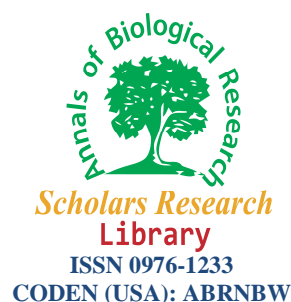




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Annals of Biological Research, 2012, 3 (9):4362-4366  
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## The relationship between Internet addiction and mental health in male and female university students

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### ABSTRACT

*The purpose of this research was to study the relationship between internet addiction and mental health among male and female Payame-Noor university students. Fifty students (20male and 30 female) were selected randomly. Internet Addiction Scale (IAS) and General Health questionnaire were used to carry out the study. The results of the study showed that there is no internet addiction between students. Female more than males had signs of internet addiction. Females in comparison with males are more social neglect and have high expectation.*

**Keywords:** internet addiction, mental health, university students.

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### INTRODUCTION

Internet Addiction Disorder (IAD) was originally proposed as a disorder in a satirical hoax by Goldberg in 1995. This concept became a phenomenon that is attempted to be represented with different names in recent years such as “net addiction”, “internet addiction”, “online addiction”, “internet addiction disorder”, “pathologic internet use” and “cyber disorder” [1].

Although internet addiction does not yet have a standard definition [2], its most basic symptoms can be described as not being able to set a limit for internet use, going on to use albeit its social or academic damages and feeling an intense anxiety in case of limiting the access to internet [3].

Internet addiction is a newly emergent disorder. It has been found to be associated with a variety of psychiatric disorders. Information about such coexisting psychiatric disorders is essential to understand the mechanism of internet addiction. Internet addiction is a term that denotes the harmful and uncontrolled use of internet. In recent years, internet addiction began to be dealt with as a psychological problem in the world of science by relating to various psychological issues.

Computer, internet and its games, which like other human-made devices have almost entered in all aspects of human life, has two dimensions. One of the dimensions is its proper use and help to growth and prosperity of human being, and the other dimension is misusing the computer, for instance using it in the fields except for scientific and occupational purposes [4].

Recent studies have proved that a series of physical improvements is related to certain mental circumstances. Studies have shown that the Internet addiction is one of the major factors influencing mental and physical health.

Tuten and Bosnjak [5] and Correa et al. [6] have reported that high openness to experience is related to internet dependency. People that had addictive behaviors, begun to social neglect their work and social life, to lose their self-

control and to substitute the real world with the online space and believe that their life outside the net is empty and joyless.

Much research [4, 7, 8 and 9] has shown that there is a positive relationship between internet addiction and mental health. Van Gelder [10] in his research on university students found that people who are prone to the Internet addiction, are easily tired and dejected. They are alone, bashful and shy, while having low quality of life and suffering from depression and other types of problems. In another research, shows that, the dispread of internet addiction between Iranian students is up to 8.3 percent and also student who they are addicted to the net are more alone and their self esteem are lower than thenormal users. Some studies have been reported [11, 12] positive relationship between internet dependency and neuroticism.

Mitchel et al. [13] found that excessive use of the Internet on students lead to have suffered from physical and psychological problems, their happiness and positive thought reduce and have academic problems. Shahbazzadegan et al. [4] in their research showed that there is a significant difference between internet users and non users in mental health and aggression.

To address the mentioned issues, current study aimed to determine relationship of internet addiction with mental health in high school students.

## MATERIALS AND METHODS

### 2.1 Participants

The population of this study was all of male and female university students (103 students) who studying in the field of computer at Payame Noor university (Mahabad city) in 2011 -2012 academic year. Subjects selected through random sampling (20 male and 30 female students).

