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Relevance of Smart Phone Addiction on Indian Adolescent Their Sleeping Habit And Associated Behaviors : A Literature Review

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ABSTRACT

World is ever changing due to advancement in realm of science and technology, one such advancement is in field of smart phones. The ubiquity of smart phone technology raises concern for its addiction among adolescents and its relationship with quality of sleep, mental and physical health problems. Objective of the study was to investigate magnitude of smart phone addiction and evaluate the impact of smart phone addiction on their mental health and sleep quality. Mounting evidence shows that smartphone usage heavily disrupts our work life and social activities. Moreover, it is possible that overuse could resemble addictive tendencies There is a considerable debate on addiction and abuse to Smartphone among adolescents and its consequent impact on their health; not only in a global context, but also specifically in the Indian population; considering that Smartphone's, globally occupy more than 50% of mobile phones market and more precise quantification of the associated problems is important to facilitate understanding in this field. Main aim of this paper is the reviews investigate some aspects of the emerging literature on the impact of mobile phone on adolescent's life. There are several reviews addressing the definition, Mobile phone addiction symptoms, Assessment of Mobile phone addiction, Negative effect of Mobile phone addiction on adolescents and some reviews addressing the role of Mobile phone addiction on adolescent's mental and physical health.

Keywords : Adolescent's, Literature Review, Assessment Behaviour Problems, Smart Phone Addiction, Sleep Quality

I. INTRODUCTION

The world is rapidly changing due to the advancement in the domain of e-technology. In this advancing and competitive world it's impossible to escape the presence of technology and one such example is the use of smartphones. Smart phones are more likely to be the hand held computers for configuring the daily schedules, saving large documents, for watching videos, listening music, chatting with friends, social networking sites, video conferencing and much more than a human mind can think.

Adolescents are defined as young people between the ages of 10 and 19 years as per WHO (2014) criteria.[1] Today, 20% of people persons in the world are adolescents, constituting 1.2 billion people worldwide. Nearly, 243 million adolescents live in India as per the UNICEF Report (2011).[2]

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.[3] The two major categories of addiction involve either substance addiction, e.g. "drugs or alcohol addiction" or "behavioral addiction such as mobile phone addiction."[4]

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.

A Smartphone, or smartphone, is a term for distinguishing mobile phones with advanced features from basic feature phones. The term "Smartphone" first appeared in 1997, when Ericsson described its GS 88 "Penelope" concept as a smartphone.[5,6,7,8] This term was basically introduced in the market for a new class of mobile phones that provides integrated services from communication, computing and mobile sectors such as voice communication, messaging, personal information management applications and wireless communication capability.[9]

Modern Smartphone's currently include all the features of a laptop, including web browsing, Wi-Fi, and 3rd-party apps etc., The most popular Smartphone's today which are emerging are Google's Android, Apple's IOS mobile operating systems and Nokia-X series.[10,11,12,13,14] Significant increase in Smartphone use and their capabilities allow adolescents to access the Internet, communicate, and entertain themselves anywhere and anytime. Therefore, most teenagers in 10-19 years of age can use the Smartphone as a constant companion.

1) Worldwide scenario of adolescents vulnerability to Smartphone's

The age group of 25-34 is found to have the highest Smartphone usage rate of 62%. 50% of Android Smartphone's and 43% of Apple iPhone users are younger than 34 years. 53% of Smartphone users are male and 47% are female. Indian teens are currently driving Smartphone's market in India The age group of 16-18 years using Smartphone's have shown a rapid rise from 5% in 2012-25% in early 2014.Recently in 2013, there were around "51 million" Smartphone users in Urban India and rate of rise from year 2012 was 90%.

2) Global Smartphone's addiction scenario

Smartphone abuse is increasing in the 21st century as more and more adolescents enjoy exploring their Smartphone's in their free hours. Smartphone overuse can be a sign of Smartphone addiction as per many studies of Kim and Flanagan. New research in US suggests that excessive use of Smartphone's, increases the risk for severe psychopathologies in adolescents and there is growing evidence of problematic use of Smartphone's that impacts both social and health aspects of users' lives.The study of 200 adolescents in Korea also showed that abnormal users of Smartphone's had significantly more problematic behaviors, somatic symptoms, attention deficits, and aggression and this study also found that youth were more addicted to Smartphone they had more severe psychopathologies.

