

## Increasing Trend of Internet Addiction among Undergraduate Medical Students

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### ABSTRACT

The aim of the present research work was to investigate increasing trend of internet addiction among undergraduate medical students. The total sample comprised of 230 medical students from Chintpurni Medical College Pathankot, Punjab. Out of which 91 students were from the batch of 2014 and 139 students were from the batch of 2016. Data was collected with the help of Dr. K. Young's internet addiction scale. Descriptive method was used to analyze the result. The results revealed that in the batch of 2014, 22 percent were moderately and 39.5 percent were excessive internet users where as in the batch of 2016, 42.4 percent were moderately and 51 percent were excessive users of internet respectively. Thus, it can be concluded that, there is a trend of increasing internet addiction. Which can lead to dependency causing neurological, psychological and social problems.

**Keywords:** *Increasing trends, Internet Addiction and Students.*

The American Society of Addiction Medicine (ASAM) in 2011 released a definition of addiction as a chronic brain disorder, officially proposing for the first time that addiction is not limited to substance use. All addictions whether chemical or behavioral, share certain characteristics including salience, compulsive use (loss of control), mood modifications and the alleviation of distress, tolerance, withdrawal and the continuation despite negative consequences. The first serious proposal for diagnostic criteria was advanced in 1996 by Dr. Young, modifying the DSM-IV criteria for pathological gambling (Young, 1996). Since then variations in both name and criteria have been put forward to capture the problem, known as Internet Addiction Disorder.

Forty percent of the world population is using internet with different uses and benefits such as communication, research, education, financial transactions, real time updates, locating lost friends sending and receiving mails for transferring various files and documents. Internet and computer technology are considered as the most effective tool and has been influential in all areas of science, business, education, culture, politics, etc. (Brenner V, 1997). One of the major problems that the Internet has created is virtual addiction or addiction to the global web

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world, which has harmful psychological and behavioral effects on the user (Widyanto and Griffiths, 2006) reported. Internet addiction is defined as any online-related compulsive behavior which interferes with normal living and causes severe stress on family, friends, loved ones, and one's work environment. Nowadays, (Alavi, Jannatifard, Maracy, and Rezapour, 2000) described that internet addiction has been raised as a mental disorder in psychology and medical science. This disorder is recognized as a new form of addiction in recent years. This disorder has attracted the attention of researchers from various fields including psychology, psychiatry, sociology and other disciplines (Stavropoulos, Alexandraki, and Motti-Stefanidi, 2013). Persons with Internet addiction disorder can exhibit symptoms, suffer drawbacks and face consequences that are similar to individuals addicted to alcohol, gambling, narcotics, shopping and other compulsive behaviors. One way to describe persons infected with this disorder is that they find the virtual environment to be more attractive than everyday reality. Their daily lives are dominated with their need to be online (Jasdeep and Parampal, 2018). The international prevalence of 1.5% to 8.2% has been reported for Internet addiction (Petersen, Weymann, Schelb, Thiel, and Thomasius, 2009). The number of Internet users stood at 481 million in December 2017, an increase of 11.34 percent over December 2016 said the report titled, "Internet in India 2017." The number of internet users in India is expected to reach 500 million by June 2018, said a report by the Internet and Mobile Association of India (IAMAI) and Kantar IMRB. (IMAI, 2017).

