

Analysis of Factors Causing Nomophobia in Adolescents: A Meta-Analysis Study

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ABSTRACT

This study combines data from various studies to provide more in-depth knowledge of the underlying reasons, possible risk factors, and protective variables associated with nomophobia in this demographic group. “nomophobia” describes a group of actions or symptoms associated with smartphone use. It is considered a contemporary phobia caused by society's interaction with mobile information and communication technology, especially cell phones. Nomophobia, the fear or worry that arises when someone is separated from their smartphone, has become a problem in today's digitally connected culture. This research uses meta-analysis research methods. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) were used in this study. Studies published between 2013 and 2023 were the focus of the search. Factors that influence nomophobia include Duration of Smartphone Use, Dependence on Social Media and the Internet, Compulsive and Obsessive Behavior, Social Relationships and Mental Health, Mindfulness, and Demographic Factors such as gender, employment status, parental education, and level of education. The results of this search provide in-depth information about the characteristics and causes of nomophobia, highlighting the need for focused treatment and support networks to address this increasing problem among adolescents. This meta-analysis seeks to close this gap by methodically investigating the elements that lead to adolescent nomophobia.

Keywords: Nomophobia, Teenagers, Digital, Smartphone, Addiction

INTRODUCTION

Virtual communications and new technological devices are valuable resources for the planet. People are now finding comfort in computers, tablets, and mobile phones, especially young people, in all aspects of their lives. Some of the things these devices help with are internet access, photo editing, listening to music and radio, news consumption, address and route search, making appointments, banking, shopping, gaming, and much more. At the same time, advances in technology and virtual communications bring both benefits and harm to the world. Disadvantages include social hardships such as social isolation and financial/economic problems such as huge debts incurred due to the purchase or use of advanced phones. It can also target psychological and physical disorders, including electromagnetic field radiation damage, car accidents, and anxiety stemming from the fear of losing the ability to use modern

technology. Nomophobia is a term when using this device causes strong feelings of fear and sadness and creates dependence on cell phones (Sharma et al. 2019).

The abbreviation for "NoMOBILE PHone PhoBIA" is nomophobia, namely the fear of not being able to use or not being able to be approached via a smartphone. This is a fear of the modern age caused by interaction with new technology. In recent years, this phenomenon has attracted a lot of attention, especially from teenagers, who use mobile devices more often than anyone else. Concerns about the psychological impact, particularly for young populations, arise as a result of increasing reliance on mobile phones as instruments for social contact, communication, and entertainment (Ghogare et al. 2022).

Additionally, those who had cell phones for several years and spent a lot of time using them showed higher levels of nomophobia. Concerns about over-reliance on technology can be seen in the emergence of social networking as a primary form of communication, especially among the younger generation. A possible addition to the DSM-V, the diagnostic guide for mental illness, is nomophobia, defined as the fear of being without a cell phone. Given the huge impact smartphones have on everyday life and the potential impact on ordinary users who lose their devices, it is important to consider the implications of smartphone use on society's general well-being. According to a study on parental educational attainment, the average nomophobia score decreased as the father's education level increased (Morales Rodríguez et al. 2020).

In addition, a related study found that the duration of smartphone use, social sentiment, and parental education level were all closely related to the emergence of smartphone addiction. (Çiçek et al. 2021) conducted research that corroborated the unfavorable correlation found between a father's educational performance and problems with forward motivation, loneliness, and smartphone addiction. The conclusions of this study show how risk factors, such as the father's education level, influence excessive smartphone use, which is closely related to smartphone addiction. Additionally, their fathers' poor educational background and the participants' smartphone addiction were linked in other similar studies.

To address the prevalence of nomophobia among teenagers and reduce the potential negative impact on their mental health and general well-being, it is important to understand the underlying elements of this problem. Even though this phenomenon has undergone several studies, a thorough analysis is still needed that synthesizes previous research findings and finds similarities or different trends between different studies. This meta-analysis seeks to close this gap by methodically investigating the elements that lead to adolescent nomophobia. This study aims to provide more in-depth knowledge about the underlying reasons, possible risk factors, and protective variables associated with nomophobia in this demographic group by combining data from various studies.

RESEARCHED METHODS

This research uses meta-analysis research methods. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) were used in this study. Compliance checklists are provided in databases including PubMed, Web of Science, AccessMedicine, ScienceDirect, EMBASE, PROQUEST Research Library (including

ABI/INFORM), and Scopus. A comprehensive search was conducted in all electronic databases. "Nomophobia" or "no-mobile-phobia " and "factor" or "smartphone addiction," "internet addiction," "digital addiction," or "social media addiction" were some of the key phrases used in the search strategy. Studies published between 2013 and 2023 were the focus of the search.

Inclusion and Exclusion Criteria

The inclusion criteria are:

- 1) Articles about nomophobia were published in 2013-2023.
- 2) Peer-reviewed research articles published in English.
- 3) Research assessed the factors causing nomophobia in adolescents.

The exclusion criteria are:

- 1) Studies in the form of case reports or book chapters.
- 2) It is not a peer-reviewed research article that was published in a non-English format.
- 3) Research is not directed at the factors causing nomophobia in adolescents.

