ORIGINAL ARTICLE

The Relationship between Addiction to Mobile and Anxiety, Depression and Stress in Students of Islamic Azad University of Birjand

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ABSTRACT

Aim: To investigate the relationship between addiction to mobile and anxiety, depression and stress among students of Birjand Islamic Azad University.
Methods: The present study is a correlative one and the statistical population consisted of all students in Birjand Islamic Azad University in the academic year 2014-2015, and according to information received from the University, the number of them is 6450 individuals that 209 of them were randomly selected as the sample size. Of this sample,133 individuals were men and 76 were women. The tool to collect data was the questionnaire of mobile addiction, depression, anxiety and stress. To analyze the data at descriptive section, tables and graphs of frequency distribution, mean and standard deviation, and at analytical section, the Pearson correlation coefficient and regression were used.
Results: The results of this study showed that there is a significant positive relationship between anxiety, depression and stress, and mobile addiction. The results also showed that mobile addiction can predict the depression variable up to 14%, the anxiety variable up to 15%, and stress variable up to 20%.
Conclusion: Addiction to mobile can reduce the psychological status that can have destructive cultural and psychological effects in long run; therefore, it is necessary to plan the training appropriately in order the correct culture for using mobile is created in society.
Keywords: mobile addiction, anxiety, depression, stress

INTRODUCTION

Today, with the advent of new technologies in the field of information and communication, many problems of communication and information have been solved and the easiest ways to get the latest news and information in the shortest time have been achieved. One of these technologies is mobile. In addition to the advantages which the mobile has such as Bluetooth, camera and video camera, receiving radio waves, TV, and satellite, receiving MMS and sending messages, connecting to the Internet and funning games, this technology has created risks for its users (Sternberg and Monahon, 2007). One reason for the prevalence of the use of cell phone is due to its applicability by the masses of illiterate people in the less developed countries; that is, the people who cannot afford to buy a computer and even did not use the traditional networks of telephone. Research shows that mobile phone has been able to bridge the gap between developed and less developed countries in the use of telephone. In general, mobile technology has been more successful than computer technology in connecting the deprived people to the field of digital information (Mazruei Joshari, 2009 و MONTAZER 2019).

The use of Internet and mobile gives numerous opportunities to the users. The more theses opportunities and happiness resulting from the use of the Internet and mobile increase, the more the users will drive towards this new phenomenon. Despite the advantages and benefits of using the Internet and mobile, new concerns regarding the use of this technology and its impact on various aspects of life of human beings is increasing every day. Following the increasing use of Internet and mobile and living in cyberspace for a long time, users falsely become dependent that is difficult to get rid of it (Rasouli and Azadmajd, 2013). Supporting the above subject, researchers like Bianchi and Phillips (2005) and Leuge and Wei(2000) have conducted researches on the psychological effects of mobile phone and tried to predict the addiction-like use of mobile phone through psychological traits and demographic characteristics in people. Therefore, they validated the addiction index of mobile phone as "the scale of difficulty in using a cell phone" and "mobile phone addiction scale", respectively. New research findings show that in America in connection with mobile texting, the young people who are extremely and addictively use short messages encounter high levels of impulsivity, feelings of loneliness and social anxiety. Signs of cell phone addiction include a wide range spectrum, but the common feature of this addiction is the permanent and repeated checkout of received messages, the feeling of insecurity in the event of non-receipt of response to phone or message sent, constant need to purchase the latest model of cell phone with newer applications and the need to communicate, being informed of events and being available to others (Dadsetan, 2008. Ehsani A,2016).

