

Association of Smartphone Usage with Academic Stress and Life Style among Young Adults: A Cross Sectional Study

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Abstract:

This research examines the link between smartphone usage, academic stress, and lifestyle in young adults. The data was gathered from surveys given to youngsters to assess their smartphone habits, academic stress levels, and lifestyle. The findings show significant connections between smartphone usages, academic stress, and lifestyle emphasizing the importance of implementing strategies to encourage healthier technology practices and enhances sleep quality among youngsters.

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Introduction

Mobile phones have become an indispensable part of our daily routines. Initially designed solely for communication purposes, they have transformed into "smartphones" - versatile gadgets equipped with various applications. These apps encompass calculators, cameras, alarm clocks, games, internet access, social media platforms (such as Facebook, WhatsApp, Twitter, Instagram, Skype, etc.), email functionality, and numerous other features. These advancements provide benefits like enhanced social connectivity and emergency security [1].

Due to the numerous benefits they offer, smartphones are gaining immense popularity among young adults, particularly college and university students. These devices provide them with the convenience of swiftly accessing a wide range of online journals and articles whenever they encounter uncertainty. Additionally, smartphones facilitate constant communication with their peers, allowing them to seek assistance for daily tasks such as homework [2].

Numerous studies indicate that a majority of individuals who use mobile devices often face increased stress levels and lack of sleep, leading to a decline in cognitive function and learning abilities. Limited research has been conducted thus far regarding the impact of medical students using cell phones before bedtime on their academic achievements and sleep pattern [3].

Furthermore, recent studies suggest that certain educators are receptive to incorporating contemporary approaches, like incorporating smartphones in the educational setting. However, despite the numerous advantages they offer, excessive usage of smartphones can result in addiction and dependency [4].

Therefore, the purpose of the current study was to evaluate how smartphone related behaviour affects the educational activities and the life style of undergraduate medical/paramedical students.

Aim & Objectives

Aim: To find out the association of smartphone usage with academic stress and life style among young adults

Objectives:

- To determine the association between smartphone usage and academic performance of the participants.
- To determine the usage of smartphone and its effects on life style and behaviour of young adults.

Material and Methods

Study design: Cross-sectional study.

Type of study: Observational, Questionnaire-based study which will be self-administered.

Sample size: The sample size should be chosen with help of convenient sampling methods. Total 267 students were enrolled in this study.

Selection Criteria: youngsters of the age group of 17-25 years.

Inclusion criteria:

1. Those, who will give written consent after understanding the objectives of the study by signing the Informed Consent Form (ICF).
2. Youngsters of age group from 17 - 25 years.

Exclusion criteria:

1. Those who won't give consent by signing the ICF.
2. Elderly people and younger than 17 years of age.

Data Collection - Method of Screening

After taking consent, all the participants were given with the questionnaire which contains various aspects like how long they are using smart phones, duration of smart mobile phone usage in day time and night, lifestyle including behaviour pattern like mid night checking, using during class hours and academic performance.

Result

The below bar diagram is showing major time consumption using smartphone. It includes mainly Calling, Messaging, Academic activities, other Utility apps and major time consumption by Social networking Sites (SNS). Out of 250 students, 52.3% students spent major time on SNS, 23.3% students devoted time in academic activities, 14.7% of them performed functions using utility apps, 4.5% and 5.3% spent time on calls and messages respectively.

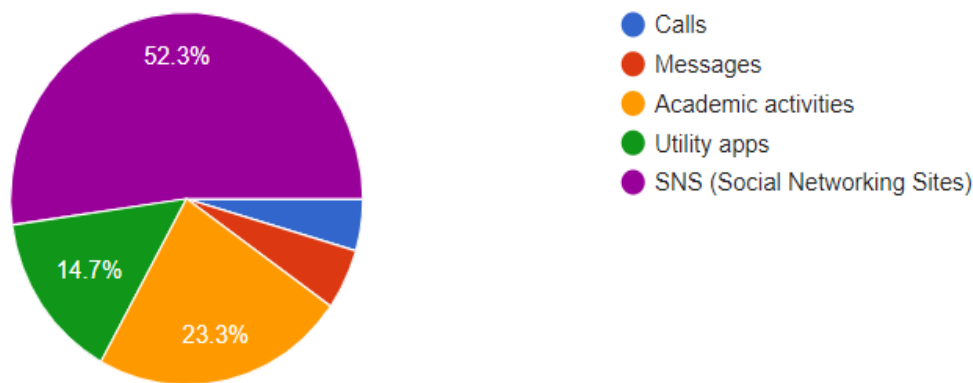


Figure 1: Major time consumption on smart phone

This pie chart is showing the side effects of excessive smartphone usage among college students.

