Ilkogretim Online - Elementary Education Online, 2020; Vol 19 (Issue 4): pp. 7393-7404
http://ilkogretim-online.org
doi: 10.17051/ilkonline.2020.04.765141

Covid-19 Pandemic And Smart Phone Addiction: A Descriptive Survey On Secondary School Students

Puja Mushahari , [1] Seema Rani Das[2] , Debolina Mukherjee[3]

[1,2,3]Research Scholars, Department of Education, Tezpur University, Napam, Tezpur, Assam-784028

Abstract

The present study mainly focused to study the level of Smart phone addiction among the Secondary School students of Sonitpur district. This study was mainly a descriptive survey conducted on sample of 84 secondary school students (40 male and 44 female) who were selected with the help of stratified random sampling technique. For this study the researchers adopted "Smart Phone Addiction Scale" developed by Dr. Vijayshri and Dr. Masaud Ansari. The finding of the study revealed that most of the students have high level of Smart phone addiction during the COVID-19 pandemic situation. Significant differences were observed between the students on the basis of the gender and locality. The male students were found highly smart phone addicted as compared to the female counterparts. Similarly it is examined that the students from urban area were preferably more prone to smart phone addiction in comparison with that of students from rural area.

Keywords: COVID-19 pandemic, smart phone addiction, secondary school students.

Introduction

The Internet has become a part and parcel of our daily life as it serves multitude of purposes including speedy information sharing, cultural exchange between people, broadening the horizon of knowledge and understanding, effective electronic commerce, emotional boost and the most obvious purpose of entertainment (Scherer, 1997). Extreme benefits of using internet cannot be overlooked in the context of coping up with the diverse needs, innumerable challenges, dynamic demands of the fast growing 21st century world. Here comes the crucial role of smart phones because it is the great combination of a mobile phone and internet service. Along with internet facility smart phone provides various others interesting advantageous services. Smart phones are the most advanced devices that are utilized for multipurpose. It is an extremely beneficial device for people from different age group be it children, youngsters, adults and older people. Smart phonesare used for establishing communication with others, to express their thoughts, to watch videos, to play

video games, and most importantly, to gain information and knowledge, to connect with people who live far away through video calls, an exciting mechanism offered by smartphones. And the most positive factor of smart phone usage would be a smartphone's portability and accessibility that allow it to be used anywhere and for any amount of time (Cha & Seo, 2018). In fact, Smartphone usage is on the rise all around the world.During this pandemic due to COVID- 19 when the entire learning scenario went through a major transformation from offline mode of learning in the academic institutional setting to the virtual mode of learning, the smart phones became the most significant instrument for continuing the process of learning.COVID-19's emergence was undoubtedly a grave threat to humanity. The outbreak of the COVID-19 pandemic made a far reaching impact on everyone's lives. Maintaining physical distance, and shunning mass gatherings and assemblies were used as the preventive measures used in India and other countries too. The only way to stop the disease from spreading in large scale was functionalize lockdown strategy which resulted in the closure of schools, training institutes, and further education facilities. (Sintema, 2020). The process of education cannot be ceased; and in such condition a paradigm shift was bound to take place in terms of the approach to the learning process. When face-to-face teaching in the physical setting of academic institutions was not possible, the need for the development as well as implementation of an alternative instructional and assessment strategies arose. With the aim of minimizing the spread of the virus the academic institutional authorities chose e-learning to be employed as per the urgent demand of the situation. E- Learning makes use of electronic resources of which the essential component is the use of computer technology and the Internet (Aboagye et al, 2020). The COVID-19 epidemic paved the ground for digital learning to be adopted (Dhawan, 2020). Educators started to deliver quality education via multiple online platforms like Microsoft Teams, Google Classroom, Canvas and Blackboard, as it was “Education in Emergency”. And to make this online education effective, in order to continue study from home, the use of smart phones becomes inevitable for both the teachers and the students. Emphasis on online education through the usage of information and communications technology (ICT) including advanced gadgets like mobile phones with internet service, laptop, desktop, tablets etc. became a remedy for this unprecedented worldwide pandemic. New technology devices and modes of communication (smartphones, tablets, and social media) are progressively influencing the lives of many children and adolescents today. Smartphone usage has risen fast in recent years all around the world. The COVID-19 pandemic had significant negative psychological and behavioural consequences on young people, because it caused them to spend more time at home and make extensive use of technology equipment. The average amount of time spent on a smartphone per day during the COVID-19 pandemic was higher than before the epidemic: Individuals (66.3 percent) spent more time on smart phones during the pandemic, compared to that of (16.3 percent) the pre pandemic time. People’s increased involvement "telephone call," “video call”, "social network (Instagram, Facebook)," " video game," "online chat (Whatsapp, Messenger etc.,)," "music," and "videos’’ was observed during the COVID- 19 pandemic.

