



PREVALENCE OF SMARTPHONE ADDICTION AND NOMOPHOBIC BEHAVIOUR: EXPLORING THEIR CORRELATION

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Abstract

Objective: This study aims to assess the prevalence of smartphone addiction and nomophobia (fear of being without a mobile phone) and the relationship between these two phenomena. The sampling method was multistage random sampling and 400 people participated in the study. The distribution and the correlation between smartphone addiction level and nomophobia level was analyzed. Findings showed a significant positive correlation ($\rho = 0.721$, $p < .001$) on the correlation between smartphone addiction and nomophobia, highlighting the link between smartphone addiction and nomophobia (the fear of being disconnected), which has become integral to monitoring in the digital age.

Keywords: correlation, fear of being without a mobile phone, Nomophobia, Smartphone Addiction.

Introduction

In today's world, technology has seamlessly integrated into daily life, becoming an essential aspect of modern existence. Among the numerous technological advancements, mobile technologies, particularly smartphones have witnessed rapid growth in popularity. Once considered luxury items, smartphones have now become indispensable tools for people worldwide. According to Cisco's 13th annual Visual Networking Index (VNI), it was projected that 829 million individuals in India would be using smartphones by 2022. Similarly, Statista (2023) estimated that smartphone users in India surpassed 748 million in 2020, with a global forecast predicting over 1.5 billion users by 2040. This widespread dependence on smartphones is reflected in daily behaviors, as Ali (2020) reported that 88% of individuals checked their

phones within 15 minutes of waking up, and 73% felt a sense of isolation when separated from their devices. King et al. (2014) further highlighted that individuals with emotional imbalances experienced panic attacks associated with mobile phone use, demonstrating the psychological toll of this reliance.

The COVID-19 lockdown exacerbated these issues, leading to a sharp increase in screen time among adolescents and adults, particularly on OTT platforms, social media, gaming, and other digital activities. Bartwal et al. (2019) identified nomophobia, defined as the fear of being without a mobile phone, as a growing behavioral issue resulting from over-dependence on smartphones, emphasizing the urgent need for attention. In this digital age, smartphone addiction and nomophobia have emerged as new obsessions. Smartphone addiction refers to the excessive and compulsive use of smartphones, which disrupts daily functioning, while nomophobia describes the anxiety and fear of being without access to a mobile phone.

Understanding the prevalence and relationship between these conditions is essential for developing targeted interventions to reduce their disabling effects. By assessing these phenomena, this study not only highlights their widespread impact but also emphasizes their potential influence on individuals' mental health and daily functioning. Addressing these issues is a crucial step toward promoting digital well-being and improving overall quality of life.

Literature Review

Many researches are highlighting the adverse effect of smartphone addiction. Overuse of smartphones has been shown to have psychological and behavioral impacts along with the adverse effects on students' academic performance and well-being. For example, Talan Doğan, and Kalinkara (2024) found that smartphone and social media addiction contribute to phubbing. Sharma, Goel, Sidana, Kaura, and Sehgal (2023) identified a significant link between smartphone addiction and depression, affecting 77.2% of addicts. Alahdal, Alsaedi, Garni, and Alharb (2023) associated smartphone addiction with poor sleep quality, while Awinashe et al. (2023) noted impaired cognitive and psychomotor skills in dental students. Rathakrishnan et al. (2021) and Kibona and Mgaya (2015) confirmed a negative correlation between excessive smartphone use, academic performance, and sleep quality. Acharya, Acharya, and Waghrey (2013) and Shambare, Rugimbana, and Zhoua (2012) described smartphones as a major addiction causing anxiety, irritability, and reduced concentration. Cheever, Rosen, Carrier, and Chavez (2014) observed increased anxiety during phone deprivation. Additional studies revealed links between smartphone use, poor sleep, stress, physical fitness, and decreased academic motivation (Thomée, Härenstam, & Hagberg, 2011; Rosen, Carrier, Miller, Rokkum,

& Ruiz, 2016; Lee, Cho, Kim, & Noh, 2015; Tavernier & Willoughby, 2014). These findings stress the need for interventions to mitigate smartphone addiction's impact on students. The emotional attachment to smartphones has led the society to nomophobia, where the fear of being unreachable or disconnected fuels smartphone addiction. Researchers have identified several predictors of nomophobia, including emotional factors such as low self-esteem, attachment anxiety, stress, maladaptive coping strategies, and loneliness (Liang, 2024; Vagka Gnardellis, Lagiou, & Notara 2023; Dahiya, 2021). Severe nomophobia has been linked to poor sleep quality among college students (Peszka et al., 2020) and mediated by factors like intolerance of uncertainty (Ercengiz, Yildiz, Savci, & Griffiths, 2024) and loneliness (Valenti, Bottaro, & Faraci 2024). Higher nomophobia has been correlated with poor academic performance (Ahmed Pokhrel, Roy, & Samuel., 2019), and symptoms of increased discomfort and anxiety are seen among younger medical students when deprived of their smartphones, reflecting its impact on mental health (Darvishi, Noori, Nazir, & Karimi., 2019). These studies emphasize the importance of addressing these connected issues. However, there is not enough research on the link between smartphone addiction and nomophobia, and this study aims to fill that gap.

