

A Study to Assess The Prevalence of Smartphone Addiction and Sleep Quality Among Students at Selected Colleges, Coimbatore

Mrs. S. Helen Elizabeth,¹ Prof. Dr. Lingaraj Chitra² and (Srimathi, Sudharsan, Surendharkumar, Thrisha, Udhaya, Uma Mageswhari, Vaishnavi)³

1. M.Sc. Nursing Assistant Professor, Department of Medical-Surgical Nursing, PPG College of Nursing, Coimbatore. helenpappu90@gmail.com.
2. M.Sc.(N), Ph.D. (N). MHM, Principal, PPG College of Nursing, Coimbatore. lingarajchitra@gmail.com.
3. B.Sc. Nursing Final year students, PPG College of Nursing, Coimbatore.

Abstract:

The incidence of smartphone addiction has escalated in recent years, resulting in a rise in sleep disturbances and a deterioration in sleep quality among individuals. A research study was carried out to assess the degree of smartphone addiction and its effects on the sleep quality of students at various colleges in Coimbatore. A non-experimental research design was implemented among 30 undergraduate students from the ppg college of nursing. Hostel students ii year b.Sc.Nursing 3rd semester. The survey consists of questions about the students' age, gender, education level, and sleep quality, as well as the reasons why they are addicted to their smartphones and how it affects their sleep. The study findings revealed that out of the 30 undergraduate students surveyed, the majority, 15 [50%] were classified as having moderate smartphone addiction, while 13 [43%] were categorized as having mild addiction. Only 2 [7%] were considered to have severe addiction. The majority of the students, around 60%, experienced mild sleep quality issues, while 10% had moderate sleep quality problems. Additionally, 2% had severe sleep quality issues, leading to the conclusion that the hostel students were affected by poor sleep quality due to smartphone addiction.

Keywords:

Smartphone, Sleep Quality, Addiction, Headache, Lifestyle

How to Cite this Article?

Elizabeth SH, Chitra L, Srimathi, Sudharsan, Kumar S, Thrisha, Udhaya, Mageswhari U, Vaishnavi. A study to assess the prevalence of smartphone addiction and sleep quality among students at selected colleges, Coimbatore. Int J Adv Res Med Nurs Health Sci [Internet]. 2025 Jan-Jun [cited 2025 Jun 27];3(3):136-40.

Available from: <http://www.ijarmnhs.in>

Introduction: Currently, sleep issues and low-quality sleep have become prevalent due to smartphone addiction, leading to an unhealthy lifestyle (wang et al., 2019). Over time, technology

has evolved to the point where individuals regard and use smartphones as remarkable devices. There are three distinct traits of smartphone addiction: the necessity for the smartphone to be powered on, dependence on the smartphone despite the availability of a landline, and the experience of financial strain and social conflicts resulting from excessive smartphone use in their daily lives.

Furthermore, earlier research indicates that females exhibit a greater susceptibility to smartphone addiction than their male counterparts, as they generally engage with their smartphones for extended periods. This phenomenon can be attributed to the fact that females are more frequently engaged in smartphone-related activities and demonstrate a higher inclination towards such activities in comparison to males (Ionut et al., 2016).

In end, smartphone dependency had raised worries, mainly in nowadays's virtual generation wherein it's miles essential to give interest toward phone dependency and lift focus so one can make the people to know and apprehend the poor effect and the results of phone dependency by using an put into effect or advocate some techniques so as to reduce or prevent people from getting influenced and addicted in the direction of smartphones which turn out to be a hassle and intricate that influences their life.

Scope of the study

Poor sleep quality may result from the unbalanced sleeping habits of undergraduate students. Nonetheless, they are the group that spends a lot of time on their smartphones for purposes including playing online video games, relaxing, watching movies or dramas, interacting with others, and pursuing educational goals. To find out if there is a connection between smartphone addiction and sleep quality, researchers are now examining the relationship between smartphone dependency and sleep quality among PPG College of Nursing undergraduate students. The purpose of this study is to increase public awareness that students who are more addicted to their smartphones have lower-quality sleep. Furthermore, this study will advance knowledge of the prevalence and consequences of smartphone addiction in college students.