### 2.2 Measures

To assess the mental health, *General Health Questionnaire (GHQ-28)* which is the most common screening tool for mental problems in Iran, was utilized. This questionnaire was made by Goldberg, and it can detect the probability of the existence of a disorder in an individual. It is also used for detecting those who have a mental problem [14]. This questionnaire as a short screening tool includes four subscales: anxiety symptoms and sleep disorder, physical symptoms, social dysfunction, and depression symptoms. All items have four choices. Likert's numbering method (0, 1, 2, and 3) was utilized. Cut points of 22 and 6 have been reported respectively in Likert type and in traditional method. It means that scores higher than 6 in subscales and totally higher than 22 indicates chronic symptoms [15, 16]. More than 70 studies about the validity and reliability of this questionnaire have been done around the world. Goldberg and merry [17] by Meta analysis from researches done around the world reported 84 and 82 percents for means of sensitivity and characteristics of this questionnaire respectively. In Iran, reliability of this questionnaire has been approved by different researchers [18, 19].

The *Internet Addiction Scale (IAS)* is a revisited version of "Internet Addiction Diagnostic Questionnaire" which devised by Young [20]. Young's Internet addiction scale with 20 items was translated into Persian. The 20items of the IAS are calibrated scores ranging from 1 to 5 (given a total score ranging from 20 to 100), with higher scores reflecting a greater tendency toward addiction. . Cronbach's alpha coefficient of reliability for this was 0.90 to 0.95.

### 2.3. Statistical analyses

Data analyzed by descriptive statistics, correlation coefficient and T Test.

**RESULTS**

**Table 1 descriptive statistics of subjects**

Statistics									
	Age	Social neglect	Lack of control	Expectation	negligence	Excessive use	Be obvious	Health	Total score
Mean	20.84	4.00	6.66	4.36	5.86	9.76	10.16	4.28	40.90
Std. Deviation	1.48	1.85	2.75	1.88	2.21	3.60	4.04	3.29	12.93
Minimum	19.00	2.00	3.00	2.00	3.00	5.00	3.00	.00	20.00
Maximum	25.00	8.00	15.00	8.00	12.00	17.00	19.00	12.00	67.00

Minimum of age is 19 year and maximum is 25 year, mean of age is 20.84; Minimum of internet addiction is 20, and maximum is 67; and mean is 40.90; minimum score of mental health is 0.00, maximum, 12 and mean is 4.28.as can be seen in table, there is no internet addict person between subjects (internet addict person acquire score > 70).

**Table 2 descriptive statistics of subjects with regard to gender**

Group Statistics					
	sex	N	Mean	Std. Deviation	Std. Error Mean
Social neglect	Female	29	4.4483	1.88199	.34948
	Male	21	3.3810	1.65759	.36172
Lack of control	Female	29	7.0690	2.81490	.52271
	Male	21	6.0952	2.64395	.57696
expectation	Female	29	4.9310	1.73063	.32137
	Male	21	3.5714	1.83225	.39983
negligence	Female	29	6.0690	2.15359	.39991
	Male	21	5.5714	2.31455	.50508
Excessive use	Female	29	10.0690	3.60487	.66941
	Male	21	9.3333	3.63776	.79383
Be obvious	Female	29	10.6552	3.80109	.70584
	Male	21	9.4762	4.36599	.95274
health	Female	29	4.1034	3.15487	.58584
	Male	21	4.5238	3.54428	.77342
Total score	Female	29	43.3793	11.93857	2.21694
	Male	21	37.4762	13.75725	3.00208

As can be seen in table 2, in all variables except mental health, mean score of females is higher than that of male. This means that females in compare with males are more social neglect, lack of control, expectation, excessive use and be obvious.

