



THE IMPACT OF NOMOPHOBIA ON MENTAL HEALTH IN NIGERIAN SCHOOLS: A SYSTEMATIC REVIEW

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ABSTRACT

Background: Nomophobia continues to attract attention around the world because of its impact on mental health. It cuts across all age groups and genders that regularly use smartphones. Nomophobia, notably under-documented in Nigeria, negatively impacts the school students and staff. Besides the declining academic performance, depression and anxiety were reported as effects of nomophobia. Addressing this issue requires urgent intervention from the Public Authority in recognizing the adverse effects of nomophobia and developing appropriate policies in Nigerian schools. **Methods:** We employed a structured approach to identify and review available articles on Nomophobia and mental health in Nigerian schools. We aimed to evaluate the adverse impact of nomophobia on school students and staff. **Results:** The results showed a high prevalence of nomophobia among the students and staff of Nigerian schools reviewed. There was a positive relationship between nomophobia, depression, and anxiety. **Conclusions:** It is imperative that the public health authority recognize the adverse impact, nomophobia poses to the developing young adults in Nigeria. Pro-active measures, in the form of policy development about phone usage and educational campaigns about the regulated use of smartphones in Nigerian schools are relevant.

KEYWORDS: Impact, health, mental, Nigerian, nomophobia, schools.

INTRODUCTION

Technological advancement has made communication much easier and comforting through the introduction of the mobile telephone. Mobile phones have become an integral part of our lives, serving as tools for accessing, transmitting information, and social interaction.^[1] It goes beyond just answering and making calls, smartphones

with internet access offer the platforms for various uses. Nowadays, smartphones enable 3D picturing, amplified and cybernetic applications, online academic roles, and therapeutic applications.^[2]

In Nigeria and other developing countries in Africa, mobile phones were introduced in the late 1990s. Since

then, the number of Nigerians using mobile phones has gradually increased. An estimated 7.1 billion mobile devices were in use in 2016, which was greater than the number of people on Earth at the time.^[3] By 2025, there will likely be over 140 million smartphone users in Nigeria, according to a published study.^[4] Smartphone applications have extended to the academic institutions, as students apply themselves to the extended functions of smartphones. With the help of the contemporary approach, students with supplemental learning skills can interact with online reading resources and demonstrate what might have been amazing classroom interactions. Smartphones are therefore platforms that enable teachers and students to take full use of contemporary teaching techniques, such as cooperative, personalized, and flexible learning.^[5]

While the various benefits offered by mobile phones are undeniable, a growing concern has emerged regarding excessive addictive use of smartphones, especially by students and staff in Nigerian schools. Numerous studies have linked smartphones to obsessive checking habits, as well as the fact that using a smartphone can cause compulsiveness, discomfort, and addictive behaviors in its users.^[6] Users' growing desire to use their phones more frequently in order to feel happy has resulted in the emergence of habits requiring monitoring, which can seriously affect day-to-day functioning.^[7] These activities have led to smartphone addiction.

BACKGROUND

The phrase "nomophobia," which is an acronym for "no-mobile-phone phobia," first appeared in a 2008 study conducted by the UK Post Office, which hired YouGov, another UK-based research group, to examine the fears experienced by mobile phone users.^[3,8] "The fear of being out of mobile phone contact" is the definition of nomophobia.^[8] "Nomophobia, also known as no-mobilephone-phobia," is defined by the International Business Times as "anxiety that people experience when they believe they cannot get a signal from a mobile tower, run out of battery, forget to bring the phone with them, or simply do not receive calls, texts, or email notifications for a certain period of time."^[9] It is, in essence, a psychological dread of losing communication with a mobile or cell phone.

Nomophobia has been reported to affect students around the world. In a study by Fahad Alosaimi and his colleagues, they reported that there is a significant correlation between a negative lifestyle and poor academic achievement that could be attributed to the use of smartphones among university students in most parts of the world.^[10] Nomophobia has a major impact on the

mental health of students around the world, increasing the rate of anxiety, depression, and stress, and disrupting sleep and performance.^[11] The multiple studies on nomophobia among university students in Africa and elsewhere in the world should be a wake-up call to critically review its effects on the students, as there is also the danger of losing their freedom and human interaction.^[12]

Methods

We performed a systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines 2020.^[13]

Eligibility Criteria

Cross-sectional studies reporting the prevalence of nomophobia in high school and higher institution students and staff in Nigeria were included. Studies that evaluated nomophobia and associated mental illness were considered. Nomophobia assessed with the 20-item Nomophobia Questionnaire (NMP-Q) tool developed by Yildirim and Correia were prioritized.^[14] We selected this instrument as an inclusion criterion, as it is the most popular and widely used validated scale.^[15] It divides nomophobia into absent (20 points), mild (21–60 points), moderate (61–100 points), and severe (101–120 points).^[14] Studies with fewer than 100 participants, case-control studies, case reports, case series, editorials, commentaries, clinical practice guidelines, opinions, and reviews were excluded.

Study Selection

We conducted a systematic search of literature using the search terms "nomophobia and depression in Nigerian schools," "nomophobia and anxiety in Nigerian schools," "nomophobia and mental health in Nigerian schools," in PubMed, Google scholar, Bielefeld Academic Search Engine, and CORE. No language or publication date restrictions were applied.