The widespread and multifaceted role smartphones played during the outbreak had its negative side also that caused different emotional, psychological, heath issues like "distraction," "mood modification," "loss of interest," "isolation," "sleep disturbances," etc. Though smartphones provide numerous benefits in our lives, but we must be mindful of these negative consequences of their use, the most serious of which is smartphone addiction. Smartphone addiction is a term that refers to the inability to manage one's smartphone usage. The uncontrollability of smart phone usage is main concern of the phenomenon called smart phone addiction. In other words, the inability to control over the use of smartphone regardless of the negative consequences can be referred to as smartphone addiction. People who suffer from this condition have to go through various social, psychological, and health issues (Young, 1999). For the harmful effects on users, smartphone addiction is thought to be deep-rooted in Internet addiction (Goldberg, 1996). Smartphone addiction and Internet addiction both are marked by behavioural addiction due to impulse control disorder.Addiction to media has been linked to an increase in depressive symptoms as well as a decline in overall well-being of individuals (Yoo et al., 2014). Lin et al. (2014) identified four characteristics of smartphone addiction: compulsion, functional impairment, tolerance, and withdrawal. The excessive usage of a smartphone results in an inability to limit the level of its use, despite serious negative implications in financial, physical, psychological, and social life (Van Deursen et al., 2015). Poorly regulated preoccupation with smart phones can lead to various impairments (Demirci et al., 2014), makes the users media addicts, and thereby, unable to manage even the real-life activities (Greenfield, 1999). People engrossed in using Internet for longer periods of time have less social support and are left with the state of loneliness and alienation (Nie & Erbring, 2000). Children who are addicted to their cell phone are encountering certain behavioural issues such anxiousness, temperament, inattentiveness, mental distraction, impatience, nervousness, sleeping disorder and indolence, and these issues get intensified if excessive smart phone addiction is continued (Divan et al., 2012).

Adolescents, in particular, are at a significant risk of becoming the victims of smartphone addiction. Adolescents have a deep attachment to their smartphones. A large number of smartphone users generally have the statement that they would be unable to live without a smartphone (Wajcman et al., 2007). The period of adolescence is known as transition-period because during this time period youngsters go through a variety of physical and psychological changes as they grow and develop. The teenagers face an in between state as, on one hand, they depend on their parents in terms of their life decisions and identities, but on the other hand, they also attempt to be independent of their parents, to develop their own identities, and to carve out a place for themselves. As a result of these changes adolescents become increasingly dependent on smartphones. They are fascinated by new technology and adapt to its operation more quickly than adults. Adolescents, harbor the passion to be digitally empowered, they have the craze to express themselves in an online arena, stay up with the current fashion, to use a variety of online applications (apps), and seek emotional

support and relationships (Tapscott, 2009). In the pursuit of newness or seeking for fame, youngsters start to spend their enormous time on smart phones. It seemed as if the smartphones have become their sole world. With such lack of control competence, they are in the most deplorable condition, undoubtedly at a greater risk of becoming addicted to smartphones (Chambers et al., 2003).The seriousness of smartphone addiction has already been recognised in clinical science and practice. Repeated smartphone use is tremendously addictive and distracting. According to Oulasvirta et al. (2012), awareness of the risks associated with continuous smartphone use is low. Most of the people are unaware of the severity of that repeated use of a smartphone that has the full potential to lead to addiction. Spreading awareness among people to make them understand how addiction to smartphone can hamper their lives in every aspect would be a major step for providing a remedy to the critical situation.

Review of related literature

The root of smart addiction is found in Internet addiction because both of them have similar symptoms and negative effects on users (Seong-Soo 2018). Smart phone addiction is a kind of behavioral addiction just like internet addiction. Even if it has negative effect on users and they know it, but they cannot control the use of smart phone. Smartphone addiction is also considered a technological addiction that involves human–machine interaction (Griffiths, 1995; Seong-Soo. 2018). Using smart phoneproduces pleasure and reduces feelings of pain and stress but leads to failure to control the extent of use despite significant harmful consequences in financial, physical, psychological, and social aspects of life (Shaffer, 1996; Van Deursen et al., 2015; Young, 1999; Seong-Soo 2018).

