



## TECHNOLOGY ADDICTION AMONG NURSING PROFESSIONALS: IMPLICATIONS FOR SCREENING & PROMOTION OF ITS HEALTHY USE

Ramachandra., Valliammal Shanmugam., Manoj Kumar Sharma., Sailaxmi Gandhi., Sathyavathy and Bingi Rajeswari

<sup>1 4</sup>Department of Nursing, National Institute of Mental Health & Neurosciences (NIMHANS), Bangalore, Karnataka

<sup>2 5 6</sup>College of Nursing, National Institute of Mental Health & Neurosciences (NIMHANS), Bangalore, Karnataka

<sup>3</sup>Department of Clinical Psychology National Institute of Mental Health & Neurosciences (NIMHANS), Bangalore, Karnataka

### ARTICLE INFO

#### Article History:

Received 06<sup>th</sup> March, 2015

Received in revised form 14<sup>th</sup>

April, 2016

Accepted 23<sup>rd</sup> May, 2016

Published online 20<sup>th</sup> June, 2016

#### Key words:

Addiction; Psychosocial; Impairment; Addiction

### ABSTRACT

Technology use has seen an increase in its usage pattern across all age groups. It is associated with various psychosocial dysfunctions secondary to technology use. The present study is exploring the technology use pattern among nursing trainees as well as the psychosocial dysfunctions. 240 (male & female nursing) students were taken randomly with the inclusion criteria of using technology in the last one year and students who are absent at the time of data collection/unwilling to participate were excluded. They were assessed using internet addiction, screening question for mobile addiction as well as video game addiction. Results indicate the presence of 5.2% problematic use of internet use. In terms of application use, apps/Gmail are frequently used whereas gaming, hangout and other messenger apps are not in frequent use. Correlation analysis revealed significant association with items of loneliness. 1.3% were found to have problematic status for food, TV and shopping. It has implications for screening technology addiction among nursing professionals and motivate them for healthy use of technology.

Copyright © 2016 Ramachandra et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

### INTRODUCTION

Technology permeates every aspect of our lives. (Alavi, 2010). Due to this people are developing excessive to addictive use of internet contents. (Beranuy, Oberst, Carbonell, Chamarro, 2009). It is leading them to develop a compulsive need to use those devices and check online activities at all hours of the day. (Chandra, Anu, Noshir, James, 2012). Recent years have seen a concern for developing its healthy use and develop healthy life style. (Weinstein, 2010)

Technology use can become overuse and addiction when it starts to take away from the time one normally spends on socializing with friends or family, relaxing, or doing a hobby. Of course, it's not that extreme for everyone. (Goldberg, 1996) More common, signs of possible addiction include loss of interest in hobbies and social interactions, inability to turn off the phone or PDA, keeping devices near or at easy access all the time, physical issues like carpal tunnel syndrome. Feeling anxious about not checking messages also may be a concern. (Block 2008; Nalwa & Anand 2003). Based on a growing research base, the American Psychiatric Association included Internet Use Disorder in the appendix of the fifth edition of the Diagnostic and Statistical Manual for Mental Disorders (2012) for the first time, acknowledging the problems arising from this type of addictive disorder. (Yadav P, Banwari, Parmar,

Maniar, 2013) Adolescents appear to be a population at risk for developing technology addiction due to variability in developing their cognitive control and boundary setting skills. Technology usage is being integrated as part of every day's. It has dramatically changed the current communication scenario and there has been a considerable increase in the number of internet users worldwide in the last decade. (Goel, Subramanyam, Kamath 2013). There have been growing concerns worldwide for what has been labelled as "technology addiction" the term "technology addiction" was proposed by Dr. Ivan Goldberg in 1995 for pathological compulsive internet use. Griffith considered it a subset of behavior addiction and any behavior that meets the 6 "core components" of addiction, i.e., salience, mood modification, tolerance, withdrawal, conflict, and relapse. While Davis avoided the term technology addiction, referring it as a dependency "pathological internet use" (PIU). (Young 1998)

