardians, counselors and mental health tutors will help in preventing mobile phone abuse and enabling teenagers in achieving a balanced social and academic lifestyle.

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