

Online But Not On the Line: Evaluating Internet Addiction as a Predictor of Psychological Symptoms in University Students

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Abstract

This study aimed at collecting precise data about the internet addiction and psychological symptoms in university students. The overall objective of the study was to empirically explore the effects of internet addiction on psychological symptoms in university students. For this purpose, 150 participants were sampled for the study. Among 150 participants, 75 were males and 75 were females. Internet addiction was measured by using Internet Addiction Test and Psychological Symptoms were measured by using Depression, Anxiety and Stress Scale (DASS). Correlation, regression and independent sample t-test were used for the analysis. The results of correlation indicated significant positive relationship between internet addiction and psychological symptoms in university students. Moreover, the results of regression indicated internet addiction as significant predictor of psychological symptoms. The study also evidenced gender differences with females having greater level of internet addiction and psychological symptoms than males.

Keywords: *Internet Addiction, Psychological Symptoms, University Students*

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Introduction

In the past decade, use of internet has been increased at massive rates. In addition to being used for the purpose of seeking guidance and information, it is also used for leisure activities by the people (Teo & Lim, 2000). Use of internet is claimed to be reducing the feelings of boredom and loneliness by the individuals. The excessive use of internet makes the users involve in making conversations with strangers, playing risky and useless games and numerous activities that are considered harmful for their physical and psychological health (Livingstone, 2002).

Internet Addiction is referred to be the inability of individual to resist the use of internet which eventually causes hindrances in fulfilment of commitments at personal, social, educational and occupational level (Stanton, 2002). Internet Addiction is meant to be the source of other behavioural addictions as well (Hamidian, 2000).

The term 'Internet Addiction Disorder' was coined by Ivan Goldberg in 1999. The behavioural addictions related with internet addiction are mostly unpleasant emotions, psychological issues which mainly include depression, anxiety and irresistibility to use internet the whole day long. These ailments categorize internet addiction as an impulse control disorder and lead to social, psychological and occupational issues at severe level (Gonzalez, 2008).

Internet is not regarded as a source of physical and psychological ailments in its users. It is the excessive use of internet that leads the users to addiction. The number of individuals addicted to the internet mostly include youth who are studying at graduate and post graduate levels. The excessive use of internet affects the lives and social relationships of users. However, the internet users are unable to realize and admit the harmful influences of internet on their lives (Carli et al.,2013).

Statement of the Problem

In university life, the students are faced with lots of challenges as per changes in their environment and demands from society. In addition to the environmental changes and demands, the students are encountered with new interpersonal relationships in university life. These circumstances often lead them towards a state of psychological distress (Wang, 2001).

In order to cope with these circumstances, the university students often use internet and social media. They mostly seek information about the individuals in their surroundings, methods of making new interpersonal relationships, entertainment and other related activities. In addition to the

information and guidance, excess use of internet has been evidenced of causing psychological symptoms among university students. These complaints include lack of self-esteem and academic motivation together with excessive need of getting socially approved by people (Wartberg et al, 2011).

These factors provided the ground to study internet addiction and its relationship with psychological symptoms in university students.

Objectives of the study

1. To explore the relationship between internet addiction and psychological symptoms in university students
2. To examine the gender differences in internet addiction and psychological symptoms in university students

Literature Review

The relationship between internet addiction and psychological symptoms has been studied by various researchers. Internet addiction is indicated to be positively correlated with psychological attributes including loneliness, anxiety, shyness, depression and social relationships (Ko et al., 2007).

Research study conducted by Ha et al (2007) revealed significant relationship between internet addiction and depression among teenagers. The findings of research study conducted in Tehran University also reported significant relation between internet addiction and depression among the university students (Hakimzade et al., 2010).

Research study conducted by Rezvani and Nademi (2006) illustrated that people involved in or at risk of getting involved in internet addiction report psychological symptoms including lack of self-confidence, aggression, loneliness, depression and anxiety.

