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Internet Addiction: A Research Study of College Students in India

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Abstract

Internet was created to facilitate our lives. However, the dramatic increase in use the internet among students in last years has led to pathological use (Internet addiction). This study is a preliminary investigation of the extent of internet addiction in a management institute in India, where sampled were 300 students (first, second and third years' students). This study was conducted using an Internet Addictions Scale developed by Young (1998) to measure the level of internet addiction. The study used a survey methodology design. Respondents were classified into two categories, "younger" and "older." There was a significant difference between the two groups, the older group clearly showing higher internet usage. It is possible that older students were more addicted to the internet than younger students due to increased exposure to the internet. It is also possible that older students needed to spend more time because they were in senior years requiring the investment of more time on the internet. When differences between gender and internet usage were examined, there were statistically significant differences obtained between the students in terms of this variable. An ANOVA was also done looking at differences in the sample, for both males and females and for the overall sample with GPA as the dependent variable. It was surprising to note that there were no significant differences in internet usage and GPA for all 3 ANOVAS. In general, we found no evidence of severe internet addiction. The addiction was more in the range of moderate to mild addiction. However, it is possible that the reported scores were related to internet work in the campus and did not include the use of smartphones and the time spent on using social websites using smartphones. This study indicated that there is a high degree of correlation between age and internet addiction with older students being more addicted to the Internet than younger students. Also with regard to Internet usage, there were significant differences with regard to gender with men being more addicted than women. The study, however, found no differences between the students in terms of the study year.

Keywords: Internet Addiction, College Students, India.

1. Introduction

Internet addiction has become a reality. Due to the advancement of technology and the use of the internet as a tool for working, information seeking, education and socializing, it has become pervasive in the lives of many people. The addiction is itself pervasive and takes place in several ways for example by joining social networks, creating groups or joining existing groups of users, messaging, blogging, and the pervasive email systems (Anderson, 2001). These methods of communication never existed even a decade back, and today they have become dominate our lives and more importantly our time.

Despite the advantages of social networking and the extensive use of the internet these technological advances it has also created several problems of a psychological and social nature that tend to exacerbate and with the increasing passage of time become addictive and affect the personality of the individual. Researchers in fields as

diverse as management, psychology, sociology, and anthropology are today studying these problems especially as it relates to Internet Addiction (Yung et al., 2015, Yen et al. 2008, Young, 1996).

Internet Addiction has created a new area of relevant research, and many researchers in the field of management are interested in understanding the phenomenon since it has a pervasive on factors as diverse as workforce productivity, student performance in school and college, the effect on student health (both physical and mental) and socially unacceptable behaviors. (Griffith 1995; 1996; 1998).

2. Literature review

Internet addiction is a result of extensive unlike a drug, and other addictions have been defined variously as a technological addiction created as a result of extensive human-machine interaction over an extended period of time. This prolonged interaction creates various psychopathological conditions that may interfere with normal functioning. It has been noticed that excessive use of the internet can over time affect psychological and mental health that manifests in numerous problems like loss of social skills, sleep disturbance patterns, and extreme obsession with websites, social networks and the internet in general. Various research studies were done in the past support these assertions (Ghassemzadeh, Shahraray, & Moradi, 2008; Liu & Potenza, 2007).

Several studies have indicated that the problems can range across a broad spectrum from less problematic to more problems related to the job and academic performance like not showing up for work or getting low grades to more severe addiction that results in depression and other mental illness like phobias interacting with others. (Shaffer, 2004; Kim & Haridakis, 2009). Other research also came up with similar findings that Internet addiction can have a negative impact on personal life and relationships and can affect the interactions with others negatively. Kraut et al. (1998)

Several researchers alike have found that extensive use of the internet can result in more depression and extensive stressful episodes apart from a feeling of separation. As revealed in other studies it can have a negative effect on a young person's lie both in personal and professional terms. (Morahan-Martin & Schumaker, 2003; Morgan & Cotton, 2004; Anderson, 2001).

Several studies indicate that IA can become a pathological state when an individual spends a lot of time on the internet to the neglect of other activities (Young 1996). Kendall (1998) describes internet addiction as "psychological dependence." Other researchers have tried to fine tune the concept of Internet Addiction which now encompasses behavior related to instant messaging (IM) as well.

