



## The Prevalence of Internet Addiction among University Students: A General or Specific Problem?

Dr. Ramazan Hasanzadeh, Atefeh Beydokhti, Faramarz Danesh Zadeh

<sup>1</sup>Associate Professor of Psychology, Islamic Azad University, Sari branch

<sup>2</sup>Master of Psychology, Islamic Azad University, Sari branch

<sup>3</sup>BS in Psychology

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### ABSTRACT

**Purpose:** The purpose of this study is to measure the prevalence of internet addiction among university students as a general or specific problem.

**Methods:** In the present study descriptive and causal-comparative research method were used. The statistical population is all of Sari Islamic Azad University students. From among the statistical population, according to the sample population determining table, from society volume or Krejcie and Morgan Table, 261 subjects were selected based on stratified random sampling.

For gathering data a questionnaire was used. In this study, for measuring internet addiction the Internet Addiction Test was applied. This test was developed by Yung (1998).

**Finding:** The findings indicate that:

- Internet addiction is common among university students. (Mean 33/26).
- Internet addiction is different between male and female students ( $t=4/267$ )
- Internet addiction is not significant among students at different ages ( $F=1/054$ )
- Internet addiction among students is different based on internet use level ( $F=22/655$ ,  $P>0.05$ )
- Internet addiction is different among students according to the students' fields of study ( $F=12/187$ )

**Conclusion:**

Internet addiction is prevalence among students and need remedial and hygienic considerations.

**Key words:** internet addiction prevalence, gender, age, experience, students.

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### 1. INTRODUCTION

Internet is a network consists of some of different networks connected together through a protocol. Internet is a very crucial communication instrument. It has changed our ordinary life at home, educational environment and at work. Not only internet has many applications in our everyday life but also qualifies special and unique features that have doubled its attraction. At present, internet addiction as a psychological disorder has been discussed in psychology and medicine. Clinical experts have been reporting cases at their clinics.

Internet addiction as a new form of addiction in recent years has attracted psychology, psychiatry, sociology and other researchers' attention. Internet addiction is a problem can be seen in different societies and cultures. The spread of this problem has lead researchers and experts to identify its reasons, consequences and side effects (1).

For the first time Goldberg used the internet addiction disorder term for introducing identification of characteristics of persons who along with use of internet show some problems. He was the first who formed a group for supporting the internet addicts. Addiction to internet and computer as a hygienic problem has been recently paid attention to and is classified as mental disorders. With appearance of internet and its development and expansion to other places of the world, this technology that until 1991 was exclusively under control of research centers, found new and diverse applications. It is a major communicative instrument. It has changed our routine life at home, educational environment and at work. Not only internet has many applications in our ordinary life but also qualifies special and unique features that have doubled its attraction. Today, communications through computer and internet is a part of life reality. Revolution in computer technology and communication via internet in present culture has found an increasing role. The internet and computer technology has an effect on all people and at different ages.

Possible to say that in world today, the internet and computer technologies are the most effective instruments. The internet and computer technologies have been influential in all scientific, commercial, education, culture, politics and many other disciplines. Computer and the broad penetration of internet technology in present world have caused everyone gets involved and work with it.

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\*Corresponding Author: Dr. Ramazan Hasanzadeh, Associate Professor of Psychology, Islamic Azad University, Sari branch, Iran.

This increasing demand to internet technology accompanies with many main mental health and healthy social communications problems (2). The problem of extreme and pathological use of this technology and the problem of internet addiction has attracted psychologists' attention (3). The studies carried out on internet addiction have reported many contradictory results. Treuer,(4) Cao et al (5), Yellowlees et al(6), Lee and Chung(7) point out that excessive and pathological use of internet decreases mental health of students.

These researchers found out that the students experience extreme and pathological use of internet in comparison to those who have no such experience show more pathology and mental problems. In fact, there is a relationship between the increase of working with internet experience and decrease of mental health rate.

Kim et al (8) mentions sex as one of related factors to internet addiction. Addiction to internet has influenced a wide range of people directly or indirectly. With assessing those who are under the influence of this phenomenon directly or indirectly, it is possible to understand its broadness level. Internet addiction is a global phenomenon with different level and range, from 5 to 25 percent of U.S., China, South Korea, England, Australia, Taiwan, Japan, and other Eastern and Western European (9) countries students. A few studies show that women in comparison with men have shown two times more addiction to internet (10-12).

