Impact of smartphone addiction on perceived stress among post graduate students in Pune

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ABSTRACT

With the use of smartphones, people may now stay connected on a new level that is always available to them and places, regardless of location or time. Social networks and relationships have been able to grow stronger as well as new ones thanks to never being disconnected. The sense of place and time has changed, which has led to new opportunities for social networking and interactions, but it has also had unfavourable effects. It's possible that many of us have seen situations where we have witnessed a smartphone user acting rudely or disrespectfully toward those around them. Social interaction has changed because of smartphones. Our social environment is changing because of people communicating more through text messages and cell phones than they do in person. People are losing out on potential new social connections because they are engrossed in their cell phones and are less conscious of their social surroundings. There's a risk since a lot of individuals don't know when to put their phones away. The ability to listen well and establish personal contact must diminish relative to availability. Our lives have been impacted by smartphones in every way. A sample of 150 PG students from Pune's Management Colleges participated in the survey. A meticulous schedule was created based on the goal. The respondents' demographic characteristics were determined, and the impact of smartphone addiction on stress was computed. Because the schedule's elements were prepared in this fashion, a high score denoted minimal impact or utilization. According to the current study's findings, a sizable portion of students use their smartphones for more than four hours every day, making and receiving an average of eight calls and eight receives each day. Games and music apps are the most often used ones. They believed that most people were dependent on their smartphones and that they were status symbols. Approximately 40% of kids acknowledge that while they are at home, they would rather converse on their phones with friends than with their parents. When they are depressed, though, they would rather not talk on their phones.

KEYWORDS: Smart Phone, Addiction, Stress, Social Environment, Psychology, Mental Wellbeing.

1. INTRODUCTION

Concern over how smartphone addiction affects postgraduate students' perceptions of stress in Pune is developing in the current digital era. Students are among the many people who are growing more reliant on smartphones due to their growing accessibility and popularity for a variety of uses. But using smartphones excessively can have negative consequences on mental health, especially when it comes to how stressed-out people feel. Perceived stress refers to an individual's subjective evaluation of the amount of stress they experience in their daily lives. It is influenced by various factors, including academic pressure, social expectations, and personal circumstances. On the other side, excessive and compulsive smartphone use that has a detrimental impact on one's wellbeing is referred to as smartphone addiction.

In the context of postgraduate students in Pune, smartphone addiction can significantly contribute to increased levels of perceived stress. Students often rely on smartphones for academic purposes, such as researching, studying, and accessing educational resources. However, the constant exposure to notifications, social media platforms, and online distractions can lead to a loss of focus and productivity, ultimately causing stress and anxiety.

Moreover, the addictive nature of smartphones can also disrupt students' sleep patterns, as they may engage in late-night browsing or social media scrolling. This lack of quality sleep further exacerbates stress levels and hampers academic performance. Additionally, the excessive use of smartphones can negatively impact students' social interactions and relationships. Overuse of cell phones can cause emotions of alienation and disengagement from reality, which can heighten tension and anxiety levels. It is essential to comprehend how smartphone addiction affects postgraduate students' perceptions of stress in Pune in order to create measures that effectively address this problem. Policies and educational institutions can support students in managing their stress levels and leading balanced lives by fostering healthy digital habits and increasing knowledge of the possible negative effects of excessive smartphone use.

In conclusion, the impact of smartphone addiction on perceived stress among postgraduate students in Pune is a significant concern that needs to be addressed. By recognizing the negative effects of excessive smartphone use and implementing measures to promote healthy digital habits, we can support students in managing their stress levels and fostering overall well-being.

2. REVIEW OF LITERATURE

Bisen and Deshpande in 2016 explored the dependency of engineering student on a smartphone in their study entitled as "an analytical study of smartphone addiction among engineering students: gender differences Researchers employed purposive and random sampling to include students between the ages of 18 and 22, and they utilized the t-test to analyze the information gathered from the questionnaire The study's findings demonstrated that men are more reliant on smartphones than women in using mobile for health, communication, and shopping applications, whereas females' students are more dependent in terms of entertainment and educational application is given in smartphones and discussing the proneness and risk of addiction among students.

Deshpande (2015) reviewed the empirical research available on the impact of mobile phone addiction on physical and mental health among youth. The researcher presented the results of studies outlining the challenges brought on by mobile addiction, including financial difficulties, poor social skills, relationship problems, auto accidents, job loss, academic challenges, low self-esteem, physical health problems like nervous system disorders and negative side effects, and mental health problems like depression, restlessness, insomnia, and anxiety. Thus, highlighting the ill effects of smartphone addiction among youth (Lavanya and Rajandran, 2017).

