Relationship between Internet Addiction, Mental Health, and Academic Performance among Adolescents 15 to 18 Years Referred to Cafe-Net in Hamedan-Iran

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Abstract: The current study examined the association between internet addiction, mental health, and academic performance. Respondents of the present study comprised of 351 male and female adolescents who were identified by random sampling technique. Instruments for data collection included Internet Addiction Test (IAT) and General Mental Health (GHQ). The results of the Pearson correlation analysis revealed a positive relationship between mental health with adolescent internet addiction and academic performance. In contrast, the results of present study indicated a negative relationship between internet addiction and academic performance. Also, the results of multiple regression showed that mental health and internet addiction predict adolescents' academic performance.

Introduction

In the recent years with the development of science and communications that were the pioneers of the industrial revolution like the internet with thousands of new users every day and near 200 million users all around the world, are shaping a communication, social and economic revolution(Khajeh Moughi & Alasound, 2011). Nowadays internet is at the peak of the mountain of digital industrial revolution and any new revolution will have its own new problems. Unique specifications of the internet like being reachable 24 hours per day, easy to use, cheap, staying unidentified as a user all made it very popular all around the world(Shaw & Black 2008). so for all these reasons it causes an addiction to the internet that is related to the long hours of using the internet, its high speed, being reachable and the huge amount of information that are being transferred online and if this hypothesis is right so we will have higher amount of addiction to the internet if we upgrade the modems and the systems and the internet and have better internet and faster speed (Kim et al., 2010).

Phenomenon of addiction to the internet is a disorder and is the kind of use from the internet that could cause psychological, social, study or work problem for the user. The most common definition for addiction to the internet is that it causes a kind of behavioral attachment for the user. The main syndromes of addiction that must continue for at least 20months are as follows: bearing, addiction syndromes (like shaking, anxiety, having repeated thoughts about the internet, hallucination, dreaming about the internet, moving the fingers willingly or unwillingly). Being force to use the internet to decrease or stopping the symptoms of addiction, using the internet more than what is needed and usual, decreasing social, work and fun activities and risk of losing job, study and job opportunities because of using the internet more than usual(Nimz Grifthz and Ban Yard 2005).

So internet by itself is a harmless tool but by using it more than usual and in the wrong way it will make big troubles for the users and so the society. In spite there are different researches going on regarding the effects of the internet on the users. Some of the

researchers believe that the best way for a teenager to grow socially and emotionally is to interact with other people and learn by experience and interact with others; but when people are spending so much time with the internet there will be no motive to interact with others and they will also be less able and interested to keep their friendships; also will spend less time with their families and with experiencing more anxiety they will feel more lonely and depressed(Ghasemzadeh, Shahriari and Moradi, 2007; Skilli, 2002; Vizshafar, 2005; Kim & colleagues, 2010).

The researches in the last few years shows the rate of spread of addiction to the internet is between 3% to 22%, regarding the fact that near 60% of people on earth are using it in some ways (Lam, 2009; Sanchez et al., 2008). With regard to the effects of addiction to the internet on the life of the users like changing the life style for having more time to surf on the net, having no concerns about him/her health, ignoring the important activities of life, decreasing social relations, don't care about the family, friends and relatives, educational problems because of spending lots of time on the internet, financial problems because of the internet costs and its whereabouts, all of these factors will directly affect the psychological health of the addicted user.

Nasty Zane (2009) believes that psychological health in interactions and involving on positive activities, starting relations with family and friends and also being successful in education and work and addiction to the internet is opposite to all these. Psychological health of a person is crucial in affecting his/her education. Surly a good learner must interact with its activities in a useful way, must be able to interact with his/her teachers and classmates in a useful way and also be able to overcome the problems of educational anxiety. One of the psychological organizes is to be able to interact with other people and that means a good and successful learner is a person who can affect the environment and also answers to others organizing interactions (Seyed Mohammadi, 1386).

Lam et al. (2009) indicated that the internet like other technologies will cause body laziness, help low movement and decrease the effort to interact with others in real world and so it will cause social isolation and will affect the psychological health of the person. Also Ghasemzadeh et al. (2007) showed that using too much of the internet will affect the family relationships diversely.

