

Effect of use of Mobile Phones on Mental Health of Secondary School Students

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ABSTRACT

Mobile phones are an extremely valuable instrument in every aspect of science, business, training, culture and legislative issues but the excessive and misuse of mobile phones can cause addiction and other mental health problems. The purpose of the current study is to explore the effect of cell phone use on mental health issues among middle school students. A cross-sectional and correlation research design was used in the current study to test the study hypothesis. Participants of the study are 214 (50%) girls and (50%) boys' secondary school students' with an age range of 12-20 years. The sample was collected through random sampling techniques from different schools of Peshawar. Problematic mobile phone use questionnaires (PMPUQ-SV) were administered to measure investigation variables. Results revealed that usage of mobile phones has been a significant positive predictor of mental health problems among secondary school students. The results further revealed that female students scored significantly higher on mental health problems as compared to males. While statistically there was no significant relationship found among genders and mobile phone usage. The current paper reveals that the usage of mobile phones can cause more psychological problems in females as compared to males. Experimental analysis based on the dataset indicates a very encouraging and improved performance.

Keywords: Mobile phone, mental health, Secondary School Student

Introduction

The mobile phone is an extremely valuable instrument in every aspect of science, business, training, culture and legislative issues. However its misuse and abuse of this helpful apparatus can cause addiction. The present era is known for information and communication and because of this advanced communication system; we are able to connect to the world quicker than the past. The most predominant kind of technology is the cell phone, the utilization of which is a previous couple of years, because of social effect, has developed considerably. Cell phone dependence, as a psychological disability coming about because of current innovation, has gone to the consideration of clinicians, sociologists, and researchers of training. Excessive use can be accounted as a technology addiction. The user's attachment to their cell phone has evolved to the point that they feel they can't survive without it, and research has shown that prolonged usage can have a detrimental effect on physical and mental health [1]. According to medical research, cell phone users are unable to preserve their fitness. For example, the findings of numerous studies show that cell phones emit radiation, which causes auditory and visual problems, headaches, memory loss, and

irritability, as well as the development of a brain tumour [2]. Cerebral tumours are also caused by the delayed use of PDAs, according to the findings. According to psychology, heavy cell phone use has a detrimental effect on social relationships and a person's well-being due to loneliness, depression [3], and social anxiety. Various studies have also concluded that mobile phone addiction has a major effect on both psychological and physical health. Acceptance of social fact and the ability to deal with it; moderately meeting one's needs; and behaving in harmony with the community [4] are all facets of mental health. Young people rely heavily on mobile phones to stay in touch with one another. Certain negative effects of mobile phones have also been observed in the peer relationships of young people, such as isolation and bullying. Similarly, the use of a mobile phone has caused changes in the elements of a family. From the viewpoint of parents, issues of security and observation cause the organisation of evolving flexibilities for children. Constant texting, calling, listening to music, playing games, or just passing the time with their mobile phone being such an important part of their lives, even the sensation of not having their cell phone around them causes them to become paranoid.

According to the India Telecom Regulatory Authority, India has about 929.37 million mobile phone supporters; making it the world's second-largest wireless utilising developing nation as of May 2012 [5] asserted that the problem of mobile phone use may be a symptom of depression. Time spent each week, social use percentage, and percentage of positive way usage is the underlying problems that predict mobile addiction [6]. "Emotional well-being" is described by Hadfield as "the complete and proper functioning of the entire personality." A mentally stable person may live a happy and productive life. Emotional well-being, according to positive psychology, may include a person's ability to enjoy life and feel comfortable in adjusting to life's challenges, as well as psychological resilience. Mental wellbeing is an expression of our emotions. Mobile phone technology can have a range of effects on students' lives [7]. Texting on mobile devices is the most common form of basic communication among school students, and as a result, they gradually distance themselves from their families, losing emotional closeness and warmth [8]. It triggers parental and adolescent conflicts and conflict. According to Ross [9], there are certain symptoms of cell phone addiction, including the fact that people who are addicted to their phones keep them on all the time and when they are at home, they choose to use mobile phones instead of landlines. Finally, they often suffer financial and social problems as a result of their heavy use of cell phones.

