



INTERNET ADDICTION AND LEVEL OF ANXIETY AMONG SCHOOL STUDENTS

Original scientific paper

D. Deep Kaur Gulati¹, Mamta Bakliwal²

¹Faculty of Education, The Bhopal School of Social Sciences, Bhopal, India

²Faculty of Education, Rajeev Gandhi College, Bhopal, India

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ABSTRACT

Internet Addiction is a rising problem among the Indian school students. The purpose of this research was to find out the extent of internet addiction among higher secondary level school students and the anxiety of higher secondary level school students having different levels of internet addiction. The research was conducted on 600 students of CBSE schools in Bhopal. The information was collected by Internet Addiction Scale and General Anxiety Scale. The findings revealed that 10% had normal level of internet addiction, 56% had mild level of internet addiction, 33% had moderate level of internet addiction and just 1% had severe level of internet addiction, the lower the level of internet addiction the lower will be the anxiety of the higher secondary level school students and girls are found to have significantly higher anxiety than boys.

Keywords: *anxiety, gender, higher secondary level, internet addiction, school students*

INTRODUCTION

Ivan Goldberg, psychiatrist in the New York was the first person who suggested the term internet addiction. He explained a symptom list for this as 'Internet Addiction Disorder' in 1995, which is similar to the conditions for substance dependence mentioned in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). He further described that pathological compulsive internet use can be used to define problematic, excessive, or mal-adaptive usage pattern of the internet. The other popular term for Internet addiction is pathological internet use. It is a type of impulse control disorder. Individuals who are using internet either lack in social skills or use it to avoid problems in their lives. American Psychiatric Association (1995) clearly defined that Internet Addiction is related to the pattern of using the internet which results in

functional disorders and unpleasant inner emotional state for a duration of two months. An individual can be diagnosed by applying seven criteria. It is necessary that an individual should satisfy at least three criteria for two months. Tolerance, withdrawal symptoms, internet use for longer than intended, continuous inclination to control behaviour, a significant portion of time is spent on activities related to internet use and other important offline activities related to socialisation, occupation, and recreation are either given up or reduced as a result of internet use, and regular use of the internet without knowing its drawbacks is among them. Kimberly Young (1996) was the first person who conducted a deep study in the area of internet addiction. She explained the prominent symptoms for diagnosing the problem. These are

Correspondence to: Daman Deep Kaur Gulati, Ph.D., Faculty of Education, The Bhopal School of Social Sciences, Bhopal, India.

Email: damangulati@gmail.com

excessive mental exertion on internet, spends more time even though being planned to spend few minutes, experiences some health issues due to spending hours in front of the screen, endlessly waiting for the next connection time, feels more comfortable in contacting with people over internet than face – face interaction, feels a constant craving for checking e-mails whether there is something new, decrease meals, or downfall in work effectiveness due to using internet or staying linked, spreads the mail address and chat room names to everybody, always feel sleepless and drained because of late night work over the internet, fails to decrease the excessive internet use, withdrawal syndrome due to lessening the internet usage. Individual also hides the usage of internet from the family members, therapists and others to stay linked with the internet. Behavioural addictions should also be explored and genuine studies will bring forth the relevant facts. The fourth and the last edition of Diagnostic and Statistical Manual of Mental Disorders, (DSM-4-TR) introduced the internet addiction as set of “Impulse Control Disorders not specified as another kind” and the same disorder was classified under the same group in the next edition of 2011 (APA, 2000). Internet addiction occurs when an individual is unable to control the use of the internet, which ultimately causes psychological, social, academic and work-related problems in a person’s life. (Chou & Hsiao, 2000). Young (1998) Internet Addiction (IA) involves various computer or internet activities in which an individual spends more time or it also includes the want to spend time on these activities. These include: Cyber-sexual addiction - use of adult chat rooms or cyber-porn;

Cyber-relationship addiction - over involvement in online relationship; Net compulsions - online gambling, virtual casinos etc.; Information overload - compulsive web surfing or searches and Computer addiction - obsessive computer games. (as cited in Alam, 2014, p.623)

