



The Study of the Relationship between Internet Addiction and Depression, Anxiety and Stress among Students of Islamic Azad University of Birjand

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Keywords

Internet addiction
Anxiety
Depression
Stress

Abstract

Objective: The present study has been done to investigate the relationship between Internet addiction and depression, anxiety and stress among the students of Islamic Azad University of Birjand. **Methods:** This study is a correlative one and the statistical population included all students of Islamic Azad University of Birjand who were educating in the academic year 2013-2014 that based on the information obtained from the university their number is 6450 students. Of these, 209 individuals were randomly selected, that 133 individuals were male and 76 individuals were female. The instrument of collecting data was the standard questionnaire of Internet addiction, depression, anxiety and stress. To analyze data, the tables and graphs of the frequency distribution, mean and standard deviation in the descriptive part and the Pearson correlation and regression analysis in analytical part were used. **Results:** The results showed that there is a positive and significant relationship between addiction to the Internet and anxiety, stress, depression as a whole and all its components. The regression results also indicated that in general, addiction to the Internet can predict about 17% of depression variable, 20% of anxiety variable and 13% of stress variable. **Conclusion:** The study of the underlying causes of Internet addiction and consequently, prevention of it seems necessary based on the findings of this study.

1. Introduction

The use of IT and new technologies is one of the obvious effects of the world ahead; the Internet also as one of the newly-established technologies of the modern world has a great role in changing the lives of the individuals of the society. Internet has been able to rapidly become an essential tool of life with its arrival, as far removing it from everyday life is inevitable (Farshbaf, 2009).

Internet is one of the advanced tools technology that detecting its addictiveness is very difficult from its beneficiary. Although, statistical manual of mental disorders (DSM-IV) published by the America Psychiatric Association has stated some cases to identify this disorder (Frod and Schroeder, 2010). Nevertheless, today the use of the term *Internet addiction* is seen frequently by scholars such as Kandell and Young (Kandell, 1998; Young, 1998). The growing increase and unpleasant disorders that are generated by Internet addiction have caused that this addiction is considered as an addiction which is the source of the other behavioral addictions (Hamidian, 2000). This disorder is an interdisciplinary phenomenon that various medical, computing, sociology, law, ethics, and psychological sciences have studied different aspects of this phenomenon (Moaidfar et al, 2008).

Ivan Goldberg first introduced Internet Addiction Disorder in 1959. Internet addiction creates a behavioral dependency to the Internet and is determined with the following properties: increasing costs for the Internet and its related issues, feeling unpleasant emotions (such as anxiety, depression, ...) when the individual does not contact with the Internet, the ability to tolerate and adapt to the effects of being in the Internet, a denial of problematic behaviors; according to this point of view, the disorder is considered as tension disorder or impulse control disorder such as pathological gambling and those who reach this level, face psychological, social and vocational problems (Gonzalez, 2008).

The Internet itself is mostly harmless tool, but the overuse and incorrect use of it encourages the risk of addiction, that this phenomenon has brought many problems for young people. Internet addiction has changed the human beings to the abandoned ones and affects their social relationships influence. For example, in several studies (Ko et al, 2008; Yen et al, 2008), it was shown that among users addicted to Internet, depression has much prevalence than normal users, while Namazee et al (2005) found that there is no significant relationship between the rate of Internet use and depression among users. Akini and Iskender (2011) by studying Turkish students reported that depression and anxiety are significant predictors of Internet addiction. Jalalipour et al (2012) by studying 330 students reported that anxiety is a significant predictor of Internet addiction.

Ko et al (2007) stated that Internet addiction relates to psychological variables such as shyness, loneliness, anxiety, depression, and interpersonal relations. On the one hand, Ha et al (2007) in a study showed the relationship between depression and Internet addiction in adolescents. Hakimzade et al (2010) in a research in the students of Tehran University dormitory found there is a significant relationship between internet addiction and depression. Nademi and Rezvani (2006) in a study showed that people at risk of Internet addiction indicate symptoms such as anxiety, loneliness, depression, temperament and weaknesses in self-confidence. In this regard, Barak and King (2000) studied the pathological consequences of Internet use on psychological status such as feelings of isolation, depression, etc and have provided conflicting results.