Several studies indicate that the number of students using the Internet and the incidence and prevalence of Internet addiction among them is increasing (Siomos, Dafouli, Braimiotis, Mouzas, and Angelopoulos, 2008). In Greece, Internet addiction was 11 percent in this age group; in South Korea, it was 7-10 percent (Park, 2008); in Finland, it was 7.4 percent in females and 6.4 percent in males (Cooper, 2002) in China, it was 9 to 11 percent (Lijuan, Xin, and Mingzheng, 2006); and in Italy, 4.5 percent of students were addicted to the Internet (Pallanti, Bernardi, and Quercioli, 2006). According to the report given by (Ayyar, 2017), Indians spent 2 hours a day on apps in 2016 and this time duration is going to increase now days. In the first three months of 2017, Indians spent 2.5 hours a day on apps. India also ranked ahead of the US, UK, Germany and France where users spent 1.5-2 hours per day on apps (Jasdeep and Param Pal, 2018). There has been limited research on the prevalence of Internet addiction in students in India. Internet is an effective resource and an exceptional education tool but when used excessively it causes number of physical and health hazards such as becoming uncomfortable and irritant when not online, Internet addiction in students is associated with problems such as loss of interpersonal communication, anger, aggression and irritability (Park, Kim, and Cho, 2008). It can also cause multiple harms to the person, including mental health (anxiety, depression, and loneliness), physical (sleep disorders, nutrition), familial (reduction of family relationships and increasing the distance between family members), job (reduced work effectiveness, dismissal from work) and education (school grades drop) (Flisher, 2010). Internet addiction in students is concomitant with depression and insomnia (Ceung, and Wong, 2010), suicidal thoughts (Fu, Chan, Wong, and Yip, 2010), hyperactivity disorder (ADHD), social phobia and hostility (Ko, Yen, Chen, Yeh, and Yen, 2009), drug abuse (Gong, Chen, Zeng, Li, Zhou, and Wang, 2009), and problematic alcohol consumption (Ko, Yen, Chen, and Yen, 2008). Due to the paucity of information in this part of the country. This study was planned with the following aims and objectives.

### *Aim and Objective*

- To assess the addiction of internet among first year medical students of a Medical College in Punjab.

**MATERIAL AND METHODS**

The present study is a cross sectional descriptive study. Convenience Sampling approach was employed to select a total sample of 230 medical students from Chintpurni Medical College Pathankot, Punjab. Out of which 91 students from batch, 2014 and 139 students from batch, 2016 have been selected. Before the study was undertaken the selected undergraduate medical students were assured that their information will be kept strictly confidential. Proper instructions were given to them beforehand. The Internet Addiction Test (IAT) which is the validated measure of internet addiction to measure internet use in terms of average, moderate, excessive and intensive level of addiction was carried out. The Internet Addiction Test (IAT) by Dr. Kimberly Young is based on Internet Addiction Diagnostic Questionnaire (IADQ) is composed of eight items.

**Four point scale of Internet addiction**

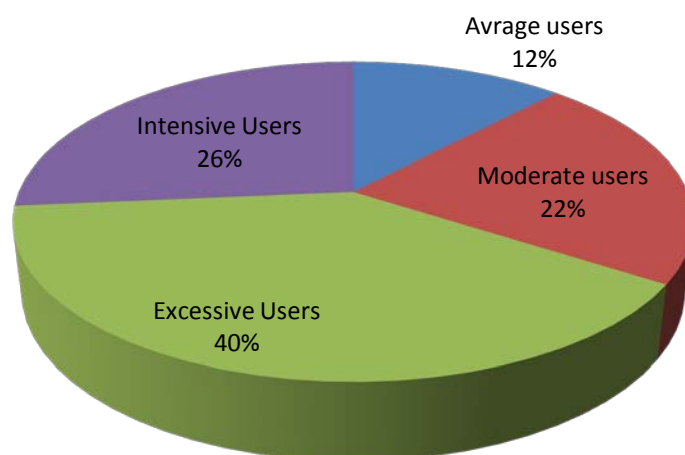
Sr No	Category of internet user	Questions endorsed
1	Average user	0-1
2	Moderately user	1-2
3	Excessive user	3-4
4	Intensive users	Five or more

