Original Research Article

A Study on Damages of Internet and Social Networks on Students' Mental Health

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Abstract

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The present study aims to investigate the damages induced by internet and social networks on mental health of students of the Payam-Noor University of Khalkhal. The study was conducted through descriptive correlation field study using a questionnaire. Statistical society of the study included all students of Payam-Noor University at Khalkhal in the school year 2015- 16 from among which 235 students were selected via stratified random sampling as the study sample. The data for the study were collected through a researcher-made questionnaire compiled by Poor-Gholami et.al. (2010). Reliability of the questionnaire was calculated using Chronbach's alpha to be 0.93. The data collected were then analyzed via single sample independent t test of Pearson correlation coefficient. Results from Pearson correlation coefficient approved of the positive and significant relationship between mental health and use of internet and social networks in $\alpha < 0.01$ level. Independent t statistical tests revealed that there is a significant relationship between parameters under study including means of variables of mental damages, social control, violence and lack of concentration from the point of view of gender in the subjects under investigation. However, the study failed to find a significant difference in parameters like aggression, lying and sleep disorders. Besides, single sample T test demonstrated that among all parameters of the study, there is a significant relationship between indices of aggression, sleep disorder, lying, and violence with a scale score of 3; therefore, indices of aggression sleep disorder, lying and violence had the highest means in students. Thus, it could be concluded that high levels of internet and social network use could affect mental health in students.

Keywords: Internet, Mental damages, Mental health, Social networks, Students

INTRODUCTION

Looking back and comparing communications in the past with the communicative device at the present, it will be easily noticed how technology has advanced and facilitated life. Simple communication tools available at that time are simply not comparable to the ones modern humans have access to and the difficult and timely letter writing and phone calling are now extremely simplified through huge advancements in technology and areas like mobile phones, internet and more recently social networks like Face book, Twitter, Instagram, Telegram etc. (Alavi et.al. 2009). However, as the great minds were working on developing these technologies to ease human life, they would never have imagined humans in the third millennium would misuse their inventions and solutions for this problem would be sought. The gadgets brought into existence by technology presented the cyber space to humans. The easy access to these communicative devices including mobile phones and the internet let all people from all sectors of the society enter cyber world. In the 21st century, seeing a 6-year-old kid with a smart

