



Excessive Use of Mobile Phone on Study Habits of Young Students: A case study of Sindh University Students

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Abstract

Mobile phone technology would enhance the students' status if they use it appropriately in academic activities. Students who use mobile phones excessively, their grade point average (GPA) can be low. The recent rapid increase in cell phones has influenced multiple aspects of our daily lives, particularly those of Students. Students' ability of learning is influenced by study habits. Among these, the use of technologies has assumed a controversial role. Therefore, the aims of the current study is to determine the influence of the mobile phone usage on academic performance among university students. A face to face survey was conducted among 240 students which include 120 male students and 120 female students ranging from second year to fourth year from different departments of Sindh University, Jamshoro. Cell phone and study habits questionnaires were applied to students belonging to various departments of the faculty of Arts. The questionnaire consists of students' demographic information and question-related about the types or brands they use, how much time they spend on their mobile phones, total sleep timings, and what type of challenges they have to face while using mobile phones for study purposes. The mean age of respondents was 20 to 24 years (22.31, SD = 4.27). The results revealed that the maximum time they spent on mobile phones is negatively affecting students and making them more distracted from studies and due to lack of sleep at night they are unable to pay proper attention to their studies. Linear regression analysis also pointed out negative effects on the study habits of students.

Keywords: : Mobile phones, study habits, learning, university students

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INTRODUCTION

We live in this age where every other person in society is equipped with the latest technology. Every member of our society depends much on modern gadgets, like phones, laptops, I pods, etc. Among all these advanced gadgets, mobile phones come on top because it is the quickest and easiest way to make contact with other people and it provides many functions like talking, messaging, whatsapping, Twitter, and Instagram. (Csibi; Griffiths, & Szabo,2020) The universal outpouring in use of mobile phones has led to an ever increasing craving on mobile phones because of their embedded functionalities, easy excess, and movability factors. Most of the people, especially young generation prefer to take the mobile phones rather laptops and personal computers because of their various functionalities which are inserted in mobile phones such as, entertainment, watching sports, online games, online banking, online shopping, sending emails, chatting, agenda tracking, social media and ability to complete homework (Nayak, 2018). If we talk about Pakistan more than 83 percent of adult people and 94 percent of the youth are equipped with these gadgets. Researchers have found out that irrespective of gender both boys and girls spend most of their time on their cell phones. (Boumosleh and Jaalouk,2017) .It was also found that the female population mostly goes for online shopping and trending than the male population of the cell phone users. (Baert et all, 2018 ; Reinecke et all, 2017).

Use of Mobile phones and learning

Many types of research proved that excessive use of cell phones may cause tension anxiety stress and sleeplessness to university students and screen radiation may be one of the main causes of eye problems, headaches, and tiredness. (Augner and Hacker,2012). It was also found that students who experience any sort of trauma or they think that their life is boring useless dull or sad, may be attached to their cell phones or social media more often to forget about painful events. (Arefin & Mustafi,2017).

It is also observed many students use mobiles at night time before sleep, they involve more time chatting surfing various sites use Facebook and chatting through messaging in this way they don't realize that how much time they spend on mobiles phones, they slept late that lead to a decline in mental alertness, in classrooms they cant perform well resulting in low grades. Students nowadays have an addictive sort of relationship with a mobile phone, if they forget their phones at home they become restless in university until they go back and take mobile. (Brian, 2013). This lifestyle is badly affecting their study routines and academic outcomes.

Many kinds of research also indicated that those students who perceive themselves as lonely, have experienced any kind of failures, or have any sort of relationship problems get highly addicted to their cell phones. (Negi and Godiyal,2016). Most university students remain highly engaged with their cell phones because of an easy medium to gain information besides remaining busy on social websites. But it is important to consider that long-term exposure to the radiation of mobile phones has negative effects on their overall health and behavior including cognitive abilities.

(Schoeni & Roser,2015).