**Table 3 independent T-test for gender differences in internet addiction subscales and mental health**

	t-test for Equality of Means						
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Social neglect	2.079	48	.043	1.06732	.51344	.03498	2.09967
Lack of control	1.238	48	.222	.97373	.78653	-.60769	2.55514
Expectation	2.675	48	.010	1.35961	.50822	.33776	2.38145
negligence	.781	48	.438	.49754	.63670	-.78263	1.77771
Excessive use	.709	48	.481	.73563	1.03686	-1.34911	2.82037
Be obvious	1.017	48	.314	1.17898	1.15933	-1.15202	3.50998
health	-.442	48	.661	-.42036	.95206	-2.33461	1.49388
Total score	1.619	48	.112	5.90312	3.64700	-1.42966	13.23590

As can be seen in table 3, in variables of social neglect and expectation, there is significant difference between male and females. This difference is significant at level 0.05 and 0.01; i.e. females acquire high scores in two mentioned variables. This means that female is more social neglect and has more expectation.

Table 4 correlation matrix of subscales of internet addiction and mental health

		Correlations									
		1	2	3	4	5	6	7	8	9	10
1 sex	Pearson Correlation	-									
2 age	Pearson Correlation	-.210									
3 social neglect	Pearson Correlation	-.287*	.052								
4 lack of control	Pearson Correlation	-.176	.006	.423**							
5 expectation	Pearson Correlation	-.360*	-.045	.187	.366**						
6 negligence	Pearson Correlation	-.112	-.118	.359*	.630**	.497**					
7 excessive use	Pearson Correlation	-.102	-.152	.312*	.632**	.492**	.680**				
8 be obvious	Pearson Correlation	-.145	.004	.403**	.685**	.442**	.574**	.706**			
9 health	Pearson Correlation	.064	-.074	.211	.188	.234	.280*	.369**	.258		
10 total score	Pearson Correlation	-.228	-.028	.532**	.748**	.594**	.734**	.817**	.813**	.344*	-
	N	50	50	50	50	50	50	50	50	50	50

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Results of correlation matrix indicated positive significant relation between mental health and negligence, mental health and excessive use, and mental health and total score of internet addiction. This difference is significant at level 0.05 and 0.01; also there is positive correlation between social neglect, lack of control, expectation, negligence, and excessive use be obvious and total score of internet addiction.

## DISCUSSION

The aim of study was to investigate relationship between internet addiction and mental health in male and female university students. Therefore, 50 subjects were randomly selected and Internet Addiction Scale (IAS) and General Health Questionnaire (GHQ) completed by them. The results of the research showed that:

1. There is no internet addiction between subjects. In other words, major of students were in the range of average and low. Given that students were computer student and estimated within them there were students that have internet addiction, but not so; perhaps that's because due to lack of advanced internet infrastructure, many of them do not have access to the Internet.

2. Females more than males had signs of internet addiction.

This result is consistent with [21, 22, and 23] and inconsistent with [24]. According to Sibal et al. results, boys spend more time online than girls. 36.36% of the boys report that they go online for 5-9 hours each day as well as 7.27% percent of them are online more than 10 hours a day. 8.62% of the girls report that they do not go online and a vast majority of the girls (40.51%) report that they are online 2-4 hours each day. Fallahi [22] observed no gender differences in social isolation variable; and results of Octavian Vanea [25] research showed that there is significant difference between male and female.

3. Females in comparison with males are more social neglect and have high expectation.

There is positive correlation between mental health and negligence. Also, there is positive correlation between mental health and excessive use of internet. Students with personalities characterized by dependence, shyness, depression and low self-esteem had a high tendency to become addicted.

These results inconsistent with Aydin[26]. Their findings showed that general self-esteem, social self-esteem, family-home self-esteem and total self-esteem were significantly and negatively correlated with Internet addiction. Furthermore, social self-esteem and family-home self-esteem were found to be significant predictors of Internet addiction. Sahin et al.'s research [27] showed that there is a negative correlation between mental health and internet addiction. Shahbazzadegan et al. [4] research results showed that there is a significant difference between the means of two groups, using internet and not using, and the variables of mental health and aggression ( $P < 0/05$ ). Overlay, the students using interne have more unfavorable mental health and aggression control than the students not using.

The main reason for discrepancies may be that internet addiction does not exist in the samples studied.

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