It is also observed that while performing online activities addicted young adults feel happy, electrified and attractive. But in offline conditions they feel unhappy, frustrated, anxious, irritated, and uncomfortable. These emotions support the compulsive behavior and generates a painful effect in young adults (Young, 1998). During the span of life, every human being feels anxious or meets some stressful situation in his or her life. But if this situation prevails for a longer duration, it may make a person to feel continuously anxiety. This also disturbs their everyday activities. This may be an indication of generalized anxiety disorder. Children, adolescents and adults

experience anxiety in different ways. The symptoms of anxiety are prominently visible in some. The physiological and psychological responses in the individuals also gives an indication of presence of anxiety disorder. The frequency and intensity of anxiety may differ from one individual to another. A person can experience anxiety at any point of time in life. An anxious person always worries about the unknown risks. Anxiety is generally defined as diffuse, unclear, very unpleasant feeling of fear and worry (Irwin & Barbara, 2005). Begovic (2015) revealed that 17.3% are addicted to internet and there was a significant positive association of the internet addiction level with the severity of anxiety. Younes et al. (2016) investigated that the potential Internet Addiction was higher among males and the noteworthy correlations were found between potential Internet Addiction and anxiety. Ostovar et al. (2016) found that Internet addiction is a predictor of anxiety and addictive internet use is gender sensitive and risk of Internet addiction is more in males than in females. Mohammadkhani et al. (2017) found that there is no significant difference between occurrence of Internet addiction in male and female of high school students and there is a significant positive relationship between internet addiction and signs of mental disorders. Gupta et al. (2018) examined that 25.3% students were found to be internet addicted. There was no association between age and sex groups of the study participants and internet addiction and revealed strong positive association between anxiety and internet addiction. The usage of internet has penetrated deep in the urban areas. The internet has become a necessity for the students to do online studies and entertainment. The internet is surfed for watching educational videos, social media websites, online games, movies, songs, dances etc. The school children are in the stage of exploration, they like to explore internet for various reasons. Some even watch porn websites and visit gambling websites out of inquisitiveness. It is very challenging for the students to remain focused in the studies. It is observed that some students get carried away by the online games, social media, porn sites and start spending more time on entertainment rather than focusing on academics. These young adolescents studying in higher secondary school often get disturbed due to over indulgence in the online activities. In the current Indian education system, the students at higher secondary level choose different streams of their choices to study specific subjects for making their career. The science stream students need to appear for entrance exam to make a bright future in medical sciences and engineering. The students of commerce, humanities and science have to achieve the higher grades for

their admissions in the reputed colleges. Parents invest a huge amount in the coaching classes for cracking the entrance exams. Generally, a student spends more than six hours for studying in the school, come back home and then go for their coaching classes. They have to fulfill the hopes of their parents and chase their own dreams. Some students prefer to spend time on internet for entertainment activities to reduce the pressure of school, parents and coaching classes. The present study has made an attempt to know the extent of internet addiction among the higher secondary level school students and the anxiety of higher secondary level school students having different levels of internet addiction in the Bhopal city.

OBJECTIVES

The objectives of the study are to know the extent of internet addiction among higher secondary level school students and to know the anxiety of higher secondary level school students having different levels of internet addiction. In order to study the first objective, the research question was framed as, what is the extent of internet addiction among higher secondary level school students? In order to study the second objective, the hypothesis was framed as, there is no significant difference in the anxiety of higher secondary level school students having different levels of internet addiction.

RESEARCH METHODOLOGY

The descriptive research method was used to conduct the research in the Bhopal city. The random stratified sampling was used to collect data from different CBSE schools. The information was collected from 600 students of higher secondary level. These students were from the streams of commerce, humanities and science. There were 300 girls and 300 boys. The permission was obtained from the school management for conducting the study. The students using the internet for more than three years for non-academic purpose were included in the study.

RESEARCH TOOLS

Internet Addiction Scale

To collect the information related to internet addiction, the researcher developed the Internet addiction scale. It has 20 items and aims to check the students on the extent of internet addition that they possess. The scale is in the form of a rating scale

with does not apply, rarely, occasionally, frequently, often and always as the options and 0,1,2,3,4 & 5 as the ratings, respectively. The reliability index of the test was calculated by using the Spearman – Brown Prophecy formula. Split half method was used. Even-odd split method was done to make two halves of the items in Internet Addiction Scale. The reliability coefficient was found to be .81 which is sufficiently large to assume that the present Internet Addiction Scale is highly reliable instrument for measuring the internet addiction of higher secondary level school students.

General Anxiety Scale

The information regarding anxiety was collected by using the General Anxiety Scale developed by Dr. Anil Kumar. It is self-administered tool. The scale consists of 45 items which has been developed for use in Indian culture and conditions. The scale is helpful to locate the anxiety level of children up to an age of 17 or 18 years. The scale also categorizes the anxiety level of children into five categories such as very low, low, average, high and very high. The 45 items in the scale are related to varied life situations. These items contain an element of anticipation of dangerous and painful consequences. The coefficient of reliability for this scale as per Split-Half Method was .79 and as per Kudur-Richardson formula 20 was .81.