Findings of different studies indicated that university students are more influenced by new trends, thus they adopt new and advanced technology, buy expensive laptops, mobile phones, iPad, etc. (Jones,2014)

Nowadays students are much dependent on the internet because every bit of information is easily available as well as it is providing a platform to socialize and interact with anyone at any time at the least economical cost. The excessive involvement on social network sites is causing a decrease in their study habits and academic learning. (Boumosleh and Jaalouk,2018).

On the contrary, some studies have indicated that the use of mobile phones facilitates learning, a practical medium to learn foreign languages easily, and a helping tool for teachers to transfer knowledge to students. (Cha and Seo, 2018). The learning through mobile or m learning courses have started in different educational institutions also draw attention towards its alternate usage. (Augner and Hacker,2012).

LITERATURE REVIEW

The excessive use of mobile phone affects the other basic activities of daily life that leads to the negative consequences (park & Lee, 2012). Most of the previous studies have observed that excessive mobile use has negative consequences on the level of academic performance (Mendoza, Pody, Lee, Kim, & McDonough, 2018; Olufadi, 2015; Rozgonjuk et al., 2018). One of the previous studies also suggests that extreme use of mobile phone can inhibit the academic performance and it has negative effects on students' academic performance through decreased CGPA scores (Lepp, Barkley, and Karpinski (2014). However, some studies have found out that there is a positive effect on use of mobile phones on academic performance that is may be associated with the shift in wrong social practices. In addition, Tessier (2013) found that mobile phone as an education tool that will help out to enhance the learning. If the students are allowed to use the mobile phones for the learning purpose in the classroom it would increase the level of academic performance and beneficial for the educational settings. Entirely, the researchers have generated mixed findings of the excessive use of mobile phone. One more study has suggested that there is a significant gender differences in various aspects in extreme use of mobile phone. The study also revealed that there is a both negative and positive impact of excessive mobile phone use on study habits depending on the different pattern of usage (Zara omar, Dr. Junaid Siddiqi and Dr. Bushra Shamshad, 2019).

On the other hand, several studies related to health issues have suggested that long-term excessive involvement with mobile phones may cause brain tumors. (De-Sola et all, 2016). A meta-analysis study was conducted to evaluate long-term mobile use and the risk of mental illness. The conclusion of the meta-analysis suggested a consistent pattern of relationship between ipsilateral glioma and neuroma. Lepp & Barkley et all, 2015). Similar findings suggested in another meta-analysis study indicated a positive relationship between intracranial tumors and long-term mobile phone use. (Ng Hassan et all, 2017).

One more research suggests that the use of mobile phone has become the extensive part of the youngster's life and that is nearly imperceptible and certainly they do not even realize the level of the dependency on their cell phones. Therefore, it is important to identify the onset point that from where the use of mobile phone crosses the line from being helpful tool to unnecessary use (Choudhury S, Saha I, Som TK, Ghose G, Patra M, Paul B. 2019). Results of several psychological and behavioral science-related studies indicated an increase in the behavior problems, addictive effects, poor learning, low academic achievement, sleep deprivation, and problems in maintaining and developing stable and good relationships among those who use mobile phones for a longer time for any purpose. (Li L, et al ., 2016).

The long-term radiofrequency electromagnetic (RF-EMF) exposure while using cell phones disturbs the cognitive functioning, memory, and concentration ability of students. (Jones, 2014). It also leads to emotional problems among young adolescents. One study showed no significant difference in in-class test scores, regardless of whether they were using instant messaging .However, texters took a significantly longer time to complete the in-class test, suggesting that texters required more cognitive effort in memory recall. Other researchers have posited that simply the presence of a cell phone may have detrimental effects on learning and memory as well. Research has shown that a mobile phone left next to the participant while completing a task, is a powerful distractor even when not in use. (Tanil & Yong, 2020) At present mobile phones, laptops and other related technology are more in use by students, especially during pandemic conditions, but it is important to guide them about the limited time use for better psych-physiological health.