Young linked excessive use of psychoactive substances, he instead preferred the term internet use most closely to pathological gambling, a disorder of impulse control in DSM IV and adapted the DSM IV criteria to relate to internet use in the technology addiction Test developed by her. According to her, various types of technology addiction are cyber sexual

addiction, cyber relationship addiction, net compulsions, information overload, and computer addiction.(Young,1998)

3.1% of 1,723 adolescents in the age group of 14-17 years showed lower levels of family functioning and life satisfaction as well as more problems in family interactions due to pathological internet use.( Wartberg, Nash, Geol, 2015) 8.8% of 5,122 were identified as internet addicts. These adolescents who had poor vs. good academic achievement had lower levels of internet-use ( $p < 0.0001$ ), they were more likely to develop AIA (odds ratio 4.79, 95% CI: 2.51-9.73,  $p < 0.0001$ ) and have psychological symptoms in 6 of the 7 subscales (not in Time-consuming subscale). The likelihood of AIA was higher among those adolescents who were male, senior high school students ( $p$ -values  $< 0.05$ ). Adolescents tended to develop AIA and show symptoms in all subscales when they spent more hours online weekly (however, more internet addicts overused internet on weekends than on weekdays,  $p < 0.0001$ ) or when they used the internet mainly for playing games or real-time chatting. (Xu, Yan, Wu, Ma, 2012). The internet use rate (IUR) of first-grade junior students was 96.43%, with the average of primary surfer age as 8.93 +/- 1.95 among 1219 first-grade junior students. The internet addiction tendency (IAT) rate and the IAD rate were 10.87% and 7.71% respectively. The IAT and the IAD detection rates among male students were significantly higher than in female students ( $\chi^2 = 13.04$ ,  $P < 0.01$ ). By ordinal logistic regression analysis, the relative factors mainly involved 6 aspects in IAD, including sex, poor academic performance, the surfer number of times, the surfer time, the surfer place and the surfer expense. The prevalence rates of IAT and IAD were quite high in the first-grade junior students.( Swaminath,2008).The users are psychologically addicted to the online activities. The overuse also causes intra-psyche conflicts and relapse among the youth (Cabral, 2011). Internet gaming and shopping is one of the important reasons for depressive symptoms among the college students. (Cotton, 2001). The overuse of technology also affect academic performance, relationships, as well as overall development among youth. (Young, 2004).

Reports reveals that there were about 137 million internet users in India in 2013 and further suggest India as world's second largest in internet use after China in the near future. However, excessive use of the internet has resulted in negative consequences especially among the regular users labelling it as an addiction. There has been an explosive growth in the use of internet not only in India but also worldwide in the last decade. There were about 42 million active internet users in urban India in 2008 as compared to 5 million in 2000. (Wartberg, Nash , Geol 2015). There is an abundance of literature in relation to university students' addiction on internet but very few studies has been undertaken in India related to technology addiction in undergraduate nursing students. This study aimed to determine prevalence of technology addiction among undergraduate nursing students.

## MATERIAL & METHODS

### Aim

To assess the pattern of technology addiction among undergraduate nursing students at college of nursing

### Objectives

To assess the pattern of technology addiction among undergraduate nursing students at college of nursing.

### Sample

240 male & female (1<sup>st</sup> year to 4<sup>th</sup> year ) B.Sc nursing students were taken randomly with the inclusion criteria of using technology in the last one year and students who are absent at the time of data collection/unwilling to participate were excluded.