One of the variables that researches have studied its relationship with mobile addiction is anxiety. Anxiety is the fear of an unknown factor that causes distress, signs and symptoms of feeling danger, including palpitations and pallor; therefore in the anxiety process, unlike the natural and real fear, there is not a scary or dangerous or injurious real factor, but the human mind automatically and unconsciously feels the danger. In fact, if our mind loses its normal working and becomes too sensitive to future events and faces dilemma due to mental and nervous stress and unpleasant incidents that frequently happen for us, we suffer anxiety (Mahmoodabet al,2016, Shekarriz R 2019).In this regard, Fu-Yuan et al. (2012) showed that the excessive use of mobile phones is associated to personality traits of social extraversion and anxiety. Yassami et al. (2012) showed that there is a significant relationship between university students' anxiety and the rate of using cell phone, i.e., by increasing the use of cell phone, the students' anxiety also increases. However, Lu et al. (2011) state that the anxiety has a negative relationship with mobile phone addiction.

Depression is another variable associated with mobile addiction. Depression is a broad and vague term. For a normal person, depression associates a certain state with sadness and shock, and impatience, and for medical group, it associates witha range of emotional disorders with multiple directories(Pour Afkari, 2001). Thome et al. (2007) found that the long-term use of mobile phones increasesthe risk of chronic stress and depression. Manteghi (2007) also suggests that excessive use of mobile phone increases the risk of stress elongation followed by depression. Igarashi(2008) reported that extraversion and neuroticism are important personality characteristics that are correlated with the excessive use ofcell phone.

The other variable studied in this research is stress. Stress is the body's reaction to a change which requires adaptation or physical, mental or emotional response. Stress can be created by any factor or stressor stimulus, even working with a patient (Morrow,2011). Leung(2007) studied the relationship of the psychological traits such as emotionality, self-esteem, leisure, age and genderwith addiction to mobile. The results showed that people with a high degree of impatience at leisure and emotionality are more susceptible to be addicted to mobile, and people with high self-esteem are less inclined to mobile addiction and the individuals with low self-esteem and high emotionality have the highest inappropriate use of mobile. Azadnam et al. (2013) also examined the relationship between the rate of using Internet and mobile phone with depression, anxiety and stress in students, and found that there is not a significant relationship between the use of the Internet and the scores of depression, anxiety and stress, but there is a significant positive relationship between the useof mobile phone and depression, anxiety and stress.

Finally, it can be concluded that mobile and internet addiction has been recently considered as a mental disorder and the number of clients that referto psychiatry clinics is gradually increasing. Internet and mobile are not human enemies, but people depend on it for various reasons because they take away the people from real life and can have negative effects on their lives. Internet and mobile phones, because of creating the false appeal, gradually make the people addicted to them and can provide their emotional and psychological needs. It is while the extensive use of Internet and mobile causes disorders in psychological, social and emotional growth because of the absent of common experiences and creates behavioural disorders and self-emersion in contacting with others (Atashpour and Nadi, 2004).

Cell phone as a new informing tool, in addition to wide applications in various fields of information, communication systems, sustainability, making funny, irritability, has some inappropriate social consequences such as psychological addiction, insecurity of values, reduced social interactions, gradual erosion in national literature, pubertas praecox, unethical Bluetooth and short messages and endangering personal safety. On the other hand, given that the mental health of students as future managers of this territory is very important, the present study investigates the relationship between addiction to mobile and anxiety, depression and stress in Islamic Azad University students in Birjand. We hope the results of this study can be a step towards planning and development of mental health and psychological well-being of students.

METHOD

The present study is a correlative one. The statistical population of this study consisted of all students studying in Islamic Azad University of Birjandin academic year 2013-2014.The total population was 6540 people including 2392 women and 4148 men; among them, we selected 209 individuals as the sample size using stratified random sampling, from all departments according to the population of each department, and participated in the study.Finally,209 subjects (76 women and 133 men) were tested. To analysethe data, we used descriptive statistics such as calculating and drawing tables, frequency distribution, mean, and standard deviation and to test the hypotheses, Pearson correlation coefficient and nui-variateregression were used.