Addiction to the internet also has been associated with lowered academic performance (Huang & Leung, 2009). Young people who make extensive use of the internet could become shy and alienated and develop other more serious social and psychological problems. Young (1998) has developed Internet Addiction Test (IAT) which has been used a reliable and valid measure of addictive use of the internet globally, and several studies have found that this scale is very appropriate for use globally

However, the concept of Internet Addiction has not been clarified in the research literature, and much research needs to be done at the conceptual level. For example, there are questions on definitional issues related to what constitutes "addiction." Also, the Internet can manifest itself in several different forms like chat rooms, social networking websites, instant messaging systems and email systems. This makes it difficult to define and determine as to what constitutes IA in each context.

Chak and Leung (2014) found extensive addiction among younger people in terms of ICQ, chat rooms, newsgroups, social network sites and gaming. Their results pertained to the Net-generation. The study found that full-time students were more addicted to the internet compared to part-timers because of flexible times and unlimited access.

3. IA and the College population in India

Although there are no large-scale studies related to IA at a global level, statistics indicate the widespread prevalence of internet usage including the use of social websites and chatting. Information related to the Internet World Statistics related to internet usage in the world for the fourth quarter of 2018(www.internetworldstats.com/stats.htm) indicates that there are about 4.1 billion internet users in the world and that the increase in internet usage between 2000 and 2018 has been about 1052 percent with the largest increase being in Asian countries.

Studies also indicate that the youth population is most vulnerable to internet addiction (Kuss et al. 2013). Although there are no specific statistics related to internet addiction among Indian youth, there is a reason to believe based on some research evidence of an exponential increase in the numbers of internet users. (Beard, 2005; Binder, 2013; Boyd, 2014; Young, 1999; ;).

In the context of India, there have been several studies into this phenomenon.
Sharma A, Sahu R, Kasar PK, Sharma R. (2014) found that internet addiction was significant among professional courses students. The student population was found to have moderate to severe internet addiction. Other studies (Grover S, Chakraborty, K, Basu D. 2010) investigated internet use pattern among professionals and found similar results.

Some other studies (Krishnamurthy S, Chetlapalli SK. 2015). Indicate the prevalence and risk factors as they relate to internet addiction and suggest ways to ameliorate the situation.

Sakthivel Arthanari1, Najam Khalique2, Mohammad Athar Ansari3, Nafis Faizi4 (2017) conducted a study of internet addiction among Indian adolescents and found that there was a high incidence of addiction (35.6 percent) among internet users.

In India the entire country has been networked and Indians even in remote areas can access the internet owing to the wide availability of cell phones. People widely use social networking, instant messaging, video streaming and emailing and their use is only increasing. However, there is the potential for this to result in internet addictions emerging which need to be addressed early.

In India, there is a lack of information related to internet addiction as the phenomenon is quite recent and there are very few studies that address this issue among youth populations. Since there is a growing youth population India, this issue becomes even more important. Overall there is a need to have a better understanding of the nature of this problem so that preventative measures can be taken at the appropriate level (Masters 2015).

4. Methodology

Despite the fact that that internet assessment instruments have been increasing the researchers have used different criteria in ascertaining the psychometric properties of the scales used. This is another measurement issue. This study was conducted using an Internet Addictions Scale developed by Young (1998) to measure the level of internet addiction. The study used a survey methodology design. Several instruments have been used in previous studies related to Internet Addiction in India including the Bergen Facebook Addiction Scale (Andreassen et al.2012) and Online Video Gaming Instrument (Van Rooij et al., 2010). These show good psychometric properties.

In this study, the Internet Addiction Test, (IAT) developed by Young (1998) was used. It is a 20 item self-reported Likert scale and the score ranges from 0 to 100. The six factors measured by the scale include Salience, Excess Use of the Internet, Neglecting Work, Anticipation, Lack of Self Control. The reliability measure using Cronbach's Alpha ranged between .54 and .82, and the scale was also found to have good validity. High reliability was also found in studies conducted in India (Krishnamurthy S, Chetlapalli SK, 2013)

5. Sample

This research study sampled 300 students, from a management institute in India. The students were first, second and third-year students in management and were representative of the modern educated population who made extensive use of the internet in their daily lives. There were 144 females and 156 males in the sample. Other demographic data such as class, age, and gender were also collected. GPA data was also collected as a dependent variable to assess the relationship between internet addiction and GPA.

6. Results

The data from all the surveys were analyzed by using the SPSS package, and the results are shown below.

