

Evaluation of Internet Addiction, Impulsivity and Psychological Distress among University Students

Review Article

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Abstract

The present study is an attempt to assess internet addiction, impulsivity and psychological distress among university students. The sample in the study consisted of one hundred fifty university students out of which 75 were males and 75 were females who were selected on the purposive basis from the main campus of Kashmir University. Young's Internet Addiction Scale (IAT), Kessler Psychological Distress Scale (K10), Barratt Impulsiveness Scale (BIS-11) and Demographic Data sheet were used to collect research data from informants. The obtained data were analysed by frequency method, Pearson correlation method and t-test. The results revealed that male university students experienced more internet addiction, impulsivity and psychological distress as compared to the female university students and a significant positive correlation was found between internet addiction and psychological distress; and internet addiction and impulsivity among university students. Moreover, the results also indicated that rural university students experienced more internet addiction and psychological distress as compared to urban university students.

**Keywords:** Internet Addiction; Impulsivity; Psychological Distress; University Students.

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Introduction

The Internet is a widely recognized channel for information exchange, academic research, entertainment, communication and commerce [3,16,45,64]. Although the positive aspects of the Internet have been readily praised, there is a growing amount of literature on the negative side of its excessive and pathological use [11,12,7,4,20]. Byun et al. (2009) estimate that 9 million Americans could be labeled as pathological Internet users with unpleasant consequences for their social life, their professional status and their psychological condition [55,56,68,62]. In the scientific literature, several terms have been proposed to describe pathological

Internet use: Internet addiction, cyberspace addiction, Internet addiction disorder, online addiction, Net addiction, pathological Internet use, high Internet dependency, problematic Internet use and others [64,3]. Internet addiction is defined as an individual's inability to control his or her use of the internet, which eventually causes psychological, social, school and/or work difficulties in a person's life [15,69]. Like other addictions, internet addiction has been linked to a variety of problems. Besides little sleep, failure to eat for long periods and limited physical activity, it also disrupts the studies and other aspects of the daily life of an individual [5]. University students are considered as a high risk group for IA [27,69,47,48].

Possible reasons for this are: (a) students have huge blocks of unstructured time, (b) schools and universities provide free and unlimited access to the Internet, (c) students from the ages of 18–22 years are for the first time away from parental control without anyone monitoring or censoring what they say or do online, (d) young students experience new problems of adapting to university life and finding new friends, and often end up seeking a companionship by using different applications of the Internet, (e) students receive full encouragement from faculty and administrators in using the different Internet applications, (f) adolescents are more trained to use the different applications of technological inventions and especially the Internet, (g) students desire to escape university sources of stress resulting from their obligations to pass exams, compose essays and complete their degrees in the prescribed time with reasonable marks, and finally (h) students feel that university life is alienated from social activities, and when they finish their studies, the job market with all its uncertainties is a field where they must participate and succeed in finding employ-

ment [68].

Research findings have shown that excessive use of Internet or Internet addiction adversely affects one's physical health, family life, and academic performance. Academic problems caused by Internet addiction include decline in study habits, significant drop in grades, missing classes, increased risk of being placed on academic probation, and poor integration in extracurricular activities. Besides, adolescent Internet addicts often suffer from severe psychological distress, such as depression; anxiety; compulsivity; feeling of self-effacement; fear that life without Internet would be boring, empty, and joyless; as well as feeling of loneliness and social isolation. Internet users are not a homogenous group. Mafe and Blass (2006) [42] proposed that a profile of internet-dependent users is young. Young internet users (that is between 19 to 24 years old) were more at risk of becoming internet addicts than older users [57,59].

Several studies have reported gender differences in internet usage. Weiser (2000) [63] reported significant gender difference in internet usage. He reported that males tend to be more familiar with the computers and internet as compared to females. Same gender differences were stated in the literature concerning internet addiction. Scherer (1997) [54] suggested that dependent internet users included a large proportion of men as compared to women. Similar results were reported by Morahan-Martin and Schumacher (2000) [46] that males were more likely to be pathological internet users than females.