Literature Review

According to a study conducted on Australian university students, they use their phones for 1.5 to 5 hours per day. Their results revealed a number of traits linked to addictive behaviour. Prior to using the system, they discovered lack of control techniques as well as withdrawal symptoms, impulsivity, and tension. The findings also revealed several variables that were linked to customer participation in addictive or compulsive behaviour. Special incidents, substance misuse, and depressed circumstances are all situational variables that influence inappropriate use [10]. Devis, et al., conducted a study in which they discovered that boys use cell phones more than girls and that adolescents spend more time on their phones on weekends than they do on weekdays [11]. Individual personality and

characteristics, such as gender and age, are linked to phone-related behaviour, according to Turner [12]. The results of Billieux' research on gender differences in impulsion and problematic mobile usage among young people indicate that males use their cell phones more often in dangerous circumstances, while females have formed a dependence on them [13]. Some studies have discovered a link between problematic internet use and behavioural and psychological factors. Evidence of a link between excessive use of the internet and social isolation, low self-esteem, fear, and a lack of social skills [14, 15, 16]. Some research mentions new addictions (e.g., sex addiction, television addiction, religious sect addiction); this approach considers potentially addictive behaviours [17]. These addictions include a number of distinct common components (salience, mood alteration, tolerance, withdrawal, conflict, and relapse) as well as a number of other commonalities that may represent a common aetiology of addictive behaviour; this suggests that addiction may be a distinct syndrome [18]. A study of college students in Spain found that a small proportion of them were on the verge of psychopathology or Internet addiction (Kamibeppu et al. 2005) [19]. Despite data showing that 19 (cell-phone) overuse is associated with behavioural patterns such as waking late at night and exchanging messages, as well as emotional dependency reflected in the belief that users could not live without their cell phone, there are fewer studies in this area. The findings support the negative effects of excessive use on students' physical and mental health. . In the last 20 years, global mobile phone subscriptions have increased from 12.4 million to over 5.6 billion, covering roughly 70% of the global population. Its use has also become a major public health issue, as there have been numerous reports of mental and physical health risks in people of all ages. While some of these common side effects are life-threatening, such as cancer, others cause physical and mental morbidity. The World Health Organization confirmed on May 31, 2011, that cell phone use is indeed a health hazard, classifying mobile phone radiation as a carcinogenic hazard, potentially carcinogenic to humans. People's physical and psychological well-being has been harmed by their constant use of cell phones, which has resulted in aches and pains and, in some cases, disability; they have lost their required number of hours of sleep; they become irritable and fight over trivial matters and so on.

Objective

To examine the relationship between mental health and mobile phone addiction among secondary school children.

Hypotheses

H1: Mobile phone use will positively predict mental health problems among Secondary school student

H2: There is no significant gender difference between the mental healths of higher secondary schools students with respect to the use of mobile phones.

Research Methodology

Research design and Methods

Current research was planned to explore the effect of cell phone use on mental health issues among middle school students. The cross sectional and co relational research design was used in current study.

Sample and Participants

The sample size consisted of ($N = 214$), including girls ($n = 107$), boys ($n = 107$) secondary school students with age range of 12 to 20 years. The date was selected through G power software. The required data was collected from different government and private schools of Peshawar KPK by using random sampling technique. Only those students were selected who had used mobile phones from at least one year during education.

Description of Measures

Demographic form along with measuring tools was used in current research to collect the information from participants.

Data collection Instruments

Two validated questionnaires were used in the study through which data was collected. The instruments used in the study were; the mooney problem checklist high school form and Problematic Mobile Phone Use Questionnaire (PMPUQ-SV).

The mooney problem check list high school form: This dichotomous scale consists of 330 items. All items were rated on a two point scale ranging from Yes for 1 to No for 0. PMPUQ-SV (Problematic Mobile Phone Use Questionnaire): The purpose of this questionnaire is to determine the problematic use of mobile devices among school students using a Likert scale. It consists of 15 items, with each subscale consisting of five items, all of which were scored on a scale of 1 to 4 ('I strongly agree' to

'I strongly disagree'), with the exception of items 2,4,5,8,9,10,11,13, and 14, which were reverse scored. Item 2,5,8,11 and 14 measures dangerous use of mobile phones, item 3,6,9,12 and 15 measures prohibited use of mobile phone use and item 1,4,7,10 and 13 measures the dependence on mobile phones. Overall, the scores ranged from 15 to 60, with higher scores showing more potential problems associated with cell phone use.

Procedure

The heads of the schools and authorities gave their approval to the study. Before the research questionnaires were administered, the participants were briefed on the essence and intent of the current study. All the questionnaires were distributed among participants during their lunch using a standard set of instructions. There was no time limit to fill the questionnaire for the participants. To aid informed consent, the participants were informed that their responses will remain anonymous. After sorting out informed consent, participants filled the questionnaire. Data from 16 questionnaires were excluded because of incomplete responses.