On the other hand, it seems that one another of the variables that could predict Internet addiction is stress. Stress is a state or psychological process in which the individual finds his/her physical and psychological well-being as a threatening situation. In fact, creating stress depends on how the individual perceives the situations and events. A situation may be safe for someone and may be perceived as a threat for someone else (Clark, 2010). All types of social, economic and psychological stresses play a role in creating and developing Internet addiction. In this regard, Nastizaei (2010)

writes: the users addicted to the Internet have considerable anxiety and apprehension. These individuals may therefore use the Internet as an escaping way, that is, when a person does not have access to the Internet, s/he becomes anxious and to reduce his/her anxiety, s/he precedes Internet.

Alavi et al (2010) in a study examined the relationship between psychiatric symptoms of Internet addiction in Isfahan University students; they showed that there is a significant positive correlation between psychiatric disorders such as depression, anxiety, stress, hypochondriasis, compulsion, interpersonal sensitivity, aggression, paranoia, phobias, psychosis and Internet addiction. Jafari and Fathizade (2012) in a study showed that there is a significant positive relationship between Internet addiction and each of the clinical variables of depression, anxiety, stress and social phobia.

Different sciences have studied this phenomenon in several angles and have mentioned different theories to explain this disorder. The biomedical theory emphasizes on hereditary and congenital factors, chemical fluctuations in the brain, and neurotransmitters. While the socio-cultural theories point out that addiction differs in connection with age, gender, socioeconomic status, race and nationality; therefore, it can be assumed that Internet addiction is more prevalent in certain groups, but since there is little research in this area, we can not properly indicate which groups are more susceptible for Internet addiction (Davoodabadi, 2005).

Therefore, according to the mentioned subjects, examining the factor providing the ground for Internet addiction and consequently prevention of it seems necessary, so the present study was conducted on students of Birjand Islamic Azad University to examine the relationship between Internet addiction and anxiety, depression and stress.

2. Methodology

The present study is a correlative one and the statistical population included all students of Islamic Azad University of Birjand who were educating in the academic year 2013-2014 that their number is 6450 students. Of these, 2392 individuals were females and 4148 individuals were males; the sample size includes 209 individuals that were selected through stratum random sampling according the number of students of each college; totally 209 participants (133 males and 76 females) were tested. To analyze data, calculation and drawing tables, the frequency distribution, calculating mean and standard deviation were used in the descriptive statistics and the Pearson correlation and single-variable regression were used to study hypotheses.

The instrument of research

a. The Internet Addiction: Internet Addiction Test is and a reliable and valid method for measuring the addiction to the use of Internet. This questionnaire consists of 20 items and had been prepared to measure the level of dependence of the individuals to work with the Internet or computers by Dr Kimber Li Yang (1996). Its responses have been set on a five-scale continuum from “rarely”, “sometimes”, “often”, “very often” and “always” which measures the degree of the Internet addiction as mild, moderate, and severe. The lowest received score is 20 and the highest score is 100. The above test measures six aspects that include being prominent, overusing, negligence, waiting, and lack of control and neglect of social life.

In performing Internet Addiction Test, Young et al (1998) achieved Cronbach’s alpha over 0.90. In Iran, Soltani (2010) obtained a reliability coefficient of the questionnaire equal to 0.94. In the present study, the reliability in Cronbach’s alpha was obtained equal to 0.84.

b. Depression, anxiety and stress survey (DASS-21): This questionnaire was prepared by Lovibond and Lovibond in 1995. This scale has two forms. The short form contains 21 items that any psychological construct of “depression”, “anxiety” and “stress” is evaluated by 7 different terms. The long form includes 42 items that each measures the 14 terms of an agent or a mental construct. The 21-item short form was validated by Sahebi et al (2005) for Iranian population.

Antony et al (1998) reported the reliability of this tool with Cronbach’s alpha equals to 0.95 for depression, 0.90 for anxiety and 0.93 for stress. The validity of this instrument was also determined by Moradipannah et al (2005) in Iran so that the Cronbach’s alpha was reported equals to 0.97 for depression, 0.92 for anxiety and 0.95 for stress. In the present study, reliability through Cronbach’s alpha was obtained as 0.87 for depression, 0.90 for anxiety and 0.83 for stress.