Moreover, applications designed for cellphones improve communication, internet browsing, document management, and organization within society. A smartphone is an electronic device that not only fulfills its core tasks of making calls and sending messages but can also be utilized for browsing, social networking, chatting, and playing audio and video games. The programs built for smartphones appear to work as multitasking aids for students, particularly adolescents. Due to the

fact that the majority of programs developed for mobile devices rely on the internet and provide enticing features, the use of the internet via smartphones has expanded dramatically (Islam et al., 2010).

Moreover, there was a decline in studies with inside the past; this present day examine pursuits to gain teenagers, mainly people who are undergraduate college students in Malaysia. Consequently, it is able to additionally spotlight a vital issue for college kids to rethink their time spent on telephones for numerous purposes. Misuse or immoderate use of telephones may also result in bodily and intellectual fitness issues, that can adversely have an effect on an individual's sleep high-satisfactory and boom tension levels. Historically, it's been counselled that poorer sleep high-satisfactory is much more likely to be related to extreme danger factors, or a better diploma of phone dependancy may be located amongst this group. However, this examine can function a supply of expertise and contextual records for the general public concerning whether or not phone dependancy, stimulated through friends or social circles, contributes to negative sleep high-satisfactory. This may also in the end offer extra powerful and useful recommendation and records in this issue (Yusuf et al., 2018).

Statement of the problem

A study to assess the prevalence of smartphone addiction and sleep quality among students at selected college, coimbatore.

Objectives

1. To assess the smartphone addiction and sleep quality among college students.

Operational Definition

Assess:

The act which is planned by researcher to assess the evaluate the sleep quality in PPG College of Nursing students .

Smartphone:

A smartphone refers to a mobile phone that offers advanced features typically include internet access, touch screens, apps, cameras, GPS and multimedia capabilities.

Addiction:

Addiction refers to a conditions where a person becomes dependent on a substance or activity, often to the point where it negatively impacts their daily life, relationships, and overall well-being.

Sleep quality:

The Sleep Quality Scale, which accommodates 28 items, assesses sleep exceptional throughout six domains: daylight symptoms, recuperation following sleep, demanding situations in starting up and keeping sleep, problems in walking, and general sleep satisfaction. This scale could be applied to assess the exceptional of sleep.

Assumption:

Sleep quality leads to poor status of sleep. Poor quality of sleep influences poor performance.

Conceptual Framework Data collection procedure

Procedure for data collection

After getting permission from the predominant of PPG university of Nursing the records collection become scheduled in the month of July 2024. The take a look at was conducted for a period of one week. The researcher met B.Sc Nursing II 12 months third semester hostel students. The patterns become selected by way of non opportunity sampling approach. The researcher added herself to students of the hostler and explained the motive of the examine. The main examine changed into performed 7 days at PPG university of Nursing hostel, Coimbatore district. The investigator defined about the device to everybody after establishing rapport with them personally. The information had been gathered thru person-to- man or woman method to pick out the smartphone addiction and sleep satisfactory. every sample was given 10 min for answering the device. throughout the conduction of the study there has been no hassle aroused and pattern become cooperative to conduct the examine.

Analysis and interpretation

SIMPLE PERCENTAGE ANALYSIS

Thirty students made up the study sample. Of the thirty students, fifteen (50%) were in the 18-year-old age group, fourteen (46.7%) were in the 19-year-old age group, and one (3.3%) was in the 20-year-old age group. Regarding the sex of the students, the majority were 20 (66.7%) women and 10 (33.3%). Regarding the residential area of the students, the majority 25 (83.3%) were rural, 5 (16.7%) were urban. In relation to the residence of a student, the majority were 27 (90%) hostellers, 3 (10%) of day scholars. There were about 30 (100%) B.Sc nursing about students' course. Regarding the type of family types of students, majority were 22 (73.3%)

atomic families, 7 (23.3%) were joint families and 1 (3.3%) family was expanded.