Amichai Hamburger and Ben Artzi(13) have pointed that those students are excessively dependent to internet feel alone from mental health point of view. The studies carried out indicate that university students who are suffering from internet addiction have no necessary skills in their social communications(14-15). The researchers understood that students with internet addiction suffering from high vulnerability and low health and mental health.

Brenner (16)and Kaplan (16)in their researches reached to this conclusion that those students are affected to internet addiction in comparison to those students without internet addiction have less mental and social welfare. Cao et al(18) , Kim (19)and Lee et al(20), Yen et al (21)have compared the psychological, personal and social characteristics of students using internet excessively with other students. The results indicated that the level of depression, stress, suicide intention, hyper- activity, fear, social fear , aggression , violence and anti- social behaviors occur more in addicted students. Fung(22)Grifits(23) , Jones and Madden(24),and Krat et al(25) in their studies mention that internet addiction in students causes interpersonal, family, friendship and social relations indifference.

These students also possess low social and personal identity. Indeed, these researchers believe that entrance of students to university is a paradox since by entering university they get familiar with modern technology and computer and find more chance to use internet, however, it is more likely to suffer from internet addiction as well.

The use of internet among students is common. They use internet 164 minutes a day in average. In Thailand 5.9 percent of students are addicted to internet, and 10.6 percent of Chinese adolescents and adults suffer from internet addiction. It is estimated that about 4.4 to 4.7 million of Americans are affected by internet addiction. The university students have high vulnerability towards internet addiction disorder(3,6).

According to The Association of Iranophile Tehran -IRAN report, the internet penetration coefficient in the country has reached from 11.7 to 16.1 percent that indicates an 80 percent growth. Based on the latest statistics, the number of internet users in Iran till the end of March reached to 11260000 people. However, in last June it was 7350000 users. Therefore, in present study, the following hypotheses were tested:

H1: internet addiction is common among students.

H2: internet addiction is different among male and female students.

H3: internet addiction among students is different at different ages.

H4: internet addiction is different among students based on amount of internet use.

## 2. METHODOLOGY

This study is based on the descriptive and causal-comparative research method. In descriptive and causal-comparative studies, the existing situation is assessed and then compared(26). In present research, the statistical population is all of Sari Islamic Azad university students. Based on the latest statistics of ISC office (Information, Statistics and Computer) in university, the total number of studying students is 7558. In this study the statistical sample is 261 subjects.

The sampling method is stratified random sampling. The statistical sample is based on sample size determining table from society size or Krejcie & Morgan Table and according to the sampling principles (based on variance or ratio), the sample is an index of society. Also for gathering data a questionnaire has been used. For measuring internet addiction, the Internet Addiction Test was applied. This test was developed by Yung (1998)(27). This scale is a 20 item self- assessment evaluation according to Likert scale for measurement of addiction to internet. Its rating is as (Always score 5, Often score 4, Usually score 3, Sometimes score 2, Rarely score 1 and Never score 0).

In his classic study, Yung developed and validated the well-known scale of internet addiction and after that its content and construct validity was confirmed. In this research, the test reliability was measured with Cronbach Alpha. The test reliability coefficient with use of Cronbach Alpha equals 0.91. In the present study, the reliability of internet addiction test with use of Cronbach Alpha is 0.88.

For measuring the demographic characteristics of testees, the questionnaire was divided into two parts and then administered: a) the personal or demographic characteristics such as sex, field of study, educational department, age and academic semester and b) internet addiction test.

