



REVIEW ON INTERNET AND SMARTPHONES ADDICTION: SPOILING THE FUTURE OF INDIA

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ABSTRACT

Addiction of the internet and the Smartphones in a young age is an emerging topic for the researchers in worldwide. There is a considerable debate on this topic of addiction in adolescents and its consequent impact on their health. Globally it was found that accessing to the Smartphones and internet had occupied more than 70% of mobile market and assessment frequency to the internet. Despite the progress that has been made in prevention, diagnosis and treatment in this disorder, the field is wide and unexplored, when it comes in a mental health nursing practice. These smartphones and internet addiction has shown their adverse effects on social, professional and academic life of an individual's. Moreover the effects that long hours screen exposure may on physical health, the excessive participation of children and adolescents in online gaming and social networking sites as well as the emergence of a new type of anti-social behaviors expressed by harassment, bullying, cyber crime and online suicides are a new research field in digital age. Considering the globalization and the complexity of internet & smartphones addiction mental health nurses must establish an effective program for the management of the addiction as well as the daily problems that raises such conditions. Within the clinical context of mental health, nurses can have an effective role not only in the assessment, diagnosis and treatment of internet addiction but in the prevention of that phenomenon as well.

KEYWORDS: Internet addiction, Smartphone addiction, problematic internet use, mental health nursing practice, internet & smartphones addiction treatment, children and adolescences health.

1. INTRODUCTION

The Internet and mobile technology are increasingly important to the educational and social lives of adolescents, and are becoming a part of their identity. With the advent of broadband and mobile access to the internet giving young people access to the internet at any place and at any time, and thus 24/7 entertainment, interaction and communication, there is a real risk that adolescents can become so immersed in their online world that it seems to take over their lives. It is easy to see the young people spending many hours pursuing their interests, playing games, finding information and communicating with friends and strangers online. However, when this use becomes obsessive and at the expense of other aspects of a young person's life, this use of the internet could be problematic and could even be classified as Internet addiction.^[1]

Internet Addiction, Internet Addiction Disorder, Compulsive Internet Use, Computer Addiction, Internet Dependence and Problematic Internet Use - all of these are inter-changeable terms that have been applied to

those that spend excessive amounts of time online at the expense of other aspects of their lives.^[1]

However, addiction may not be about the attractiveness of the Internet alone. It is recognized that Internet addiction may also be symptomatic of other problems such as depression, anger and low self-esteem.^[2]

Researchers in Taiwan have argued that more than 20 hours per week constitutes Internet addiction. This figure has been echoed in the research conducted in the U.S. and Europe. This is similar to television addiction with the average person watching in the region of 11-13 hours per week and those addicted watching in excess of 21 hours per week. However, time is not the only indicator of problematic Internet use. However, the fact that time is the only indicator of problematic internet use is still debated.^[2]

In last few years, number of internet users, both broadband and mobile users has rapidly increased in India and large numbers of them are adolescents. Thus the present study was conducted to assess the prevalence

of internet and smartphone overuse among school going adolescent students.^[3]

Internet & Smartphone addiction in young age is an emerging topic gaining researchers interested worldwide. Despite the progress that has been made in prevention, diagnosis and treatment in this disorder the field is wide and unexplored when it comes in mental health nursing practice.

Nevertheless, the wide spread, especially in specific population groups, such as young people, has resulted in the creation of a form of disorder i.e. Internet & Smartphone addiction. Although the topic nowadays is widely discussed the possibility of addiction or potential dependence from various recreational internet activities, is discussed since 1987. However it took a decade and more specific after 1996 for several experts' psychiatrists and psychologists considered that the excessive computer & mobile phone use can cause addiction and recognized this overuse as a disorder and dependence with similar criteria to those of other dependencies.^[4,5,6]