Research has identified specific factors within smartphone usage that correlate with perceived stress levels. Compulsive checking and use, driven by the need for instant gratification and fear of missing out (FoMO), have been linked to higher stress levels. The prevalence of forgetfulness due to smartphone distractions and a lack of attention to tasks has also been associated with heightened perceived stress. Moreover, the relationship between smartphone uses and mental health challenges such as depression, anxiety, and social withdrawal underscores the multifaceted nature of this connection.

In their 2012 study, Shambare, Rugimbana, and Zhowa set out to answer the following main research question: What kinds of behaviours are connected to cell phone use? In order to test the addictive and habitual behaviour, a 33-item questionnaire was created and given to the individuals. The researchers discovered that using a mobile phone does not lead to addiction or habit formation. The outcome also raises the possibility that the largest non-drug addiction of the twenty-first century is a cell phone addiction.

Cell phone usage's consequences on health were examined by Acharya, Acharya, and Waghrey (2013). It was carried out with the admitted students who were enrolled in professional programs at urban institutions. The survey included students between the ages of 17 and 23 who belonged to both genders. The individuals completed a self-administered, pre-tested questionnaire that includes a few prevalent negative mental and physical health symptoms linked to cell phone use. The result showed that 96.1% of the subjects possessed cell phones and they use cell phone a maximum time of the day. 51.47% subjects had headache, while 50.79% had 49 irritability/anger followed by 32.19% had body aches, 36.51% had eye strain and 13.8% had digital thumb. Other mental health problems that the subjects mentioned were anxiety, insomnia, difficulty concentrating, subpar academic performance, etc. Also, cell phone usage while driving has been linked to accidents.

3. METHODOLOGY

The study employed two sampling techniques, namely Purposive Sampling and Simple Random Sampling. At first, a list in accordance with the "criteria for selection of subjects" was prepared. Then, the researcher short listed a few educational institutions out of these with the help of Purposive Sampling technique. Subsequently, Simple Random Sampling was used to ensure the equal chances of the subjects of the selected colleges to be recruited. Finally, the sampling units, that were individual young adults, were drawn by using Simple Random Sampling from those educational institutions which had short listed. 150 samples of young adults were selected from different B Schools of Pune city.

The test selected were administered on all the individuals via google forms to measure their addiction to smart phones and stress involved through it.

The two tests were Likert Scale questionnaire in which the individuals were asked to evaluate according to the items. The Scoring was done according to the instructions given in the manuals of the tests.

4. DATA ANALYSIS & FINDINGS

Objective 1: To explore the association between smartphone addiction and perceived stress levels among students.

- **H_{o1}:** Students' perceived levels of stress are positively and significantly correlated with smartphone addiction.
- **H_{a1}:** Students' reported levels of stress are not positively and significantly correlated with smartphone addiction.

According to level of Stress among PG students with level of Smart phone Addiction.

Maximum 30 (3.0 %) of Students with mild smartphone addiction reported severe stress, followed by 13 (1.3 %) with extremely severe stress, 7 (0.7 %) with moderate stress, 3 (0.3%) with normal stress, and minimum 2 (0.2 %) with mild stress. It was determined that a maximum of 42 (4.2 %) adolescents with moderate levels of smart phone addiction experienced

severe stress and a minimum of 7 (0.7%) had mild stress with mild levels of smart phone addiction. It was inferred that the degree of stress grows as the amount of smartphone addiction rises. It was revealed that a maximum of 42 (4.2 %) students with moderate smartphone addiction had severe stress and a minimum of 2 (0.2 %) students with mild smartphone addiction had mild stress. It was deduced that as the degree of smartphone addiction grows, so does the intensity of stress. At the P < 0.05 level of significance, the findings indicated a significant connection between the degree of smartphone addiction among PG students and the level of stress ($\chi 2$ =258.4). It implies that smart phone addiction has an effect on the stress levels of PG students.

Table 2: Frequency and percentage of Perceived stress among PG Students N = 150

Chi Square Test		Smartphone Addiction						Association with smartphone Addiction			
		Mild smartphone Addiction		Moderate smartphone Addiction		Severe smartphone Addiction					
Variables	Options	f	%	f	%	f	%	$\chi 2$	P Value	df	Table Value
Stress Level	Normal	3	0.3	9	0.9	0	0	258.41*	0.000	8	15.507
	Mild	2	0.2	7	0.7	0	0				
	Moderate	7	0.7	11	1.1	0	0				
	Severe	30	3.0	42	4.2	0	0				
	Extremely	13	1.3	14	1.4	12	1.2				

- **H$_{o2}$:** There exists a favourable correlation between some parameters related to smartphone usage and elevated levels of perceived stress among students.
- **H$_{a2}$:** There is no positive correlation between higher reported stress levels among students and the specific components associated with smartphone usage.