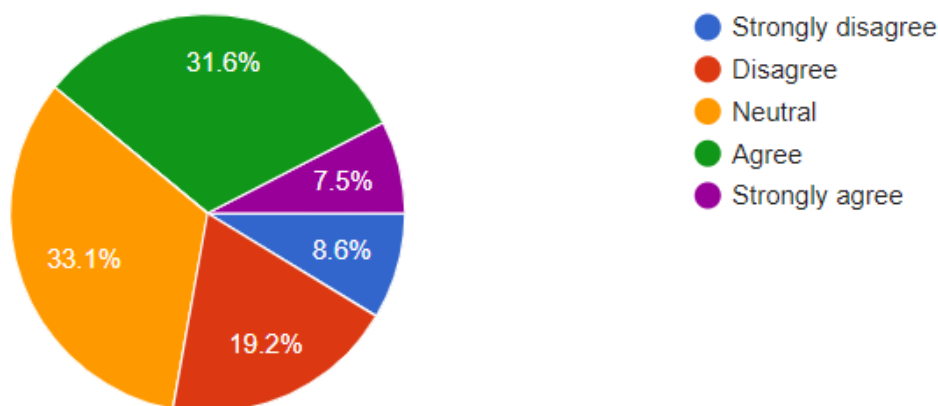


Figure 2: Experiencing light heartedness or blurred vision due to excessive smart phone use

The pie chart below is showing the distribution of the students having difficulty in academics due to smart phone usage. Out of 250 youngsters, 31.7% agreed on the fact that they were finding difficulty in concentrating or focusing on academic activities like doing assignment and other academic work. 6.4% were strongly agree regarding difficulty in different academic activities.

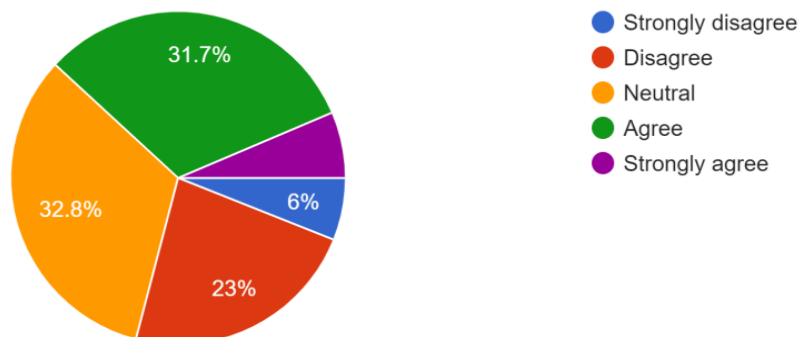


Figure 2: Experiencing light heartedness or blurred vision due to excessive smart phone use Having a hard time concentrating in class, while doing assignments, or while working due to smart phone use

Discussion

With the aid of smartphones, most of our labor has been replaced, making life easier overall. Using an internet-enabled mobile phone is a 21st-century experience that involves multiple functions. This study looked at phone use and found that students' academic performance is affected by internet-enabled mobile phones.

In a study in Charles Sturt University by Uys P et al [5], it was reported that 55% of respondents used phones for texting and 30% for talking with friends and families and 65% of students think that usage of smart phones has affected their academic performance.

Balaji Arumugam et al [6] reported similar findings in his research study. It was discovered that excessive use of smart phones, neglecting their academic activities results in poor academic performance among students in a study done by Soyemi Jumoke et al [7] in tertiary institutions which were similar to the findings as reported in our study.

Szykowska et al. [8] in Poland reported headache problems in 70% of the students and when questioned about life without mobile phones, 82% of participants replied that they feel uncomfortable without mobile phones.

Of the participants, 51.9% university students in Delhi NCR region, spend more than 3 hours using their phone daily in a study conducted by Bandana et al [9]. The study revealed a positive correlation between stress and using a phone for more than 180 minutes in a day. A study by Jilisha G. et al [10] provided evidence that a lot of youngsters use their smartphones for education purposes which supports our research. Maya Sahu et al [11] reported that

22.5% nursing students were under low stress, 67.7% under moderate stress and 9.8% under high stress due to mobile phone usage.

P. Stalin et al [12] in a study found that excessive mobile phone usage has ill effects on health. According to a study by Sharma N. et al. [13], 61% of students suffer from headaches and 73% of students feel irritated when they don't have their phones.