Today, most researchers in the field of addictions indicate that the internet & Smartphone dependence disorder is a psychophysiological disorder involving tolerance and isolation symptoms as well as emotional and social disturbances. & Smartphone addiction is an emerging problem in society that is increasing as much as is increasing the computer use. It is a fact that internet is gaining ground internationally within the field of information, entertainment, communication and technology. Over the last decade has started an international study about the pathological internet use by humans.^[6,7]

Along with internet & Smartphone addiction nowadays, a series of other behaviors link to pathological internet use are under investigation to. The effects that long hours screen exposure may have in physical health, the excessive participation of children and adolescents in online gaming and social networking sites as well as the emergence of a new type of anti-social behaviors expressed by harassment, bullying, cyber crime and online suicides are a new research field in digital age.^[8,9]

Adolescents are defined as young people between the ages of 10 and 19 years as per WHO (2014) criteria.^[10]

Addiction is considered by WHO (WHO Expert Committee - 1964) as dependence, as the continuous use of something for the sake of relief, comfort, or stimulation, which often causes cravings when it is absent.^[11] The two major categories of addiction involve either substance addiction, e.g. "drugs or alcohol addiction" or "behavioral addiction such as mobile phone addiction."^[12] Mobile phone addiction/abuse/misuse is one of the forms of compulsive use of "a mobile phone" by adolescents across the world. A new kind of health disorder in this category among adolescents,

"Smartphone's addiction/abuse/misuse" is now challenging health policy makers globally to think on this rapidly emerging issue. Indian adolescents are also affected by this high smartphone engagement, and the current paper will use meta-analysis to discuss their addictive behaviors.^[13,14,15]

2. TYPES OF INTERNET AND SMARTPHONE ADDICTIONS

2.1 Cyber sexual Addiction: People suffering from this type of addiction usually deal with the viewing, downloading and trading of pornographic material through the Internet or participate in adult chat room with role fantasy games. Addicted of this category are usually people with low self-esteem, because they believe they are not sufficiently good-looking or have some sexual dysfunction. Finally, studies have shown that men like to watch erotic Video, while women like to enter in erotic content chat.

2.2 Cyber-Affair / Relational Addiction: This category includes those suffering from addiction in chat rooms, sending instant messages and participates in online social network sites. Online friends quickly become more important to the individual, to the detriment of relations in its real life with family and friends. In many cases this will lead to family discord and family instability.

2.3 Net Compulsions: The addiction to online gaming, online games of chance and on eBay have started very quickly to become a new mental problem in the post-era of internet. Because of direct access to virtual casinos, interactive games and eBay addicts lose huge amounts of money, their jobs and disrupt their interpersonal relationships.

2.4 Information Overload: The wealth of data available on the web has created a new type of compulsive behavior associated with excessive "surfing" on the Internet and database searches. People spend a lot of time in search, data collection and organization of information gathered from the Internet.^[16,17]

3. Internet And Smartphone Addiction In Numbers

The effects that internet & smartphone addiction may have in an individual's life are shown in the social, professional as well as in academic level. Details for the numbers of addiction related to smartphone and internet for the various developing countries are represented as follow:

Although in an international level, studies have shown that the internet addiction varies between 5-10% among Internet & smartphone users in China and in other Asian countries the rates are higher.

1. China is the country which is facing the problem of addiction in adolescents is around 25.7%
2. Other Asian Countries such as N. Korea and Taiwan are facing this problem at the same extend to.
3. *In India the annual rate of growth of smartphone and internet users is around 129%.*

