

Internet Dependency and Its Association with Depression among the Students of North South University of Bangladesh

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Received: April 05, 2016; Published: May 06, 2016.

Abstract

Internet becomes an important part of modern life, which brings huge change and convinces people spend more time in online. Internet may provide an alternative to life without joy for depressed ones and depression may occur as a result of internet dependency. A cross-sectional study was conducted to assess internet dependence and its association with depression among 400 undergraduate students of North South University, Bangladesh during January to April 2015. Internet Addiction Diagnostic Questionnaire Test and CES-D scale was used as a data collection tool. Chi-square test and logistic regression was done using Statistical Package for Social Science (version- 20). Among 400 respondents, male and female were 56% and 44%. About 101 (25.3%) students were found as internet dependent and 264 (74.8%) were depressed. About 31.4% respondents were internet dependent with depression ($p < 0.001$) and OR was 3.00 (1.71-5.26) i.e., internet dependent were more likely to have 3 times risk to develop depression. Besides 16.8% had mild to moderate depression, 65.3% had major depression and 17.8% had no depression and it was statistically highly significant ($p < 0.001$). It is concluded from the study that internet dependency is significantly associated with depression.

Keywords: Internet dependence; Depression; Undergraduate students; North South University

Introduction

Internet dependency is a term for "excessive use of the Internet" to the detriment of one's physical, psychological, social, or vocational well-being. One of the important features of modern society is the increased effect of online communication tools, especially internet, on people. There is no doubt that this effect is higher on young people than other ones in society [1]. The majority of the students in most of the universities now use internet as a source of information and entertainment on at least an occasional basis. Most use it on a regular basis without becoming dependent upon it [2]. Increase use of internet results dependency on it. Excessive internet use may revolve around chat rooms, pornography, database searches, blogging, gambling, gaming, shopping or other online activities. Interestingly these negative effects are due to internet dependence [3-5]. Orzack showed people who were susceptible to internet dependency were easily bored, lonely, shy, depressed and suffering from other addictions [6]. Individual in the age group of 18-25 is more susceptible, especially students in universities or colleges [7]. American Psychiatric Association has defined the internet addiction as a pattern for using the internet which can cause dysfunction and unpleasant internal reactions [8]. Depression is a common but serious mental illness typically marked by sad or anxious feelings. The World Health Organization defines depression as "a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration" [9]. Though depression developed for many reasons but internet dependence is one of the major causes. This study attempts to realize the factors of internet dependence and its association with depression among the students of North South University, Dhaka.

Citation: Md Monoarul Haque., et al. "Internet Dependency and Its Association with Depression among the Students of North South University of Bangladesh". *Ec Psychology and Psychiatry* 1.2 (2016): 44-48.

Material and Methods

This cross-sectional study was conducted among 400 undergraduate students of North South University, Bangladesh using convenient sampling. There are four schools in this university namely School of Business, School of Life Sciences, School of Engineering and Physical Sciences, School of Humanities and Social Sciences. We collected 100 data from each school. Data were collected by 'Personal information form' to collect information with 'Young Internet Addiction Diagnostic Questionnaire' to identify the students with internet dependent or not and 'CES-D Scale' to make out levels of depression of students. Collected data were entered and analyzed by Statistical Package of Social Science (SPSS) version 20. Chi-square test was done to see association between internet dependency and depression and regression analysis was done to measure risk.

Personal Information Form or Socio-demographic data form: Considering the objectives of the study, a form was prepared by investigators and used to collect socio-demographic information of the students.

Internet use Questionnaire: The internet used questionnaire was designed to collect the basic information of internet use, such as duration of internet use per day, purposes of internet use, internet use mostly.