**RESULTS**

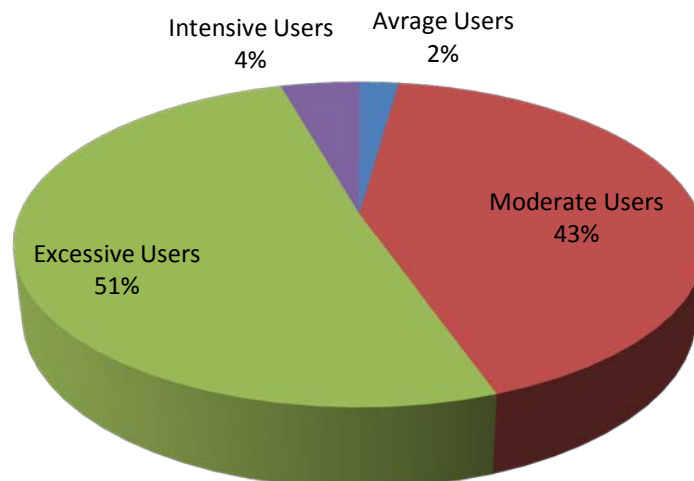
In the present study it was observed that in 2014(as shown in Fig -1) batch 12.1 percent of medical students were average users, 22 percent moderate users, 39.5 percent excessive users and 26.4 percent intensive users. In 2016 (as shown in Fig-2) batch of medical students 2.2 percent were average users, 42.4 percent moderate users, 51.0 percent excessive users and only 4.4 percent of intensive users. This comparative study has shown an increasing trend of internet addiction among moderate and excessive users.

Sr. No	2014 Batch	2016 Batch
Average users	12.1 %	02.2 %
Moderate Users	22%	42.4%
Excessive users	39.5%	51.0 %
Intensive users	26.4%	0 4.4%

**Fig 1 2014 BATCH**



*Fig- 2 2016 BATCH*



## DISCUSSIONS

Internet addiction is a complex behavioral syndrome resulting from multiple biological and psychosocial factors. The internet has in recent years become an integral part in the lives of young and children due to rapid information technology (IT) development, high speed wire connection, easy accessibility and increasing affordability (Ong and Tan, 2014).

The present study has shown increasing trend of internet addiction among medical students especially among moderate and excessive users. Note worthy finding of present investigation is decreasing scores of intensive user among batch of 2016 in comparison to batch of 2014 medical students.

According to Young (1998 and 2013) Internet addiction closely resembles an impulse control disorder. She described eight common signs (Young, 1996) of internet addiction which are based largely on the Diagnostic and Statistical Manual of Mental Disorder, Fourth Edition (DSM-IV) criteria for pathological gambling. The common features include preoccupation with target activity, development of tolerance and withdrawal symptoms, compulsive need to engage in activity or a sense of loss of control, unsuccessful attempts to stop or cut down, and neglect of social, academic and occupational obligations with functional impairment.

When internet use becomes excessive and pathological, there could be ill-health effects on the youths such as impaired psychological well-being, less peer and family interaction, poor academic performance, and impediment to achievement of psychosocial developmental task (Mitchell, 2000 and Young, 2013). A study on the Internet overuse by Korean National Youth Commission (Choi, 2007) in school going children indicated that children and adolescents suffered from social isolation, deterioration in their grades, disruption in their lives, school refusal, and violence at home who overuse internet. Typically affecting more boys than girls, suffers tend to have behavioral problems such as hyperactivity, conduct disorder and worse overall psychosocial adjustments (Kormas, Critselis, Janikian, Kafetzis and Tsitsika, 2011).

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Furthermore, excessive use of Internet can also impede one's physical health such as causing back pain, eye strain and carpal tunnel syndrome (Young, 1998). Cardiopulmonary-related deaths were also reported in the most severe cases (Choi, 2007).

Comparable with other addictions, the “addictive” components embedded with Internet use have a tendency to appeal to users' brain reward system, which results in an increase in levels of the naturally occurring neurotransmitter dopamine (Young, Yue and Ying, 2011) tendency to appeal to users' brain reward system, which results in an increase in levels of the naturally occurring neurotransmitter dopamine (Young, Yue and Ying, 2011). This modulates the brain's ability to perceive reward reinforcement and keeps the person coming back to re experience these good feelings. After multiple reinforcements, the person might become “addicted” and requires higher level of stimulation to reach the same “good feeling”.