Internet addiction has been demonstrated as the predictor of psychological issues like isolation and depression (Barak & King, 2000). The relationship between internet addiction and psychological symptoms was also reported in a research study conducted in Isfahan University. Results of the study indicated positive correlation between internet addiction and psychological issues such as paranoia, psychosis, aggression, hypochondriasis, interpersonal compassion, obsessions, compulsions together with stress, anxiety and depression (Alavi et al., 2010).

Findings of the study conducted by Fathizade and Jafari (2012) also revealed significant positive relationship between psychological variables of depression, stress, anxiety, social phobia and internet addiction.

Internet addiction has been demonstrated as a significant predictor of depression and anxiety by a research study conducted on Turkish students by Iskender and Akini (2011).

All these researches strongly recommend internet addiction to be having significant relationship with psychological symptoms in university students.

Research Methodology

Research Design

The current study was a survey research method design. The study was correlational in nature and it assessed the internet addiction as predictor of psychological symptoms in university students. The study sampled the students of public and private universities of Sargodha.

Instrumentation

Internet Addiction Test

In the present study, internet addiction was measured by using Internet Addiction Test (Kimber & Yang, 1996). This scale is composed of twenty items and responses are scored on five-point Likert type scale. The scores range from 20 to 100. It measures six aspects which include prominence, negligence, excessive usage, waiting, inability to control and negligence of social life.

Depression, Anxiety and Stress Scale (DASS)

The psychological symptoms will be measured in the study by using 21 items short form of Depression, Anxiety and Stress Scale by Lovibond and Lovibond (1995). Cronbach's alpha of this scale is 0.95 for depression whereas 0.90 and 0.93 for anxiety and stress (Antony et al.,1998).

Sample Size & Data Collection

Random sampling technique was used in the study. The total number of participants was 150 which included 75 males and 75 females. Their age range was from 15 to 25 years ($M=19.2$, $SD=2.64$).

Hypotheses

H_I: There is a significant positive correlation between anxiety, depression and stress and Internet addiction.

H_{II}: Internet addiction will significantly predict anxiety, depression and stress in university students.

H_{III}: There will be significant gender differences in the level of internet addiction and psychological symptoms in university students.

Procedure

In procedure, the sample of the study was personally conducted in Sargodha. The participants were assured that data collected from them will only be used for research purpose. The Internet Addiction Test and Depression Anxiety and Stress Survey were administered individually on 150 students. Sample was selected from public and private universities of Sargodha. The purpose was to get information about the study and testing the hypotheses. Before administering the instruments of study, the required personnel information was obtained on demographic sheet.

Instructions about scale were given verbally in Urdu. As a result, participants gave information in a convenient and relaxed manner. In the end, participants were thanked for the cooperation.

After compiling the scores of all participants, the data was then entered in SPSS 16.0 version. Pearson Correlation was applied on the data in order to assess the relationship between internet addiction and psychological symptoms in university students. Linear regression analysis was applied in order to assess whether internet addiction significantly predicts the psychological symptoms in university students. Moreover, Independent sample t test was applied on the data in order to investigate the gender differences in the prevalence and effects of internet addiction in university students.

Results

The purpose of the present study was to explore the effects of Internet Addiction on psychological symptoms among university students. After completion of data collection, different statistical analyses were used to analyse this data. The results of the analysis are shown in the tabular form below:

Table 1: *Frequency and Percentage Demographic variables of Participants (N=150)*

Demographic variables	<i>f</i>	<i>%</i>
Gender		
Male	75	50
Female	75	50
Class		
1st Year	27	18
2 nd Year	30	20
3 rd Year	63	42
4 th Year	27	17.3
Masters	4	2.7

Table 1 shows frequency and percentage of participants with respect to gender and class in university. Male students ($f=75$, 50%) were greater in number as compared to female students ($f=75$, 50%). Students enrolled in 3rd year of university were highest in number ($f=63$, 42%) as compared to the others enrolled in 1st year ($f=27$, 18%), 2nd year ($f=30$, 20%), 4th year ($f=27$, 17.3%) and Masters ($f=4$, 2.7%).