Perceived Stress is another dependent variable of the study. Using the scale manual as a guide, the student sample was split into two groups: high and low smartphone addiction based on consumption. The means, SDs and t-values of perceived stress factors are presented in the tables to follow.

Table:3: Mean, SD and t-values of Stress in two categories of Smart Phone Addiction N (150)

Smart Phone Addiction		Normal	Mild	Moderate	Severe	Extremely
High	M	24.76	28.74	27.49	28.41	30.67
	SD	3.58	4.51	3.14	3.89	5.31
Low	M	20.17	24.58	25.41	27.38	29.96
	SD	4.28	4.285	3.69	4.01	4.92
t- values		15.66**	10.37**	6.64**	2.86**	0.45

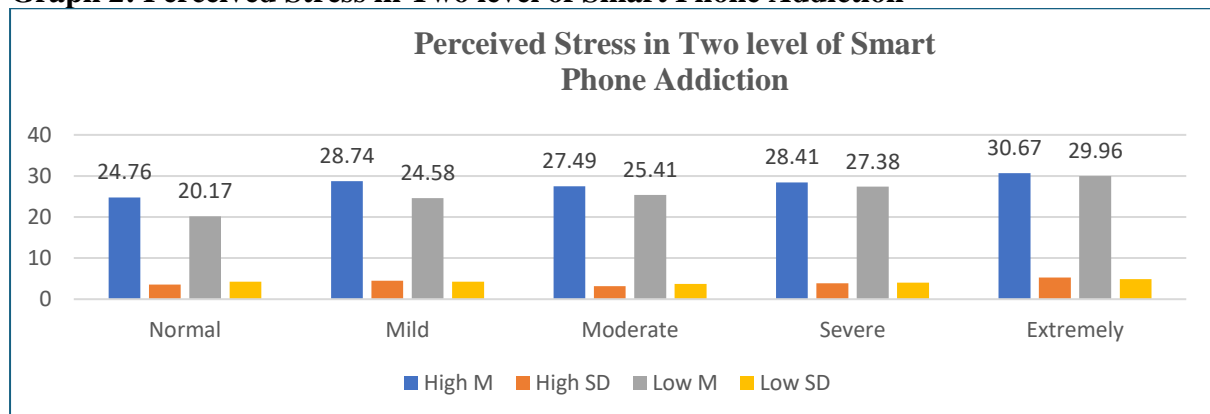**Graph 2: Perceived Stress in Two level of Smart Phone Addiction**

Table 2 presents means, SDs and t-values of Perceived Stress in two groups of mobile phone addiction. It is noticed that students of high mobile usage have significantly higher mean scores (24.76) than the low users (20.17) in Perceived Stress. There may be a substantial difference in stress levels between the two groups of students with mobile phone addiction, as indicated by the t-value of 15.66, which is significant at the 0.05 level. It is evident that high mobile users (addicted) develop certain disturbances, unrest, and mental imbalance because of their high concentration of mobiles. They are found to be disoriented from their surroundings. They are more confused, anxious and are not able to decide on their actions. This suggests that compared to low addicted people, high addicted people are comparatively more insecure and have an emotional instability, fear of missing out (FoMO), sleep difficulties, and fewer in-person social connections. Evidently it does reveal the fact that they are most likely to have a lower level of Addiction to seek novel experiences. Normally they are open to new and diverse experiences. They are open minded and creative and welcome novel ideas. They tend to be inquisitive, imaginative, innovative, and creative. Further they are found to have more consideration, cooperation, kindness or selfishness, empathetic attitude, trust, goal achieving, etc. On the other hand, the highly addicted have such qualities in them but relatively in lower degree compared to their counterparts.

5. CONCLUSION

It was inferred that the degree of stress grows as the amount of smartphone addiction rise.

- It is evident that high mobile users (addicted) develop certain disturbances, unrest, and mental imbalance because of their high concentration of mobiles. They are found to be disoriented from their surroundings. They are more confused, anxious and are not able to decide on their actions.
- High mobile phone addicted are relatively more insecure and tend to be emotionally unstable, fear of missing out (FoMO), sleep disturbances, and reduced face-to-face social interactions. than low addicted.
- There are significant differences in the Stress level between high and low/no smartphone phone addicted students: The students with low or no addiction are found to have lower scores on all the dimensions of stress.
- There are significant gender differences: Males are more mentally healthy than the females.
- There is a significant influence of smart phone addiction, age, background of study and gender on autonomy dimension.