With most behavioral and addiction problems, prevention is the key in reducing incidence and morbidity associated with them. Public awareness of Internet addiction, parent education on Internet use and advocacy for proper parental supervision of Internet use are pertinent factors in prevention efforts. Simple measures, such as implementing house rules on Internet usage at young age, placing the computer in common living areas and making available alternative social activities, are some of the practical tips parents could start doing easily. Improved parent-child relationship and family functioning effectiveness communication and positive social support further lay the foundation for family and children to resilient and competent in problem solving.

### CONCLUSION

The study concluded that there were increasing trends of internet addiction among medical students especially moderate and excessive users. This rising trend could be health hazardous. Users need to be educated on the health hazards and advised to limit the use of internet for as need based. Use alternative means such as letters and phone. It is suggested that similar studies can be undertaken with larger sample size to generalize the findings. Studies may also be done on different age groups of students. Quasi experimental studies can be conducted to improve the knowledge of students regarding internet addiction. We can safely say that Internet is good slave but bad master. Use internet for need and not for greed.

### REFERENCES

- Alavi, S.S, Jannatifard. F, Maracy, M. Rezapour, H. (2009). The psychometric properties generalized pathological internet use scale (GPIUS) in Internet user's students of Isfahan Universities (Persian)]. *Journal of Knowledge & Research in Applied Psychology*, 40:38-51.
- Ayyar, R. (2017). Indians spend 2.5 hours per day on apps: Report,. Available from: <https://timesofindia.indiatimes.com/business /indiabusiness/indians-spend-2-5-hours-per-day-on-appsreport/articleshow/58653431.cms>
- Brenner, V. (1997). Psychology of computer use: XLVII, (1997). Parameter of Internet use, abuse and addiction: The first 90 days of the Internet usage survey. *Psychological Reports*. 80(3):879– 82. doi: 10.2466/pr0.1997.80.3.879
- Ceung, L.M., & Wong, W.S. (2010). The effects of insomnia and internet addiction on depression in Hong Kong Chinese adolescents: An exploratory cross-sectional analysis. *Journal of Sleep Research*. 20(2):311–7. Retrieved from doi: 10.1111/j.1365-2869.2010.00883.x