4. In **Greece** the rates are almost as high as they are in China.
5. **Taiwan and N. Korea**, with 70.8% of adolescents had access to the internet & smartphones.
6. The most common form of internet use is in form of online games, which represent the 50.9% of Internet users, as well as information services, which account for 46.8%.
7. According to the data from Adolescent Health Unit of Athens Children's Hospital (2007), 8% of the adolescents are using the internet more than 28 hours a week and about three in ten (26%) teenagers surf on a daily basis.
8. Again on the basis of international studies it was found that...61.34% students started using internet after 12yrs of age while 38.66% students said that they started using internet before 12 year of age. 26.33% students spent 4 hour or more online per day.
9. 28.66% students admitted that their school work was often delayed or incomplete due to spending more time on internet.
5. On the basis of international survey studies some more effects which are reported are as follow..., 28.66% (86) students admitted that their school work was often delayed or incomplete due to spending more time on internet.
6. 21% (63) students admitted that they became defensive or secretive when someone inquired about what they do online.
7. 22.33% (67) students said that they get relieved from disturbing thoughts of school work with soothing thoughts of internet.
8. 30% (90) students said that life without internet would be boring, empty and joyless.
9. 24% (72) students said that they feel an urge to get online immediately after getting up in the morning.
10. 40.66% (122) students admitted that they give more importance to internet then physical activities.
11. 42% (126) students had problem of eye sight while 20% (60) were having problem of procrastination.
12. 25% (75) students admitted that they remain online late in night.
13. 29% (87) students felt that they are isolated/having loss of interaction with society.
14. When inquired about health problems, maximum students (42.00%) had problems related to eye sight followed by anxiety (37.67%) and headache (24.33%).
15. Maximum females had problem of eye sight (39.70%) followed by anxiety (29.41%) and headache (20.59%).
16. Maximum males had problem of anxiety (44.51%) followed by eye sight disorders (43.90%) and headache (27.44%).
17. Just only 11% students had no health problem which was almost equal in both males (10.97%) and females (11.03%).

The most frequent reason for internet use is online gaming. And this is the reason which can lead to addictive behavior is the social networks and follow the online games.

Young's Internet Addiction Questionnaire which contains 20 questions was used to measure internet addiction among students. Out of 300 students, 09.33%, were in the score range of 0-19 i.e. no addiction; 60.34% were in the score range of 20-49 i.e. mild addiction; 24.00%, were in the score range of 50-79 i.e. moderate addiction and 06.33%, were in the score range of 80-100 i.e. severe addiction.^[18, 19, 20, 21, 22]

4. Adverse Effects Of Internet And Smartphones Addiction^[23,24,25]

1. Most of the addicted teens play computer "games" at home or internet café. They may quit school, & be isolated from their family and friends, be aggressive with their parents, steal money from the family in order to "play", live in a room, and not eat or the opposite, not exercise and not sleep for days and nights. They may not even change clothes, neglect their hygiene and cleanliness as well. These may occur in milder form during early adolescence.
2. According to A.H.U, the first reason was the online games. Moreover, children with addiction behavior engage in games of chance and use sexual material significantly more often than other people.
3. Adolescents with addiction behavior exhibit aggressive, delinquent behavior, while adolescents with marginal use (a pre-dependence stage, however problematic use) exhibit depressive tendencies and anxiety.
4. Teenagers with problematic use seem to acquire a misguided "comfort" to the Internet by removing boundaries and presenting high-risk behaviors.

5. Prevention methods for internet addiction

In the context of prevention there are several factors which will help dealing in this problem by informing young people. More specifically, the family environment will put the first limits of computing & utilization of smart phone, in terms of time and type of use. Parents must set family rules on computer, smartphone and Internet use, rules which apply to parents as well. During childhood and adolescence period social and sporting activities are very important. Moreover, children and adolescences must be included to family activities that do not involve the use of computer, internet & smartphone. Finally, computer should be placed in a shared room by the family and not in the children's room. Schools can determent a special role in prevention of internet & smartphone addiction. Teachers can and must inform students and parents about the dangers that internet & smartphone has. Moreover, should encourage students to make school works via computer and Internet so that the positive aspects of their use can have. Furthermore, public media campaigns can be an effective mean, to aware the parents and children about the phenomenon, providing additional information about

units that working with such issues, available treatment centers and counseling telephone lines. Health services must have the responsibility to inform doctors, trainee and students about excessive internet & internet use. Internet & smartphone addiction should be included in conferences and workshops in order to health professional such as nurses, pediatricians, and child psychiatrists, psychologists, who will come across with such problems be sensitized.^[26]