S. No.	Demographic Variables	Frequency (n)	Percentage (%)
1	Age group of students		
	a. 18 years	14	46.7%
	b. 19 years	15	50%
	c. 20 years	1	3.3%
	d. 21 years	0	0%
2	Gender of students		
	a. Male	10	33.3%
	b. Female	20	66.7%
3	Residential area of students		
	a. Rural	25	83.3%
	b. Urban	5	16.7%
4	Residence of students		
	a. Hosteller	27	90%
	b. Days scholar	3	10%
5	Name of the course		
	a. B.Sc Nursing	30	100%
	b. GNM	0	0%
	c. BPT	0	0%
	d. BOT	0	0%
6	Type of family		
	a. Joint	7	23.3%
	b. Nuclear	22	73.3%
	c. Extended	1	3.3%

Findings related to modified sleep quality scale

The frequency and delivery of the sleeping difficulty of the students, the majority of 20 (66.7%) were rarely, 7 (23.3%) were sometimes, 2 (6.7%) were often there and 1 (3.3%) were almost always.

Once the students woke up in the middle of the night, about going back to sleep, the majority 13 (43.3%) were rarely, 13 (43.3%) were sometimes there, there were often 3 (10%) and 1 (3.3%) were almost always.

In relation to students, the noise was very easily awake due to 13 (43.3%), rarely, 26 (26.7%) were sometimes there, 3 (10%) were often there and 6 (20%) were almost always.

After waking up during sleep, toastudants never returned to sleep, the majority 17 (56.7%) were rarely, 8 (26.7%) were sometimes, there were frequent 4 (13.3%) and 1 (3.3%) were almost always.

Regarding fresh students after sleep, majority 10 (33.3%) were sometimes, 8 (26.7%) were rarely,

4 (13.3%) were often there and 8 (26.7%) were almost always.

To poor's sleep gives a headache for students, majority 9 (30%) were rarely, 12 (40%) were sometimes, there were 3 (10%) often and 6 (20%) were almost always.

Difficulty falling asleep of students

n=30

S.No	Difficulty falling asleep	f	%
1.	Rarely	20	66.7%
2.	Sometimes	7	23.3%
3.	Often	2	6.7%
4.	Almost always	1	3.3%

Difficulty getting back to sleep once students wake up in middle of the night

n=30

S.No	Difficulty getting back to sleep	f	%
1.	Rarely	13	43.3%
2.	Sometimes	13	43.3%
3.	Often	3	10%
4.	Almost always	1	3.3%

Smartphone Addiction And Sleep Quality Scale Interpretation Smartphone Addiction

Smartphone addiction interpretation

n=30

S.No	Level of addiction	f	%
1.	Mild(0-10)	13	43%
2.	Moderate(10-20)	15	50%
3.	Sever(20-30)	2	7%

Sleep quality interpretation

n=30

S.No	Level of sleep quality	f	%
1.	Mild(0-20)	18	60%
2.	Moderate(21-40)	10	33%
3.	Severe(41-60)	2	7%

Conclusion

In conclusion, earlier research has provided evidence supporting the relationship between smartphone addiction and sleep quality. The present study has successfully met its goal of investigating smartphone addiction and sleep quality among second-year B.Sc Nursing students in their third semester. The primary aim of this research was to explore the correlation between smartphone addiction and sleep quality, as well as to examine any gender differences in these areas. Furthermore, the results indicated that smartphone addiction is a significant predictor of sleep quality. Additionally, this study has determined that there are no notable gender differences in smartphone addiction and sleep quality among second-year B.Sc Nursing students in their third semester. Researchers are encouraged to further investigate this topic to gain deeper insights.

Throughout this study, the findings have shed light on the extent of poor sleep quality resulting from smartphone addiction. Therefore, this research may serve as a reference for future scholars to delve deeper into this issue. We also believe and hope that this research will raise awareness and provide valuable information regarding smartphone addiction and its associated sleep quality problems, which contribute to various global issues.

Reference

1. 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(1).<https://doi:10.1186/s12888-018-1745-4>.
2. Angelone, A. M., Mattei, A., Sbarbati, M., & Di Orio, F. (2011). Prevalence and correlates for self-reported sleep problems among nursing students. Journal Prev MedHyg, 52(4), 201-208. [https:// doi:10.15167/2421-4248/jpmh2011.52.4.293](https://doi:10.15167/2421-4248/jpmh2011.52.4.293).
3. Arber, S., Bote, M., & Meadows, R. (2009). Gender and socio-economic patterning of selfreported sleep problems in Britain. Social science & medicine, 68(2), 281-289. <https://doi:10.1016/j.socscimed.2008.10.016>.