### Procedure

Informed consent were taken prior to administration of Screening Questionnaire for internet Addiction (28 questions)-it was evolved as part of Indian council of medical research funded work to explore technology addiction in community (Sharma, Benegal, Rao & Thenarasu, 2013).; Internet addiction test : is a 20 items questionnaire based on 5-point Likert scale to assess addiction to internet Internet Addiction Impairment Index can be utilizing to help classify the behavior in terms of mild moderate and severe impairment. The scale covering the degree to which their internet use affecting their daily routine, social life productivity, sleeping pattern and feelings. Minimum score on this scale is 20 and maximum is 100. the scale showed moderate to good internal consistency. It was validated by its personal and general internet usage. (Young, 1999)

20 questions. Video game addiction test : to assess individuals video game use pattern in 9 item scale with two self reported assessment of video game using pattern, and the emotional distress associated with it.<sup>15</sup> on 240 students in 20 group sessions. The present work has Institute ethic permission (Griffiths, Davies, Chappell 2004).

Descriptive statistics such as mean, median, frequency, standard deviation will be used analyse socio demographic characteristics of the sample.

## RESULTS

250 female undergraduate students acknowledge the use of video game and internet.1.3% found to have problematic status for food, TV and shopping. Video game score are below the cut off score for the sample. Correlation analysis revealed significant .534 at.05 level) association with items of loneliness.5..2% of problematic user reported on average delay of 2 hours in initiation of sleep.

**Table 1** Percentage of application use among undergraduate nursing students

Variable	Response Categories			
	Always (%)	Often (%)	Sometimes (%)	Rarely (%)
Use of Applications				
Whatsapp	55.5	26.7	9.7	8.1
Facebook	27.6	26.1	27.2	19.2
Gmail	45.3	28.6	17.6	8.5
Hangouts	5.4	13.5	16.9	64.2
Hike	6.6	14.2	14.5	64.6
Other messenger apps	3.6	17.5	13.1	65.7
Youtube	20.8	25.9	37.2	16.0
Gaming apps	4.39	16.8	25.7	52.6

**Table I** indicate use of frequent use of apps/gmail is in higher percentage whereas gaming, hangout and other messenger apps are not in frequent use.

**Table II** Pattern of internet addiction scores in the sample

Scores	Category	Frequency	Percentage
Less than 49	Normal use /Mild	237	94.8
Between 50-79	Occasional problems/ Moderate	13	5.2

Table indicate absence of significant dysfunction score among nursing undergraduate whereas 5.2 % have problematic use of internet.

## DISCUSSION AND CONCLUSIONS

The study document the presence of 5.2% problematic use of internet use. In term of application use,apps/gmail are the frequently used whereas gaming, hangout and other messenger apps are not in frequent use.(table I & II) Correlation analysis revealed significant .534 at.05 level) association with items of loneliness. 1.3% found to have problematic status for food, TV and shopping. Though trend in higher percentage in other available studies. A survey study conducted to assess the impact of mobile phone and the internet use on self-reported behavioural changes among 542 undergraduate college students, found that 53.3% of the students reported that they use to chat with friends, 0.85% students reported of chatting with family members. (Swapna, 2009).18.88 % undergraduate medical students had internet addiction. (Chathoth, Kodavanji, Nayanatara, Pai 2013). Female nursing students with higher trait of extroversion and neuroticism and unhealthy lifestyle are prone to have high level of 3 mobile phone dependency. (Ezoe et 2000). Sleep deprivation seems to be one of the major problematic effect of internet addiction and late night logins. Shaw, Black 2008; Cheung, Wong 2011Users who were dependent on Internet would delay their work to spend time online, lose sleep due to logging in till late night, feel lonelier, and feel life would be boring without the Internet as compared with nondependent subjects. The variation in reported prevalence of internet addiction can be due to heterogeneity of population studied, lack of availability of standard diagnostic criteria, studies failing to differentiate between essential and nonessential Internet use. It has limitation in term of absence of experiential aspect of usage of information technology and factors related to its excessive use. The findings indicate a need for large sample cross sectional study to explore this emerging addiction among nursing professionals and its dysfunctions. The Internet is an indispensable tool for professional development in nurses, but additive behaviour may lead to adverse outcomes such as fatigue/patient care. Nurses should pay attention to their online behaviour and seek counselling if necessary. There is a need to develop prevention and counselling resources for promotion of healthy use of technology.