## Impulsivity and Internet Addiction

The impulsivity has been defined as a predisposition toward unplanned reactions toward internal or external stimuli without regarding the negative consequences of the action [44]. Impulsivity is more salient in particular psychiatric disorders [24,25] such as personality disorders, eating disorders [41], substance abuse [19,14], and last but not the least IA [6,43]. Other than severity of psychopathology measured with the Symptom Checklist-Revised (SCL-90-R) being higher [65,66], personality disorders, particularly those in cluster B known as impulsive personalities, found to be higher in those with IA [65]. On the other hand IA has also been found to be associated with attention-deficit hyperactivity disorder (Yen et al.,) [8], low self-esteem [31], shyness [61], depressive symptoms [69,61,23,26], hostility [34,66], interpersonal sensitivity (Ko et al., 2007), impairments in relationships (Milani et al., 2009), obsessive-compulsive symptoms(OCS) [23,26,8], and last but not least impulsivity [6,43]. Furthermore, the students who reported excessive internet use are characterized by complaints of indecisiveness, preoccupation with details, nervousness, irritability, aggressiveness, and impulsivity [65].

## Psychological Distress and Internet Addiction

Psychological distress is a major problem of present era, especially for student population. Any situation that evokes negative thoughts and feelings in a person such as unpleasant, frustrating, irritable, worrisome, and anxious is considered psychological distress. According to [9] psychological distress is "a continuous experience of unhappiness, nervousness, irritability and problematic interpersonal relationships". Internet addiction also may contribute to anxiety and stress [18,70]. Those who suffer from anxiety and stress often have a great deal of trouble communicating and interacting with others in a healthy, positive, and meaningful

way. These human characteristics are viewed as important determinants of internet addiction. Moreover, an association between increased Internet use and psychological distress and loneliness has also been found [39]. Different factors are associated with internet addiction that operate differently in different cultures, races and countries, and since there is dearth of such systematic study under Indian set up, it is appropriate to investigate empirically that whether or not psychological distress, impulsivity, gender and residence independently are accountable for differences in internet addiction.

Following are the objectives of the study:

1. To study internet addiction, impulsivity and psychological distress among university students.
2. To study the relationship between internet addiction and impulsivity among university students.
3. To study the relationship between internet addiction and psychological distress among university students.
4. To study the difference in internet addiction among university students with respect to their gender and residence.
5. To study the difference in impulsivity among university students with respect to their gender and residence.
6. To study the difference in psychological distress among university students with respect to their gender and residence.

## Hypotheses of the Study

On the basis of above mentioned objectives, following hypotheses were formulated.

**Ho<sub>1</sub>.** There is not a significant correlation between internet addiction and impulsivity among university students.

**Ho<sub>2</sub>.** There is not a significant correlation between internet addiction and psychological distress among university students.

**Ho<sub>3</sub>.** There is no significant difference in internet addiction among university students with respect to their gender.

**Ho<sub>4</sub>.** There is no significant difference in impulsivity among university students with respect to their gender.

**Ho<sub>5</sub>.** There is no significant difference in psychological distress among university students with respect to their gender.

**Ho<sub>6</sub>.** There is no significant difference in internet addiction among university students with respect to their residence.

**Ho<sub>7</sub>.** There is no significant difference in impulsivity among university students with respect to their residence.

**Ho<sub>8</sub>.** There is no significant difference in psychological distress among university students with respect to their residence.

## Methodology

### Participants

The study is based on the sample of 150 university students enrolled in various post-graduate programs at the Kashmir University, (India). Out of 150 university students 75 were males and 75 were females.

**Tools used:** To collect the desired data for the present study, two standardised psychological tests were used.

### Young Internet Addiction Scale (IAT)

Young's questionnaire which contains 20 questions is one the most popular questionnaire in the majority of researches [21]. The 1998 version of the abovementioned questionnaire was implemented in this study. Yoo & colleagues (2004) [67] found Chronbach Alfa coefficient to be greater than 0.9 as did Whang and colleagues. Dargahi (2006) found the coefficient of stability of this questionnaire to be 0.88 [21]. The 20 questions of this questionnaire are scored on a 5-point scale, (ranging from 1 to 5). The marking range for this test is from 0 to 100, where the higher the mark the greater dependence on the internet.

**Barratt Impulsiveness Scale (BIS-11):** Impulsivity was assessed with the Barratt Impulsiveness Scale, Version 11 (BIS-11) [50]. The BIS-11 contains 30 items which assess impulsivity in daily life, including common impulsive and non-impulsive (for reverse scored items) behaviours and preferences. Items are rated on a 4-point scale: Rarely/Never (=1), Occasionally (=2), Often (=3), and Almost Always/Always (=4). The BIS-11 has three subscales: Attentional Impulsiveness (8 items), Motor Impulsiveness (11 items), and Non-Planning Impulsiveness (11 items) (Patton et al., 1995). Published reliability coefficients for the BIS-11 total score (Cronbach's alpha) range from 0.72 to 0.83.