6. Treatment for internet addiction

Treatment of diagnosed cases in internet & smartphone addiction can be applied with pharmacological and most likely non pharmacological interventions. Due to the fact that along with internet addiction another psychiatric disorder can exist, there has been some evidence for the use of various pharmacological agents successfully in the treatment of this addiction. According to Przepiorka et al 2014, Antidepressant drugs, Antipsychotic drugs, Opioid receptor antagonists, Psychostimulants, and Glutamate antagonists have been successfully administrated and treat internet addiction disorder.^[27]

In addition, in rare and severe cases where suicidal ideation, or major depressive disorder and symptoms of cachexia arise due to many days, continuous involvement with the Internet & smartphone, such as online games can coexist. In this case there is the possibility of hospitalization in child psychiatry clinic.^[28]

Moreover, according to the meta-analysis study of Winkler et al in 2013, both psychological and pharmacological interventions proved beneficial in the Internet & Smartphone addicts as regards time spent online, depression and anxiety.^[29]

The majority of studies utilized non- pharmacologic interventions for Internet & Smartphone addiction, such as some psychotherapeutic approaches, in order to investigate the causes leading children and adolescents to this attitude, aiming to regain the confidence in him and in life. During the therapy the use is not interrupted but the teenager learns to set limits and start again engaging in other activities. These included cognitive behavior therapy (CBT), motivational interviewing (MI), reality training, or a combination of psychological and/or counseling therapies within a self-devised treatment program.^[30]

7. Preventive measures as a business model

With the prospective of business, we can develop any software or mobile app which will help to control the accessing of smartphone or internet by adolescence i.e. when any adolescence is using the smartphone or internet more than a hour, then in such a situation an auto SMS alert should be delivered to the guardian or parents; so that one can able to ask questions to their adolescence relating to long term exposure for internet or smartphone.

8. CONCLUSION

Conclusion of present study indicates that the problem of internet & Smartphone addiction is real and needs appropriate attention from authorities. The role of internet & smartphone in our lives in present century is established beyond doubts and its usage is going to increase further. The real challenge is to have a control on usage of social sites- the amount of time being spent and the type of activities adolescents are doing online. It is essential to have a control on social sites. At present, computer and internet education have become a regular part of curriculum in all the schools. Parents need to explain their children and schools should start counseling of adolescents regarding appropriate use of internet & Smartphones; and finally balancing of time between internet surfing, studies and outdoor physical activities.

9. REFERENCES

1. Wikipedia, the free encyclopaedia. Website: Internet addiction disorder. https://en.wikipedia.org/wiki/Internet_addiction_disorder.
2. Factsheet Internet Addiction. Website: http://paneuyouth.eu/files/2013/07/factsheet_addiction.pdf. Child net International, 2006.
3. Simon Kemp. Social, Digital and Mobile in India. 2014. Website: <http://wearesocial.net/tag/india/>.
4. Siommos K, Angelopoulos N. Internet addiction disorder. *Psychiatriki*, 2008; 19(1): 52–8.
5. Clarke BH. Early adolescents' use of social networking sites to maintain friendship and explore identity: Implications for policy. *Policy & Internet*, 2009; 1(1): 53–87.
6. Musetti A, Cattivelli R, Giacobbi M, Zuglian P, Ceccarini M, Capelli F et al. Challenges in Internet Addiction Disorder: Is a Diagnosis Feasible or Not?. *Frontiers in Psychology*, 2016; 7: 842.
7. Young K. Internet Addiction: The Emergence of a New Clinical Disorder. *Cyber Psychology & Behavior*, 1998; 1(3): 237-244.
8. Smith KP, Mahdavi J, Carvalho M, Fisher S, Russell S, Tippett N. Cyberbullying: its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, 2008; 49(4): 376-385.
9. SULER J. To Get What You Need: Healthy and Pathological Internet Use. *CyberPsychology & Behavior*, 1999; 2(5): 385-393.
10. WHO. Maternal, newborn, child and adolescent health. Adolescent development: A critical-transition. http://www.who.int/maternal_child_adolescent/topics/adolescence/dev/en.
11. WHO. Management of substance abuse: Dependence Syndrome. Available from: http://www.who.int/substance_abuse/terminology/definition1/en/.
12. Kim H. Exercise rehabilitation for smartphone addiction. *J Exerc Rehabil*, 2013; 9: 500-5.
13. Ira S. "Before iPhone and Android Came Simon, the First Smartphone" *Bloomberg Businessweek*. Bloomberg L.P. ISSN 2162-657X. (2012-06-29).