Differences between categories of Age:

Although some research has suggested there could be differences in the relationship between internet usage and age, there were statistically significant differences obtained between the students in terms of this variable. The means and standard deviations are displayed in Table 1. Respondents were classified into two categories, "younger" and "older." Table 2 shows the ANOVA results. There was a significant difference between the two groups, the older group clearly showing higher internet usage. It is possible that older students were more addicted to the internet than younger students due to increased exposure to the internet. It is also possible that older students needed to spend more time because they were in senior years requiring the investment of more time on the internet.

Table 1. Descriptive statistics for internet usage by Age level

Age category	Mean	SD	N
Older	57.56	17.80	141
Younger	47.23	15.14	159

Table 2. ANOVA – Internet Usage and Age

	Sum of Squares	df	variance	F	Sig.
Between Groups	7974.36	1	7974.36	26.43	.000
Within Groups	89910.6	298	301.71		

When differences between gender and internet usage were examined, there were statistically significant differences obtained between the students in terms of this variable. The means and standard deviations are displayed in Table 3. Table 4 shows the ANOVA results. There was a significant difference between the two groups, males showing higher internet usage.

Table 3 - Descriptive statistics for internet usage by Gender

Gender	Mean	SD	N
Male	52.56	17.80	156
Female	46.23	15.14	144

Table 4 – ANOVA – Internet Usage and Gender

	Sum of Squares	df	variance	F	Sig.
Between Groups	3000.35	2	3000.35	10.91	.0011
Within Groups	81888.60	298	274.79		
Total	65474.07	298			

These statistically significant differences between males and females with males showing a higher addiction compared to females is consistent with earlier studies. Similar results were found by other researchers. (Yadav P, Banwari G, Parmar C, Maniar R. 2013; Goel D, Subramanyam A, Kamath R, 2013).

Differences Between categories of GPA

An ANOVA was also done looking at differences in the sample, for both males and females and for the overall sample with GPA as the dependent variable. It was surprising to note that there were no significant differences in internet usage and GPA for all 3 ANOVAS.

 Level of Internet usage – One variable we looked at was the level of usage as described in the criteria by Young (1998), the author of the survey on internet addiction.
When we looked at the level of usage, it appeared that the mean score was 54.
Using a criterion of 0-49 as not being addicted it was appearing that the respondents in this study were not severely addicted but were approaching a high level of usage bordering addiction. -Approximately 33 percent of the sample had an average score of 54 suggesting borderline addiction as the scale values range to 100.

7. Conclusion

In this study, we found no evidence of severe internet addiction. The addiction was more in the range of moderate to mild addiction. However, it is possible that the reported scores were related to internet work in the campus and did not include the use of smartphones and the time spent on using social websites using smartphones. If this were included, it is possible that the level of internet addiction could be much higher. This study indicated that there is a high degree of correlation between age and internet addiction with older students being more addicted to the Internet than younger students. This may be because they have been exposed to the internet in its various forms including chatting, emailing and messaging and the use of social media. Also with regard to Internet usage, there were significant differences with regard to gender with men being more addicted than women. This is in accordance with precious studies that also indicate similar findings. The reason for this is not very clear and needs to be investigated further. The study, however, found no differences between the students in terms of the study year.

There is increasing evidence today from research worldwide that internet addiction is an ongoing problem and it is rapidly increasing. (Huang, H.Y. & Leung, L. 2009; Kuss, D. J., Griffiths, M. D., & Binder, J. F. 2013) Just like compulsive gambling, overeating and taking alcohol or drugs some individuals who continuously and excessively use the internet have become addicted to this in much the same way as other addictions. Use of the internet particularly in recent years have dramatically seen an increase in college and many students have become overly dependent on this medium.

This study aimed at understanding internet addiction among university students in India. More studies need to be done, and qualitative methods and other methodologies need to uses with larger samples and more diverse populations and not just students. This is a problem that extends beyond just youth. The psychological and social effects also need to be examined in more depth, and additional questionnaires need to be used to measure several outcomes of internet addiction. Studies could isolate those users who have a severe internet addiction and do longitudinal analysis and follow on them to examine how this affects cognitive, behavioral and social outcome in their lives. We could also sample parents, teachers, and employers and relate performance to their level of addiction.
In terms of implications especially in colleges and university settings, there needs to be some proactive interventions and awareness and recognition that both students and employees, could potentially become addicted to a technology that is being provided directly by the college or institution (Beard, K. W. 2005). Future studies can also examine internet addiction by types like videos, electronic games, chat rooms, and social media that can be researched further. Future studies could also focus on the relationship between IA and anxiety, depression and stress.

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