3) Smartphone's addiction impacting health of adolescents

There are two questions that arise from the new way of using Smartphone's:

- The first is the issue of stress from constant connection to other people and decreased privacy
- The second issue is whether his new way of being online is going to make people more present in the virtual world at the expense at the real world?

Assessment of overuse or problematic use can actually depend on one time, self-reported behavioral information about Smartphone.

4) Developed countries scenario

There are many reports of people exhibiting problematic patterns of Smartphone abuse with potentially negative consequences on their familial, vocational and social lives after getting addicted to Smartphone's in developed countries such as US and UK. A University of Southern California study found that the unprotected adolescent sexual activity was more common amongst owners of Smartphone's due to easy access to porn websites.A study conducted by the Rensselaer Polytechnic Institute's Lighting Research Center also concluded that smartphones, can seriously affect sleep cycles.

5) Smartphone's addiction emerging in Indian adolescents

A majority of adolescents from lower socioeconomic background in whole world; are not untouched by the effects by the widely available and cheaper Smartphone. Adolescents under 15 are also affected, in India and around the world. Moreover, little research has been conducted about smartphone use and its consequences. Considering the high rate of smartphone use among

Indian adolescents, this area needs to be further explored, with a focus on what roles technology plays in fostering fantasies, acting out behaviors. Authors therefore aimed to explore problems emerging with this technology among Indian adolescents, so that best prevention and treatment strategies can be worked out- this is the prime reason why the authors have chosen and analyzed this area by meta-analysis and systematic-review of studies in this article.

Effect of Mobile Phone on Adolescents Mental and Physical Health

Over usage of the mobile phone leads to physiological health hazards like headaches, earache, warmth sensation, fatigue and musculoskeletal symptoms. Usage of mobile phones during driving is one of the leading cause of accident, and some controversy still exist in the over usage of the mobile phone whether it produces tumor or not. Mobile-addicts can be seriously affected at the psychological level. They don't show any physical and psychological symptoms, their disorder goes unnoticed by others. Ozturan, et al. (2002) concluded that Ear is the first organ dealing with the cell phones, there is a elevated energy deposition in the ear as compared to other organs and its effect on hearing are debated. Loughran, et al. (2005)found that exposure to electromagnetic fields emitted by digital mobile phones handsets prior to sleep decreased the rapid eye movement (REM), sleep latency and increased the electroencephalogram spectral power in the 11.5 to 12.25 Hz frequency range during the initial part of sleep following exposure. Agrawal, et al. (2008) [2] reported that the cell phones harmful radiations were able to degrade the quality of sperm with regard to quantity, viability, motility, morphology and few mutations in DNA causing severe changes in sperms. Soderqvist, et al. (2008) [48] explored the assess use of wireless phones and health symptoms in 2000 Swedish adolescents and they showed that frequent mobile phone users reported health complaints, such as tiredness, stress, headache, anxiety, concentration difficulties and sleep disturbances. Regular users of wireless phones had health symptoms more often and reported poorer perceived health than less frequent users. Srivastava and Tiwari (2013) investigated that the effects of excess use of cell phone on adolescent's mental health and quality of life. They randomly selected 100 male students from Uttar Pradesh, India. They found that limited users of cell phone have better mental health and quality of life than unlimited users of cell phone. Acharya, et al. (2013) examined that the health effects of cell phones usage amongst students pursuing professional courses in colleges. College students of both sexes in the age group 17-23 years from urban and rural backgrounds were selected at random (those using cell phones). Result showed that headache was to be the commonest symptoms followed by irritability/anger. Other common mental symptoms included lack of concentration and poor academic performance, insomnia, anxiety etc. Among physical symptoms- body aches, eye strain, digital thumb were found to be frequently in both sexes.

II. CONCLUSION

Increase in the use of smartphones in societies, has raised concern about social and psychological effects of excessive use of smartphone's especially among Indian adolescents. Smartphone's have made mobile connectivity so accessible that today's Indian generations are abusing their Smartphone. Smartphone abuse to addiction has become more serious since adolescents can download and run numerous applications with smartphone even without Internet connection. Smartphone addiction are is still not sufficiently addressed within studies in literature, so what is suggested is more in-depth qualitative and quantitative studies in the future with larger sample sizes, and the development of policies to raise awareness about this issue by Indian governments for better future of Indian adolescents as a priority action.

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