RESULTS AND DISCUSSION

The data collected was analysed and interpreted for all the two objectives of the research.

Internet Addiction among Higher Secondary Level School Students

The first objective of the study was ‘to know the extent of internet addiction among higher secondary level school students’ for which the research question prepared was ‘What is the extent of internet addiction among higher secondary level school students?’. The level wise internet addiction of the higher secondary level school students is presented in table 1.

Table 1. Internet Addiction of the Higher Secondary Level School Students

Level of Internet Addiction	Percentage %
Normal	10%
Mild	56%
Moderate	33%
Severe	1%

From table 1 it can be observed that the among the higher secondary level school students 10% had normal level of internet addiction, 56% had mild level of internet addiction, 33% had moderate level of internet addiction and just 1% had severe level of internet addiction. From above it can be inferred that very few students had severe level of internet addiction. The low percentage of severity of addiction is a good sign as it indicates that these students have appropriate control over the usage of internet. The results of researches conducted in this area vary from each other. Goel et al. (2013) conducted a study in Mumbai amongst college students between the age group 16 to 18 years and identified 0.7% as internet addicts. On the contrary, Anwar (2014) conducted a study among the secondary school students in Lucknow found that 10% were severely addicted to internet. Similar to this result Yadav et al. (2013) found that 11.8% higher secondary school students in Ahmedabad had internet addiction and Ali et al. (2019) in his study conducted in Tezpur, Assam reported presence of 34 % severe internet addiction among higher secondary school students. Further, in research conducted on undergraduate medical students in Indore found that 9.5% were severely addicted (Malviya et al. 2014). It was found that 4.75 % of the undergraduate students of Purulia, West Bengal, are addicted towards internet (Mahanti et al. 2016).

A similar study done by Kumar and Mondal (2018) found that 39.5% of the students of different colleges in Kolkata were severe users of Internet. Among studies conducted abroad, in Guangzhou, China 0.96% adolescents were classified as severe internet addicts (Xina et al.,2018). In another study conducted by Wanajack (2011) it was found that 3.7% of Thai secondary school students in Chiang Mai, Thailand, were addicted users. Karapetsas (2012) found that 22% of students between age group 13 -15 years in the urban areas of Volos, Greece were addicts.

Anxiety of Higher Secondary Level School Students having different Levels of Internet Addiction

The second objective of the study was ‘to know the anxiety of higher secondary level school students having different levels of internet addiction’ for which the hypothesis prepared was ‘there is no significant difference in the anxiety of higher secondary level school students having different levels of internet addiction.’ In order to find the effect of internet addiction on anxiety, the mean anxiety scores of students belonging to four levels of internet addiction (normal, mild, moderate and severe) were compared with the help of one-way ANOVA. The results are presented in Table 2.

Table 2. Anxiety of Higher Secondary Level School Students having different levels of Internet Addiction

	SS	df	MSS	F-Value
Among	2204.724	3	734.908	11.273**
Within	38853.269	596	65.190	
Total	41057.993	599		

** Significant at 0.01 level

Table 2 indicates that the F-value for anxiety of higher secondary level school students is 11.273, which is significant at 0.01 level with df equal to 3/596. The F-value indicates that there is a significant difference in anxiety of higher secondary level school students having normal, mild, moderate and severe levels of internet addiction. Therefore, the hypothesis, namely, “there is no significant difference in the anxiety of higher secondary

level school students having different levels of internet addiction”, is rejected. Thus, it can be inferred that the anxiety of higher secondary level school students is dependent upon their level of internet addiction. Since there is found to be significant difference in the mean anxiety scores of students having different levels of internet addiction, there is need to find the difference between the various groups. This is shown in Table 3.