Table 2: *Inter correlation between Internet Addiction and Depression, Anxiety and Stress (N=150)*

Measure	1	2	3	4
1. Internet Addiction	-	0.22**	0.13	0.20*
2. Depression	0.22**	-	0.62**	0.46**
3. Anxiety	0.13	0.62**	-	0.42**
4. Stress	0.20	0.46**	0.42**	-

* $p < .001$

Table 2 indicates Pearson correlation among the study variables. Findings indicate that Internet addiction has significant positive correlation with depression ($r = .22$, $p < .001$), anxiety ($r = .13$, $p < .001$) and stress ($r = .20$, $p < .001$).

Table 3 : *Linear Regression Analysis Showing Internet Addiction as the Predictor of Psychological Symptoms (N =150)*

Model	B	SE	b	t	p
Constant	18.95	2.71		6.97	.000
Internet Addiction	.172	.061	.225	2.80	.006
R ² =.051					
ΔR ² =.044					

Table 3 indicates that Internet Addiction significantly predicts Psychological Symptoms in University students. The ΔR²=.051 demonstrates that 12% variance in the dependent variable i.e. Psychological symptoms can be accounted for, by the predictor which is Internet Addiction with $F=7.84$, $p<.001$.

Table 4: *Linear Regression Analysis Showing Internet Addiction as the Predictor of Depression (N =150)*

Model	B	SE	b	t	p
Constant	5.36	1.17		4.56	.000
Internet Addiction	.073	.026	.222	2.75	.007
R ² =.049					
ΔR ² =.043					

Table 4 indicates that Internet Addiction significantly predicts Depression in University students. The ΔR²=.049 demonstrates that 12% variance in the dependent variable i.e. Depression can be accounted for, by the predictor which is Internet Addiction with $F=7.60$, $p<.001$.

Table 5: *Linear Regression Analysis Showing Internet Addiction as the Predictor of Anxiety (N =150)*

Model	B	SE	b	t	p
Constant	6.90	1.23		5.60	.000
Internet Addiction	.047	.028	.138	1.69	.092
R ² =.019					
$\Delta R^2=.012$					

Table 5 indicates that Internet Addiction significantly predicts Anxiety in University students. The $\Delta R^2=.012$ demonstrates that 12% variance in the dependent variable i.e. Anxiety can be accounted for, by the predictor which is Internet Addiction with $F=2.88, p<.001$.

Table 6: *Linear Regression Analysis Showing Internet Addiction as the Predictor of Stress (N =150)*

Model	B	SE	b	t	p
Constant	6.69	.905		7.39	.000
Internet Addiction	.051	.020	.201	2.49	.014
R ² =.040					
$\Delta R^2=.034$					

Table 6 indicates that Internet Addiction significantly predicts Stress in University students. The $\Delta R^2=.034$ demonstrates that 12% variance in the

dependent variable i.e. Stress can be accounted for, by the predictor which is Internet Addiction with $F=6.23, p<.001$.

Table 7: Mean, standard deviation and *t*-values for Internet addiction among university students. ($N = 150$)

Variables	Males(74)		Females(N=76)		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Internet Addiction	40.18	12.47	45.01	12.58	2.36	.020	8.87	3.00	0.35
Psychological Symptoms	11.80	12.36	16.27	13.73	1.83	.022	12.05	3.12	0.34

Table 7 shows mean, standard deviation and *t*-values for Internet addiction and psychological symptoms among university students. Results indicate significant mean differences on internet addiction with $t(148) = 2.36, p < .005$. The findings show male university students significantly scored low on internet addiction ($M = 40.18, p < .005$) as compared to female university students ($M = 45.01, p < .005$). Results indicate significant mean differences on psychological symptoms with $t(148) = 1.83, p < .05$. The findings show that male university students ($M = 11.80, p < .05$) significantly scored lower on psychological symptoms as compared to female university students ($M = 16.27, p < .05$).