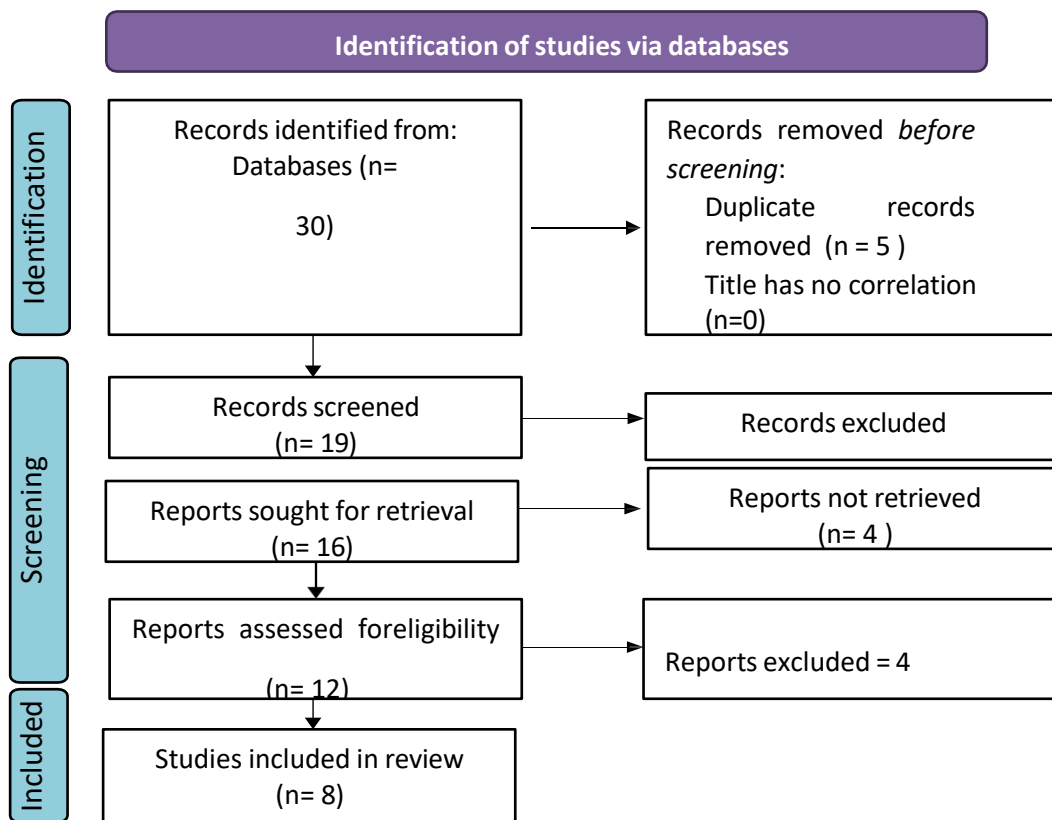


Figure 1. PRISMA

RESULTS AND DISCUSSION

Analysis Result

The majority of research focuses on the level and frequency of nomophobia. They defined nomophobia and linked it to various variables, including age, gender,

amount of time spent using smartphones each day, academic status, housing type, internet connection, number of job applications, and educational attainment. The following are the results of the analysis:

It is evident from the research findings that undergraduate medical students have nomophobia. It has been proven that there is a negative correlation between nomophobia and happiness and self-esteem, as well as a positive correlation with feelings of loneliness. Additionally, there is a statistically significant relationship between nomophobia and self-esteem. These findings suggest a strong correlation between nomophobia and psychological health.

According to (Gonçalves, Dias, and Correia 2020), there is a good relationship between psychopathological symptoms and nomophobia. Three factors have been identified as primary indications of nomophobia: OCD, interpersonal sensitivity, and the amount of time spent using smartphones each day. Highly educated people often have stronger relationships with family and friends and show fewer symptoms of nomophobia.

According to (Vagka et al. 2023), 99.9% of participants showed some level of nomophobia, with the dominant level being moderate (57.0%). Severe nomophobia was more common in women and unemployed participants (adj PR = 1.57), and participants whose fathers did not have a college degree had 30% higher levels of nomophobia overall ($p = 0.029$). Additionally, 45.8% of those with any degree of nomophobia said that it adversely affected their academic performance, and 59% of those with severe nomophobia checked their phones very frequently ($p < 0.001$). Early prevention should be prioritized by creating integrated health promotion initiatives.

According to (Arpaci, Baloğlu, and Kesici 2019), there is a strong inverse relationship between mindfulness and nomophobia in both genders. When they cannot communicate, students with poor attention levels show more anxiety.

Nomophobia intensity was found to have a strong, positive, and substantial relationship with anxiety about social appearance, problematic internet use, and dependence on social media, according to (Ayar et al. 2018).

A clearer relationship between nomophobia and obsession was demonstrated by (Lee et al. 2018). Higher levels of obsession correlate with higher levels of nomophobia severity, which may be a factor in the increase in clinical symptoms caused by new technological advances.