Seong, Soo& Bo- Kyung Seo (2018)in their study "smartphone use and smartphone addiction in middle school students in Korea: Prevalence, social networking service, and game use" found that out of 1824 participants, 563 (30.9%) were identified as a risk group for smartphone addiction and 1261 (69.1%) were classified as a normal user group according to their scores on the Smartphone Addiction Proneness Scale. The scores of the risk group showed significantly higher scores on the scale as well as on each subscale of the tool as compared with the normal users group.

Rationale of the Study

This research study endeavored to examine the status of smart phone addiction during COVID- 19 pandemic among secondary school going pupils. This study targeted to deal with the characteristics of smart phone addiction of adolescent students belonging to age group 14to16 years. There is no doubt that smart phone addiction is detrimental to students' welfare having a negative impact on students' mental health condition, and thereby, effecting their academic achievement. It is imperative to identify the students with smart phone addiction as compared to those students who are normal users of smart phone. During this pandemic due to COVID- 19 the entire learning scenario shifted to online mode from the

offline one. Naturally students needed to spend a significant amount of time on smartphones, and thereby, they became more prone to be smart phone addict, Thereby, an urgent need is to focus on the issue of smart phone addiction among today's learner. Not only this, lack of awareness among people regarding smart phone addiction needs to be eradicated. Individuals should be aware of the risk factors of excessive use of smart phones so that they are able to take proper action to prevent it. Thereby, it can be said that one of the primary reasons behind undertaking the study was to raise awareness about the severity of smart phone addiction among people.

Objectives of the study

1. To study the level of smart phone addiction among secondary school students.
2. To study the differences in level of smart phone addiction with respect to gender that is male and female.
3. To study the differences in level of smart phone addiction with respect to locality that is rural and urban.

Hypotheses

1. **H_0** There is no significant differences in level of smart phone addiction with respect to gender.
2. **H_0** There is no significant differences in level of smart phone addiction with respect to locality.

Method of the study

The present study has been conducted using Descriptive Survey method.

Population

The population of the present study covers all the secondary school students studying in secondary schools of Sonitpur district of Assam.

Sample and Sampling technique

The sample of the present study included 84 secondary school students out of which 40 are male students and 44 are female students and were selected with the help of Stratified Random Sampling Technique.

Tool used

The researchers have used Smart Phone Addiction Scale developed by Dr. Vijayshri and Dr. Masaud Ansari. The reliability of the scale is .857 Cronbach's Alpha Score significant at 0.01 levels.

Statistical Techniques

Mean, Standard Deviation and Z-test have been used in the present study.

Analysis and interpretation

Objective No.1 To study the level of smart phone addiction among secondary school students

Table 1: Level of smart phone addiction among the secondary school students in Sonitpur District

Range of z-Scores	No. Of Respondents	Percentage	Level of smart phone addiction	Grade
+2.01 and Above	2	2.38	Very High Level	A
+1.26 to +2.00	38	45.24	High Level	B
+0.51 to +1.25	27	32.14	Above Average Level	C
-0.50 to +0.50	17	20.24	Average Level	D
-1.25 to -0.51	0	0	Below Average Level	E
-2.00 to -1.26	0	0	Low level	F
-2.01 & below	0	0	Very Low level	G

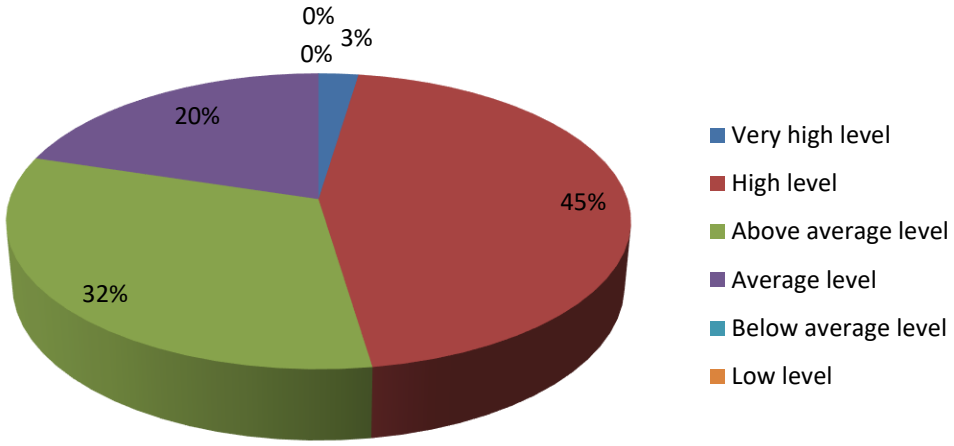

Figure No.1 Graphical description of the percentage of students in various levels of Smart Phone addiction