3. Results

Table 1. Results of the research subscales

Variable	Mean	Standard deviation	Median	Mode	Lowest score	Highest score
Being prominent	10.45	4.62	9	5	5	25
Overusing	11.02	4.49	10	6	5	25
Negligence	6.18	2.96	6	3	3	15
Waiting	4	1.87	4	2	2	10
Lack of control	6.57	3	6	3	3	15
Neglect of social life	4.08	2.03	4	2	2	10
Total Internet addiction	42.30	16.64	38.50	20	20	100
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

As the above table shows, Internet addiction in the whole is 42.30 ± 16.64 and among the components of Internet addiction, the highest mean was related to “overusing” and the least mean was related to the component of “waiting”.

Table 2. The relationship between Internet addiction in general and its components with anxiety, depression and stress

Variable	Depression	Anxiety	Stress
Being prominent	r= 0.45 p<0.001	r= 0.44 p<0.001	r= 0.36 p<0.001
Overusing	r= 0.36 p<0.001	r= 0.40 p<0.001	r= 0.36 p<0.001
Negligence	r= 0.32 p<0.001	r= 0.37 p<0.001	r= 0.29 p<0.001
Waiting	r= 0.26 p<0.001	r= 0.29 p<0.001	r= 0.23 p<0.001
Lack of control	r= 0.37 p<0.001	r= 0.39 p<0.001	r= 0.30 p<0.001
Neglect of social life	r= 0.28 p<0.001	r= 0.36 p<0.001	r= 0.25 p<0.001
Total Internet addiction	r= 0.41 p<0.001	r= 0.36 p<0.001	r= 0.25 p<0.001

According to the above table, there is a significant positive correlation between the anxiety, stress, and depression with Internet addiction as a whole and all its constituents, in the studied students ($p<0.001$).

To determine that the Internet addiction as a whole to what extent can explain the variable of anxiety, single-variable regression test was used that the results showed that the Internet addiction as a whole can explain the variable of anxiety up to 20% which is statistically significant ($p<0.001$ and $F=51.83$).

Table 3. Regression analysis of variance related to the role of Internet addiction on anxiety

The source of changes		Sum of squares	Degree of freedom	Mean of squares	F	Significance level	Correlation coefficient	Determination factor
Internet addiction as a whole	Regression	828.28	1	828.28	51.83	<0.001	0.45	0.20
	Remainder	3324.21	207	15.98				
	Total	4152.50	208					

To determine that the Internet addiction as a whole to what extent can explain the variable of depression, single-variable regression test was used that the results showed that the Internet addiction as a whole can explain the variable of depression up to 17% which is statistically significant ($p<0.001$ and $F=42.20$).

Table 4. Regression analysis of variance related to the role of Internet addiction on depression

The source of changes		Sum of squares	Degree of freedom	Mean of squares	F	Significance level	Correlation coefficient	Determination factor
Internet addiction as a whole	Regression	796.82	1	796.82	42.20	<0.001	0.41	0.17
	Remainder	3927.16	207	18.88				
	Total	4723.98	208					

To determine that the Internet addiction as a whole to what extent can explain the variable of stress, single-variable regression test was used that the results showed that the Internet addiction as a whole can explain the variable of stress up to 13% which is statistically significant ($p<0.001$ and $F=31.45$).

Table 5. Regression analysis of variance related to the role of Internet addiction on stress

The source of changes		Sum of squares	Degree of freedom	Mean of squares	F	Significance level	Correlation coefficient	Determination factor
Internet addiction as a whole	Regression	580.51	1	580.51	31.45	<0.001	0.36	0.13
	Remainder	3839.21	207	18.64				
	Total	4419.81	208					

4. Discussion and conclusion

The objective of this study is to investigate the relationship between Internet addiction and anxiety, depression and stress in students of Islamic Azad University in Birjand. The study sample is all students of Birjand University.