Academic achievement, good study habits, and learning skills are important for students for a better future life, but due to high involvement with cell phone usage, they waste their study time chatting, texting, and internet surfing on social media sites. Consequently, their performance was affected negatively. (Zamani and Kheradmand 2011). Although they reported that during study time, they use mobile phones to search for information related to study topics or make assignments but they also remain attached to the social media sites and which causes distraction, impaired memory, and poor concentration.

The present study was designed to examine the effects of excessive socialization via mobile phones on the study habits and gender differences in the excessive socialization via mobile phones and study habits of University students. In higher education, students need to search for different forms of knowledge and information to complete their academic tasks. They use mobile phones to fulfill their tasks but it's a common observation that they remain highly involved in socialization via mobile phones. (Parasuraman, 2017; Rosen, 2013).

In addition, it was also revealed that the dependency on mobile endures the possible long term health risks, including behavioral changes that weakened the academic performance of the students (Hassanzadeh R, Rezaei A., 2011). Most of the people will run the technology and gradually they became dependent on it. Especially children, adolescent and youth are extremely disposed to misuse the mobile phones. Therefore, it is important to inculcate the factors of dependency and provide

awareness among parents, teachers, and students about the essentials to assess the level of mobile dependency, behavioral changes, and academic performance of the students. In an early study (Van Dan Bulck, 2003) reported that addictive cellular phone usage could cause disturbance in sleep pattern. Students tend to engage in text messaging and feel anxious when they are not receiving replies from their friends even during the nights when they are supposed to be sleeping (Kamibeppu and Sugiura, 2005). This addictive behavior tends to cause students to stay up late at night and thus disrupting their daily routines. Several studies have shown that addictive behavior and lack of sleep is detrimental to one's psychological health and functioning (Frederickson, Roihdes 2004).

SIGNIFICANCE OF THE STUDY:

Cellular phones are perceived as a useful and important for conversation, entertainment, and preserving memories (with the help of recording functions). It helps students to achieve many educational tasks and makes easy for university students to keep in touch with relatives. But at the same time it affects inversely the studies of students by many ways, so this research focuses on excessive use of cell phones can cause negative impact on study habits of students. Cellular phones disturb and distract the concentration of students in class. Excessive use of cellular phones keeps students busy and they find less time for studies. It also promotes copy culture and also affects students' health by increasing level of depression, stress, and loss of appetite; It is also found that it damages the areas of brain associated with learning, memory and movement. It was found that majority of the students spend more time using cell phones which have a large effect on their psychosocial development. Students keep their cell phones switched on 24 hours, and they are equipped with almost every feature of cell phones. It was also significantly tested true that students who spend more time using cell phones were more vulnerable to psychological disturbance and the degree of attachment towards the cell phones caused students to experience symptoms such as Anxiety, Depression or even Lack of sleep, which affected their overall psychological functioning and academic performance.

HYPOTHESES

1. Excessive socialization via cell phone would be a significant predictor of study habits.
2. There would be significant gender differences in the study habits and excessive socialization via mobile phones.

METHODOLOGY

Research Designs:

This study was quantitative research. To explore the excessive use of mobile phones on studies of university students, two questionnaires were used. Firstly, MPS mobile phone survey scale, which was developed by biaqnchi and Philip in 2005, was administered on students. The scale consists of 25 items and it is based

on five point likert like scale. In second stage, SHAI, study habits and attitude inventory were administered to measure study habits of university students. The scale was developed by Malik and Parveen, 2013. It has 40 items with four subscales. The scale response category is a four point likert like scale ranging from strongly agree to disagree. The study was quantitative research. For this study data were collected from different departments of Ars Faculty, University of Sindh, Jamshoro. The sample size consisted of 240 participants selected randomly from different departments of the Social Science and Arts faculty. The data were collected through a simple random sampling technique. The approximate age of the respondent was 20-24 years (Mean = 22 years, SD = 5.36). The purpose of the study was made clear and informed consent was taken before the study.