**Kessler Psychological Distress Scale (K10) 1996**

The Kessler psychological distress scale (K10) [30] is a widely used, simple self-report measure of psychological distress which can be used to identify those in need of further assessment for anxiety and depression. The K10 comprises 10 questions where respondents are required to choose between 'All of the time', 'Most of the time', 'Some of the time', 'A little of the time', and 'None of the time' and are scored from five through to one. The total score ranges from 10 to 50 and the maximum score of 50 indicates severe distress while the minimum score of 10 indicates no distress. Kessler and colleagues (2002), found that the Cronbach's alpha for the K10 (a measure of internal consistency reliability) to be high (.93). The brief questionnaire has been shown to have good construct and criterion validity (Kessler et al., 2002), being significantly associated with measures of mental health symptoms and disability as well as the frequency on consultations

for a mental health problem in the previous 12 month period.

**Procedure**

These three measures were in printed form and were administered on each selected subject by assuring them that information provided by them will be kept strictly confidential. Having obtained the data from the subjects, the data were tabulated for giving statistical treatment for obtaining the results.

**Statistical Analysis**

Keeping in view the nature of research problem and to meet the objectives of the study the data collected was analyzed by using Statistical Product and Service Solutions (SPSS 16.0). Statistical techniques used for analyzing data were: frequencies, percentages, correlation and t-test. The statistical significance value was set at  $p < 0.05$ .

**Results and Discussion**

The descriptive statistics are displayed in Table 1, Table 2 and Table 3. The associations of internet addiction with impulsivity and psychological distress are presented in Table 4 and Table 5. Finally, Tables 6 and 7 show the Show the Comparison of Mean Scores of Internet Addiction, Impulsivity and Psychological Distress among University Students with respect to their gender and Residence.

The aim of the present study was to study internet addiction, impulsivity and psychological distress among university students and the relation of internet addiction with impulsivity and psychological distress. The comparison among university students on internet addiction, impulsivity and psychological distress with respect to their gender and residence has also been examined.

The results of the present study revealed that there is a significant positive correlation between internet addiction and psychological distress among university students. There are several studies which are in line with these results. Research studies has shown

**Table 1. Showing Frequency and Percentage of Sample Group With Respect to Internet Addiction**

Level	Range	f	%
Mild	0-49	67	44.66
Moderate	50-79	70	46.67
Severe	80-100	13	8.67
Total		150	100

**Table 2. Showing Frequency and Percentage of Sample Group With Respect to Impulsivity**

Level	Range	f	%
Over Controlled	Below 51	7	4.67
Normal	52-71	100	66.66
High	72 & above	43	28.67
Total		150	100

**Table 3. Showing Frequency and Percentage of Sample Group With Respect to Psychological Distress**

Level	Range	f	%
Low	10-19	48	32
Moderate	20-29	54	36
High	30-39	48	32
Total		150	100

**Table 4. Showing Pearson’s Correlation Coefficient(r) Between Internet Addiction and Impulsivity of the Sample Group**

Variable	r
Internet Addiction	
	.236*(p = <0.004)
Psychological Distress	

\*P<0.05 Level of significance

**Table 5. Showing Pearson’s Correlation Coefficient(r) Between Internet Addiction and Psychological Distress of the Sample Group**

Variable	r
Internet Addiction	
	.769*(p = <0.001)
Psychological Distress	

\*P<0.05 Level of significance

**Table 6. Showing the Comparison of Mean Scores of Internet Addiction, Impulsivity and Psychological Distress among University Students with respect to their Gender**

Variable	gender	n	M	SD	df	t-value
Internet Addiction	Male	75	49.65	21.96	148	1.632*
	Female	75	43.36	25.5		
Impulsivity	Male	75	68.12	9.99	148	3.083*
	Female	75	63.57	7.94		
Psychological Distress	Male	75	28.45	12.24	148	4.045*
	Female	75	21.4	8.83		
Total N=150						