Thus, in our present study, we enrolled 267 college-going students. They were assessed with the help of a questionnaire. Now days, smartphone and its use have increased substantially, for calling, messaging, browsing, learning and for entertainment too. But, this excessive use of phones comes with a lot of cons that affect your lifestyle, sleeping habits, focus, academic performance, etc, and this has been verified by the findings of our present study.

Hence, students are recommended to take this responsibility that they will minimize the use of phone in their daily lives, which may lead to many health benefits.

Conclusion

Based on the study's findings, it's evident that smart phone usage among young adults is significantly associated with increased academic stress and alterations in lifestyle. This suggests a need for proactive measures to mitigate the negative impacts of excessive smart phone usage, such as implementing digital wellness programs and promoting healthier lifestyle choices.

Additionally, interventions aimed at fostering a balanced approach to technology use and promoting effective time management skills could

help alleviate academic stress and improve overall well-being among young adults.

Further research into the long-term effects of smartphone usage on academic performance and lifestyle outcomes would be valuable in informing targeted interventions and policies aimed at promoting healthy technology habits among young adults

Limitation

1. This was a single centred cross-sectional study with modest sample size (n= 250). As a result, drawing any definitive conclusions from this study is difficult.
2. This study is highly subjective (based on students' self-report).

References

1. Gupta N, Gang S, Arora K. Pattern of mobile phone usage and its effects on psychological health, sleep and academic performance in students of a medical university. *Natl J of Physiol Pharm Pharmacol* 2016;6(2):132-9.
2. Haque ATME. Usage of mobile applications at night and its association with sleep pattern and academic performance of the medical students of Uni KL -RCMP, Ipoh, Malaysia. *Journal of Global Pharma Technology* 2017;9(9):15-24
3. Abhishek MG, Sudha PS, Amrutha GN. A cross-sectional study to determine the effect of smartphone usage on the academics, health and sleep patterns, of undergraduate medical students. *J Evid Based Med Healthc* 2020; 7(40), 2286- 2289. DOI: 10.18410/jebmh/2020/474
4. Akçay D, Akçay BD. The effect of mobile phone usage on sleep quality in adolescents. *The Journal of Neurobehavioral Sciences* 2018;5(1):13-7. DOI: 10.5455/JNBS.1519129764
5. Uys P, & Klapdor T. Mobile Learning at Charles Sturt University: Lessons learned from university-wide iPad trials in 2012. Conference: Ascilite Sydney 2013
6. Arumugam B, Sachi S, Nagalingam S. A descriptive study on behavior associated with mobile phone usage and its effect on health among medical students in Chennai. *Journal of Evolution and Dental Sciences* 2014;3(7):1590-5.
7. Soyemi J, Oloruntoba AS, Okafor B. Analysis of Mobile Phone Impact on Student Academic Performance in Tertiary Institution. *Int J Em Tech Adv Eng*.2015:361-7.
8. Szyjkowska A, Bortkiewicz A, Szymczak W et al. Subjective symptoms related to mobile phone use – a pilot study. *Pol Merkur Lekarski* 2005;19(112):529-32
9. Dobhai B, Badola M, Dikshit A, Awasthi A A, Taneja N, Janardhanan R. Pattern of Mobile Phone usage and its Association with Stress among University Students in Delhi NCR. *Ind J Pub Heal Res Dev* 2021;12(3):16-25
10. Jilisha G, Venkatachalam J, Menon V, Olickal JJ. A Mixed-Methods Study on Prevalence, Associated Factors, and Perception among College Students in Puducherry, India. *Indian J PsycholMed. Nomophobia* 2019;41(6):541–548 PMID: PMC6875835 PMID: 31772441doi: 10.4103/IJPSYM.IJPSY M_130_19
11. Sahu M, Gandhi S, Sharma M, Palaniappan M. Perceived stress and resilience and their relationship with the use of mobile phone among nursing students. *Investigation y educacion en enfermeria*.2019;37(3);1-9
12. Stalin P, Abraham SB, Kanimozhy K, Prasad RV, Singh Z, and Purty AJ, Mobile phone usage and its health effects among adults in semi urban area of southern India *journal of Clinical and Diagnostic Research*. 2016, Vol.10 (1), doi: 10.7860/JCDR/2016/16576.7074
13. Sharma N, Pooja, Neha and R.Wavare, Rising concern of nomophobia amongst Indian medical students, *International Journal of Research in Medical Sciences*, 2015, vol-3(3), doi: 10.5455/2320-6012.ijrms20150333.