Statistical Analysis

For data analysis Statistical package of social sciences (SPSS) 20 version was used in which statistical technique logistic regression and correlation were employed to find the relationship between the variables.

Ethical Concern

The Research Committee of Islamia College University Peshawar gave its approval to the current study (ICP). After the study was approved, the extra procedure was carried out. All government and private school authorities gave their approval. The nature and purpose of the current study were explained to participants, and the data collection tools were distributed. The researcher was given a consent form first, followed by other screening tools. Participants were asked to complete a questionnaire based on the instructions provided. The researcher gives participants complete freedom to leave the study at any time.

Results

There were 214 participants in total, 50 % of whom were girls and 50% of whom were boys, ranging in age from 12 to 20, with an average age of (17.25 + 10.3). In this study, simple linear regression and a t test for differences were used for further analysis. Simple linear Regression Analysis Showing the Role of mobile phone usage in Predicting mental health problems among Secondary school students.(N = 214). **Table 1** analysis results shows that mobile phone usage is significantly positive predict mental health problems among secondary school students and accounts 15 % (R=.15) of variance in predicting. Mental health problems among secondary school students

Table I: Regression Analysis

Variables	ΔR	β	P
Model 1	0.78		
Constant		67.831	.000
Mobile phone use		.397	.000
R	.354		
R2	.15		
F	5.088		

Note: Dependent variable; mental health

Table 2 illustrates that there are significant group differences between males and females in terms of mental health problems .mental health problems is reported more by males students as compare to female students. However, non-significant gender differences are found in the use of mobile phone.

Table II: Differences in mental health problems and mobile phone use among gender

Variable	Female (n = 99)		Male (n = 109)		t(198)	P	95%CI	
	M	SD	M	SD			LL	UL
Mental health	158.08	32.497	134.31	50.577	3.987	.000	-12.01	35.521
Mobile phone	36.19	5.505	34.90	5.457	1.696	.091	-2.78	.210

Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit.

Discussion

Excessive cell phone use can have a negative impact on all aspects of a student's life. The purpose of this study was to see how mobile phone usage affects mental health issues in secondary school students. Excessive mobile phone use has been suggested as a predictor of mental health issues in secondary school students. Previous research has looked into the link between cell phone use and mental health issues. They discovered that excessive use of mobile phones is linked to an increase in mental health issues among secondary school students [20]. Previous research has also linked mobile phone use to a higher risk of mental health issues like depression, insomnia, anxiety, addiction, and stress [21]. Another study by Thomee (2018) [22] found that excessive mobile phone use was linked to a variety of behavioural and psychological issues, including depressive symptoms and sleep problems. Results showed significant difference with mental health problems and found non-significant difference with use of mobile phone. However, significant differences were found on mental health problems among male and female participants. Female participants showed more symptoms of mental health problems as compared to males. These findings are in consistent with a study conducted by Qasim (2017). The study concluded that like many other countries, women in Pakistan generally have higher rates of mental health problems than men. Depression and anxiety disorders are also more common among women than men (Qasim, 2017). However, non-significant differences were found usage of mobile phone among male and female participants. Female participants spend more times using mobile phone as compared to males [23].

Conclusion

The research creates awareness among psychologists, academicians, and researchers that excess use of mobile phone can increase problem related to mental health among students. Thus, it is recommended that schools authorities that they should educate students regarding the negative consequences of mobile phones. Moreover, students should be provided with services in schools such as counselling centres in order to identify early symptoms such as depression, anxiety and sleep problems that relates to usage of mobile phone.

Limitations and Recommendations

Collection of the data was done from various different schools of Peshawar city therefore; findings generated by results cannot be generalized to overall Pakistani population. For better generalizability, future studies should include bigger sample from multiple cities across the country. Furthermore, descriptive and experimental studies are required to better understand this framework. This study was cross-sectional; a longitudinal dataset would give more insight into causal processes. For that reason, future studies could include various other important variables to further identify the circumstances under which use of mobile phone leads to mental health problems. More studies could be carried out on different population and in relation with other possible predictors for further validation.

Implication

This study will be useful for mental health professionals, teachers and caregivers to gain a better understanding that how excess use of mobile phone can have an impact on individual's mental health and thus can raise more awareness about dangers associated with excessive usage of phones. The present study has implications for educational psychologists and academicians as nowadays usage of mobile phone is more common in students, as they spend most of their time in using mobile phones. The current study provides empirical data to better understand these variables. The study provides insight to excessive use of mobile phones to be taken under consideration for intervention programs such as awareness programs in school levels.

Conflict of interest

No conflicts of interest were reported by authors.

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