\*p<0.05 level of significance

that internet addiction has positive correlation with psychological distress and other psychiatric symptoms [29]. Moreover, several researchers have found statistically meaningful correlation between internet usage and psychological symptoms as a somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism [35]. Similarly Kraut et al., (2002) [40] found that greater internet use is associated with reduced psychological Wellbeing, reduced social support, increased loneliness and depression. The present study also revealed that there is a significant positive correlation between impulsivity and internet addiction among undergraduate students. There are several studies which are in line with these results. Research studies have shown that impulsivity has a positive correlation with internet addiction. For example, Cao, Su, Liu, and Gao (2007) [6] found that young adults who met the criteria for Internet addiction had significantly higher scores on the Barratt

Impulsiveness Scale-11 (BIS-11) than a group of matched controls. In another study, Kim, Namkoong, Ku, and Kim (2008) [32] observed that Internet-addicted high school students tended to score lower on a measure of self-control and had a harder time inhibiting their responses.

Comparing the university students on internet addiction, impulsivity and psychological distress with respect to their gender, significant difference was found among them on both internet addiction, impulsivity and psychological distress. The mean score of male university students was found high on internet addiction as compared to female university students. There are several studies which are in consistence with our findings. For example, [1] in their study found that male students are more likely to become addicted to internet than are females and pathological internet users are likely to be males. That might be due to the traditional

**Table 7. Showing the Comparison of Mean Scores of Internet Addiction, Impulsivity and Psychological Distress among University Students with respect to their Residence**

Variable	gender	n	M	SD	df	t-value
Internet Addiction	Rural	83	67.71	10.07	148	1.632*
	Urban	67	63.51	7.66		
Impulsivity	Rural	83	48.30	24.57	148	1.030NS
	Urban	67	44.28	22.65		
Psychological Distress	Rural	83	28.18	12.92	148	4.167*
	Urban	67	20.89	6.82		
Total N=150						

NS=insignificant, \*p<0.05 level of significance

stereotypes of gender roles holding that women are not as technologically oriented as men and computer has been considered stereotypically masculine [49], and females have cultivated a fairly negative attitude towards it and their mild disinterest [17]. Moreover, Rees and Noyes (2007) [51] found that there are significant gender differences that were reported for computer and internet use, internet attitudes, and computer anxiety. Although males and females were generally used this technologies, but females are less frequent user of technology as compared to males and that females have less positive attitude and greater anxiety toward technology.

As compared to female university students, male university students were found high on psychological distress. The earlier research on psychological distress among university students have mixed results. Several studies are inconsistent with our findings. For example [2,53,52] found that prevalence of psychological distress, depression, the life time risk of depression and anxiety are higher in woman than in their male counterparts. The preponderance of female psychopathology is also demonstrated in the student population. Similarly, Toews (1997) [60] found that female students experience higher stress level than male counterparts. On the other hand some researchers for example, [58,22] found that there was no significant difference in psychological distress between male and female university students.

As compared to female students, male students were found high on impulsivity. The earlier research on impulsivity are in consistency of our findings. For example, [12,13] found significant gender differences exist in the way adolescents make their decisions, with boys taking more risks and choosing more options associated with negative outcomes. Similarly, King & Gurian (1999) [33] found that Girls are reportedly less impulsive than boys because the frontal lobe, which is the decision making area of the brain, develops sooner and is more active. This allows girls to sit still, read and write earlier.

The results of the study further reveal that there is a significant difference among University students on internet addiction and psychological distress with respect to their residence but not on impulsivity. The mean score of rural students was found high on both internet addiction and psychological distress as compared to the urban students. Research studies has shown that habit of changing manipulating information on the internet, habit of downloading vulgar pictures/pornographic items, plagiarism and tendency of sending unwanted messages and internet abuse are comparatively high among the adolescents in rural areas [36]. Sim-

ilarly Niemz, Griffiths, & Banyard, (2005) found that the rate of internet addiction is higher for rural students (8%) than for city students (5%). Rural students were found high on psychological distress as compared to urban students. Several studies support these findings. Kurupparachchi, Wijerathne and Williams (2002) [37] found that psychological distress among rural students was significantly greater than suburban and urban students. Similarly studies done by Kathriarachchi, Ariyaratne, & Jiffry, (2001) [28], Kurupparachchi Somerathne, Madurapperuma, & Talagala, (2012) [38] recognized that adjustment problems and economic difficulties of rural university students are one of the major key factors, which govern psychological distress among them.

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