ORIGINAL ARTICLE

THE PREVALENCE OF INTERNET ADDICTION AMONG THE STUDENTS OF RAFSANJAN UNIVERSITY OF MEDICAL SCIENCES

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Abstract

Objective: **Internet addiction is defined as mismanagement of internet use that causes mental, social and occupational problems. Thus, the assessment of prevalence of this disorder can lead to preventive measures and appropriate treatment to prevent its spread.** ***Methods:*** **In this cross-sectional study, prevalence of internet addiction disorder was assessed in Rafsanjan University of Medical Sciences, Rafsanjan, Iran in 2012. Stratified random sample was used to select 224 students. Demographic data were recorded and Internet Addiction test Test (IAT) questionnaire was administrated.** ***Results:*** **Out off 224 students participating in the study, 86 (38.4%) were males and 138 (61.6%) were female with a mean age of 21.05± 0.1 years. Most of the students (42.4%) were using the internet "under one hour" and the lowest (4%) "More than six hours". Mean test score of IAT was 24.81 ± 1.08 (mild addiction). In terms of internet addiction, 95 (42.4%) cases were normal users, 115 (51.3%) had mild addiction, 12 (5.4%) showed moderate addiction and 2 (0.9%) were cases of severe addiction which are lower compared to previous studies.** ***Conclusion:*** **The rate of internet addiction among students of Rafsanjan University of Medical Sciences in Iran is lower than the previous reports. It is still necessary to curb the spread of this problem due to its complications.** ***ASEAN Journal of Psychiatry, Vol. 14 (2): July – December 2013: XX XX.***

Keywords: Prevalence, Internet Addiction, Rafsanjan, Students

Introduction

The internet is one of the most accessible media in the world and it is different from other types of media. Reasons for this are: (i) the internet has many activities that its users can engage with; (ii) the internet offers an opportunity to communicate with people all over the world without any limitation. Furthermore adolescents have become an important target of this commercial market [1, 2]. Internet technologies and activities, that are progressing rapidly have attracted adolescents, leading to the over-use of the internet and maladaptive internet behavior called ‘‘Internet addiction’’ [3]. Many studies have shown the association between internet over-use and other psychopathological syndromes [4].

The term of ‘’addiction’’, though traditionally used to describe a physical dependence on a substance [5], has been applied to the over use of the internet. Internet addiction disorder is described as excessive computer use that interferes with daily life and can impair daily function [6,7]. Internet addiction is characterized

as a form of addiction, and people who suffer from it, cannot control themselves when they are using the internet. This phenomenon results in serious impairments in psychosocial functioning such as poor school functioning [8]. 'Internet addiction' is considered as a psychiatric disorder in the forthcoming DSM-V [9].

Studies described excessive computer use as ''Internet addiction'' [10, 11], ''pathological Internet use'' [12], and ''problematic Internet use'' [13]. Researchers have described various symptoms displayed by people who suffer from internet addiction. These symptoms include preoccupation with the use of internet [14, 15], being online most of the time, compulsive use of the internet, believing that everything except the internet is boring, increased irritability if disturbed while online, decreased communication with others, and increased depressive behaviors [16]. Several studies have found that people who spend too much time online suffer from insomnia [16, 17] and their interpersonal relationships are also impaired [18]. The studies have shown that internet addiction can cause sleep disorders, malnourishment, impaired interpersonal relationships, depression, anxiety and other psychiatric and somatic problems. For example, sleep disturbances and impairment of nutrition can cause growth retardation. Meanwhile impairment in nutrition and low activity can cause obesity, osteoporosis and bone fractures [19-22] leading to poor health. There are tools for measurement of internet dependence [23].

The prevalence of internet addiction is reported from 1.5% to 25% in different countries [20-23]. In Iran, internet addiction is reported as approximately 11% which is higher than countries such as Italy, China and Australia [24], which are 5%, 4.4% and 8.1% respectively [25-27]. The mechanism of internet addiction resembles drug addiction. According to previous studies, the increase of activity in orbitofrontal cortex and the decrease of activity in anterior cingulate were contributing factors of internet addiction, but however, more studies are necessary [28]. Methods to treat this disorder include cognitive therapy, behavioral treatment, and exposure therapy by keeping them offline. Education on the risks of internet addiction can improve the condition [3]. This study intends to measure the prevalence of internet addiction among the students of Rafsanjan University of Medical Sciences.