Discussion

The study was conducted for investigating the relationship between internet addiction and psychological symptoms in university students. Internet addiction was assessed as a predictor of psychological symptoms. Moreover, the inter-correlation of internet addiction and psychological symptoms together with gender differences among the university students were explored in the study.

Owing to the introduction of numerous social media applications, the trend of using internet has been increased at massive rates today. Internet itself is obviously not a harmful entity; the overwhelming use of internet by the individuals has labelled it as a source of psychological symptoms, wastage of time and demolition of educational and vocational activities. These factors have made internet addiction to be classified as a psychological disorder according to the latest edition of DSM V. A large number of patients suffering from this disorder are reported on daily basis in all societies. The excessive use of internet

causes behavioural disturbances and hampers the psychological, societal and emotional development of the users. They become self-involved and reduce communication with surroundings (Atashpour & Nadi, 2004).

First hypothesis of the study stated that there will be significant correlation between internet addiction and psychological symptoms in university students. The findings of study confirmed this hypothesis as internet addiction was reported to be having positive correlation with psychological symptoms including depression, anxiety and stress (see Table 2). These findings are congruent with researches which demonstrated internet addiction to be having significant relationship with anxiety, depression and stress (Ko et al, 2007; Ha et al, 2007; Alavi et al, 2010; Jafari and Fatehizade, 2012).

Depression, anxiety and stress are often stated as having circular relationship with internet addiction. This means that internet addiction may serve as a predictor of psychological symptoms but it may also be the case that depression, anxiety and stress lead the individual to the use of internet. This may lead them to reduction of feelings of boredom, isolation and lack of self-esteem and enable them to spend their time in a delighted manner (Mirzaeian et al., 2011).

The second hypothesis of study stated that internet addiction is a predictor of psychological symptoms. This hypothesis was also confirmed by the results of the study as internet addiction predicted depression up to 17%, anxiety up to 20% and stress up to 13% (see Table 4,5,6). The results of the study revealed significant linear relationship between internet addiction and psychological symptoms (see Table 3). These results are consistent with results of previous studies which include Maarten et al (2009) which stated Internet as a significant predictor of depression and social anxiety in youth. Brummett et al (2001) also indicated that irresistible use of internet develops social, physical and emotional problems in adolescents. The most common psychological problems are depression and stress in adolescents. On the other hand, physical problems include eating and sleeping issues, headache, stomach and heart palpitations.

Third hypothesis of the present study stated that there will be significant gender differences in the level of internet addiction and resulting levels of psychological symptoms in university students. This hypothesis was confirmed by the findings of study with females having higher levels of internet addiction and psychological symptoms than male university students (see Table 7).

These results are in line with the study which investigated gender differences in internet addiction with self-rated and subjective happiness along with depressive symptoms in Korean students of high and middle school with

age range 12 to 18 years. The results of the study demonstrated Internet addiction to be significantly higher in female students than male students. The factors to be considered were that females with emotional problems such as subjective happiness and depressive symptoms possessed greater risk of internet addiction than males (Ha & Hwang, 2014).

Conclusion

The results of the study indicated that excessive use of Internet has significant relationship with psychological health of university students. Furthermore, females are reported to be having higher level of internet addiction and psychological symptoms as per the results of the study.

Limitations and Suggestions

The limitations of the present study are the intended population and statistical sample that are the students of universities of Sargodha only; therefore, generalizing the obtained results to the other cities and universities will increase its validity. Some other demographic variables such as family history should have been explored too as they have strong influence on mental health of individuals.

Implications

1. It can be helpful for clinical and counseling psychologist working on psychological and mental health of university students.
2. This can be helpful for the youngsters in solving their adjustment problems regarding the use of internet.

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