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- Choi, Y.H. (2007). Advancement of IT and seriousness of youth internet addiction. Paper presented at: 2007 International Symposium on the Counseling and Treatment of Youth Internet Addiction; Seoul, South Korea. 2007. p. 20
- Cooper, A. (2002). Sex and the internet a guidebook for clinicians. New York: Psychology Press.
- Flisher C. (2010). Getting plugged in: An overview of internet addiction. *Journal of Paediatrics and Child Health*, 46(10):557–9. doi: 10.1111/j.1440-1754.2010.01879.x
- Fu K w., Chan, W.S.C., Wong P.W.C., & Yip P.S.F. (2010). Internet addiction: prevalence, discriminate validity and correlates among adolescents in Hong Kong. *The British Journal of Psychiatry*, 196(6):486–92. doi: 10.1192/bjp.bp.109.075002
- Gong, J., Chen, X., Zeng, J., Zhou, D., & Wang, Z. (2009). Adolescent addictive internet use and drug abuse in Wuhan, China. *Addiction Research & Theory*. 17(3):291–305. doi: 10.1016/j.addiction.2013.03.008
- Internet and Mobile Association of India (IAMAI) and Kantar IMRB. 2017.//[economictimes.indiatimes.com/articleshow/63000198.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://economictimes.indiatimes.com/articleshow/63000198.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)
- Jasdeep Kaur and Param Pal Cheema. (2014). A study to assess the prevalence of internet addiction among the students of college of nursing Adesh University Bathinda. Punjab, *International Journal of Applied research*, 4 (6). 04-07.
- Ko, C.H., Yen, J.Y., Chen, C.S., Yeh, Y.C., & Yen, C.F. (2009). Predictive values of psychiatric symptoms for internet addiction in adolescents. *Archives of Pediatrics & Adolescent Medicine*. 163(10):937. doi: 10.1001/archpediatrics.2009.159
- Ko, CH., Yen, J.Y., Chen, C.S., Chen, C.C., & Yen, C.F. (2008). Psychiatric co morbidity of internet addiction in college students: An interview study. *CNS Spectrums*, 13(02):147–53.
- Kormas, G., Critselis, E., Janikian, M., Kafetzis, D., & Tsitsika, A. (2011). Risk factors and psychosocial characteristics of potential problematic and problematic internet use among adolescents: a cross-sectional study. *BMC Public Health* 2011;11:595.
- Lijuan, C., Xin, Z., & Mingzheng, W. (2006). A research on the effects of Internet addiction on adolescents' social development. *Psychological Science-Shanghai*. 29(1):34.
- Mitchell, P. (2000). Internet addiction: genuine diagnosis or not? *Lancet* 2000; 355: 632.
- Ong and Tang (2014). Internet Addiction in Young People. *Ann Acad med Singapore*. 2014;43:378-82.
- Pallanti S, Bernardi S, Quercioli L.. The shorter PROMIS questionnaire and the internet addiction scale in the assessment of multiple addictions in a high-school population: *Neurologie Psychiatrie*, 77(05), 263–71. doi: 10.1055/s- s0028-1109361
- Park, S. K., Kim, J.Y., & Cho, C.B. (2008). Prevalence of internet addiction and correlations with family factors among South Korean adolescents. *Adolescence*, 43(172):895. PMID: 19149152
- Petersen, K. Weymann, N. Schelb, Y. Thiel, R .& Thomasius, R. (2009). Pathological Internet use--epidemiology, diagnostics, co-occurring disorders and treatment German. *Fortschritte der*
- Prevalence and related disability. *CNS Spectrums*. 2006;11(12):966–74. doi: 10.1017/s1092852900015157
- Siomos, K.E., Dafouli, E.D., Braimiotis, D.A, Mouzas O.D, Angelopoulos, N.V. (2008). Internet addiction among Greek adolescent students. *Cyber Psychology & Behavior*, 11(6), 653–7. doi: 10.1089/cpb.2008.0088
- Stavropoulos, V. Alexandraki, K. Motti-Stefanidi, F. (2013). Recognizing internet addiction: Prevalence and relationship to academic achievement in adolescents enrolled in urban

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- and rural Greek high schools. *Journal of Adolescence*. 2013; 36(3):565– 76. doi: 10.1016/j.adolescence.2013.03.008
- Widyanto, L. & Griffiths, M. (2006). Internet Addiction: A critical review. *International Journal of Mental Health and Addiction*. 4(1):31–51. doi: 10.1007/s11469-006-90099
- Young, K. S. (1999). The Evaluation and treatment of Internet addiction. In L.Vande Creek & T. Jackson (Eds.). *Innovations in Clinical Practice: A Source Book*, 17: 19-31. Sarasota, FL: Professional Resource Press.
- Young, K.S. (1996). Psychology of computer use: XL. Addictive use of the Internet: a case that breaks the stereotype. *Psychol Rep* 1996;79:899-902.
- Young, K.S., & Rogers, R.C. (1998). The relationship between depression and internet addiction. *Cyberpsychol Behav*. 1998;1:25-8. Available at: <http://netaddiction.fusionxhost.com/articles/cyberpsychology.pdf>. Accessed 18 November 2013.
- Young, K.S., Yue, X.D., Ying, L. (2011). Prevalence estimates and etiologic models of Internet addiction. In: Young KS, de Abreu CN, editors. *Internet addiction: a handbook and guide to evaluation and treatment*. 1st ed. New York: John Wiley & Sons; 2011. p. 3-18.

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### **Conflict of Interest**

The authors carefully declare this paper to bear not conflict of interests

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