At the beginning of the questionnaire, an appropriate instruction for attracting cooperation and presenting the answering method to the instrument was available. For analyzing data, two statistical methods were practiced:

1. Descriptive statistics (includes percentage calculation, mean, variance, tables edition, and drawing diagrams)(28) and
2. Inferential statistics (T-test)

### 3. Findings:

The tables below show the results:

#### Hypothesis 1: internet addiction is common among university students.

**Table 1: frequency distribution of internet addiction prevalence among students**

Percentage	Frequency	statistical index
		Options ( addiction level)
0/4	1	0- 19normal
82	214	20- 49 slight
17/2	45	50-79 average
0/4	1	80- 100 extreme
100	261	total

0.4 percent of students are addicted normally, 82 percent slight, 17.2 average and 0.4 extremely. The mean and standard deviation of internet addiction are 36.32 and 13.43 percent respectively. From the total number of subjects, 53.64 percent were female and 46.36 percent male.

#### Hypothesis 2: the internet addiction among male and female students is different.

**Table 2: statistical analysis summary (t) for the second hypothesis:**

$\alpha$	t	Degree of Freedom	Standard Deviation	Mean	Number	Groups
		DF	SD	M	N	
%5	4/267	259	13/837	39/5286	140	Male
			11/9868	32/6364	121	Female

Since the calculated t ( $t=4.267$ ) in confidence level of 95 percent and with degree of freedom of  $df= 259$  is bigger than critical t ( $t=1.96$ ), therefore, the null hypothesis is rejected and the research hypothesis is confirmed. It can be concluded that internet addiction is different among male and female students. In fact, the internet addiction among male students is higher than female students.

#### Hypothesis 3: internet addiction among students at different ages is different.

**Table 3: internet addiction among students at different ages**

$\alpha$	F	MS	df	SS	Change resources
> %5p	1/054	190/061	5	950/304	Inter- group
		180/352	255	45989/696	Intra- group
			260	46940/000	Total

The calculated F (F=1.054) with degrees of freedom 255 and df=5 in confidence level of 95 percent is smaller than critical F of table (F=2.23). So, the null hypothesis is confirmed and research hypothesis is rejected. Internet addiction in students at different ages isn't different.

**Table 4: statistical indexes of students' internet addiction at different ages**

SD	N	M	Statistical index of age
12/21	38	37/63	Younger than 20 years
14/07	161	36/66	21-23 years
13/97	21	35/24	24-26 years
13/78	8	38/33	27-30 years
4/68	8	28/75	31-35 years
9/22	12	31/33	Older than 36 years
13/44	261	36/33	Total

**Hypothesis 4: internet addiction in students is different according to the amount of use.**

**Table 5: summary of variance analysis (ANOVA) of fourth hypothesis**

$\alpha$	F	MS	df	SS	Change resources
<5p	22/655	3272/457	3	9817/370	inter-group
		144/446	257	37122/630	intra-group
			260	46940/000	Total

since calculated F (F=22.655) with degrees of freedom 257 and df=3 in confidence level of 95 percent is bigger than critical F (F=2.62), then, the H0 is rejected and research hypothesis is confirmed. We can conclude that addiction to internet among students is different according to amount of use. Based on variance analysis, the fifth hypothesis is confirmed. So, to determine what groups' means are different the follow-up Scheffé Test was used.

**Table 6: Follow-up Scheffe Test summary for fifth hypothesis**

SD	N	M	Statistical index Rate
11/3283	177	32/6497	0-5 hours
13/2671	46	39/6304	6-11 hours
12/7956	21	46/8571	11-15 hours
14/4505	17	52/7646	15 hours and more
13/4365	261	36/3333	Total

The internet addiction average among students who use it 0-5 hours in a week is different from those who use it 6-10, 11-15, and 15 hours and more. It can be concluded that with increase of internet use it will be more likely that persons get addicted to.

**Hypothesis 5: internet addiction is different among students of different educational departments.**

**Table 7: variance analysis summary of fifth hypothesis**

$\alpha$	F	MS	df	SS	Change resources
< 5p	12/178	1809/654	5	9048/269	Inter-group
		148/595	255	37891/731	Intra-group
			260	46940/000	Total

because the calculated F (F= 12.178) with degrees of freedom 255 and df=5 and confidence level of 95 percent is bigger than critical F (F=2.23), as a result, the H0 is rejected and research hypothesis is confirmed. It is concluded that internet addiction is different among students of different educational departments. According to variance analysis, the third hypothesis was confirmed. So, for deciding which educational departments' means are significantly different, the follow-up Scheffé Test was used.