Interpretation: From the above table no.1 it can be very vividly observed that most of the students of secondary level of Sonitpur district have high level of Smart phone addiction i.e. **45.24%,**and then in case of the above average category **32.14%** students were found to have smart phone addiction. Again **20.24%** students fall under the category of average level and least percentage of students i.e. **2.38%** falls under the very high level addiction. No students falls under the other three lower level category i.e. below average, low and very low. Therefore it can be said that no students were free from smart phone addiction among the sample of the study.

Discussion: The reason of high level of addiction among the students may be due to the lockdown situation during COVID-19 when most of the students were engaged with the smart phones, laptops, etc. due to online mode of learning. Also they were unable to enjoy the outdoor games for which mostly they get entertained with the mobile video games and other entertaining apps.

Objective No.2: To study the differences in level of smart phone addiction with respect to gender that is male and female.

H_0 There is no significant differences in level of smart phone addiction with respect to type of institution.

Table No. 2:Mean, Standard Deviation and z-test of smart addiction level among secondary school students with respect to gender that is male and female

Smart Phone Addiction	Gender	Sample	Mean	S.D	z- value	Significance
	Female	44	69.48	12.20	4.56	Significant
	Male	40	79.18	6.72		

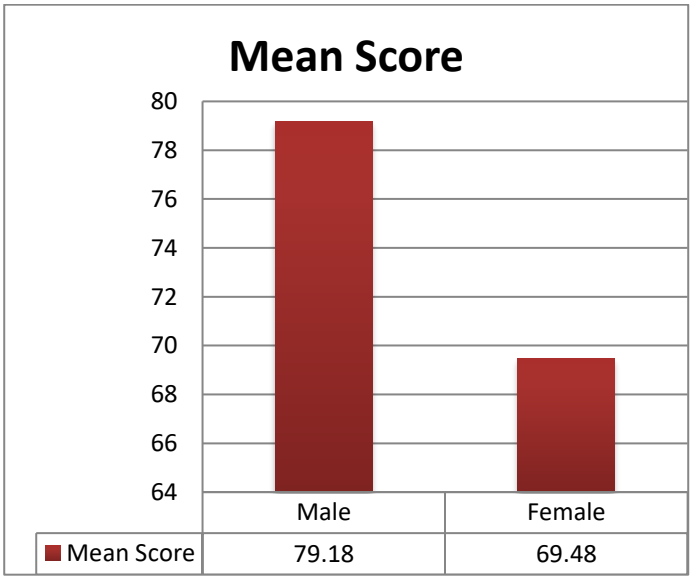

Figure No.2- Graphical representation of the mean score of Male and Female Students

Interpretation: Table no.2and figure no 2shows the result of the differences in level of smart phone addiction with respect to gender, male and female. Here, the obtained z- value was found to be**4.56** that is higher than the critical or tabulated z- value **1.96** at significant level of 0.05. So it can be said that **the Null Hypothesis (Ho) 1 is rejected**. Hence this shows that **there is a significant difference between**the level of smart phone addiction with respect to gender i.e. male and female.And the mean score of the male students i.e. **79.18**is higher than the female students i.e.**69.48**, so it can be said that the male students have higher level of smart phone addiction than that of the female students.

Discussion: In the study the male students are found to have higher level of smart phone addiction than that of the female students. This result of the study is supported by the findings of the study ofLeonard Yik-Chuan Leiet. al(2020) where it was found that male students of medical science were found to have preferably higher level of smart phone addiction than that of the female students. This might be the reason because of their less involvement of physical activities and having access to smart phone more than that of the female students.

Objective 3: To study the differences in level of smart phone addiction with respect to type of locality that is rural and urban.

H_0 There is no significant differences in level of smart phone addiction with respect to type of locality.