Methods

This is a cross-sectional study aimed to assess the prevalence of internet addiction disorder among students of Rafsanjan University of Medical Sciences. The period of study was from June-September 2012, students were chosen from various courses and fields. According to previous studies [20-22], sample size was calculated with $\alpha = 0.5$, $p=0.06$, $d=0.03$, $q=0.94$, $n = 240$ and $\alpha = 0.5$, $p=0.05$, $d=0.03$, $q=0.95$, $n = 209$. Sample size was obtained 209 to 222 but for more reliability 250 students were recruited into this study. Stratified sampling method was used in this study. Subjects included comprised students doing courses in anesthesia, dentistry, midwifery, experimental sciences, radiology and those who were studying in operation room. After obtaining approval from the research committee of Rafsanjan University of Medical Sciences, the information on internet addiction was gathered using a questionnaire which consists of 2 parts. First part recorded demographic information including age, date of diagnosis and educational level. For research reasons, personal information was not been revealed.

Second part was the Internet Addiction Test (IAT) by Young which is one of the most reliable tests for evaluating internet addiction. Scores are divided into 4 levels including normal (less than 21), mild dependency (49-21), moderate dependency (50-79) and severe dependency (80-100). Finally, all the responses to the 20 questions are calculated .Statistical analysis was done using the SPSS version 18 software. Chi-square test was used for analysis with P value < 0.05 considered as a significant level.

Results

A total of 224 from 250 students responded to the questionnaire (response rate was 89.6%).

There were 224 respondents, of which, 86 (38.4%) were male and 138 (61.6 %) were female ,with a mean age of 21.05±0.1.For their age range, 17 %, 77.7% and 5.4% were of ages between 15-19, 20-24 and 25-30 years respectively. 54 (24.1%) first year students, 54 (24.1%) fourth year students, 3 (1.3%) seventh year students are participated in our study and the rest of them were students from the second, third, fifth and sixth years. Thirty four out of 224 participants (15.2%, largest group) were students of anesthesia, 33 (14.7%) were medical students and 24 (10.7%, smallest group) students were studying in operation room and the rest in other mentioned fields of study.

Majority of them (77.7%) live in the dormitory. Majority of subjects the subjects, about 44 (80.4%) were single. The most common place for using the internet was at the dormitory (43.3%) (Table1) and majority of them are under the category of mild addiction (Table 2).

Table1. Frequency of participants according to marital status, Place of living and place for using the internet

Percentage	Frequency	Variable	Item
80.4	180	single	Marital status
19.6	44	married	
5.8	13	Rented home	Place of residence
16.5	37	Own home	
77.7	174	dormitory	
43.3	97	dormitory	place for using the internet
15.63	35	Home	
7.6	17	Internet cafe	
6.25	14	university	
23.22	52	All of above	
2.3	5	else	

Table 2. Comparison between severities of addiction by sex

		Male Number (percent)	Female Number (percent)	Total Number (percent)	χ^2	Degree of freedom	*p*-value
severity of addiction	Normal	26 (30.2)	69 (50)	95 (42.4)	14.448	3	0.006
	Mild addiction	52 (60.5)	63 (45.7)	115 (51.3)			
	Moderate addiction	8 (9.3)	4 (2.9)	12 (5.4)			
	Severe addiction	0 (0.00)	2 (1.4)	2 (0.9)			
Total		86(100)	138(100)	224(100)			

The majority of students (42.4%) use the internet less than 1 hour and only 9 cases (4%) use it more than 6 hours. Using internet for trade was uncommon (Fig 1).

