Original Article

Assessing the relationship between internet addiction and loneliness with sleep quality in youth population

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Abstract

Introduction: Internet addiction has increased among young adults as public health problem which lead to mental and physical disturbances. The present study aimed to assess the relationship between internet addiction and loneliness with sleep quality in youth population.

Materials and Methods: In this descriptive-correlational study, 50 college students who educating in academic year of 2014-15 in Islamic Azad University, branch of Torbat-e-Jam were selected via convenience method. They fulfilled Internet Addiction Inventory (IAI), Pittsburgh Sleep Quality Index (PSQI) and the revised UCLA Loneliness Scale. Data analyzed through descriptive and conferential statistics.

Results: The findings showed that there was positive and direct correlation between internet addiction and poor sleep quality. The same correlation was seen between loneliness and sleep quality. Also, loneliness can predict sleep quality and it can explain 13% of changes in sleep quality.

Conclusion: Regarding to the findings, internet addiction and loneliness are associated to negative impact on quality of sleep among college students.

Keywords: Internet addiction, Loneliness, Sleep quality, Youth

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Introduction

In the present century which named as "century of technology", Internet and social networks have been dramatically developed even in traditional societies and in different age groups especially among adolescents and young adults (1-4).

Based on the global evidences related to internet use in different countries, the number of internet users in Iran is estimated 33 millions and 200 thousands until 2010 which increased 30 times compared to the numbers of Iranian internet users in 1999 (5).

The term as "Internet Addiction" is first used by Kimberly Young in 1996. He defined this type of addiction as spending a lot of time (40 to 80% of time or more than 20 hours in a week) (6).

Internet addiction is associated to many public health problems such as mental, social, professional and physical problems. It can lead to nutritional and sleep disturbances, ophthalmic and musculoskeletal adverse outcomes (7,8).

Adequate sleep is needed for appropriate physical and mental development but overuse of smart phones and internet can disturb the quality of sleep and it can lead to sleep disorders or other psychiatric problems such as anxiety, insomnia and depression (9,10). On the other hand, problematic use of internet may conclude social isolation and loneliness. The past studies showed that loneliness and reduced social contacts have adverse impacts on sleep quality especially in young adults and adolescents (11,12).

Regarding to the increased rate of internet addiction especially among youth population and its consequences on sleep quality and social relationships, the present study aimed to assess the relationship between internet addiction and loneliness with sleep quality in college students.

Materials and Methods

The statistical community of this descriptive-correlational study approved by Islamic Azad University consisted of all students who educating during 2015-16 in management course of Islamic Azad University, Branch of Torbat-e-Jam. Amongst them, 50 students were selected through convenient method regarding to the inclusion criteria. Inclusion criteria included: aged 20-30 years, tendency to participation, lack of major psychiatric problems.

Research instrument

A) Pittsburgh Sleep Quality Index (PSQI): This scale includes of 7 subscales as: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction. The global score (0-21) is sum of scores of each subscale (0-3). The total score >5 is concerned as poor quality of sleep (13). This instrument has good psychometric properties in Iranian population (Cronbach alpha=0.85) (14-17).

B) The revised UCLA Loneliness Scale: This scale consisted of 20 items which scored in 4 degree Likert system as 1 (never) to 4 (often). This instrument measures non-satisfaction in two dimensions of lack of intimate relationships and lack of social network. Russell et al. reported its validity 0.94 (). In two Iranian studies, its validity measured as 0.78 and 0.83 (18-20).

C) Internet Addiction Inventory (IAI): This inventory had 20 items which assess the addictive symptoms in internet users and the questions scored in a 5 degree Likert system as: rarely (1), sometimes (2), often (3), most often (4) and always (5) (6). This instrument has good internal consistency in Iranian studies (α=0.88). The score of 46 is concerned as the cut-off point (21,22).

Data analyzed through descriptive and conferential statistics such as linear regression and Pearson coefficient.

Results

The cases of this study consisted of 50 college students. In term of age, 44% of them aged 20-25 years and 64% of students were employee. The mean and standard

deviation of the assessed variables and coefficients were shown in Table 1 and 2.

Table 1. The scores of internet addiction, sleep quality and loneliness

Variable	Mean	Standard deviation
Internet addiction	35.69	10.06
Loneliness	39.44	10.48
Sleep quality	12.38	6.41

Table 2. Coefficient of between internet addiction, loneliness and sleep quality

Variable	Sleep quality
Internet addiction	r=0.129 P=0.435
Loneliness	r=0.363 P=0.23

The results of the above table showed that there was positive and direct correlation between internet addiction and sleep quality. The same correlation was seen between loneliness and sleep quality. These findings

indicated that higher scores of internet addiction and loneliness are associated to poor sleep quality.

Tables 3 and 4 indicated the results of regression.

Table 3. The coefficients of multi-regression analysis

Variable	R	R2	Adjusted R2	Standard error
Sleep quality	0.363	0.132	0.108	6.057

Table 4. The results of regression to predict sleep quality through loneliness

Changes variable	Sum of squares	Degree of freedom	Mean of squares	F	P
Predictor	206.003	0.132	206.003	5.616	0.002
Residual	1357.228	37	36.682		
Total	1563.231	38			

The results of tables 3 and 4 indicated that loneliness can predict sleep quality and

loneliness can explain 13% of changes in sleep quality.

Discussion

The findings of this study showed that internet addiction and loneliness had positive and direct relationships with sleep quality among college students. Also, loneliness can predict quality of sleep in the cases. The conducted studies concluded the same results although there are few studies in Iranian population which assessed the

predictive role of loneliness in sleep quality especially in young individuals.

In a cohort study conducted by Matthews et al. 2232 twins who born in England during 1994-1995 were assessed through UCLA Loneliness Scale and Pittsburgh Sleep Quality Index. The results indicated that loneliness is associated to poor sleep quality and daytime dysfunction (23). This finding is in line with the present study, although

internet addiction was not assessed in Matthews et al. study.

A study which assessed the effect of online social networks in sleep quality and academic performance in 470 Iranian adolescents through Pittsburgh Sleep Quality Index and Young Internet Addiction Test indicated that overuse of internet networks had a negative effect on sleep quality and academic performance while it increased the depressive symptoms among the adolescents (24). These findings supported the present study in the effect of internet addiction on loneliness and sleep quality among young adults.

In addition, Moradi and Jamshidi evaluated the relationship between internet addiction and loneliness through Young internet addiction test and Asher loneliness inventory among 150 college students in different courses. They found that there is positive and significant relationship (Pearson coefficient = 0.905 and p=0.00). In addition they found that students of computer course had higher scores in internet addiction compared to the other educational courses. In the present study we evaluated only one course (managing course) (25).

In term of sleep disturbances and internet addiction, Nourian Aghdam et al. evaluated college students (n=50) with or without internet addiction. They found that there were significant differences between two groups in sleep disturbances (p=0.001) and social isolation (p=0.004) (26). These findings supported the role of internet addiction in sleep problems and social isolation same as our research.

This research had some limitations such as specific course and age group. So, it is recommended that the future studies conducted on different age groups and educational courses with a larger sample size.

Conclusion
Regarding to the findings, internet addiction and loneliness are associated to negative impact on quality of sleep among college students.

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