Table 3. Significance of difference of Means between Level of Internet Addiction in respect of Anxiety

Category 1	Category 2	df	Mean difference	't' value	Significances
Normal (20.11)	Mild (20.84)	395	0.726	0.641	p>0.05
Normal	Moderate (24.34)	259	4.229	3.630	p<0.01
Normal	Severe (32.50)	64	12.387	2.911	p<0.01
Moderate	Mild	532	3.503	4.860	p<0.01
Moderate	Severe	337	11.661	2.854	p<0.01
Mild	Severe	201	8.158	2.062	p<0.05

Table 3 indicates that there is a significant difference in the mean scores of anxiety of higher secondary level school students having normal, mild, moderate and severe levels of internet addiction. The mean anxiety scores of students having normal levels of internet addiction (M=20.11) is better than the students having mild (M=20.84) level of internet addiction but the difference is not significant at 0.05 level of significance. The mean scores of anxiety of students having normal level of internet addiction is significantly better than that the students having moderate (M=24.34) and severe (M=32.50) levels of internet addiction at 0.01 level of significance. Similarly, the mean anxiety scores of students having moderate levels of internet addiction is

significantly better than the students having mild and severe levels of internet addiction at 0.01 level of significance. Further, the mean anxiety scores of students having mild levels of internet addiction is significantly better than the students having severe levels of internet addiction at 0.05 level of significance. Hence it can be concluded that the lower the level of internet addiction the lower will be the anxiety of the higher secondary level school students. Saikia et al. (2019) found that there is an association between the internet addiction and anxiety. Students with excessive internet use had high score on anxiety (Goel et al., 2013). Individuals having high usage showed depression and anxiety (Kumar & Mondal 2018).

CONCLUSION

The present research has highlighted the extent of internet addiction among the higher secondary level school students in the Bhopal city. It is a matter of growing concern as 33 % had moderate level of internet addiction and 1% had severe level of internet addiction. It was also found that there is a significant difference in the mean anxiety scores of students having different levels of internet addiction therefore the lower the level of internet addiction the lower will be the anxiety of the higher secondary level school students. The mean score of anxiety of higher secondary level school boys is 19.95 which is significantly lower than that of higher secondary level school girls whose mean anxiety score is 24.06. It may, therefore be concluded that girls are found to have significantly higher anxiety than boys.

REFERENCES

- Alam, S.S., Hashim, H. K., Ahmad, M., Wel, C. A.C., Nor, S.M., & Omar, N.A. (2014). Negative and positive impact of internet addiction on young adults: Empirical study in Malaysia. *Intangible Capital*, 10(3), 619-638. Retrieved 23 December 2020 from https://www.academia.edu/29433553/Negative_and_positive_impact_of_internet_addiction_on_young_adults_Empirical_study_in_Malaysia
- American Psychiatric Association. (1995). *Diagnostic and Statistical Manual of Mental Disorders*. (4th ed.) Washington, DC: Author
- American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)*. Washington, DC: American Psychiatric Association
- Anwar, E. (2014). Internet addiction among secondary school children and its relation with their academic achievements. *Indian Journal of Research*, 3(12). Retrieved December 23, 2019 from https://www.worldwidejournals.com/paripex/recent_issues_pdf/2014/December/December_2014_1418653147_24.pdf
- Ali, A., Horo, A., Swain, M. A., Gujar, N.M., & Deuri, S. P. (2019). The prevalence of internet addiction and its relationship with depression, anxiety and stress among higher secondary school students: North-East perspective. *J. Indian Assoc. Child Adolesc. Ment. Health*, 15(1), 13-26. Retrieved February 4, 2020 from <http://www.jiacam.org/1501/orig1Jan2019.pdf>
- Begovic, D., Pajevic, I., Hasanovic, M., & Avdibegovic, E. (2015). The level of Internet Addiction positively associated with the severity of depression and anxiety amongst secondary school students in Bosnia and Herzegovina. *The Journal of European Psychiatry Association*, 30. DOI: [https://doi.org/10.1016/S0924-9338\(15\)30849-X](https://doi.org/10.1016/S0924-9338(15)30849-X)
- Chou, C., & Hsiao, M.C. (2000). Internet addiction, usage, gratifications, and pleasure experience—The Taiwan college students' case. *Computers in Education*, 35(1), 65-80. [https://doi.org/10.1016/S0360-1315\(00\)00019-1](https://doi.org/10.1016/S0360-1315(00)00019-1)
- Goel, D., Subramanyam, A., & Kamath, R. (2013). A study on the prevalence of internet addiction and its association with psychopathology in Indian adolescents. *Indian J Psychiatry*, 55(2), 140-143. Retrieved February 4, 2021 from <https://www.indianjpsychiatry.org/article.asp?issn=0019-5545;year=2013;volume=55;issue=2;epage=140;epage=143;aulast=Goel>
- Gupta, A., Khan, A.M., Rajoura O.P., & Srivastava S. (2018). Internet addiction and its mental health correlates among undergraduate college students of a university in North India. *J Family Med Prim Care*, 7(4), 721-727. Retrieved January 2, 2020 from <http://www.jfmpc.com/text.asp?2018/7/4/721/240404>
- Irwin, G. S., & Barbara, R. S. (2005). *Abnormal psychology: The problem of maladaptive behaviour*. Pearson Education. pp 229-237
- Karapetsas, A.V., Fotis, A.J., & Zygouris, N.C. (2012). Adolescents and internet addiction: A research study of the occurrence. *Encephalos*, 49, 67-72. Retrieved February 4, 2021 from https://www.researchgate.net/publication/288181738_Adolescents_and_Internet_Addiction_A_research_study_of_the_occurrence
- Kumar, M., & Mondal, A. (2018). A study on internet addiction and its relation to psychopathology and self-esteem among college students. *Industrial Psychiatry Journal*, 27(1), 61-66. Retrieved December 23, 2019 from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6198588/>
- Mahanti, J., Mondal, B.C., & Saha, B. (2016). Internet dependency of undergraduate students: An empirical study. *American International Journal of Research in Humanities, Arts and Social Sciences*, 15(2), 171-174. Retrieved February 4, 2021 from https://www.academia.edu/36087865/Internet_Dependency_of_Undergraduate_Students_An_Empirical_Study