Regarding the researches of Ko et al. (2008) addicted users of the internet have more anxiety than normal people and they also aren't able to make personal contacts and this anxiety will affect their educational, work and family environment directly. Also with regard to the increasing number of the users of the internet for work and personal reasons, makes it clear that this research and the relation between the psychological health of the person and its educational work and its importance are opposite in this regard.

Kim et al. (2010) by examining the demographic variables as the foreseen variables believe that sex, age, being jobless and being married are the affective variables for being attracted to the internet. It's obvious that the teenagers and young people and also the ones that have lots of time will be more attracted to the internet and spending time with this communication device. In some other studies they do it by the user's personal behavior like shame, loneliness, anxiety, depressed and psychological behaviors (anxiety, anger, depressed, shame and being vulnerable on stress), roughness and quarrelsome, being an inside person, low self-respect, unsteady feelings and imaginative, looking for new things, trying not get hurt and don't look for any reward are effective in addicting to the internet (Wan et al., 2008).

Kaoo (2007) investigated relationship between being a maniac and moody and attracting to the internet on Chinese youth showed that being attracted to the internet is opposite to the psychological health and the ones that have this kind of addiction shows high levels of anxiety and depression and there is also a straight connection between being a maniac and moody person. Thong (2008) investigated personality differences between ordinary and addicted students. He found that behaviors like being an inside person, being too open and also the amount of anxiety are related to the addiction to the internet. Bridge (2001) showed that the lonely people that are not socially protected will be more vulnerable to the addiction to the internet.

Mottram (2009) indicated that there is no a significant relationship between internet use and depression. While, users who spend more time in chat room suffer from depression. Also, Mottram showed that internet use lead to high creativity in students. Thus, based on different results of studies; the present study is developed in order to answer this question: whether there is a relationship between internet addiction, mental health and academic performance among adolescents?

Objectives

The objectives of the present study are:

1. To describe the levels of internet addiction, mental health, and academic performance of respondents.
2. To determine relationships between internet addiction, mental health, and academic performance of respondents.
3. To determine the predictors of academic performance among respondents.

Hypotheses

H_a1: There is a significant relationship between Internet addiction and mental health among respondents.

H_a2: There is a significant relationship between Internet addiction and academic performance among respondents.

H_a3: There is a significant relationship between mental health and academic performance among respondents.

H_a4: Internet addiction and mental health predict adolescents' academic performance.

Method

Research design

Research design of the present study is descriptive and correlational.

Participants

The study population consisted of all adolescents who referred to cafe-nets in Hamedan city. These referred adolescents were 20700. According to Levy and Lemshow formula (1999), sample size was determined 351 adolescent (180 male and 171 female). These 351 respondents were selected by random sampling method technique and filled the following questionnaires

Measures

Internet Addiction Test

The Kimberly Yung Internet Addiction Test was designed to gain information about addiction to internet in adolescents. This Scale consists of 20-items. It is rated on a five point Likert scale ranging based on 1=never, 2= occasionally, 3= sometimes, 4= usually and 5= always. The score for internet addiction measured by summing up the scores for the 20 items. The total score ranged from 20 to 100, that high score showing high internet addiction among respondents. You et al. (2004) reported reliability results from the internet addiction with Cronbach coefficient alpha values of .90. Also, Ghasemizadeh (2007) reported reliability results from the internet addiction with Cronbach coefficient alpha values of .88 in Iranian society.

Mental Health Questionnaire

Mental health was measured using General Mental Health Scale (GHQ) by Goldberg & Heller (1979). The GHQ has 28 items with four somatic symptom, anxiety and sleep disorder, social function, and depression symptoms. In the present study, GHQ has demonstrated respectable psychometric properties (alpha =.75).

