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An Evaluation of Internet Addiction and Its Related Factors among the Students of Yazd University of Medical Science

Nasim Namiranian [1], Seied Saman Mansouri [2], Mohammad Shafiee [2]

1. Department of Community & Preventive Medicine ,Shahid Sadoughi University of Medical Sciences, Yazd, Iran
2. General Practitioner ,Shahid Sadoughi University of Medical Sciences, Yazd, Iran

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Corresponding Author:
Mohammad Shafiee
m.shafii.70@gmail.com

ABSTRACT

Introduction: Considering the increase in Internet addiction rate, we tried to investigate the rate of internet addiction among medical students of Shahid Sadoughi University of Medical Sciences in Yazd in 2016.

Methods: This analytic-cross-sectional study was performed on 350 students of Shahid Sadoughi University of Medical Sciences in Yazd. The data collection tool was a demographic questionnaire, and Yang's Internet addiction inventory. The questionnaire contains 20 questions, according to which the person is placed in one of four classes: normal, mild, moderate, and severe. After collecting the data, the data were entered into SPSS 16 software and analyzed using Chi-square and independent t-tests. The significance level was considered less than 0.05.

Results: According to Internet addiction, students were 65% normal, 33.3% border lip and 1.7% were addicted to the Internet. The results also showed that there was a significant statistical relationship between the prevalence of internet addiction among students and sex, smoking, and registration in cyberspace ($p<0.05$), and there was no significant statistical relationship between the prevalence of internet addiction and marital status, place of residence and birthplace ($p>0.05$).

Conclusion: According to the results of the study, it can be concluded that by increasing the awareness of medical students, the rate of Internet addiction in them can be minimized

Key Words: Addiction, Internet, Student, Yazd

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Introduction

Internet addiction is characterized by excessive or poorly controlled preoccupations, urges, or behaviors regarding computer use and internet access that lead to impairment or distress (1). Today, Internet addiction is a psychological disorder in the areas of medicine and psychology. Besides, it attracted the attention of scholars as a new field of addiction (2). The concept of addiction is generally used to describe a person's physical dependence on a particular substance, but nowadays, it has been applied to demonstrate a person's dependence on the Internet and its excessive use. However, other terms such as "pathological Internet use," "problematic Internet use," "online dependency," and "cyber addiction" were used to refer to this situation (3-5). Generally, the term "Internet addiction" describes a situation in which individuals do not have any control over the amount of Internet use and their personal lives are affected due to this excessive use (6).

For example, people may experience sleep disorders because of spending too much time on the Internet; so, they neglect to eat, feel that the real world is annoying, and their communication with the real world decrease (7,8). However, we should consider that Internet addiction criteria should continue for at least 20 months (9). Clinically, Internet addiction has special treatment methods in different countries according to their attitudes and conditions (10).

Due to the consequences of lifestyle changes, neglect of personal health, negligence in performing important life tasks, reduced social relationships, and academic problems, it is necessary to examine the various dimensions of Internet addiction (11). In this regard, there was a significant increase in the number of studies on Internet addiction problems as a mental disorder during the previous decade. Due to the Internet ease of access and the portability of new communication devices, Internet addiction has changed into a potential problem, especially in adolescents as the largest Internet users (12-14). In Iran, the number of Internet users is increasing (15). Moreover, the National Youth Organization research showed that the number of Internet users in Iran increased by about 90 percent. According to the increase of the Internet influence in Iran, it is predicted that the number of (school and university) student Internet users reach 15 million a day. Based on the statistics, more than 35 percent of Internet users are adolescents. The average rate of accuracy used on the Internet is 52 minutes a week, and this rate reaches 57 minutes for people in the age range of 21 – 24 years (16). Furthermore, Internet addiction is a common phenomenon among university students (17). Moreover, it was shown that this addiction affected the amount of study (18). Besides, this research indicated that students' awareness of Internet addiction was inadequate; so, it is necessary to reduce the risks and consequences (17, 19).

Internet is one of the most important sources to access scientific papers in medical science universities, and students use it for their professional and individual purposes. Given the increasing use of the Internet among students, Internet addiction, and its effects on education, we conducted this study. The aim was to determine the prevalence of Internet addiction and its effective factors among the medical students of Shahid Sadoughi University of Medical Sciences in Yazd in 2016.