- Malviya, A., Dixit, S., Shukla, H., Mishra, A., Jain, A., & Tripathi, A. (2014). A study to evaluate Internet Addiction disorder among Students of a Medical College and Associated hospital of Central India. *National Journal of Medicine Community*, 5(1),93-95. Retrieved February 4, 2021 from <https://www.bibliomed.org/?mno=225858>
- Mohammadkhani, P., Alkasir, E., Pourshahbaz, A., Jafarian Dehkordi, F., & Soleimani Sefat, E. (2017). Internet addiction in high school students and its relationship with the symptoms of mental disorders. *Iranian Rehabilitation Journal*, 15(2), 141- 148. <https://doi.org/10.18869/NRIP.IRJ.15.2.141>
- Oostovar, H., Allahyar, N., Aminpoor, H., Moafian, F., Md Nor, M.B., & Griffiths, M. D. (2016). Internet addiction and its psychosocial risks (depression, anxiety, stress and loneliness) among Iranian adolescents and young adults: A structural equation model in a cross-sectional study. *International Journal of Mental Health and Addiction*, 14(3), 257–267. <https://doi.org/10.1007/s11469-015-9628-0>
- Saikia, A.M., Das, J., Barman, P., & Bharali, M.D. (2019). Internet addiction and its relationships with depression, anxiety, and stress in urban adolescents of Kamrup district, Assam. *Journal of Family & Community Medicine*. Retrieved on 26 January 2021 from https://www.ncbi.nlm.nih.gov/pmc/articles/doi:10.4103/jfcm.JFCM_93_18
- Wanajak, K. (2011). *Internet use and its impact on secondary school students in Chiang Mai, Thailand*. Retrieved December 20, 2020 from <https://ro.ecu.edu.au/theses/394>
- Xina, M., Xing, J., Pengfeia, W., Hourou, L., Mengcheng, W., & Hong, Z. (2018). Online activities, prevalence of internet addiction and risk factors related to family and school among adolescents in China. *Addictive Behaviours Reports*, 7, 14-18. Retrieved December 20, 2020 from <https://www.sciencedirect.com/science/article/pii/S2352853217300627>
- Yadav, P., Banwari, G., Parmar, C., & Maniar, R. (2013). Internet addiction and its correlates among high school students: A preliminary study from Ahmedabad, India. *Asian Journal of Psychiatry*, 6(6), 500-505. Retrieved December 20, 2020 from <https://www.sciencedirect.com/science/article/abs/pii/S1876201813001676?via%3Dihub>
- Younes, F., Halawi, G., Jabbour, H., Osta, N. A., Karam, L., Hajj, A., & Khabbaz, R. L. (2016). Internet addiction and relationship with insomnia, anxiety, depression, stress and self-Esteem in university students: A cross-sectional designed study. Retrieved February 4, 2021 from <https://pubmed.ncbi.nlm.nih.gov/27618306/>
- Young, K.S. (1996). Internet addiction: The emergence of a new clinical disorder. *Cyber psychology and Behavior*, 1(3), 237-244.
- Young, K.S. (1998). *Caught in the net: How to recognize the signs of internet addiction and a winning strategy for recovery*. New York: John Wiley & Sons.