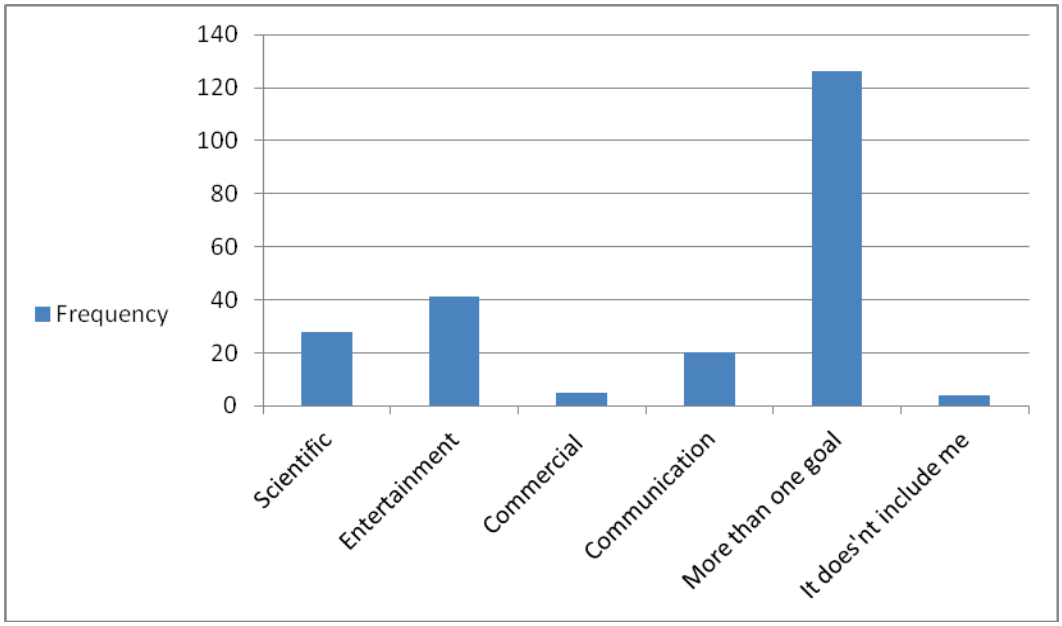

Fig 1. Frequency of participants according to goal of internet using

MSN was used less than others (2.7%). Most participants (58%) used others several search engines. Functional impairment or unpleasant feeling in a period of 12 months were found severe in 4 subjects (1.8%), moderate in 4 subjects (1.8%) and mild in 26 subjects (11.6%) while 190 cases (84.8%) did not have any problems. Most students believed that life without internet is boring and this can show that internet dependency in the new generation. Severe internet addiction was seen in 2 (1.4%) female students but it was not seen among male students. Overall, severe and moderate internet addiction among female were higher than males (P=0.006).

This study shows that moderate to severe internet addiction in medical students is more than other students but it was not significant (P=0.682). The majority of internet addicted follow the different goals in internet, specially using internet for entertainment has a high frequency but it was not significant (P=0.019). We found significant difference between patterns of internet use and addiction (p <0.001). Internet addiction among students who are between 21-30 years of age was more frequent but it was not significant.

Mean score in IAT was 24.81±1.08. We found that 95 (42.4%) students were not addicted to internet while 115 (51.3%) cases have mild addiction, 12 (5.4%) students have moderate addiction and 2 (0.9%) of them has severe addiction to internet.

Discussion

This study evaluated the prevalence of internet addiction in students of Rafsanjan University of Medical Sciences. We used IAT for measuring internet addiction. We found that 95 (42.4%) students were not addicted to internet while 115 (51.3%) cases have mild addiction, 12 (5.4%) students have moderate addiction and 2 (0.9%) of them has severe addiction to internet in different studies, prevalence of this disorder has been reported between 1.5-25% and in Iran it is 11% [20-24]. The majority of participants have more than one goal in internet use. As we showed in Figure 2, internet usage for entertainment is in the second rank. The

population, who were evaluated, were in important courses in medical sciences. Therefore, education on internet use is necessary. Fortunately, frequency of internet usage for scientific issues is high.

In this study majority of participants reported that they did not neglect their household chores when they were online to internet. Although at youth age, communication is very important. But results from this research showed that most of the participants preferred to be with friends, rather than being online in the Internet. Participants also are more likely to communicate physically rather than using the virtual communication, and the frequency of isolation was noted less in this research. While, previous results of one study in Iran, showed that the addicted group are more alone than the other groups [33]. This study also shows that the students use the internet in a very safe protected way and they will not be angry when others disturbed them. The complications of internet addiction in this study were low. Kraut et al showed that internet use leads to the decrease inequality of life but in our study, the decrease in quality of life is not prominent [34]. Another study showed that the frequency of sleep problems was high in internet addicts but it was not similar with our results [35]. Overall, severe and moderate internet addiction in female was higher than the male. These results on this study were completely different with Sipal's study [36].

We found out that most internet addicts reside in the dormitory. This result shows the importance of family support on internet addiction. This result was similar with the study of Siomos et al that showed protective effect of family on preventing of internet addiction [37]. Most addicts to internet use it for more than 3-4 hours per day. According to their courses that they study in, this amount used of time can cause problems in their study. We suggest that a study is designated to evaluate the relationship between internet addiction and the number of failed terms. Our results were similar to Sipal's study. We found that the frequency of internet usage for entertainment is high [36]. Mean score of the majority of addicts to internet was in range of 14-16.99. As it has been shown in a previous study, our study also showed that internet addiction has some reasons that are similar to the pathophysiology of substance addiction [38]. We suggest that others researches been made to evaluate the relationship between internet addiction and substance abuse.

Conclusion

We concluded that the prevalence of internet addiction between students of Rafsanjan University of Medical Sciences is lesser than the previous studies that have been performed in Iran. However, it is necessary to plan for prevention on developing internet addiction and its complication.

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