Young Internet Addiction Diagnostic Questionnaire: Internet Addiction DQ test was designed by Dr. Kimberly Young, 1998. Eight yes, no questions on Internet addiction. Individuals who answer 'Yes' to five or more of eight- Items can be classified as addicted users or dependent on internet, while other could be classified as normal internet users or non- dependent on internet. The overall of this study Cronach's alpha reliability was 0.817. Previous research found in Chinese version of YDQ was reported with a good reliability on Split-half reliability and Chronbach's alpha were 0.719 and 0.722 respectively [10]. Johansson and Gotestam (2004) found similar result with the Greek version, which showed a good reliability and consistency in Split-half test (0.729) and Chronbach's alpha (0.713) [11].

CES-D scale: CES-D scale was used to measure the level of depression. A 20-item measure designed to assess the presence and severity of depression on a 0-3 Likert type scale ("rarely or none of the time" to "most or all of the time"), and total scores range from 0 to 60. Standard cutoffs are <16 for mild to moderate depression and ≥ 23 for major depression. The overall of this study Cronach's alpha reliability was 0.817. Findings of overall scale reliability was good ($\alpha=0.88$) and similar to the values reported in the original validation study ($\alpha=0.88-0.90$) [12].

Results

Figure 1 shows 37% respondents used internet 4-7 hours per day followed by 51.8% 1-3 hour and 11.3% >8 hour. About 70%, 19.8%, 10.3%, 5.3% and 2.8% respondents used internet at night, at evening, at mid-night, at afternoon and at morning respectively (Figure 2). Figure 3 reveals 52% respondents used internet for social networking, 39.8% for entertainment, 35.8% for study, 8% for loneliness and 2.8% for health. Figure 4 clearly shows 25% were internet dependent and 75% were not dependent on internet. Figure 5 shows that major depression, moderate depression and no depression were 37.8%, 28.3% and 34% respectively. Table 1.a and 1.b shows 83(31.4%) respondents were internet dependent with depression ($p<0.001$) and OR was 3.00 (1.71-5.26) which means those who were internet dependent were more likely to have 3 times risk to develop depression. Besides 16.8% were mild to moderate depressed, 65.3% were major depressed and 17.8% were no depressed. Whereas, p value was statistically highly significant ($p<0.001$).

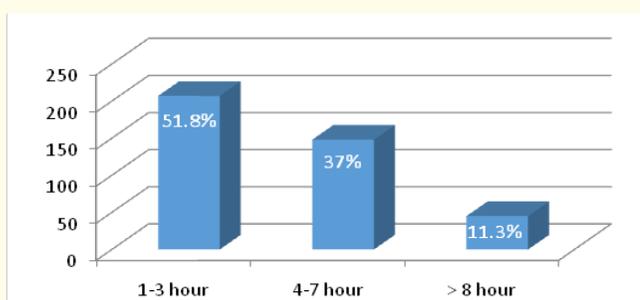


Figure 1: Duration of Internet use regularly.

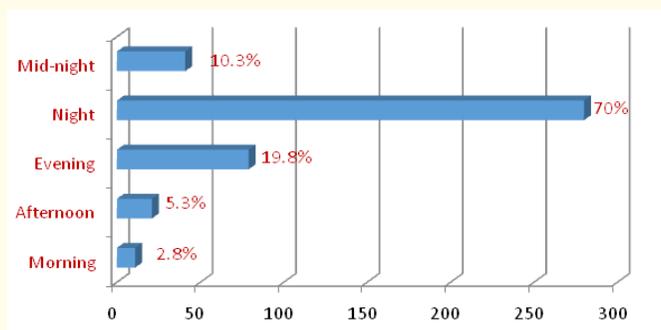


Figure 2: Distribution of internet use mostly.

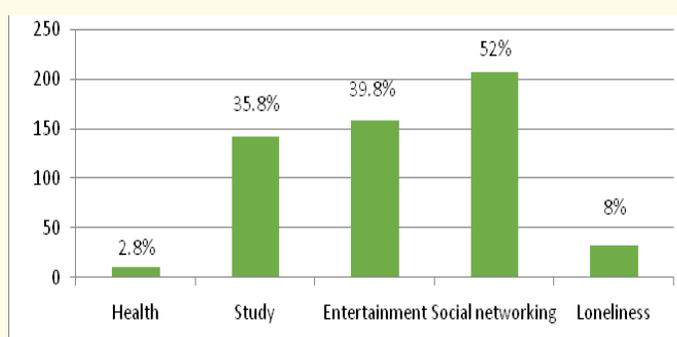


Figure 3: Distribution of purposes of internet use.