phone in hand is not a weird scene anymore (Mohammad-Beigi et.al. 2009). The internet is by nature a necessity in modern life; however, using it excessively increases the risk for addiction to it and this has become one of the major problems for mental health in the society. Nevertheless, contradictory results have been reported from studies on the effects of internet. Nastiezaie (2009) and Dell (2001) believe that the internet brings physical inactivity, intensifies sloth and reduces attempts to make relationships in the real world eventually ending in social introversion. Students in this modern era could share their ideas and beliefs with their fellow counterparts along with experts all around the world and reach learning thereafter. On the other hand, in spite of all advantages that could be mentioned for the internet and the educational and communicative benefits it may have, negative side effects like pornographic content, addiction, antisocial behavior, infidelity in families, crimes could also be brought up by it (Ranjbar, 2009). Moreover, social networks are among the most efficient tools affecting people in social aspects of life in different societies and other dimensions of life including education, medicine, business and legal systems (Masic et.al. 2012). Social networks offer online services letting people have their own specific account, introduce themselves to others, share what they know and communicate with others. Therefore, they can maintain their relationships with their acquaintances and form new relationships (Boyd & Ellison, 2007). Social networks not only form new interactions in social fields and interpersonal relationships, but also play a huge role in business and career interactions (Almquist, 2011). In case of damages induced by social networks, the important point is their high level of cultural and social risks (Garcia et al., 2005). Different social networks with millions of users are increasingly gaining attention from cyber hackers. Users of these networks spend numerous hours of their lives chatting with their friends or checking their personal pages in those networks (Boyd et al. 2008). Face-to-face communication fades away because of virtual relationships in cyber space and end in social introversion and improper sociability (Boyd and Ellison, 2007). This environment could offer novel facilities and this could decrease real world communications. This will eventually reduce human's role as a human in this world. Addiction to the internet has now become a challenge for families throughout the world. Expansion of social networks among internet users necessitates a thorough investigation on human relationships (Laros et.al. 2003). Studies have shown that individuals using internet excessively, have little communications with family members and their real world friends. Furthermore, these studies have shown that there is no significant relationship between internet use, depression and relationship with fathers (Mashayekhi and Boroojerdi, 2003). Other studies have demonstrated that self-esteem in excessive internet users is significantly lower than those using the internet normally (Alavi et al., 2010). However, several studies have found high prevalence of depression among addictive internet users compared to normal users (Fallah Mehneh, 2007). On the other hand, some of these studies have shown that using internet has decreased levels of depression in some depressed people. It should be noted that this depression was induced by lack of self-esteem, low self-recognition, and fear of being neglected by others (Nastiezaei, 2009). Stress in addictive internet users is significantly higher compared to normal users. Besides, general health condition is in a higher risk in addictive internet users than that of the normal users. The effect of the internet on depression and stress either its increase or decrease depends greatly on the type and time of internet use (Fallah Mehneh, 2007). Hakim Zadeh, Noorollahi, Zadeh Gholam and Akbari (2010) conducted a study titled dependence to the internet and depression in students residing Tehran University Dormitory Complex and found that there is a significant relationship between them. Nasti Zadeh (2010) investigated the relationship between general health and addiction to the internet in students of Sistan Baloochestan University and discovered that students addicted to the internet face a higher risk of general health especially in case of stress and depression. However, internet addicts and normal users were in a similar condition in global levels and were not significantly different compared to each other. Besides, the effect of the internet on stress and depression depend greatly on the time and type of internet use weather in its increasing or decreasing effect. Windham (2008)studied the relationship between internet relationship interferences and psychological changes in 614 male students who had used the internet for 35 consecutive months and found major defects in studies, aggression, and social introversion. Kao et al. (2007) and Yen et al. (2007) investigated psychological, personal and social traits of students using the internet excessively and compared them to normal students. Their results revealed that the level of depression, stress, suicide attempts, hyperactivity, fear, social fear, aggression and violence along with antisocial behaviors was significantly higher in students addicted to the internet. Results from studies by Kim et al. (2006) and Yen et al. (2007) revealed that the level of depression, stress, fear and social phobia is higher in students addicted to the internet. Recent studies by Canadian scholars have also shown that adolescents using social networks regularly are in higher risks of mental problems. The time these teenagers use at Face book, Twitter and Instagram could cause serious problems (Widyanto and McMurran, 2004). In this regard, the internet and social networks act as indispensable parts of modern life and are considered the only route for communication among humans. Different people depending on their age, gender, place and time use them for different reasons and spend some of their time there (Thompson et.al. 2008). Therefore, it becomes

Table 1. Reliability of the questionnaire

Index	Total Chronbach's alpha	Single Chronbach's alpha
mental damage		0.842
social control		0.878
violence		0.901
aggression	0.876	0.863
lack of concentration		0.808
lying		0.923
internet use		0.917

Table 2. Results from Kolmogorov Smirnov test

Variable Report	Statistic	Level of Significance
Mental health	0.66	0.76

Table 3. Pearson correlation test between mental health and internet and social network use

Variables	1	2	3	4	5	6	7	8
1 mental damage	1							
2 social control	0.78*	1						
3 violence	0.36*	0.63*	1					
4 aggression	0.58*	0.47*	0.21*	1				
5 lack of concentration	0.27*	0.34*	0.38*	0.21*	1			
6 sleep disorder	0.54*	0.37*	0.39*	0.19*	0.31*	1		
7 lying	0.66*	0.36*	0.39*	0.17*	0.26*	0.59*	1	
8 internet use	0.38*	0.62*	0.57*	0.43*	0.41*	0.32*	0.69*	1
				*are significant in $P<0.01$				

of high necessity to investigate the relationship between using the internet and social networks and mental health in students of Payam-Noor University at Khalkhal.

METHODOLOGY

The present descriptive correlation study was conducted as a field study using questionnaires. The statistical society of the study included all students studying in Payam-Noor University at Khalkhal from among which 235 students were selected through stratified random sampling. The data were collected using the questionnaire made by Poor Gholami et.al. (2010). This questionnaire included 20 questions and 7 indices of mental damages, social control, aggression, violence, lack of concentration, lying and internet use. It was a separated questionnaire that evaluated the indices through Likert scale. The reliability of the questionnaire was calculated to be α= 0.876. (Table 1)

Results from factor analysis of the questionnaire from the point of view of 7 dimensions of mental damage, social control, violence, aggression, lack of concentration, sleep disorder, lying and internet use were to 821% of the variance of the extracted questions. KMO= 932% test revealed that the sample size was all right and the factors

are present in the sample. Results from factors over 3% were obtained for seven dimensions using mutual turning. In order to analyze the data, due to their normality, Pearson correlation coefficient, independent t test, and single sample t test were utilized and all these statistical tests were conducted using SPSS 19 computer application.