Table No. 3: Mean, Standard Deviation and z-test of smart addiction level among secondary school students with respect to locality that is urban and rural

	Type of locality	Sample	Mean	S.D	z- value	Significance
Smart Phone Addiction	Rural	42	70.09	12.79	3.54	Significant
	Urban	42	78.09	7.13		

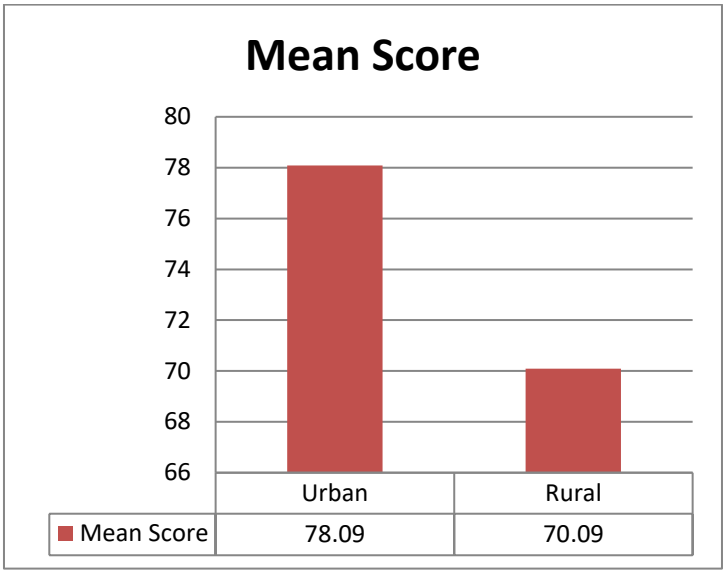

Figure No.3- Graphical representation of the mean score of Urban and Rural area Students

Interpretation: Table no.3and **Figure No.3** shows the result of the differences in level of smart phone addiction with respect to locality that is rural and urban. Here the obtained z-value was found to be **3.54** that is higher than the critical or tabulated z- value **1.96** at significant level of 0.05. So it can be said that **the Null Hypothesis (Ho) 2 is rejected**. Hence this shows that **there is a significant difference between**the level of smart phone addiction with respect to locality i.e. rural and urban.And the mean score of the students of urban area i.e. 78.09 was found to be higher than the students of rural area i.e. 12.79, so it can be said that the students of urban area have higher level of smart phone addiction than that of the students of rural area.

Discussion: The reason for higher level of smart phone addiction in urban area students may be the exposure of the smart phone is more in case of urban students than that of the rural area students, as the socio economic status of the mostly urban area students are higher than that of the rural area students; thereby they are easily enriched with smart phone facilities. Also the rural area students are engaged with most of the physical household activities and the leisure period is lesser than that of the urban area students which also ultimately gives them less time to be engaged with the smart phones.

Findings of the Study

The findings of the study are as follows:

1. In the present study most of the students were found to have high level of smart phone addiction and no students were found to have low level of smart phone addiction.

2. The level of smart phone addiction was found higher in case of male students than the female students.

3. In case of locality students living in the urban area were found to have higher level of smart phone addiction than that of students living in rural area.

Conclusion

Smart phone has become a mini version of all sorts of works and entertainment. Now days everything has become accessible with the help of our smart phones. It has replaced most of the physical activities of day to day life of the people. So now a days people has become lethargic due to lack of physical work which is almost possible in a minute through our smart phones such as from banking to shopping, from online classes to online office works. So it is obvious to be easily addicted by these smart phones at present day scenario. The present study reveals that most of the students in secondary level were highly addicted by smart phones. The reason may be due to the COVID-19 situation when classroom environment have been shifted from offline physical mode to online virtual mode. During this time students were mostly engaged with their smart phones for their classes, assignments, exams, etc. which may increase their smart phone usage hours. Also among the total sample of students boys were found to have higher smart phone addiction than that of the girls, this may be due to their less engagement in other physical activities. In case of locality also the students of urban area are found to be have higher level of addiction than that of the rural area students, this may be due to the lifestyle they deal with. In case of urban area people engage with very less physical activities than that of the rural areas, where works in the paddy field, raring of cattle, handloom activities are mostly done than that of the urban areas. So with the time this addiction should be resolve as in a study of Alhassan, A.A. 2018, it have found that addiction leads to depression and also excessive smartphone use by Indian teens may even damage interpersonal skills of adolescents. Smartphone dependence can cause stress, anxiety, insomnia,delinquency, aggressiveness, etc. (Ira S. Bloomberg, 2012; Davey & Davey, 2014). Therefore the students should be engaged mostly in physical activities in order to detach themselves from frequent use of their smart phones.