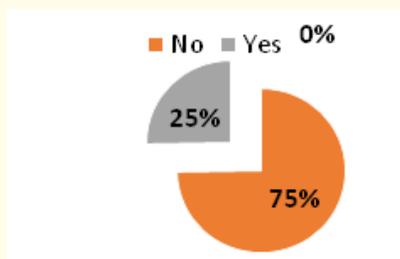


Figure 4: Distribution of Dependent on Internet.

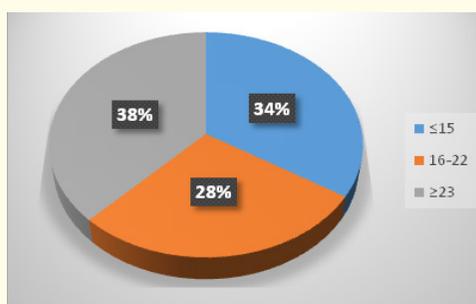


Figure 5: Level of Depression.

Characteristics	Depression			OR (95% CI)	p
	Overall population n=400)	Yes (n=101)	No (n=299)		
Internet dependent	264	83(31.4%)	181(68.6%)	3.00(1.71-5.26)	<0.001
Yes	136	18(13.2%)	118(86.8%)		
No					

Table 1A: Association between Internet Dependent and Depression.

Characteristics	Depression			p value
	<15 (Not depressed)	16-22 (mild to moderate depressed)	>23 (Major depressed)	
Internet dependent	118 (39.5%)	96 (32.1%)	85 (28.4%)	
No	18 (17.8%)	17 (16.8%)	66 (65.3%)	<0.001
Yes				

Table 1B: Association between Internet Dependent and Depression.

Discussion

Total 400 respondents were interviewed with the help of a structured questionnaire and two scales were used for measuring internet dependent and depression level. Internet dependence was measured by the Internet Addiction Diagnostic Questionnaire Test and Depression was measured by the CES-D scale. The present study found direct effect of dependent on internet use on depression. Undergraduate students who were dependent on internet had more chance to develop depression.

Turkey study found that internet addiction has a direct impact on depression [13]. This study shows that, 83 (31.4%) were internet dependent with depression whereas, major depression 66 (65.3%) mild to moderate depression is 17 (16.8%) and 18 (17.8%) were not depressed. There is p value was statistically highly significant (p<0.001). OR was 3.00 (1.71-5.26) which means those who were internet dependent were more likely to have 3.00 times depression. Another study conducted in University of Michigan 2012, among 245 undergraduate university students revealed mild levels of depressive symptoms in the overall sample 51% of the population reported minimal depressive symptoms, 37% of the population reported mild depressive symptoms, and 12% of the population reported major depressive symptoms [14]. Moreover, studies in 2002 spring, a mid-Atlantic mid-sized university was conducted among college freshmen and results obtained, increased Internet hours associated with increased depressive symptoms [15]. Most of the studies have showed that, male were more likely to go online and stay longer time on the computer compare to the female. From this study revealed that, students spent their time significantly longer time. 31.8% students were using internet 4-7 hours/per and 33.3% students were using internet >8 hours /per. Which is higher than another cross sectional study was conducted with 100 professional educational students and majority of student's education is 74% in undergraduate (B.Sc. nursing). Majority 85% students were using internet 1-4 hours/day. Maximum 66% students were using internet for their personal use. 73% of students were showed that average depression [12].

Conclusion

Internet dependence has begun to be an important problem with youngsters starting to excessive use of internet. Although studies about internet dependence are common in the world, they have just started to become widespread. Current findings increase our understanding, internet dependence are more likely to vulnerability to depression.

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Volume 1 Issue 2 May 2016

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