Smart-phone addiction is a behavioural addiction that hampers individual's cognitive ability, affect their physical and psychological health. Smart phone is a handy device that is user-friendly and offers various attractive application and platforms to get socialise and be available all the time. An over-view of the investigation showed high addiction leads to high stress level among both smart-phone addicts and non addicts.

6. BIBLIOGRAPHY

Acharya, J., Acharya, I., & Waghrey, D. (2013). A study on some of the common health effects of cellphones amongst college students. *Journal of Community Medicine & Health Education*, 3(4), 1-4.

Baek, S. S., & Cho, J. Y. (2017). The Influence of life stress, depression, smart-phone addiction on quality of life among college students. *Journal of the Korea Academia-Industrial cooperation Society*, 18(8), 248-256.

Busari, A. O. (2000). Stress inoculation training and self-statements monitoring techniques in the reduction of test anxiety among adolescent underachievers in Ibadan metropolis, Nigeria. Unpublished Ph. D. thesis, university of Ibadan.

Campbell, M. (2005, October 28). The impact of the mobile phone on young people's social life. (Paper presented to the Social Change in the 21st Century Conference Centre for Social Change Research) Queensland University of Technology.

Dadas, A. B., & Kumar, A. (2017). Smartphones - Curse or boon for productivity at work place. *MERC Global's International Journal of Social Science & Management*, 4(4), 113-115. DOI: https://doi.org/10.5281/zenodo.6685838

Dos, B. (2014). The relationship between mobile phone use, meta cognitive awareness, and academic achievement. European Journal of Educational Research, 3(4), 192-200. doi: 10.12973/eu-jer.3.4.192.

Gawande, A., Kumar, A., Pokharel, P. R., Adhikari, P. R., Singh, K., & Bagul, S. (2023). *Challenges, opportunities, and best practices for an alumni association*. March, pp. 01-205. J. Scientific Research Private Limited, Pune, India. DOI: https://doi.org/10.5281/zenodo.8043214

Ithnain, N., Ghazali, S. E., & Jaafar, N. (2018). Relationship between smartphone addiction with anxiety and depression among undergraduate students in Malaysia. *International Journal of Health Sciences and Research*, 8(1), 163- 171.

Javid, M., Malik, M. A., &Gujjar, A. A. (2011, February). Mobile phone culture and its psychological impacts on students' learning at the university level. Language in India: Strength for Today and Bright Hope for Tomorrow, 11(2), 415-422.

Jeong, B., & Baek, S. (2015). Effects of smartphone addiction on adjustment to college life- Moderating effect of impulsivity. *Journal of the Korea Society of Computer and Information*, 20(12), 129-136.

Kumar, A., & Brar, V. (2011). The sales promotion: A study of its influences on customer purchase intention with regards to organized retail services. *Pillai's Journal of Management & Research*, 2(October), 2-13. DOI: https://doi.org/10.5281/zenodo.6705998

Kumar, A., Gawande, A., & Raibagkar, S. (2022). Quality complacency in Indian higher education institutions between the second and third cycles of accreditation. *Quality Assurance in Education*, 30(4), 431-445. DOI: https://doi.org/10.1108/QAE-01-2022-0019

Lee, J., & Cho, B. (2015). Effects of self-control and school adjustment on smartphone addiction among elementary school students. *International Journal of Contents*, 11(3), 1-6.

Madrid, A. (2003): Mobile phones becoming a major addiction [Online]. Retrieved from: http://www.smh.com.au/articles/2003/12/10/1070732250532.html.

Park, C. J., Hyun, J. S., Kim, J. Y., & Lee, K. E. (2014). Impact of personal timerelated factors on smart phone addiction of female high school students. In Proceedings of the world congress on engineering and computer science (Vol. 1, pp. 1-5).

Ramgade, A., & Kumar, A. (2021). To study the impact of reputation management in protecting and strengthening the brand value of the hotel. *Vidyabharati International Interdisciplinary Research Journal*, 12(2), 403-408. DOI: https://doi.org/10.5281/zenodo.6666568

Venkataraghavan, M. (2015). A study on the usage of mobile phones for cyber bullying among tweens & teens of Chennai, India. Online Journal of Communication and Media Technologies, 19-30.

Young, K. S. (1996). Caught in the Net: How to Recognize the Signs of Internet Addiction— and a Winning Strategy for Recovery. New York: John Wiley & Sons.