INVESTIGATION OF RELATIONSHIP INTERNET ADDICT WITH MENTAL HEALTH AND QUALITY SLEEP IN STUDENTS

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Abstract

Introduction: The Internet is one of the most important sources to access scientific writing in medical Universities. Internet is one of the world’s most popular social media and online addiction is increasing rapidly. Internet can be useful and effective as a new consequence and sometimes can be hazardous and dangerous due to improper use and threaten the mental health of users. Comparing with average users, addicted users’ public health and quality sleep are in great danger.

Objective: The aim of the present research is study of relationship between internet addict with mental health and quality sleep in students.

Methods: The method of this study is descriptive - correlational. The statistical population of this research consisted of all the Tehran University of Medical sciences. The sample consisted of 250 students that were selected through random sampling. The research instruments included Pittsburgh Sleep Quality Inventory (PSQI), Mental Health Checklist (MHC) and Internet addiction questionnaire (Young).

Results: The findings showed there is a significant difference between internet addict with mental health ($r=0.279 \text{ p} \leq 0.01$) and sleep quality ($r=0.909 \text{ p} \leq 0.01$) and also internet addiction is predicted sleep quality and mental health.

Conclusion: From data interpretation can be suggested that internet addiction in university student population, similar to classic addictions to drugs, shows negative effects on mental health and sleep quality variables.

Keywords: Internet addiction, mental health, sleep quality, students.

Received April 30, 2016; Accepted July 02, 2016

Introduction

Today, the Internet has turned into a major component in our lives. The Internet has generated new communications and has empowered individuals to have access to extensive information. The experimental evidence reveals that excessive expansion of the use of the Internet is addictive, though. The term ‘Internet addiction’ was first coined by Ivan Goldberg as a disorder in 1995, and was applied by many scholars ever since. The Internet addiction is known as a common behavioral addiction that is prevailing among the circle of university students. University students’ Internet addiction centers more on such fields as Net surfing, online games and Web chat.

According to Pirzadeh, the prevalence of Internet addiction among the medical students was reported to reach 19.5%. The Diagnostic and statistical Manual of Mental Disorder (DSM-V) criteria for Internet addiction are: A) the sufficiency of the strength of symbols, B) psychosocial dysfunctions, C) a three-six-month disorder duration, D) The absence of psychotic disorder, and the existence of at least two of the symptoms: 1) loneliness, 2) obsession of mind, 3) patience, 4) losing interest (excluding interest), 5) working long hours with the Internet, despite being aware of its negative effects, 6) using the Internet with the aim of fleeing, and 7) the presence of a restless mood in persons. The Internet addiction is related to such issues as social irresponsibility, social isolation, a lack of social...
support, academic incompetency, low self-esteem, loneliness, disorders in sleep pattern, and ignoring the responsibilities in your lives. The quality of sleep is something that is under the influence of the Internet addiction. To sleep is one of the most impressive human behaviors and comprises around a third of human life\(^7\). Poor-quality sleep is highly prevalent among students and results in poor overall performance, especially in educational fields\(^8\).

The performed studies on this subject indicate that the Internet addiction leaves a negative impact on the quality of sleep. In studies conducted by Lin & Tsai\(^9\), the results demonstrated that the Internet addiction leads to deprivation of sufficient time to sleep and perform other activities. According to the results of studies performed by Jenaro et al.\(^10\), the more time the Internet users devote to the Net, the more their sleep and consciousness patterns will be disturbed, and on the other hand, high levels of insomnia were observed among the Internet addicts. Cheung & Wong\(^11\) indicated that the Internet addiction and insomnia were closely related.

In the other words, ones with strong dependence on the Internet suffer from sleep disorders. Mental health is another major factor affected by the Internet addiction. There is an abundance of evidence that prove there is a significant negative relationship the mental health and addiction to the Internet\(^12,13\).

In fact, the Internet-dependent students have poorer mental health and are more predisposed to depression and anxiety\(^14\). The results of studies conducted by Alavi et al.\(^15\) showed that there was a significant positive relationship between addiction to the Internet and the scores of such factors as psychiatric symptoms like depression, anxiety, hypochondriasis, obsession, interpersonal sensitivity, aggression, paranoia, phobias and Psychosis, and more to the point, the Internet addiction was proved to act as a good predictor of mental and physical factors of mental health. Given the significance of the Internet addiction in the present age and its high prevalence among college students, the present study aimed to delve into the relationship between the Internet addiction, quality sleep and mental health.

**Methods**

The method of this research is a descriptive-correlational. The statistical population consisted all of Tehran University of medical sciences University students. Also, the number of the sample population was determined through Cochran’s sample size formula (n=205), chosen through the agency of stratified-random sampling. For data collection, three questionnaires were used: (1) Pittsburgh Sleep Quality Index (P.S.Q.I.), (2) Mental Health Checklist (M.H.C.), and (3) Yang’s Internet addiction questionnaire.

The Yung’s Internet addiction questionnaire (YIAT20) consisted of 20 questions with five-point Likert scaling (1= rarely, 5= always) and was designed to measure the moderate (20-30), high (69-40) and severe (70-100) levels of addiction to the Internet. The validity of this tool was examined by Widyanto & Mcmurran\(^16\) through factor analysis and correlation coefficient. The results of the study showed that the Internet addiction test consisted of six distinct factors that were significantly correlated. In studies performed by Nadi et al.\(^17\), the Cronbach’s alpha for this questionnaire was 0.90, and in the present study, the Cronbach’s alpha was 0.92.