SEARCH RESULTS

We identified 6 studies through database searching as shown in Table 1. After review, we selected 3 after applying the inclusion criteria. Three studies with a total of 897 participants, both male and female genders, were reviewed. The majority of studies evaluated students and staff in nursing school, school of health, and high schools in Nigeria. The studies classified nomophobia into three groups (mild 21–59; moderate 60–99; severe 100–120). Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorders Scale (GAD-7) were employed in one of the studies to identify depression and anxiety disorder, respectively.

Table 1: Characteristics of studies on Nomophobia in Nigerian schools.

Study	Year	Sample Size	Setting	Nomophobia Prevalence	Psychiatric Association
Adebiyi et al	2023	397	High School	significantly high	Anxiety
Awofala et al	2021	300	University	100%	Depression and anxiety
Ya'u et al	2024	200	University	100%	Anxiety

Isah et al	2021	348	Higher Institution	Significantly high	-
Ogbonda et al	2024	300	Higher Institution	Significantly high	-
Okoye et al	2017	181	University	Significantly high	-

DISCUSSION

Nomophobia appears to be common among smartphone users around the world. It cuts across all age groups and occupations. It is particularly concerning among the youths in schools in view of the impact in their academic development. In our review, there are a few studies on nomophobia in Nigeria. It is possible that nomophobia is not being given the attention it rightly deserves. The few studies revealed significantly high prevalence of nomophobia among the recruited study subjects. It is concordance with a similar study in Peru, where 100% of the students had nomophobia.^[20] We found that fifty percent of the studies reviewed documented associated mental health disturbance for those who experienced nomophobia.

The study by Adebisi and colleagues found that nomophobia and smartphone addiction are predictors of mathematics anxiety among high school students in Lagos, Nigeria.^[29] Mathematics anxiety can show up as emotional, cognitive, or physical symptoms, which can result in lower academic achievement.^[21] From an emotional perspective, people experience tension, anxiety, uneasiness, and worry.^[21] Mathematics anxiety affects how well working memory functions cognitively. Similarly, a connection between mobile connectivity and psychological well-being was highlighted by the frequent expression of distress by students when they were separated from their phones.^[16]

Awofala and colleagues found a significant relationship between smartphone addiction, nomophobia, depression, and anxiety.^[3] This is in line with a study in Greece where nomophobia is associated with depression, anxiety, and stress among young adults.^[22] Nomophobia is still regarded as an emerging issue among young adults and is closely associated with symptoms of depression, anxiety, and stress, according to other studies.^[23,24,25] Other studies carried out indicate that nomophobia is associated with increased stress, low mood, irritability, insomnia, personality disorders, issues of self-esteem, loneliness, and social withdrawal.^[12,18]

The study by Ya'u and colleagues revealed a high correlation between nomophobia and anxiety among university undergraduates in Kano State, Nigeria.^[1] The study is similar to an observational study among nursing students, where there is a positive correlation between nomophobia and anxiety.^[26] Anxiety has been well documented to negatively impact students' academic performance.^[27]

Nomophobia has a detrimental effect on the academic performance of students. Students who constantly use their smartphones have problems concentrating, sleeping, and engaging in class activities. Mobile phone addiction

is closely linked to nomophobia and has a negative correlation with academic achievement.^[12,19] It is important to create a balance between the learning benefits of smartphones and the risks of excessive usage. Even though the clinical trajectories of the reported depression, anxiety, and stress were not documented in the literature we reviewed, it is concerning that young adults in Nigerian schools are having mental distress associated with nomophobia. Incorporating educational programs about digital wellness into the school curriculum must be encouraged. This would enable students to develop a healthy relationship with their phones. Online educational programs have potential for effectively preventing and treating nomophobia.^[13] School management can help students by creating awareness campaigns about responsible smartphone usage and providing counselling services that address anxiety related to the use of phones. Teachers play an essential role in identifying the symptoms of nomophobia and promoting classroom procedures that reduce distraction and encourage academic concentration.

Furthermore, policy-level interventions are critical when dealing with nomophobia. Such interventions can involve establishing smartphone usage rules, including phone-free zones or periods during which phones should not be used. Parents and their wards can also be given digital literacy training in addition to the cell phone policy. These modalities help parents set boundaries and establish home phone use limits.^[20] On a national level, research and awareness campaigns should be designed to tackle nomophobia as part of mental health initiatives. By promoting responsible smartphone use through coordinated efforts among schools, families, and other stakeholders, it may be possible to mitigate the detrimental effects of nomophobia on the mental health of students and their staff, as well as their academic performance.

This review has limitations. Only a small number of cross-sectional studies in Nigeria met the inclusion criteria. The studies have limited geographical and demographic coverage; therefore, findings cannot be generalized to all Nigerian students. Moreover, cross-sectional designs of the studies do not allow for firm conclusions regarding causality. Despite these limitations, the current available data is a good starting point in understanding nomophobia and mental health distress in Nigerian schools. Therefore, it highlights the need for further research with larger, more diverse populations.

In conclusion, this review has shown that nomophobia is associated with mental health distress among Nigerian students and their teachers, despite the small number of

published data. It also revealed the negative impact on the students' academic performance. Therefore, it is imperative that the public health authority recognize the adverse impact, nomophobia poses to the developing young adults in Nigeria. Pro-active measures, in the form of policy development about phone usage and sustained educational campaigns about regulated use of smartphones in Nigerian schools, are the best initial options.

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