Sample

The sample (N = 240) of two hundred and forty students was collected from different departments of Ars Faculty, University of Sindh, Jamshoro. The sample size consisted of 240 participants selected randomly from different departments of the Social Science and Arts faculty. The data were collected through a simple random sampling technique. The approximate age of the respondent was 20-24 years (Mean = 22 years, SD = 5.36). The purpose of the study was made clear and informed consent was taken before the study.

Instruments

The following instruments were used in the current study.

Demographic Information Questionnaire

The demographic information questionnaire was comprised of all items that included information about the respondent during the research. It included the variables including name, gender, age and education.

Study Habits & Attitude Inventory (SHAI):

It is a reliable scale to measure the study habits and attitudes of university students. The scale was developed by Malik and Parveen (Malik & Parveen, 2013). The scale response category is a four-point Likert scale ranging from strongly agrees to disagree. The Cronbach reliability $r = 0.87$ which shows its reliable status.

Mobile Phone Scale (MPS):

This scale was developed by Bianchi and Phillips. (Bianchi & Phillips, 2005). The scale is divided into two parts. 1st part consisted of demographic information and the second part contains twenty-five items on excessive use of cell phones, time spent on socialization, and communication via mobile phone. The scale response category ranges from not true to extremely true. The Cronbach alpha coefficient is $r = 0.89$ which shows its reliable status.

Data Collection

The Dean faculty of social sciences university of sindh were contacted individually and permission was taken for data collection after explaining the significance and purpose of the study. Other universities of Jamshoro district refused to collect data and hence, it was collected from students of Sindh university .

Limitations

The limitation of the study is in terms of data collection as focused that Data was taken only from the students of Sindh university jamshoro. Therefore, the results cannot be generalized on rest of the population.

Analysis of Results

For the analysis of results, the simple linear regression analysis and t-test were calculated. The following tables are presenting the findings of analysis in terms of hypotheses testing (see Table 1.).

H1:Excessive socialization via cell phone will be a significant predictor of study habits.

Table 1 Linear Regression analysis of mobile phone use and study habits

Predictor	R	B	SE	t	p
CPU	0.95	- .94	2.68	-1.96	.05
R ²	0.911				
R ² change	0.910				
F	801.84				
df					
	238				

Note: df =238, CPU=cell phone use

The regression analysis is showing that excessive use of cell phone is significant negative predictor of study habits (B = - .94, p = .05). More use of mobiles causing learning problems for students. So, first hypothesis accepted.

H 2: There would be significant gender differences in mobile phone use and study habits.

To assess gender differences in mobile phone use and study habits t-test was done.

Table 2 t-test of male and female participants on cell phone use and study habits.

<i>Variables</i>	<i>Male MSD</i>		<i>Female MSD</i>	<i>t</i>	<i>p</i>	<i>Cohen's d</i>
CPU	86.5	13.2	87.3 12.5	0.41	.23	0.21
SH	14.2	11.6	12.4 10.2	1.26	.07	0.30

Note: df = 238 (CPU = cell phone usage, SH = Study Habits)

Findings in table 2, indicating no significant gender differences in cell phone use ($t = 0.41$, $p > .05$) between male and female students, indicating more cell phone use among both groups. The mean value is indicating excessive involvement (Male $M = 86.5 \pm 13.2$; Female $M = 87.3 \pm 12.5$) with cellphone among both boys and girl. On study habits also non-significant results ($t = 1.56$, $p > .05$) found between male and female students, suggesting poor study habits (Male $M = 13.2 \pm 11.6$; Female $M = 12.4 \pm 10.2$) in both groups. Results are suggesting that both male and female have excessive mobile phone use and poor study habits.