For the Pittsburgh Sleep Quality Index (P.S.Q.I.), it was constructed by Buysse et al.\(^18\) and assessed the sleep quality and helped identify the ones with good and bad sleeping patterns. It consisted of 18 questions with seven sub-scales of the mental quality of sleep, delay in going to sleep, sleep duration, net sleep, sleeping disorders, taking sleeping pills, disorders in daily functioning. Each of the sub-scales had 0-3 scores. High scores indicated that the quality of sleep was low, and the total score of the questionnaire was 0-21.

As for the Mental Health Checklist (M.H.C.), consisting of the demographic and Checklist sections, factors like anxiety, restlessness, disappointment and anger were measured in two physical and psychological categories. The reliability of this tool was checked by Gholami & Mansoobifar\(^19\) and the results indicated that it was significant at the level of \(p\leq0.001\). In the present study, the reliability of this tool was 0.086. For data analysis, the descriptive statistics (Mean, and Standard Deviation) and inferential statistics (Pearson Correlation Test and Regression Analysis) were applied.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male</th>
<th>Female</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>120</td>
<td>130</td>
<td>250</td>
</tr>
<tr>
<td>%</td>
<td>48%</td>
<td>52%</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1: Gender distribution of research data.
Based on the results of table 1, 120 ones of sample members (48%) were male and remaining 130 ones (52%) were female.

According to Table (2) the mean of Internet Addiction is (37.17±13.40) and Quality Sleep (29.50±6.60) and mental health (20.84±6.56).

The results demonstrated that there was a significant positive relationship between the internet addict with quality sleep (r = 0.909, p ≤ 0.01) and mental health (r = 0.279, p ≤ 0.01).

The internet addict predicted 0.830% of the variance of the quality sleep (R²= 0.830). Of the dimensions of the internet addict predicted, being obvious (0.258), Overuse (0.271), working negligence (0.229), loss of control (0.129) and neglect social life (0.120) influenced the quality sleep.

### Table 2: Mean and standard deviation of variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Addiction</td>
<td>250</td>
<td>37/17</td>
<td>13/40</td>
</tr>
<tr>
<td>Quality Sleep</td>
<td>250</td>
<td>29/50</td>
<td>6/60</td>
</tr>
<tr>
<td>mental health</td>
<td>250</td>
<td>20/84</td>
<td>6/56</td>
</tr>
</tbody>
</table>

### Table 3: Correlation Matrix of Internet Addiction and Quality Sleep and mental health.

**Significant at 0.01 * significant at 0.05**

### Table 4: Coefficients the effect of internet addiction on quality sleep.

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### Conclusion

The results of the present study demonstrated that there was a significant relationship between addiction to the Internet and sleep quality, and it was also seen as a predictor of changes in the quality of sleep. This finding was consistent with the results of studies performed by Lin & Tsai(9), Jenaro et al.(10).

In support of the significance of this relationship, it can be expressed that with increasing the time of staying on the Internet, the sleep and consciousness patterns will be disturbed, and as a result, it will result in depression. Additionally, the Internet addiction leads to insomnia, dissatisfaction with sleep and poor quality sleeping manners and propels individuals towards taking sleeping drugs. Sleep deprivation is not the only adverse effect of the Internet, and the multifaceted interactions of complex physiological,
psychological, cognitive mechanisms of this phenomenon need to be explained.

The results of the present study showed that there was a significant relationship between addiction to the Internet and mental health, and it was also seen as a predictor of changes in mental health. This finding was consistent with the results of studies conducted by Shaw & Black (2), Ha et al. (12), Yen et al. (13). In support of the significance of this relationship, it can be expressed that college students’ addiction to the Internet results in a reduction in accountability, low academic performance, a lack of satisfaction with conducting tasks, low efficiency, disability and feeling of isolation, all of which endanger the mental health.

To spend more time with the Internet, college students change their lifestyles in such a way that their physical activities are decreased and less attention is paid to their personal health, and this type of sedentary life is considered as a threat to their mental health due to the prolonged exposure to the Internet. Exposure to the virtual world of the Internet without fear of opposition from others or exclusion will result in individuals’ real interactions paling into insignificance, which will make social relations less flexible in comparison with ordinary people. In addition to creating a feeling of intimacy and freedom to express feelings, Internet connection provides individuals with keeping privacy. These advantages make students spend a good deal of time on the Internet, their motivations to interact with others goes down, and their abilities to maintain friendships and real relationships are reduced. The depressed and anxious ones endeavor to find ways out of their problems, and because they are incapable of coping with the problems they are faced with, the best solution is the Internet. Typically, those who are not satisfied in the real world try to make it up for their shortages and weaknesses in the virtual world. Internet addiction is negatively related to negative excitement. In fact, this point should be kept in mind that the relationship between Internet addiction and mental health is a bilateral and mutual relationship and these two variables affect one another in such a way that the psychological and interactive problems of college students result in an increase in addiction to the Internet. Not to mention, this type of addiction alone causes lots of psychological and interactive problems.

This vicious cycle more and more secludes college students and their mental health will be in danger. In addition, it is suggested that they are in need of appropriate sports and amusements, identifying the needs of college students addicted to the Internet, and planning the needs for their proper need satisfactions.

The internet addict predicted 0.126% of the variance of the mental health (R^2 = 0.126). Of the dimensions of the internet addict predicted, only working negligence (0.337) influenced the quality sleep.

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References

4) Douglas A., Mills J., Niang M., Stepchenkova, S., Byun, S., Ruffini, C., Lee, S., Loutfi, J., Lee, JK., Atallah, M., & Blanton, M. “Internet addiction: Table 5: Coefficients The effect of Internet Addiction on mental health. The internet addict predicted 0.126% of the variance of the mental health (R^2 = 0.126). Of the dimensions of the internet addict predicted, only working negligence (0.337) influenced the quality sleep.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>standardized coefficients</th>
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<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
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<tr>
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<td>-</td>
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<td>Being obvious</td>
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