Methods

This analytical cross-sectional study was carried out on 350 medical students of Shahid Sadoughi University of Medical Sciences in Yazd in 2016. The statistical population included the medical students of Shahid Sadoughi University of Medical Science in Yazd in 2007-2014. The sample size was based on type 1 errors 0.05, with a power of 80 percent, a prevalence of 5 percent, and a 7 percent difference was calculated as 350 people. We used the list of students entering the university each academic year and randomly selected 71 individuals from each year. Considering the probability of lack of cooperation by some students, we selected the participants 15 percent more than the required number of samples. We

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excluded the participants who did not complete the questionnaire thoroughly, were not medical students, and students who did not enter university in the mentioned academic years. The demographic data included age, gender, occupation, education level, questions about the period of using the Internet during the week, the period of use, and the reason for using the Internet were registered. The Yang Questionnaire was used to assess Internet addiction. Participants should answer the items using the options that ranged from rarely to always on a five-point Likert scale. The attainable scores varied from zero to 100. This questionnaire was standardized, and based on the results of other research, its validity (0.79) and reliability (Cronbach's alpha coefficients=0.88) were determined (32). Then, the scores were divided to determine four levels of Internet addiction: normal (less than 19), mild (20-49), moderate (79-50), and severe (80-100). Initially, the data were collected and analyzed using SPSS16. Also, we calculated the mean scores and standard deviation or frequency of the data. The Chi-square and independent t-test were also applied. The significance level was set at 0.05 in all cases.

Results

The results showed that 183 (52.3%) of students were female, and 167 (47.7%) were male. The result of the study about the frequency distribution of marital status showed that 80.9 percent of participants were unmarried (283 people) and 19.1 percent (67 people) were married. Furthermore, the results showed that 85.4 percent (299 people) of participants smoked, while 14.6 percent (351 people) did not. Additionally, the frequency distribution of data indicated 132 persons (37.8%) of the participants started using the Internet at the age of 10-15 years. Considering the membership in the social media, the results showed that 16 percent (56 people) of students were not members of any social media, whereas 84 percent (294 people) had cyberspace membership. The frequency distributions of other variables are shown in Table 1.

Table 1. Frequency distribution of study variables in students

variables		N	%
Beginning age of internet use	Non-use	1	0.3
	>10 years	30	8.6
	10-15 years	136	39
	15-18 years	132	37.8
	<18 years	50	14.3
Cyberspace membership	Have	56	16
	Do not have	294	84
Residence	Dormitory	146	41.7
	Rental house	25	7.2
	Father's home	161	46
	Home property	18	5.1
Birthplace	Native	208	59.4
	Non-native	142	40.6

The frequency distribution of father's education level showed that 13 people (3.7%) were uneducated, 35 people (10%) had secondary school degree, 59 people (16.9%) had diplomas, 39 people (11.1%) had associate degrees, 122 people (34.9%) had bachelor's degrees, 49 people (14%) had master's degrees, and 33 people (9.4%) had Ph.D. In addition, The frequency distribution of mother's education level showed that 19 people (5.4%) were ungraduated, 71 people (20.3%) had secondary school degree, 98 people (28%) had diplomas, 31 people (8.9%) had associate degrees, 103 people (29.4%) had bachelor's degrees, 19 people (5.4%) had master's degrees, and nine people (2.6%) had Ph. D.

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The results of the Internet addiction showed that %65 (225 people) of the participants were in the normal range, %33.2 (115 people) were marginally addicted, and %1.7 (6 people) were addicted (Figure-1).

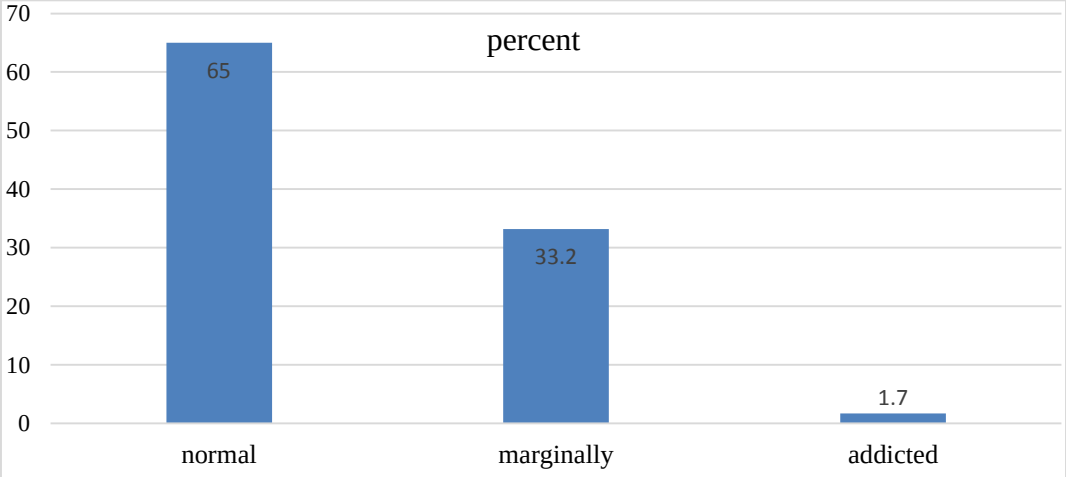


Figure 1. Frequency distribution of Internet addiction status among medical students

Furthermore, the results using the Chi-Square test showed a significant relationship between the students' prevalence of Internet addiction and their gender (p=0.003), smoking status (p=0.015), and cyberspace membership (0=0.001). Similarly, no significant relationship was observed between the prevalence of Internet addiction and marital status (p=0.026), residence (p=0.60), and home (p=0.08).