According to (Al-Mamun et al. 2023), there is a substantial correlation between Nomophobia and sadness, difficulty sleeping, Facebook addiction, and smartphone addiction. In addition, there was a strong moderating effect of smartphone addiction on the relationship between nomophobia and Facebook addiction. Reducing the use of psychoactive substances and daily smartphone use are two strategies that can help reduce the incidence of nomophobia among college students.

According to (Gezgin et al. 2018), there were significant differences observed in terms of duration of mobile internet ownership, duration of daily mobile internet use, and daily smartphone checking time. However, no statistically significant correlation was found between the duration of smartphone ownership and monthly GSM mobile internet quota. Ultimately, a statistically significant correlation was found between nomophobia and loneliness, indicating that adolescents' feelings of loneliness can

predict their nomophobia.

DISCUSSION

Teenagers are becoming more and more concerned about nomophobia, or the dread of being without a cell phone. Research has shown a number of contributing elements. Individuals who are homophobic frequently exhibit traits such as excessive usage of smartphones, avoiding locations designated for smartphone use, and constantly carrying a phone with them. Teenagers and young adults are more vulnerable to nomophobia because of their increased social contact and information availability. Age is a significant risk factor for nomophobia, with younger age groups more likely than older ones to have the condition. Furthermore, there are a number of established reasons for mobile phone addiction that have been linked to the development of nomophobia, including low self-esteem, difficulties sustaining social interactions, and the desire for acceptance from others. It has also been determined that the rise in smartphone use and the availability of Internet access are factors in the development of nomophobia in young people (Kaviani et al. 2020).

Nomophobia is characterized by physical symptoms like perspiration and elevated heart rate, as well as psychological symptoms like worry, panic attacks, and agitation when the phone is not in one's possession. When faced with spotty network connection or limited smartphone usage regions, teens and young adults may become more stressed and impulsive, which can exacerbate their symptoms of nomophobia. There have also been reports of nomophobia coexisting with comorbid diseases such as behavioral addiction disorders, drug misuse, and depression. Furthermore, while nomophobia affects people of all ages equally, research has shown that variables like gender and age do not substantially predict the condition. However, compared to older adults, women and younger age groups seem to be more likely to acquire nomophobia (Moreno-Guerrero et al. 2020).

When it comes to nomophobia, young adults appear to be more susceptible than other age groups. The fact that young people are more used to contemporary tools and technology than persons in other age groups may help to explain this. Gender inequalities may arise from the fact that women use their phones primarily for social networking and communication and to maintain relationships with friends and family, while males think that mobile phone technology boosts their degree of freedom. People who are nomophobia may never turn off their phones or always have them close at hand, even when they go to bed. Some of them may even carry an additional phone, battery, or charger just in case they misplace their phone or run out of power. Furthermore, nomophobia is sometimes classified as a "situational phobia," similar to agoraphobia or the fear of getting sick and not getting help right away; on the other hand, it is sometimes classified as a "behavioral addiction" to mobile phones, exhibiting signs of both physical and psychosocial dependence (Karl et al. 2020).

It has been suggested that social danger is the mechanism via which nomophobia may result in unfavorable psychological states or outcomes, most notably tension.

Research conducted on a sample of university students in Turkey found a strong correlation between using a cell phone and feeling lonely. 70 Numerous research have shown that the development of nomophobia as a result of excessive

mobile phone use is also influenced by maladaptive perfectionism, depression, aggression, impulsivity, and other psychological characteristics. It has been established that problematic mobile phone use is strongly predicted by low self-esteem. Furthermore, research has looked at extraversion and neuroticism as potential risk factors for improper cell phone use. Numerous investigations have endeavored to pinpoint the risk factors linked to nomophobia, with a particular focus on psychological and demographic aspects. But nomophobia also negatively impacts physical health in a number of ways (Naser et al. 2023).

CONCLUSION

The conclusion of this research is that the factors that influence nomophobia include: duration of smartphone use, dependence on social media and the internet, compulsive and obsessive behavior, social relationships and mental health, mindfulness, demographic factors such as gender, employment status, parental education, and education level. The fear that teenagers have about not having a cell phone, or nomophobia, is a serious and growing problem. Various contributing elements, such as excessive smartphone use, social contact, and information availability, have been discovered in the research. Symptoms of Nomophobia can include physical discomfort, anxiety, and panic attacks. Because of their reliance on cell phones for social connection and the need for acceptance, teenagers and young adults are a particularly vulnerable group. Teenagers are more susceptible to nomophobia, which can have a detrimental impact on their mental and physical health. The results can be applied in the treatment of adolescent nomophobia. Early prevention techniques and integrated health promotion activities are essential to reduce the increasing incidence of nomophobia. The goal of the initiative is to strengthen social bonds, encourage responsible smartphone use, and improve psychological health. Additionally, it may be beneficial to teach teens about the possible negative impacts of excessive smartphone use and provide them with coping mechanisms to deal with the anxiety associated with losing their phone. Additionally, educators and medical professionals need to be aware of how nomophobia affects adolescents and be ready to offer help and support to affected individuals. The results of this search provide in-depth information about the characteristics and causes of nomophobia, highlighting the need for focused treatment and support networks to address the increasing problem among adolescents.

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