DISCUSSION

Cell phones are the main cause of stress, anxiety, depression fatigue even, delinquency and crime. It is harmful when students are supposed to study but they involve in texting and chatting with friends. Students usually tend to focus more on their mobiles phone rather than on their studies, they spend a lot of time on the phone, they sleep late at night and as result, they either skip their classes or they become lethargic or mentally slow. This too much and excessive use of the mobile phone has made our youngsters more prone to various kinds of physical and mental illness which negatively affect their academic performance and career-building tasks. (Thomée, härenstam & agberg, 2011). The results of the study show that most of cell phone users, particularly university students consume their valuable time in typing and receiving text messages in their cell phones. Result of the study indicates that More use of mobiles causing learning problems for students. (see Table# 01). In a question, why do they use cell phone? University students responded that it is an effective and useful tool to be in contact with their parents, friends and other relatives . On the other hand, the addictive usage of cell phone has also been noted when majority of students said that they practice to turn their cell phones on silent mode, not to turn them off, while in the class rooms or when they are busy in their self-study. It is also found that when the students are not so much good in their studies or do not pay attention in their work, they get another activity which make them active, busy and more importantly same as his/ her fellow beings. This distractive thinking and behavior leads them to use cell phone in access in order to put impression on others, and/ or to assume oneself of the same or of higher status

to his/ her fellow beings. This unhealthy cognitive strategy effects inversely in their psychosocial development.

Moreover, likewise any other electronic invention, cell phone has also affected the humanistic growth and development. The functions which the earlier humans were doing by their own have been shifted to machines, which in turn has badly affected on the development of language, aesthetic sense, and at most social norms. Lack of humanistic roles and values and the excessive reliance on machines have increased stress and other neurotic symptoms like aggression, lack of sleep and loss of appetite etc. in human beings .

The result of the study also revealed that there is no gender difference found among youth, both gender are busy using mobile phones and they use almost all related functions but girls mostly go for searching online shopping for dramas and movies than boys.(see table #2).

Most university students think that mobile applications are very much helpful in making assignments and it is the quickest and easier way to find meaning and definitions of different terms it saves their time but on the contrary, this creates a vast distance between students and books. The use of this modern technology is not bad but students should know when and how long to use it. Many studies also indicated that excessive use of mobile phones disturbs students' sleep routine they complain about memory issues, they can not concentrate on studies, and show less alertness during university hours.

CONCLUSION:

This study provides new considerations for the debate on the impact of usage of cellular phones on the study habits of students. Data obtained in the present study provides baseline information regarding the patterns and problems of mobile phone usage, and its impact on study habits as well as psychological health of university students. As cell phone usage continues to grow, social workers must be aware of current trends, language, and use patterns that can alter the lives of our youth in both senses, positively and negatively, including the way they behave, interact with others, and understand the world. This information has significant implications for future directions in social work research on youth development. As the usage of cell phones is increasing day by day, the lifestyles of our youth are also changing, and their overall behavior, their relationships, interaction, psycho-social dealings, and understanding of various issues of the world are also changing. For better development of our youth, it is the time of need for all teachers parents, and social workers to take responsibility and guide students properly about the usage of these gadgets so that they become useful citizens of the society.

Competing Interests Statement

The authors declare that they have no conflict of interest.