Research Tools:

a) Mobile addiction questionnaire: this questionnaire has 22 items that have been used by Walsh et al. (2008); this questionnaire includes three sub-tests. The items of each sub-test have been formed successively such that the primary items measured the tolerance and withdrawal, the following items measured the disorders of life, and the final items measured the deterministic and persistentfactor in using cell phone. Scoring was done based on a 5-point Likert scale in which each question is scored from 1 to 5 scores. Scores of subjects in the questionnaire were evaluated based on standard T-score. The subjects who obtained scores fromzero to 62 were classified as the ordinary mobile phone users;those who gained scores of 62-70 were classified as heavy users of mobile; and those who obtained scoreshigher than 70 were classified as the mobile phone addicted users. In this study, factor analysis was used to determine the validity of questionnaire. Since, KMO sampling adequacy index is 0.89 and in Bartlett's test P <0/001 was also significant,the results of factor analysis can be confident. To perform factor analysis,the method

of key elements with by rotating the variance was used.

b) Depression, anxiety and stress scale (DASS-21): this scale was developed by Lovibond and Lovibondin 1995.This scale has two forms. The short form has 21 items, which measures each of psychological constructs of "depression", "anxiety" and "stress" with seven different items. The long form includes 42 items, which each of 14 items measures one psychological factor or construct. The 21-item short form was validated for the Iranian population by Sahebi et al. (2005). Anthony et al. (1998) reported the reliability of these instruments with Cronbach's alpha for depression, anxiety, and stress equal to 0.95%, 0.90% and 0.93, respectively. In Iran, Moradi et al. (2005) determined the validity of the instrument. They reported the Cronbach's alpha for depression, anxiety, and stress equal to 0.97, 0.92 and 0.95, respectively. In the present study, reliability was obtained for depression, anxiety, and stress by Cronbach's Alpha equal to 0.87, 0.90 and 0.83, respectively.

RESULTS

209 students were studied that 133 were males and 76 were females. The highest frequency (n=92) was related to the students of ages 21-25 years and the lowest frequency (n=58) was related to the students of ages 20 years and lower. The minimum age was 16 years and maximum age was 37 years and the average of age was 23.68±3.98. The studied sample, in terms of education, included 130 undergraduate (B.A.) students and 14 associate diploma; and in terms of marital status, 146 students were single.

According to the table above, there was a significant positive correlation between anxiety, depression and stress with addiction to mobile among students (p<0.001). In order to determine to what extent the mobile addiction can explain the variable of anxiety, uni-variate regression was used that the mobile addiction as independent variable and anxiety as dependent variable were entered into the equation; the test result showed that mobile addiction can explain about 15% of anxiety variable which was statistically significant (p<0.001; F=35.72).

In order to determine that to what extent the addiction to mobile can explain the variable of depression, the uni-variate regression was used, in which the mobile addiction as independent variable and depression as dependent variable were entered into the equation. The result of the test showed that mobile addiction can explain about 14% of depression variable which was statistically significant (P<0.001 and F=34.63).

In order to determine that to what extent the addiction to mobile can explain the variable of stress, the uni-variate regression was used, in which the mobile addiction as independent variable and stress as dependent variable were entered into the equation. The result of the test showed that mobile addiction can explain about 20% of depression variable which was statistically significant (P<0.001 and F=52.23).

Table 1 Findings related to subscales of research

Variable	Mean	Standard deviation	Median	Mode	Minimum score	Maximum score
Mobile addiction	62.1	17.42	62.50	61	22	110
Depression	7.67	4.75	7	4	0	21
Anxiety	7.30	4.46	7	11	0	21
Stress	8.86	4.60	9	7	0	21

Table 2 Relationship between mobile addiction and anxiety, depression and stress

Variable	Depression	Anxiety	Stress
Mobile addiction	r=0.38	r=0.38	r=0.2645
	P<0.001	P<0.001	P<0.001

Table 3 Variance analysis of regression related to the effect of mobile addiction on students' anxiety

Source of changes		Sum of squares	Degree of freedom	Mean of squares	F	Sig.	Correlation coefficient	Determination of coefficient
Addiction to mobile	Regression	608.53	1	608.53	35.72	<0.001	0.38	0.15
	Reminder	3543.97	207	17.04				
	Total	4152.50	208					