Internet addiction has been recently addressed as a mental disorder and gradually the number of patient referrals to psychiatric clinics because of this disorder is increasing. The Internet is not an enemy, but the people depend on it for various reasons, because it goes them away from their real life and has a negative impact on their life. Using the Internet due to its false appeal to the people slowly makes them addicted to it and can provide them the emotional and psychological needs. It is while overusing Internet causes the mental, social and emotional growth of the users become behaviorally disordered due to lack of conventional and group experiences with the other people and leads them to self-involvement (Atashpour and Nadi, 2004).

The first finding of this study shows that there is a significant positive correlation between anxiety, depression and stress with Internet addiction in general and all its components among the students; this finding is congruent with that of previous researches (Ko et al, 2007; Ha et al, 2007; Alavi et al, 2010; Jafari and Fatehizade, 2012), who showed that there is a significant relationship between anxiety, depression and stress with Internet addiction, but it is against the result of researches by Namazi et al (2005), who showed that there is not a significant relationship between the rate of Internet use and the users' depression.

In determining the relationship between anxiety and stress with Internet addiction, we can state that the high anxiety and stress may have existed before the Internet use, that is, the anxious individuals may use Internet as an escaping way. Similarly, anxiety and stress may occur due to addiction to the Internet, that is, when the individual becomes addicted to the Internet, s/he becomes restless, worried and anxious, and uses Internet to reduce her/his anxiety and stress (Mirzaeian et al, 2011). In this regard, Nastizaei (2010) writes: the users addicted to the Internet have considerable anxiety and apprehension. These individuals may therefore use the Internet as an escaping way, that is, when a person does not have access to the Internet, s/he becomes anxious and to reduce his/her anxiety, s/he precedes Internet.

In explaining the relationship between depression and Internet addiction it can be said that depression may therefore act as a trauma that predisposes individuals to develop Internet addiction. Some people use the Internet to reduce their depression so that the Internet may provide an alternative to the joyless life. Similarly, depression may occur due to addiction to the Internet, that is, the individuals who become addicted to the Internet experience the negative consequences resulting from it such as depression; therefore, according to the present study, we can not give any idea about the precise reason of the relationship between Internet addiction and depression and this issue requires further study. The consequences of focusing more on the quality of the virtual world have various impacts on the spirits and the temperament of the people. Therefore, overusing internet causes physical laziness and developing hypoergasia, and reduces having relationship with others in the real world and as a result causes social isolation.

The second finding of the present study indicates that Internet addiction as a whole can predict the variable of depression up to 17%, the variable of anxiety up to 20% and the variable of stress up to 13%; this result is consistent the results of previous studies such as Maarten et al (2009) that showed the use of Internet is the predictor of depression and social anxiety in adolescents and young adults.

Brummett et al (2001) argue that uncontrolled use of the computer places at risk the physical, social and emotional development of young adolescents. Variables, such as depression which is one of the most conventional mental disorders, are associated with a series of biological symptoms such as emergence of changes in appetite, kinetic activities, sexual interest or activity and hypnosis; and anxiety that is a spread, very unpleasant and often vague feeling of uneasiness which is associated with one or more physical feeling(s), for example, the empty feeling in the heart, shortness of chest, heart palpitations, headache or sudden compulsive urge to urinate and a desire to move are common symptoms of it. Anxiety is a warning sign. It is the news of the imminent danger that makes the person ready to deal with the threat, and stress is a binding isolation or avoidance of communicating with others. In other words, the use of Internet as a means for escaping from the problems, reducing the frustration feeling, anxiety and depression or spending a lot of time in the Internet to find virtual friends to reach imaginary affairs that are not possible in the real world by some of individuals addicted to the Internet is a factor for dependence to the Internet.

Of limitations of the present study is the intended population and statistical sample (stratum-random) that are the students of Islamic Azad University of Birjand; therefore, generalizing the obtained results to the other students and universities must be done with caution. Also, according to the existence of relationship between Internet addiction and general health, this is an alarm that the cultural authorities of universities provide the necessary facilitations in providing the culture for accurate use of the Internet and informing about the dangers of Internet addiction, the symptoms of Internet addiction and the ways of preventing it in their working plan. It also suggested that the role of Internet addiction in anxiety, depression and stress is studied using techniques such as structural equation model to clarify the causal role of these variables in the development and maintenance of Internet addiction.

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