Analysis of Data

Data from the current study were analyzed using Statistical Package for Social Science (SPSS). Two statistical procedures i.e. descriptive analysis and inferential statistical analysis were used for the data analyses. Descriptive statistics such as mean score, standard deviation, percentage and frequency distribution were used to describe the demographic profiles of the respondents. Inferential statistics that was conducted in the data analysis was Pearson Corelation Analysis to conduct of relationship between internet addiction, mental health, and academic performance. Also, multiple regression analysis was conducted that determine predictors of academic performance.

Results

Descriptive findings

There were different number of male (51.6%) and female (48.4%) adolescents who were involved as respondents of the study.

Levels of internet addiction, mental health, and academic performance

The key variables studied in the present study were internet addiction, mental health, and academic performance. As shown in Table 1, minority of the respondents reported high mental health (3.1%), internet addiction (7.1%), and low academic performance (18.2%).

Table 1: Levels of Variables

Variables	n	%
Internet Addiction		
Medium	200	57
High	126	35.9
Very high	25	7.1
Mental Health		
Very Low	182	51.9
Low	132	37.6
Medium	26	7.4
high	11	3.1
Academic Performance		
Low	64	18.2
Medium	194	55.3
High	93	26.5

Correlation Findings

Analysis of the relationships between internet addiction and mental health

The Pearson correlation analysis was used to study the relationships between internet addiction and mental health. As shown in Table 2, the result of the current study shows that there was a significant positive association ($r = .46$, $p < .01$) between internet addiction and total mental health of adolescents. This means adolescents that who reported higher scores in internet addiction reported higher mental health scores. Also, Pearson correlation analysis indicates that there was not significant relationship between internet addiction and physical complaints ($r=.07$, $p>.01$). While, there was a positive relationship between internet addiction with anxiety and sleep disorder ($r=.24$, $p<.01$), depression ($r= .38$, $p<.01$), social dysfunction ($r=.54$, $p<.01$). This means that adolescents who reported higher scores in internet addiction suffer anxiety, depression, and social dysfunction.

Analysis of the relationships between internet addiction and academic performance

As shown in Table 2, the result of the current study indicate that there was a significant negative association between internet addiction and academic performance of adolescents ($r=-.28$, $p<.01$). This means that respondents who were highly addicted to internet, reported lower academic performance.

Analysis of the relationships between mental health and academic performance

The Pearson correlation analysis showed that there was a negative relationship between mental health and academic performance ($r = -.29$, $p <.01$) between total mental health and academic performance of adolescents. This means adolescents that who reported higher scores in mental health reported lower academic performance scores. Also, Pearson correlation analysis indicates that there was a negative significant relationship between physical complaints and academic performance ($r=-.30$, $p>.01$). Also, there was a negative relationship

between academic performance with anxiety and sleep disorder (r=.-15, p<.01), depression (r= -.22, p<.01), social dysfunction (r=-.20, p<.01).

Table 2: Correlation Analysis

	Variables	X1	X2	X3	X4	X5	X6	Y
X1	Internet Addiction	1						
X2	Mental Health	.46**	1					
X3	Physical Compliments	.07	.40**	1				
X4	Anxiety and sleep disorder	.24**	.82**	.34**	1			
X5	Depression	.38**	.18**	-.06	.18**	1		
X6	Social Dysfunction	.54**	.61**	.14**	.36**	.14**	1	
Y	Academic Performance	-.28**	-.29**	-.03**	-.15**	-.22**	-.20**	1

Analysis of multiple regressions to predict of adolescent's academic performance based on mental health and internet addiction

To determine the best set of predictor variables in adolescent's academic performance, enter regression method was used. Analysis revealed two predictor variables (mental health and internet addiction) were significant in explaining adolescent's academic performance.

As shown in Table 3, the R-squared of .210 implied that two predictor variables (mental health and internet addiction) explained about 21% of the variance in the student's academic performance. This was fairly a good and respectable result. The

ANOVA table revealed [F (3, 347) = 21.99] and P-value was significant (.000). Table 4 revealed that mental health has a significant negative effect on adolescents' academic performance (Beta= -.22, p<.05). It means that one standard deviation increased in mental health is followed by .22 standard deviation decrease in adolescent' academic performance. The beta value for internet addiction is the second predictor (-.17). Also, internet addiction has a significant negative effect on adolescents' academic performance (Beta= -.17, p<.05). It means that one standard deviation increased in internet addiction is followed by .17 standard deviation decrease in adolescent' academic performance. Thus, mental health and internet addiction predict adolescents' academic performance.