REFERENCES

Arefin S, Islam R, Mustafi MAA, Afrin S, Islam N. Impact of smartphone addiction

- on business students' academic performance: a case study. *Independ J Manage Prod.* 2017;8:955–975.
- Augner C, Hacker GW. Associations between problematic mobile phone use and psychological parameters in young adults. *Int J Public Health.* 2012;57:437–441.
- Baert S, Vujić S, Amez S, Claeskens M, Daman T, Maeckelberghe A, et al. Smartphone use and academic performance: correlation or causal relationship? Bonn: IZA, Institute of Labor Economics; 2018. (Discussion paper series, IZA DP No. 11455)
- Bianchi, A. and Phillips, J.G. (2005) Psychological Predictors of Problem Mobile Phone Use. *Cyberpsychology & Behavior*, 8, 39-51.
- Boumosleh J, Jaalouk D. Smartphone addiction among university students and its relationship with academic performance. *Global J Health Sci.* 2018;10:48–59.
- Boumosleh JM, Jaalouk D. Depression, anxiety, and smartphone addiction in university students- a cross-sectional study. *PLoS ONE.* 2017;12(8):e0182239.
- Brian SJ. Two days with no phone. *Scholastic Action.* 2013 Sep 2;:4–6.
- Cha S-S, Seo B-K. Smartphone use and smartphone addiction in middle school students in Korea: prevalence, social networking service, and game use. *Health Psychology Open.* 2018;2018:1–5.
- Csibi, S.; Griffiths, M.D.; Cook, B.; Demetrovics, Z.; Szabo, A. The psychometric properties of the Smartphone Application-Based Addiction Scale (SABAS). *Int. J. Ment. Health Addict.* 2018, 16, 393–403. [CrossRef] [PubMed]
- De-Sola Gutiérrez J, Rodríguez de Fonseca F, Rubio G. Cell-phone addiction: a review. *Front Psychiatry.* 2016;7:175.
- Jones T. Students' cell phone addiction and their opinions. *Elon J Undergrad Res Commun.* 2014;5(1):74–80
- Lepp A, Barkley JE, Karpinski AC. The relationship between cell phone use and academic performance in a sample of U.S. college students. *Sage Open.* 2015;2015:1–9.
- Li L, Wu C, Gan Y, Qu X, Lu Z. Insomnia and the risk of depression: a meta-analysis of prospective cohort studies. *BMC Psychiatry.* 2016;16:375.
- Malik M. and Parveen N.: Development of an Indigenous Study Habits and Attitude Inventory for the Adolescent Students. *Pakistan Journal of Social and Clinical Psychology.* 11(1), 2013, 72-77
- Negi KS, Godiyal S. College students' opinion about cell phone usage. *Int Educ*

Sci Res J. 2016;2(10):35–38.

Ng FS, Hassan NSIC, Nor NHM, Malek NAA. The relationship between smartphone use and academic performance: a case of students in a Malaysian tertiary institution. *Malaysian Online J Educ Technol*. 2017;5(4):58–70.

Nishad P, Rana AS. Impact of mobile phone addiction among college going students: A literature review. *Adv Res J Soc Sci*. 2016;7(1):111–115.

Parasuraman S, Sam AT, Yee SW, Chuon BL, Ren LY. Smartphone usage and increased risk of mobile phone addiction: A concurrent study. *Int J Pharma Investig*. 2017;7:125–131.

Reinecke L, Aufenanger S, Beutel ME, Dreier M, Quiring O, Stark B, et al. Digital stress over the life span: the effects of communication load and internet multitasking on perceived stress and psychological health impairments in a German probability sample. *Media Psychol*. 2017;20:90–115.

Rosen LD, Whaling K, Carrier LM, Cheever NA, Rokkum J. The media and technology usage and attitudes scale: an empirical investigation. *Comput Human Behav*. 2013;29:2501–2511.

Schoeni A, Roser K, Rösli M. Symptoms and cognitive functions in adolescents in relation to mobile phone use during night. *PLoS ONE*. 2015;10(7):e0133528.

Tanil CT, Yong MH (2020) Mobile phones: The effect of its presence on learning and memory. *PLoS ONE* 15(8): e0219233. <https://doi.org/10.1371/journal.pone.0219233>

Thomée S, Härenstam A, Hagberg M. Mobile phone use and stress, sleep disturbance, and symptoms of depression among young adults-a prospective and cohort study. *BMC Public Health*. 2011;11:66.

World Health Organization. Electromagnetic Fields and Public Health: Mobile Phones. Available online: <http://www.who.int/en/news-room/fact-sheets/detail/electromagnetic-fields-and-public-health-mobile-phones> (accessed on 12 November 2018).

Zamani BE, Abedini Y, Kheradmand A. Internet addiction based on personality characteristics of high school students in Kerman, Iran. *Addict Health*. 2011;3(3-4):85–91.