Table 2 demonstrates results from single sample Kolmogorov Smirnov test. This test shows that if the statistical data are normally distributed. As it could be seen in table 2, in case of all variables, level of significance is over 0.05, which proves normality of the data distribution. Thus, the data are normally distributed.

Question 1: Do internet use and social networks affect mental health of students?

In order to answer this question, Pearson correlation coefficient was used.

Table 3 demonstrates that according to the Pearson correlation coefficient seen in the levels of α<0.05 and α<0.01 is significant among most of the indices of mental health including mental damages (p= 0.01, r= 0.38), social control (p= 0.01, r= 0.62), violence (p=0.01, r= 0.57), aggression (p= 0.01, r= 0.43), lack of concentration (p= 0.01, r= 0.41), sleep disorder (p= 0.05, r= 0.32) and lying (p= 0.05, r= 0.69), there is a significant correlation between using internet and social networks.

Table 4. Comparison of the means of the indices of mental health in students according to their gender

Variables	Gender	Frequency	Mean	Standard Deviation	Degree of Freedom	T Statistic	Level of Significance
Mental damages	girl	70	3.049	0.48	393	- 0.28	0.16
	boy	65	3.5	0.44			
Aggression	girl	70	3.38	0.33	393	0.21	0.003
	boy	65	3.2	0.56			
Lying	girl	70	3.46	0.51	393	0.26	0.000
	boy	65	3.87	0.39			
Sleep disorder	girl	70	3.39	0.41	393	0.19	0.001
	boy	65	3.45	0.46			
Social control	girl	70	3.378	0.49	393	- 0.29	0.12
	boy	65	3.68	0.55			
Violence	girl	70	3.44	0.39	393	- 0.28	0.24
	boy	65	3.13	0.36			
Lack of concentration	girl	70	3.24	0.41	393	- 0.21	0.19
	boy	65	3.67	0.38			

Table 5. Results from comparison between indices of mental health

Variables	Test value= 3				
	Mean	Standard deviation	Degree of freedom	t statistics	Level of significance
mental damages	3.68	0.48	395	2.20	0.9
aggression	3.78	0.71	395	5.87	0.001
lying	3.38	0.67	395	5.60	0.001
sleep disorder	3.65	2.27	395	5.66	0.003
social control	3.12	1.34	395	2.73	0.12
violence	3	0.59	395	4.52	0.000
lack of concentration	2.96	0.50	395	2.43	0.23

Question 2: Is the condition of the indices of mental health proper in students of Payam-Noor University?

Table 4 demonstrates that there is no significant difference in the observed t between indices of mental health including mental damages (P= 0.16, r= - 0.28), Social control (P= 0.12, r= - 0.29), violence (P= 0.24, r= - 0.23) and lack of concentration (P= 0.19, r= - 0.21) in the level of α<0.05. However, the difference between parameters of aggression (P= 0.003, r= 0.021), lying (P= 0.12, r= 0.26) and sleep disorder (P= 0.001, r= 0.19) in the level of α<0.05 was significant. Therefore, the second question concerning the significant difference between indices of mental damages is rejected in case of social control, violence and lack of concentration in case of gender; yet, indices of aggression, lying and sleep disorder approved the research hypotheses.

Since the scores obtained for the present study were in the scale of 1 to five based on the Likert scale, the average score of 3 was taken as the average for scoring. Therefore, each of the indices under study went under a t test with a minimum score of 3. Accordingly, considering the results demonstrated in Table 5, it could be seen that in the level of trust of 99%, and the t value observed, there is a significant difference between indices of aggression (p= 0.001, t= 5.87), lying (p=0.001, t= 5.60),

sleep disorder (p= 0.003, t= 5.66) and violence (p= 0.000, t= 4.52) compared to the score 3. Thus, indices of aggression, sleep disorder, lying and violence acquired the highest average among students.