4. Bruck, D., & Astbury, J. (2012). Population study on the predictors of sleeping difficulties in young Australian women. *Behavioral sleep medicine*, 10(2), 84-95. <https://doi.org/10.1080/15402002.2011.592888>.
5. Chen, B., Liu, F., Ding, S., Ying, X., Wang, L., & Wen, Y. (2017). Gender differences in factors associated with smartphone addiction: a cross-sectional study among medical college. *BMC Psychiatry*, 17(1), 341. <https://doi.org/10.1186/s12888-017-1503-z>.
6. Chen, C., Zhang, K. Z., Gong, X., Zhao, S. J., Lee, M. K., & Liang, L. (2017). Examining the effects of motives and gender differences on smartphone addiction. *Computers in Human Behavior*, 75, 891-902. <https://doi.org/10.1016/j.chb.2017.07.002>.
7. Chen, G. M. (2011). Tweet this: A uses and gratifications perspective on how active Twitter use gratifies a need to connect with others. *Computers in Human Behavior*, 27(2), 755–762. <https://doi.org/10.1016/j.chb.2010.10.023>.
8. Chiu, S.I., Hong, F.Y., & Chiu, S.L. (2013). An Analysis on the Correlation and Gender Difference between College Students' Internet Addiction as well as Mobile Phone Addiction in Taiwan. *Internet addiction and mobile phone addiction*. <https://doi.org/10.1155/2013/360607>.
10. Chung Clarissa. (2019, August 25). Obesity and gadgets keeping many of us awake at night. *The Star Online*: <https://www.thestar.com.my/news/nation/2019/08/25/obesity-andgadgets-keeping-many-of-us-awake-at-night>.
11. Islam, R., Islam, R., & Mazumder, T. (2010). Mobile application and its global impact. *International Journal of Engineering & Technology (IJEST)*, 10(6), 72-78. https://www.researchgate.net/profile/Dr_Md_Rashedul_Islam/publication/308022297_Mobile_application_and_its_global_impact/links/5991fbafa6fdcc53b79b606d/Mobile-application-and-its-global-impact.pdf.
12. application_and_its_global_impact/links/5991fbafa6fdcc53b79b606d/Mobile-application-and-its-global-impact.pdf.
13. Joo, J., & Sang, Y. (2013). Exploring Koreans' smartphone usage: An integrated model of the technology acceptance model and uses and gratifications theory. *Computers in Human Behavior*, 29(6), 2512–2518. <https://doi.org/10.1016/j.chb.2013.06.002>.
14. Human Behavior, 29(6), 2512–2518. <https://doi.org/10.1016/j.chb.2013.06.002>.
15. Jupp, V. (2011). Non-Probability (Non-Random) Sampling. *The SAGE dictionary of social research methods*: <https://methods.sagepub.com/reference/the-sage-dictionary-of-social-research-methods/n130.xml>.

16. KadirDemirci, Mehmet Akgönül& Abdullah Akpınar .(2015). Relationship of smartphone use severity with sleep quality, depression, and anxiety in university students. Journal of Behavioral Addictions, 4(2), 1-6. [https://doi: 10.1556/2006.4.2015.010](https://doi.org/10.1556/2006.4.2015.010).
17. Katz, E., Haas, H., &Gurevitch, M. (1973). On the Use of the Mass Media for Important
18. Things.American Sociological Review, 38(2), 164.[https://doi:10.2307/2094393](https://doi.org/10.2307/2094393).
19. Kline, C. (2013). Sleep Quality. Encyclopedia of Behavioral Medicine, pp.115.https://doi.org/10.1007/978-1-4419-1005-9_849.
20. Wang P-Y, Chen K-L, Yang S-Y, Lin P-H (2019) Relationship of sleep quality, smartphone dependence, and health-related behaviors in female junior college students. PLoS ONE14(4), 1
21. Wilk, M. B., &Gnanadesikan, R. (1968). Probability Plotting Methods for the Analysis of
22. Data.Biometrika, 55(1),1.[https://doi:10.2307/2334448](https://doi.org/10.2307/2334448).