- “...Simon wasn’t ready for its scheduled release in May 1994. Customers couldn’t get one until Aug 16”. Available from: <http://www.businessweek.com/articles/2012-06-29/before-iphone-and-android-came-simon-the-first-smartphone>.
14. “EricssonGS88 Preview”. Eri-no-moto; 2006, http://www.pws.prserv.net/Eri_no_moto/GS88.
 15. “History”. Stockholm Smartphone; 2010, <http://www.stockholmsmartphone.org/history>.
 16. Shapira N, Lessig M, Goldsmith T, Szabo S, Lazoritz M, Gold M et al. Problematic internet use: Proposed classification and diagnostic criteria. *Depression and Anxiety*, 2003; 17(4): 207-216.
 17. Young K, Abreu C. *Internet addiction*. Hoboken, NJ: John Wiley & Sons, 2011.
 18. Block, J.J. “Issues for DSM- V: Internet Addiction”. *American Journal of Psychiatry*, 2008; 165(3): 306-307.
 19. Tsitsika A, Critselis E, Kormas G, Konstantoulaki E, Constantopoulos A, Kafetzis D. Adolescent Pornographic Internet Site Use: A Multivariate Regression Analysis of the Predictive Factors of Use and Psychosocial Implications. *CyberPsychology & Behavior*, 2009; 12(5): 545-550.
 20. Tsitsika A, Critselis E, Kormas G, Filippopoulou A, Tounissidou D, Freskou A et al. Internet use and misuse: a multivariate regression analysis of the predictive factors of internet use among Greek adolescents. *European Journal of Pediatrics*, 2008; 168(6): 655-665
 21. Fisoun V, Floros G, Geroukalis D, Ioannidi N, Farkonas N, Sergeantani E et al. Internet addiction in the island of Hippocrates: the associations between internet abuse and adolescent off-line behaviours. *Child and Adolescent Mental Health*, 2011; 17(1): 37-44.
 22. Tsitsika A. Use and Abuse.2011, <http://www.youth-health.gr/gr/index.php>.
 23. Flanagan J. “Smart phone ‘addicts’ do not need rehab”. *The Kernel*. <http://www.kernelmag.com/features/report/6240/smart-phone-addicts-do-not-need-rehab>.
 24. Brauser. D. Smartphone ‘Addiction’ May Affect Adolescent Development. Available from: <http://www.medscape.com/viewarticle/804666>.
 25. Worldwide market share for smartphones. <http://www.finance.yahoo.com/blogs/the-exchange/a-comeback-for-unions-is-still-a-long-way-off-204551580.html>.
 26. Przepiorka AM et al. Clinical approaches to treatment of Internet addiction. *Pharmacological Reports*, 2014; 66(2): 187-191.
 27. Winkler A, Do`rsing B, Rief W, Shen Y, Glombiewski JA. Treatment of internet addiction: a meta-analysis. *Clin Psychol Rev*, 2013; 33: 317–29.
 28. Block, Jerald J. "Issues for DSM-V: Internet addiction." *American journal of Psychiatry*, 2008; 165(3): 306-307.
 29. King D L, et al. Assessing clinical trials of Internet addiction treatment: A systematic review and CONSORT evaluation. *Clinical psychology review*, 2011; 31(7): 1110-1116.
 - 30.