DISCUSSION AND CONCLUSION

The present study aimed to investigate the damages induced by using the internet and social networks on mental health of the students of Payam-Noor University at Khalkhal. Results revealed that except for two indices of aggression and lying which had no significant relationship with the main variable, the other parameters including mental damages, social control, violence, lack of concentration and sleep disorder had significant relationship with using the internet and social networks excessively. It could be concluded that excessive use of the internet and social networks could induce major damages on society and especially in adolescents at the age of growth and formation of personality. This finding concord with findings from Amichai-hamburger and Benartsy (2003). They believed that students using too much internet feel lonely from the mental health point of view. Corvet (2002) stated that too much internet

Negatively affects mental health in individuals. Accordingly, Byon et al. (2009) concluded that addiction to the internet could initiate destruction of relationships and feelings like sleeplessness, fatigue, low scores at school, irritability, moodiness and lying. Furthermore, findings from this study confirm findings of Kubey et.al. (2001) who thought excessive use of the internet and using it as a hobby induces serious damages to personal achievements, school performance, loneliness, sleep disorders etc. they also confirm findings of Kao et.al. (2007) and Yen et al. (2007) who showed that the level of stress, depression, suicidal thoughts, hyperactivity, fears, social phobia, aggression, violence and antisocial behavior were higher in students using the internet addictively. Besides, results from this study concord with findings from the study conducted by Nasti Zadeh (2010) who demonstrated that general health of excessive internet users especially in case of subscales of stress and depression was in a greater risk compared to normal internet users. This study also revealed that there is no significant difference between indices of mental health including mental damages, social control, violence and lack of concentration. However, it was significant in case of indices of aggression, lying and sleep disorder. Thus, the research question asking about the significant difference between means of parameters of mental damages, social control, violence and lack of concentration is not significant in case of gender in the sample under study. However, in case of parameters of aggression, lying and sleep disorder, the research hypothesis is confirmed. Thus, according to these findings, it could be stated that the internet could have various effects on boys and girls from the point of view of parameters like aggression, lying and sleep disorders. These results could be justified by curiosity of the subjects in their adolescence and their need for meeting their needs and approving their identity. Results have shown that boys generally use more of their physical power in their violent and aggressive behaviors compared to girls. One of the most compatible differences in gender is that boys are generally more aggressive compared to girls. This difference reveals itself when kids get angry and is common in almost all cultures (Nasti Zadeh, 2010). Various environmental and biological factors affect gender differences in aggressive behavior. Biological factors are generally hereditary or hormonal ones; yet, environmental factors include cultural factors and models adolescent boys take from their adults and peers. In case of sleep disorders, there was a difference in boys and girls as well. Sleep disorder is the condition in which sleep patterns disrupt. This disorder is commonly a mental problem however, in some cases; physiological factors may affect them as well. On the other hand, sleep disorders could directly and indirectly threat individuals lives and not only affect the individual himself, but also it may have effects on the family, colleagues and after all the society. Sleep

disorders affect the quality of sleep seriously and damage daily performance of an individual (Ranjbar, 2009). This difference may come from physiological differences in girls and the content they visit in the internet and the messages they send and receive on the internet. Therefore, families must supervise their presence in the cyber space. Internet increases lying in individuals as well and make them lie as their fake characters on the internet. This makes them not fear doing things on the internet for they are not punished for committing them and this brings about differences in boys and girls. The reason behind this difference may be the cultural belief in Iran that mandates stricter controls over girls compared to boys and are under close look from their families due to abstinence and shame arisen from Islamic culture. The internet could intensify this social problem for there is no supervision in cyber space on individuals. Individuals mostly enter the cyber space with fake identities. It should however be noted that this trend toward lying does not merely come from the internet and several other factors could trigger it as well. Social networks on the other hand could intensify this misbehavior. One of the solutions for avoiding this problem could be interesting religious and cultural programs produced and broadcast by television to inform teenagers and their families about the dangers of addictive use of the internet. Besides, schools and families could provide students with discouragement to avoid destructive and pornographic content on the internet. Native culture of a country could act as an effective tool for reducing lying in students. In general, it is vital that students be informed and warned about physical and behavioral dangers of abusing the internet and reinforce moral and valued principles in order to create self-immunity and self-control against dangers of modern technologies. Since prevention is always better than treatment, results from the present study should be taken more seriously and prevent this mental damage in order to save the youth as the constructors of the future of the society. Education in schools, media, universities and families on proper use from the internet, computer and other up to date facilities must be replaced with traditional education methods. Talking about problems of the internet necessitates education on proper culture and decent training for the students on using the internet and web sites besides filtering specific pornographic or indecent web sites. On the other hand, family environment should turn into an open environment for individuals to talk and express what they know along with giving identity to students and guiding them not to join cybersex groups, online friendship web sites and virtual communities and reduce rate of aggression and rebellion.

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