Research Objectives:

1. To examine the prevalence of smartphone addiction in college students.
2. To examine the prevalence of nomophobia (fear of being without a smartphone) in college students.
3. To study the relationship between smartphone addiction and nomophobia.

Hypothesis

H₀: There is no significant correlation between smartphone addiction and nomophobia.

Research Methodology

The researcher adopted a descriptive, correlational design to explore the prevalence of smartphone addiction and nomophobia among students and investigate the relationship between these two phenomena. A multistage random sampling technique was used to select a sample of 400 students from the Malwa region: first, the region was divided into educational zones; then, colleges or universities offering undergraduate programs were randomly selected from each zone; and finally, fifth-semester students were randomly chosen from these institutions to ensure diversity. Data collection tools included the Smartphone Addiction Scale (SAS), developed by Vijayshri and Ansari (2017), and the Nomophobic Behavioural Identification Scale, a self-constructed tool to assess anxiety or discomfort when separated

from smartphones. The data was analyzed using descriptive statistics to determine the prevalence of smartphone addiction and nomophobia, and Pearson's correlation coefficient was used to explore the relationship between the two variables.

Findings and Discussion

1. Prevalence of smartphone addiction in students

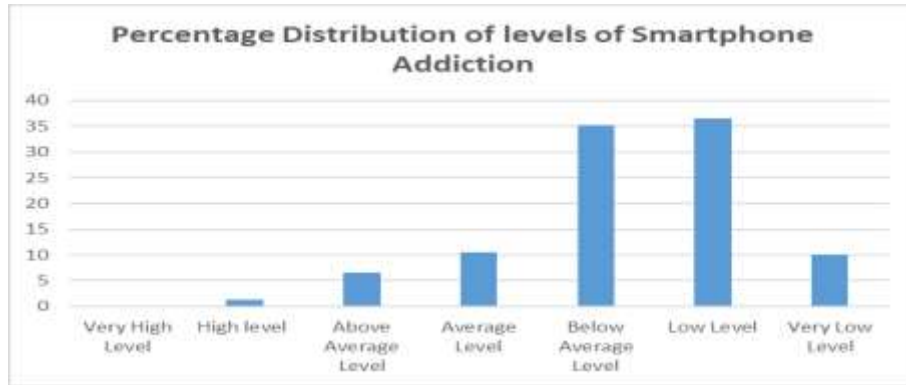


Figure 1.1: Percentage distribution of levels of smartphone addiction

The bar graph illustrates the distribution of smartphone addiction levels across seven categories, with percentages reflecting the prevalence of each level among respondents. It reveals that the majority of individuals, 36.5%, report low levels of smartphone addiction, and the highest percentages (35.25%) fall under the below-average level, making these the most common responses. Only a small percentage of respondents report higher levels of addiction, with 10.5% at an average level, 6.5% at an above-average level, and just 1.25% at a high level. Interestingly, no respondents reported a very high level of addiction, suggesting that extreme addiction to smartphones is not present, and 10% demonstrated a very low level of addiction. Overall, the graph indicates that smartphone addiction is more commonly perceived as being at lower levels, with fewer individuals with symptoms of being highly addicted.

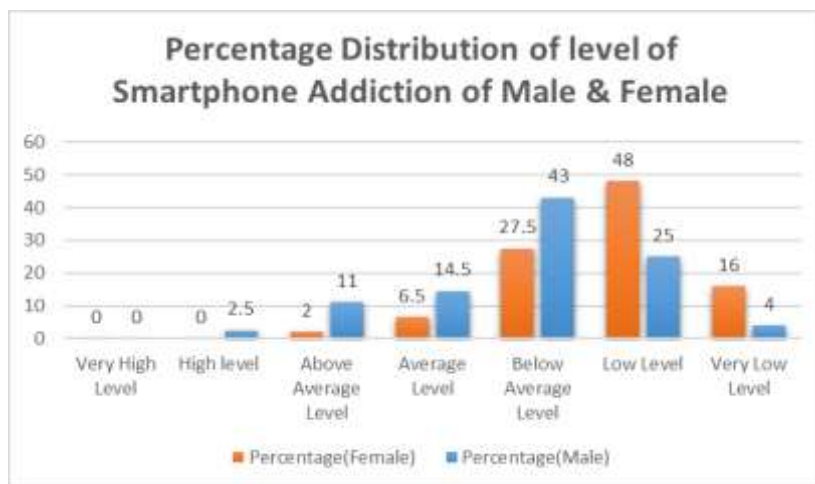


Figure 1.2: Comparison of levels of smartphone addiction between males and females

Figure 1.2 compares the percentage distribution of smartphone addiction levels between males and females. Among males, the majority (43%) fall into the below-average level category, followed by 25% in the low level, while only 4% report a very low level. Moderate addiction is reflected by 14.5% of males at the average level and 11% in the above-average level, with very few (2.5%) reporting a high level and none in the very high level category.