Discussion

The main aim of this study was to investigate Internet addiction among medical students of Shahid Sadoughi University of Medical Sciences in Yazd in 2016. The results showed that 1.7 percent of medical students were addicted to the Internet. In addition, the rate of Internet addiction in females was more than male students. The results of Pirzadeh et al. indicated that 80.5 percent of students were normal, and 19.5 percent were mildly addicted to the Internet. These findings do not support the results of the current study, in which only 1.7 percent of students were addicted to the Internet. This difference can be related to the difference between the two population studies (20).

The results of Khatib Zanjani et al. at Payame Noor University of Semnan showed that 23.8 percent of the students had moderate Internet addiction (21). The results of khatib Zanjani were in the same line with the results of Pirzadeh study. However, they differed from the results of our study, which can be attributed to the participants. Considering the difficulty of medical majors, medical students had less time to use cyberspace and become Internet-addicted.

Moreover, the results of Vahabi et al. indicated that Internet addiction was more prevalent in males than female students (22). The mentioned findings were in the same line with the results of several studies (22, 23, 24). However, they were different from the results of our study, in which the rate of Internet addiction was higher in females. The study conducted in Albania showed that the rate of Internet addiction among students was 0.9 percent (25). The mentioned results were in the same line with the results of this study. This difference in results may be due to differences in the civilization of the countries studied.

The studies conducted at Qom University of Medical Sciences showed that 90 percent of participants were mildly addicted to the Internet (26), which was different from the results of the present study. Furthermore, the participants of the present study were different from those who cooperated in the mentioned studies, considering

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the two different regions. Another reason for this difference can be due to the lack of easy access to the Internet for participants of some studies, which affects the rate of users' dependency. The results of a study over the medical students in Isfahan (27) indicated that 20 percent of participants had Internet addiction, 19.1 percent had moderate addiction, and 0.9 percent had severe addiction. These findings were different from our findings. The study by Salehi et al. among medical students in Mashhad (28) indicated that the rate of Internet addiction among participants was 2.5 percent, which was closer to our findings.

The results showed a significant statistical association between the prevalence of Internet addiction and gender, which was the same in the study by Vahhabi et al. (22). Likewise, this study showed that the prevalence of Internet addiction in females was higher than in males, while the study by Wahhabi showed that the prevalence of Internet addiction in males was higher than in females. Additionally, the study by Kenan et al. in Turkey (29) reported that the severity of Internet addiction in male was significantly more than female, which were not in the same line with the results of our study. In addition, Jelenchick et al. did not find a significant relationship between gender and the prevalence of Internet addiction. (30), which were not in the same line with the results of our study.

The results of previous studies (29-31), contrary to our study, showed that males were addicted to the Internet more than females. This can be due to the fact that males experience more freedom than females and can access the Internet more easily; whereas, females have more limitations. Given that our statistical population was medical students, this difference can be due to the length of time that these students should spend on studying the medical lessons. Furthermore, men have higher degrees of stress to make a good life in the future, which makes them more involved; so, they have less free time to spend on the Internet. Moreover, the results of our study showed no statistically significant relationship between the prevalence of Internet addiction and marital status. The results of the Wahhabi (22) and Mohammadi et al. (31) showed a significant statistical relationship between marital status and Internet addiction, which was not in the same line with the current study. Similarly, our study indicated no statistically significant relationship between the participant's residence type and Internet addiction, which was not in the same line with the results of the study conducted by Wahhabi (22). They showed that non-dormitory students were more addicted than those who stayed in the dormitory. However, our findings were consistent with the results of the study by Mohammadi (31). This finding suggests that the Internet is accessible and available everywhere, and students can use their cell phones and tablets to access the Internet anywhere. So, it seems that the risk of addiction is the same among the dormitory and non-dormitory students. Furthermore, the results of our study showed a significant statistical relationship between the prevalence of Internet addiction, smoking, and cyberspace membership. Additionally, there was no significant relationship between the prevalence of Internet addiction and birthplace.

One of the strengths of this study can be to investigate several variables on the frequency of Internet addiction, and one of the weaknesses of this study can be the lack of study of the type of virtual network

Conclusion

According to the results of the study, it can be concluded that despite the low rate of Internet addiction among medical students, due to the importance of medicine in public health, this rate should be minimized through student awareness.

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Author contribution

S.SM contributed to the research, and M.SH AND N.N writing of the article.

Conflict of Interest

The authors declare that there is no conflict of interest in the publication of this paper.

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