**Table 8: Follow-up Scheffe Test summary for fifth hypothesis**

SD	N	M	Statistical index	
			Departments	
10/5704	10	32/8000	Medicine	
9/9218	78	32/1923	Humanities	
14/2357	130	41/5000	Engineering	
19/0919	2	36/5000	Art	
3/9931	26	23/7692	Sciences	
13/0942	15	37/2000	Agriculture	
13/4365	261	36/3333	Total	

As it can be seen in table 8, since the mean of internet addiction in engineering department M= 41.50 is higher than mean of internet addiction in humanities department M=32.19, so we conclude that internet addiction in engineering department is more than humanities department. Also, because internet addiction mean in engineering department M= 41.50 is bigger than sciences department, consequently, internet addiction in engineering department is more than sciences department. The means of other departments (medicine, art and agriculture) have no meaningful difference.

#### 4. DISCUSSION

The study findings indicated that 0.4 percent normally, 82 percent slightly, 17.2 percent in average and 0.4 percent are extremely addicted to internet. Internet addiction is different among male and female students. The obtained result of this hypothesis is in accordance with Stefanescu(29),Davis(30), Lavin et al(31),Lenhart et al(32),Lee and Chung(33),Mesch(34),Treuer(35), Yellowlees(36), and Marx (37)Yung (38)studies. They mention that the extreme and pathological use of internet decreases the students’ mental health.

They realized that the extreme students in use of internet in comparison to students without this experience show higher pathology and mental problems. Indeed, the increase of internet use experience level has a relationship with decrease of mental health rate.

Morahan-Martin(39), Morgan & Cotton(40), Petrie & Gunn(41), Sanders et al(42) and Vang(43) realized that students use internet for various reasons. Cao et al(44), Yen et al(45), Ghasem zadeh et al(46), Vishferes(47), Yellowlese et al(48), Griffiths(49), Estefansco et al(50), Lee and Chung(51), Kim (52)and Treuer(53) also indicated to the gender differences in this domain.

It seems internet addiction in male students in comparison to female students hold more common. Also, the result showed that more students work with internet, more likely they get

addicted to internet. Internet addiction as a new form of addiction in recent years has attracted psychology, psychiatry, sociology and other disciplines researchers.

Mossbarger (54) showed that internet addiction is a problem is observed in various cultures ad societies. Internet and computer technology has affected different people at different ages. It could be said the computer and internet technology is the most influential instrument in condition that be used logically not extremely and lead to disorder in physical and mental health.

Internet use is one of the comprehensible manifestations of modern life and a significant instrument for schooling the young generation. Hasan zadeh(55) showed in his study that internet addiction in youths is different based on their age and goes up at 15-20 years old 21.4 percent of 15-20 year and 17.5 percent of 26-29 year subjects are at “risk” however, 13.3 percent of 21-25 year subjects show “minor dependence” to internet. Also, 1.9 percent of 15-20 year subjects are “addicted to internet”. The result of this hypothesis is in accordance with some of previous researches and none with a few others.

A few of researches point out that there is a relationship between users’ age and internet addiction rate and some others didn’t find any between these two variables. His another result showed that rate of youths suffering from internet addiction in extreme level is 2.5 and at risk 59.6 percent. Gender is one of factors influences the application and internet addiction type.

In the websites, men are seeking power, hegemony and sexual dreams. Women in contrast look for protective-friendship groups, romantic relationships and relations which can hide themselves behind. This difference in some way reflects the kind of society attitude towards man and woman.

The reports say that among university students, internet addiction is a serious and fundamental mental health problem. Since internet addiction is considered as a serious mental health problem among youths, therefore, it is recommended to pay more attention to. Due to effect of internet addiction on educational, personal, family, social

and professional performance, the appropriate intervention and remedial methods must be taken. The youths in comparison with other social classes contain more vulnerability to internet addiction. It is suggested to hold training courses on proper use of this communicative instrument.

Accordingly, the internet addiction in boys is higher in comparison to girls. It is advised to decide on the problem solution among boys. It could be taking decision about the appropriate use and rate of internet during a day and week in order to prevent the excessive or addictive use. Based on the results, the training courses among youths at different ages is mandatory.

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