Table 4 Variance analysis of regression related to the effect of mobile addiction on students' depression

Source of changes		Sum of squares	Degree of freedom	Mean of squares	F	Sig.	Correlation coefficient	Determination of coefficient
Addiction to mobile	Regression	674.21	1	674.21	34.63	<0.001	0.37	0.14
	Reminder	4049.77	207	1947				
	Total	4723.98	208					

Table 5 Variance analysis of regression related to the effect of mobile addiction on students' stress

Source of changes		Sum of squares	Degree of freedom	Mean of squares	F	Sig.	Correlation coefficient	Determination of coefficient
Addiction to mobile	Regression	887.11	1	887.11	52.23	<0.001	0.45	0.20
	Reminder	3532.61	207	16.98				
	Total	4419.71	208					

DISCUSSION AND CONCLUSION

The objective of the present study was to investigate the relationship between mobile addiction, and anxiety, depression and stress in students of Islamic Azad University of Birjand. The first finding of the present study shows that there is a significant positive relationship between anxiety, depression and stress with students' addiction to mobile. This finding is consistent with those of previous studies, including Azadnam et al., (2013),Yassaminejad et al., 2012, Manteghi (2007), Igarashi (2008) who showed that there is a significant relationship between mobile addiction and anxiety, depression and stress. In explaining this theory, it can be said that a depressed person feels lonely. This fact causes s/hetries to find a way to escape, thus by communicating via mobile and virtual world, a deep and inseparable link is established between the individual and mobile with imaginary world. Here is that, not only the individual does not tolerate any anxiety by using a mobile phone, but also faces problem by separating it and is somehow addicted to the mobile.

In other words, we can say that the person who is suffering from stress and anxiety has to concentrate her/his mind to something to reduce her/his stress and anxiety. Since establishing communication with other people is difficult in such an environment,the individual has to deal with virtual world and modern communication media in order to reduce some of her/his anxiety and stress, and make connection with new people via this way. From one hand, the continuation of issue creates a kind of dependency in the individual, which provides the ground of addiction to mobile and the virtual world. On the other hand, this pseudo-dependency is created under the effect of several factors. The key reason in the Internet and related subjects, including mobile, is the reinforcement that the person receives. The first time a person experiences the internet, s/he is reinforced with its responses, which causes this activity continues; and thens/he becomes conditional to do that activity to obtain the same response. This type of conditioning may be developed to the related aspects of the activity such as bell sound, the sense of touching keyboard, and so on. These secondary reinforcements, in turn, operate as a sign of addiction syndrome and sustain its associated syndrome (Khanjai and Akbari, 2011).

The second research finding shows that mobile addiction can predict about 14% of depression variable, 15% of anxiety variable and 20% of stress variable. It is inferred from these findings that the higher the mobile addiction increases, the higher the rates of depression, anxiety and stress also increase in users. This finding is consistent with those of previous studies including Thome et al. (2007) that showed the use of mobile phone for long time is associated with the increased risk of chronic stress and depression. Also Buskom (2008) carried out a research on too distressed people and the type of using of mobile phone in 183 people aged between 18 and 75 years old. The results showed that people who suffer from high anxiety, excessively and addictively use cell phone.

Since, prevention proceeds treatment and based on the results of the present study, it is worth that this phenomenon is considered as a psychological problem which the young and future-maker generation suffers from it and by training the individuals in families, schools and universities, the correct culture of using computers, the Internet and mobile facilities is developed and the wrong methods are replaced by correct ones. Psychiatrists and Psychologists who are working in the field of mental health are required to be aware of the psychological problems resulting from mobile addiction, such as anxiety, depression, aggression, and job and schooling dissatisfaction among the mobile addicted users. The statements of the problems and troubles resulting from mobile reveal that the correct training and appropriate culturalisation must be done in families and society for the proper use of cell phone.

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