Table 3: Multiple regression analysis on academic performance

Model	Total square	t	Mean square	F	Sig	R	R^2
Regression	202.8	3	101.4	21.10	.001	.43	.21
Residual	1667.38	347	4.81				
Total	1870.18	349	-				

Table 4: ANOVA

Model	B	Std.Error	Beta	t	Sig
1 (Constant)	19.56	.72		27.21	.001
Mental health	-.04	.01	-.22	-3.77	.001
Internet addiction	-.05	.02	-.17	-3.04	.002

Discussion and Conclusion

In response to the significant relationship between internet addiction and mental health, the results of the present study indicated that students with high levels of internet addiction reported lower mental health. The present finding is consistent with the findings of past studies (Young, 1998; Orzak, 1999; nasty zany, 2009; phires, 2003; grouhol, 2003). Internet addiction has effect on mental health and mental health is consisted of involvement in positive activities, warm and intimate relationship with friends and family, and academic success. Thus, internet addiction is uncoordinated with all of these components. Thus, adolescents with high levels of anxiety, depression, and social dysfunction are involved in internet addiction. Khajeh Moughi & Alamound (2011) indicated that addicted adolescents to internet reported high levels of anxiety and depression.

In response to the significant relationship between internet addiction and academic performance, the results of the present study indicated that students with high levels of internet addiction reported lower levels of academic performance. The present results is in line to young (1996) and Nasty Zayn (2009). It can be concludes that internet addiction lead to failure in educational, social, and financial in participants. It's clear that adolescents who are addicted to the internet drop in their education.

Chak (2004) indicated that adolescents who are addicted to the internet reported lower academic performance (cited by Omidvar & Sarami, 1381).

In response to the significant relationship between mental health and academic performance, the results of the present study indicated that there is a negative relationship between total mental health and academic performance. This means that adolescents with high scores of mental health (low mental health) reported lower academic performance. The present finding is consistent with Nasty Zayn (2009). Mental health in adolescents is an important factor and directly influences their school performance. A successful student should be involved with his/her activities and homework and be able to communicate with the teacher and his/her classmates to decreases the tensions of school anxiety.

In response to the predictors of adolescents' academic performance, the results of the present study indicated that internet addiction and mental health can predict adolescents' academic performance. The results of the present study are in accordance with Anderson (1997) that investigated the effects of adolescents' internet addiction. He found that 1/3 of adolescents drop in school because of excessive use of internet. The results of the present study is consistent with
Koli (2003) and Ko et al. (2008). Therefore, it can be concluded that the addicted adolescents to the internet ignore his/her responsibilities and this causes drop in school (Vizshefer, 2003).

Suggestions for future research
It is suggested to interested researchers:

1- A research can do be done about the relationship between addiction to the internet and social level.
2- This research is cross-sectional and it is suggested that a longitudinal study with and interview will be done to make clear the results of this research and show different

aspects of adolescent's internet addiction in school.

3- It is suggested that a research examine addiction to the internet in all ages and levels of education.

4- Preparing exact and applicable questionnaire about addiction to the internet which will be suitable for Iran society.

Applicable suggestions

1- Inform people about addiction to the internet in mass media. Today, the use of internet is spreading in Iran. But not many television program talks about damages and problems related to internet addiction. It will be better to use expert idea and make programs about addiction to the internet.

2- Pay serious attention to the communicational and mental problems of adolescents in universities.

3- Teach the proper use of internet in the universities, schools and television.

4- Pay attention to adolescents' entertainment and alternative and enjoying activities in order to decrease their eagerness to chat in the internet and useless searching in the internet.

5- Prepare booklets and brochures to inform adolescents about addiction to the internet and symptoms related to addiction internet.

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