References

Alhassan, A.A., Alqadhib, E.M., Taha, N.W., Alahmari, R.A., Salam, M. & Almutairi, A. F. (2018). The relationship between addiction to smartphone usage and depression among adults: a cross sectional study. BMC Psychiatry 18, 148. https://doi.org/10.1186/s12888-018-1745-4.

Cha, S. S., & Seo, B. K. (2018). Smartphone use and smartphone addiction in middle school students in Korea: Prevalence, social networking service, and game use. Health Psychology Open, 5(1). 2055102918755046.

Chambers RA, Taylor J, Potenza MN. (2003) Developmental neurocircuitry of motivation in adolescence: A critical period of addiction vulnerability. American Journal of Psychiatry 160 (6). 1041–1052.

Davey, S. &A, Davey (2014).Assessment of smart phone addiction in Indian adolescents: a mixed method study by systematic-review and meta-analysis approach. International Journal of Preventive Medicine,5 (12),1500–1511. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4336980/

Demirci K, Orhan H, Demirdas A, et al. (2014). Validity and reliability of the Turkish version of the smartphone addiction scale in a younger population. Bulletin of Clinical Psychopharmacology 24(3): 226–234

Divan HA, Khelfets L, Obel C, et al. (2012). Cell phone use and behavioural problems in young children. Journal of Epidemiology & Community Health 66, 524–539. https://doi.org/10.1136/jech.2010.115402

Goldberg I. (1996) Internet addiction: Electronic message posted to research discussion list. Retrieved from http://www.Cmhc.com/mlists/research

Greenfield DN. (1999).Virtual Addiction. Oakland, CA: New Harbinger Publications.

Lei, L. Y. C., Ismail, M. A. A., Mohammad, J. A. M., & Yusoff, M. S. B. (2020). The relationship of smartphone addiction with psychological distress and neuroticism among university medical students. BMC psychology, 8(1), 1-9.

Lin YH, Chang LR, Lee YH, et al. (2014) Development and validation of the smartphone addiction inventory (SPAI). PLoS ONE 9(6). https://doi.org/10.1371/journal.pone.0098312

Nie NH, Erbring L. (2000). Debating the societal effects of the internet: Connecting with the world. Public Perspective 11 42–43. Retrieved from https://icps.gwu.edu/debating-societal-effects-internet-connecting-world

Oulasvirta, A.,Rattenbury, T., Ma, L. & Raita, E. (2012). Habits make smartphone use more pervasive. Personal and Ubiquitous Computing 16(1), 105–114. Retrieved from https://www.academia.edu/7560243/Habits_make_smartphone_use_more_pervasive

Scherer K. (1997) College life online: Healthy and unhealthy internet use. Journal of College Student Development 38, 655–665.

Tapscott D. (2009) Grown up Digital: How the Net Generation is Changing Your World. New York: McGraw-Hill. Retrieved from

http://socium.ge/downloads/komunikaciisteoria/eng/Grown_Up_Digital_-_How_the_Net_Generation_Is_Changing_Your_World_(Don_Tapscott).pdf

Van Deursen AJ, Bolle CL, Hegner SM, et al. (2015) Modelling habitual and addictive smartphone behaviour: The role of smartphone usage types, emotional intelligence, social stress, self-regulation, age, and gender. Computers in Human Behavior 45, 411–420. https://doi.org/10.1016/j.chb.2014.12.039

Wajcman J, Bittman M, Jones P, et al. (2007).The impact of the mobile phone on work/life balance. Research School of Social Sciences, 1-27. Retrieved from https://www.researchgate.net/publication/303168895_The_impact_of_the_mobile_phone_on_worklife_balance

Yoo Y.S, Cho O.H, Cha K.S. (2014) Associations between overuse of the internet and mental health in adolescents. Nursing and Health Sciences 16, 193–200. DOI: 10.1111/nhs.12086

Young, KS. (1999) Internet addiction: symptoms, evaluation, and treatment. In: Vandecreek L, Knapp S, Jackson TL. (eds) Innovations in Clinical Practice: A Sourcebook. Sarasota, FL: Professional Resource Press, 1–13. Retrieved from http://netaddiction.com/articles/symptoms.pdf

Contact Details of Authors:

Puja Mushahari [1] (mail id- pujamushahari24@gmail.com)

Seema Rani Das[2] (mail id seemadas7907@gmail.com)

Debolina Mukherjee[3] (mail id- urmimukherjee92@gmail.com)