For females, the majority (48%) report a low level of smartphone addiction, followed by 27.5% in the below-average level and 16% in the very low level category. Moderate addiction includes 6.5% at the average level and 2% at the above-average level, with no respondents reporting either a high level or very high level of addiction.

Overall, females predominantly report lower levels of smartphone addiction compared to males, with a higher percentage in the low-level and very low-level categories. In contrast, males show a higher percentage at the below-average average level and above-average level, reflecting slightly higher addiction tendencies.

2. Prevalence of Nomophobic Behavior in Students

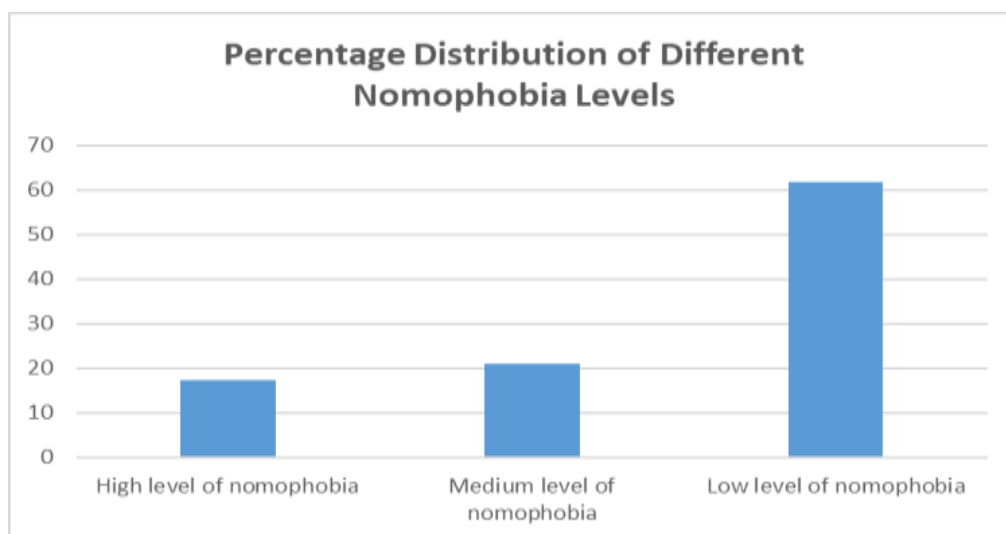


Figure 2.1 Percentage Distribution of Different Nomophobia Levels

Figure 2.1 shows the percentage of people with different levels of Nomophobia (fear of being without a smartphone). A significant majority of individuals, 61.75%, report experiencing a low level of nomophobia, indicating minimal smartphone dependency or anxiety. A smaller proportion, 21%, fall into the medium level of nomophobia, reflecting a moderate level of smartphone-related dependency or concern. Lastly, 17.25% of respondents report a high level of nomophobia, suggesting that a smaller segment of individuals experiences severe anxiety or dependence on their smartphones. Overall, the data highlights that most individuals experience low levels of nomophobia, with fewer respondents reporting medium to high levels.

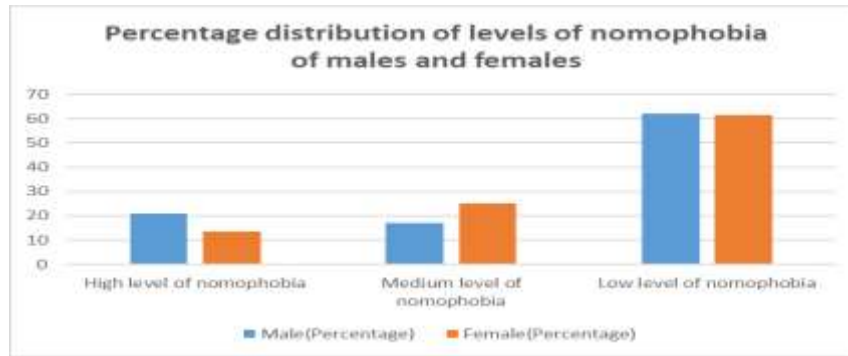


Figure 2.2 Comparison of Nomophobia Levels Between Males and Females

Figure 2.2 compares the percentage distribution of nomophobia levels between males and females. For the high level of nomophobia, 21% of males report experiencing it, compared to a lower 13.5% of females. In contrast, for the medium level of nomophobia, females show a higher percentage (25%) compared to 17% of males. Finally, for the low level of nomophobia, the percentages are quite similar, with 62% of males and 61.5% of females reporting minimal smartphone dependency or anxiety. Overall, while males show slightly higher percentages at the high level, females demonstrate a greater presence in the medium level, but both genders report similar low levels of nomophobia.