## References

- Alavi S, Maracy M, Jannatifard F, Eslami M, Haghghi M. A(2010) Survey of Relationship between psychiatric symptoms and internet addiction in students of Isfahan universities, *Scientific Journal of Hamadan University of Medical Sciences and Health Services* 17 (2): 57-65.
- Beranuy M, Oberst U, Carbonell X, Chamarro A.(2009) Problematic Internet and mobile phone use and clinical symptoms in college students: the role of emotional intelligence, *Computers in Human Behavior* 25 (5): 1182-1187.
- Block JJ (2008) Issues for DSM-V: Internet addiction. *American Journal of Psychiatry*165:306-7.
- Chandra G, Anu M, Noshir K, James M. Online and upcoming: The Internet's impact on India. Bangalore: McKinsey & Company; 2012. p. i-iii.
- Cotton, S. R. (2001). Implications of Internet technology for medical sociology in the new millennium. *Sociological Spectrum* 21(3): 319-340
- Cabral, J. (2011). Is Generation Y addicted to Social Media? *The Elton Journal of Undergraduate Research in Communications*, 2 (1):5-13
- Cheung, LM, Wong, WS.(2011) 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): 311-317
- Chathoth VM, Kodavanji B, Nayanatara AK, Pai SR(2013) Internet behaviour pattern in undergraduate medical students in Mangalore. *International Journal of Innovative Research in Science, Engineering and Technology* 2: 2133-2136.
- Ezoe S, Toda M, Yoshimura K, Naritomi A, Den R, Morimoto K. (2009) Relationships of personality and lifestyle with mobile phone dependence among female nursing students. *Social Behavior and Personality*, 37(2), 231-238.
- Goel D, Subramanyam A, Kamath R.(2013) A study on the prevalence of internet addiction and its association with psychopathology in Indian adolescents. *Indian Journal of Psychiatry* 55:140-3.
- Goldberg I. Internet Addiction 1996. Available from: <http://www.web.urz.uniheidelberg.de/Netzdienste/anleitung/wwwti ps/8/ addict.html>. [Last accessed on 2013 Nov 13
- Griffiths MD, Davies MN, Chappell D(2004) Online computer gaming: a comparison of adolescent and adult gamers. *Journal of Adolescence* 27(1):87-96
- Jose Swapna(2009). Impact of Mobile Phone and Internet use on selfreported behavioural changes among the undergraduate college students of Udipi district. 2009. Unpublished study. Available in Manipal University library
- Nalwa K, Anand AP.(2003) Internet addiction in students: A cause of concern. *Cyberpsychology & Behavior* 6:653-6.
- Swaminath G.(2008) Internet addiction disorder: Fact or Fad? Nosing into Nosology. *Indian Journal of Psychiatry* 50:158-60
- Sharma MK,Benegal V,Girish N & Thennarasu K. Behavioral addiction in the community: an exploration.Indian Council of Medical research funded unpublished work.
- Shaw, M, Black, D W (2008).Internet addiction. *CNS drugs* 22(5): 353-365
- Wartberg,S, Nash N, Geol A.(2015)Pathological internet use in a representative German sample of adolescents. *Alberta. American Journal of Psychiatry* 145:216-7. 2.
- Xu
- 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* 6:500-5.
21. Young KS. (1998) Internet addiction: The emergence of a new clinical disorder. *CyberpsycholBehav* 3:237-44
22. Young K. (1999) Internet addiction: Symptoms, evaluation, and treatment. In L. VandeCreek & T. Jackson (Eds.), *Innovations in Clinical Practice: A Source Book* (17:19-31).1999 Sarasota, FL: Professional Resource Press
23. Young, K. S. (2004). Internet Addiction: A New Clinical Phenomenon and Its Consequences. *American behavioral scientist*, 48(4), 402-415.