3. Correlation Between Smartphone Addiction and Nomophobia

Table 1: Correlation Between Smartphone Addiction and Nomophobia

Nomophobia	Pearson correlation	Correlation value	Sig
		0.721	.000
Smartphone	Sig. (2-tailed)		

Table 1 shows that a strong positive correlation was found between smartphone addiction and nomophobia ($\rho = 0.721$, $p < .001$). This indicates that individuals with higher smartphone addiction levels are significantly more likely to exhibit higher levels of nomophobia.

In today's world, where digital reliance and smartphone usage are at an all-time high, the findings on smartphone addiction and nomophobia shed light on how widespread these issues are and their impact on people's lives. The data shows that most people manage to maintain a moderate balance, with 36.5% reporting a low level of smartphone addiction and 35.25% falling into the below-average level category. However, a smaller portion of respondents still shows signs of concern as 10.5% reported an average level, 6.5% an above-average level, and just 1.25% admitted to a high level of addiction. Notably, no one reported a very high level of smartphone addiction, suggesting that extreme dependence is uncommon for now, though it

could become more common as technology becomes even more embedded in daily life, such as for work, learning, and social interaction. Smartphone addiction cause poor sleep, stress, physical fitness, and decreased academic motivation (Thomée, Härenstam, & Hagberg, 2011; Rosen, Carrier, Miller, Rokkum, & Ruiz, 2016; Lee, Cho, Kim, & Noh, 2015; Tavernier & Willoughby, 2014) which is why preventive measure are required to save children from its harmful effects.

When it comes to nomophobia which is the fear of being without a smartphone, the findings reflect the realities of today's connected world. A large portion of people (61.75%) experience a low level of nomophobia, meaning they can manage their smartphone use without major stress. However, 21% report a medium level and 17.25% a high level of nomophobia, showing that smartphones have become essential to emotional well-being and daily routines for a notable group of individuals. This is especially true in the post-pandemic era, where digital platforms became central to both personal and professional lives, increasing reliance on smartphones for socializing, entertainment, and productivity.

The comparison between genders adds another layer of understanding. Males reported higher levels of nomophobia at the high level (21%) compared to females (13.5%), which could be linked to greater engagement with activities like gaming, social media, or work. On the other hand, females showed a higher percentage at the medium level (25% vs. 17% for males), reflecting their use of smartphones for communication and social networking. At the low level, both genders showed similar results, with 62% of males and 61.5% of females reporting minimal smartphone-related anxiety, suggesting that balanced usage is common for most people. As per literature, nomophobia affects mental health, sleep quality, academic performance, and emotional well-being, with links to anxiety, stress, loneliness, poor concentration, and maladaptive coping strategies (Kibona & Mgaya, 2015; Acharya, Acharya, & Waghrey, 2013; Shambare, Rugimbana, & Zhoua, 2012; Dahiya, 2021; Peszka et al., 2020; Ercengiz, Yildiz, Savci, & Griffiths, 2024; Valenti, Bottaro, & Faraci, 2024; Ahmed, Pokhrel, Roy, & Samuel, 2019; Darvishi, Noori, Nazir, & Karimi, 2019). This is why controlling nomophobia is necessary to safeguard mental health, academic performance, and overall well-being of young generation in an increasingly digital world.

Finally, the study highlights a significant positive correlation between smartphone addiction and nomophobia, meaning that as smartphone addiction increases, so does anxiety about being without the device. Cheever, Rosen, Carrier, and Chavez (2014) also observed increased anxiety during phone deprivation. Al-Mamun et al. (2023) found significant associations

between nomophobia, smartphone addiction, and Facebook addiction, with the latter also connected to insomnia. This is particularly relevant in today's digital age, where smartphones are intertwined with everyday life. The findings underscore the importance of promoting healthy digital habits such as managing screen time, practicing mindfulness, and raising awareness about the risks of excessive smartphone use. The joint effort of parents, teachers, and policymakers can play a crucial role in fostering a balanced and harmonious relationship with smartphones, ensuring their responsible use while minimizing the risks of addiction and anxiety.

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