



A Fear of the Digital Era: Nomophobia and Its Prevalence Among Teachers and Students

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Abstract

Smartphones have been fascinating digital gadgets, and everyone in the present digital generation desires to have one and get access to the services they offer. However, a sort of irrational anxiety or fear may arise when one is out of smart phone contact. The phobia that relates to no mobile phone is termed nomophobia. The study was designed with the objective of measuring the nomophobia level of teachers and students and determining whether or not there is any significant difference between the pattern of smartphone use and nomophobia. A correlational study was conducted among 195 participants (150 students and 45 teachers). Questionnaires related to demographic variables, patterns of smartphone use, and the nomophobia questionnaire (NMP-Q) are used for this purpose. The study showed that out of 45 teachers, 13 (28.9%) had severe nomophobia. Similarly, out of 150 students, 38 (25.3%) had severe nomophobia. However, the female gender showed a greater level of nomophobia than males. The use of smartphones for making calls, texting and chatting, connecting to social media, searching for information on the internet, listening to music and watching movies, gaming, and killing time had a significant effect on increasing nomophobia levels.

Keywords: *Nomophobia, Smart Phone, Mobile, Information Technology*

1. Introduction

Our lives have been considerably more simplified by the creative and advanced tools, methods, and strategies that the modern digital world has to offer. The rapid growth of technology has brought about a significant shift in our way of thinking, acting, and living. Everyone depends on technology these days. Technology has

permeated every aspect of human existence. Information and communication technology (ICT), nanotechnology, biotechnology, wireless data transfer, man-machine connection, on-demand printing, and sophisticated robotic mechanisms are some examples of rising technologies (Essays UK, 2018). The modern era can be considered the ICT era. Technology of today offers a plethora of fascinating and cutting-edge goods. A smartphone is one such gadget.

These days, technology governs our life. In the modern world, we are so reliant on smartphones, tablets, laptops, and other digital devices that we find it impossible to envision living without them. In fact, we find it impossible to operate without them. When we refer to electronic devices as "smart," we mean those that possess independent computing power, are able to connect to a network, and can communicate with other devices and people on their own (López et al., 2018). All that a typical cell phone is used for is two-way communication. Smartphones are now used for more than just making phone conversations because to the development of Internet technology and applications. These include emailing and receiving, chatting, sharing documents and photographs, reading news, and exploring the web, online selling and buying and many more (Alfawareh & Jusoh, 2017). The "world of apps," which was made possible by smartphones and offers users applications for nearly anything, has caused a shift in daily tasks to electronic devices (Kanmani, 2017). The popularity of social media apps like Facebook, Instagram, WhatsApp, and Twitter has skyrocketed since the invention of smartphones. A smartphone can be seen of as a pocket-sized version of a portable computer that allows for "social interaction, a way for content sharing, and build collective intelligence" (Alfawareh & Jusoh, 2017).

Utilizing technology and making use of it has a significant impact. Technologies are all around us, but are we really employing them or are we just putting them to use? A large question mark appears. The same applies to smartphones. How do we use our smartphones? Do we use our smartphones when we need to? Or do we really want and need a smartphone with us at all times and everywhere? If so, what occurs when we lose our cell phones or are unable to access them? Is there ever any worry or concern when we find ourselves without a cell phone or without network coverage? If so, we are certain to have a mental illness, which we refer to as "Nomophobia".

The influence of using and utilizing technology is substantial. Although we are surrounded by technologies, do we actually use them or are we just putting them to use? A big question mark shows up. The same is true for mobile devices. How are our smartphones used? Do we utilize our cellphones when it's necessary? Or do we actually need and want a smartphone that we carry about with us all the time? If yes, what happens if we misplace our phones or can't access them? When we are without

a cell phone or network coverage, is there ever a cause for anxiety or worry? If so, we can be positive that we have a mental disease, which we call Nomophobia.

The unreasonable dread or anxiety associated with not having access to a cell phone or being outside of cell phone contact is known as nomophobia, a modern phobia. Anxiety has a negative impact on a person's ability to focus on everyday work, can alter daily routines, and negatively impact academic progress in students who experience nomophobia. Gezgin, Mertkan, and Adnan (2016). Overuse of cellphones has been identified as a type of technology addiction that is quickly becoming into a global social problem. Therefore, the goal of the study is to identify the patterns and degree of smartphone usage.

Smartphones are a useful tool for teachers to complement their teaching-learning strategies. In a similar vein, students in the digital age use digital tools for their studies, and modern educational establishments place a strong emphasis on increasing students' digital literacy. However, improving mobile learning programs and initiatives while nomophobia coexists is a significant problem for everyone. The purpose of this study is to quantify the prevalence of nomophobia and identify at-risk groups. The influence that nomophobia can have on social functioning and overall quality of life makes it imperative to assess the level of prevalence of this condition among educators and students.

1.1 Research Questions

The present study entitled “A Fear of Digital Era: Nomophobia and its Prevalence among Teachers and Students” basically focuses to measure prevalence of nomophobia among teachers and students. It also studies the pattern of smartphone usage. To achieve this objective, following research questions are formulated:

- a. What is level of nomophobia and its sub-dimensions (“not being able to communicate”, “losing connectedness”, “not being able to access information”, “giving up convenience”) among teachers and students?
- b. Is there any significant difference between nomophobia levels with regard to certain demographics such as gender, age, marital status, education qualification, and current active role as a teacher or a student?

2. Review of Literature

The present digital era is the period where digital technologies play a prominent role in shaping up and regulating the behaviours, performances, standards, etc., of societies, communities, organizations, and individuals (Liyanage, 2011). And this modern digital age is the shift from mechanical and analogue electronic technology to digital electronics. It can be said that the digitalization started with the invention of computing devices and personal computers. The invention of transistors, and

integrated circuits helped in development of electronic devices of reduced size and cost, but with greater processing ability. This has made the computing devices to be accessible to general people. The invention and popularity of internet, www and social media has brought about a drastic change in communication. The invention of smartphone helped people a lot in greater interconnectedness, easier communication, and the exposure to information. The people of the present digital era are surrounded by a good number of digital gadgets. This has certainly changed the way we live, think and act. For instance, a few years back, people used to note down phone numbers in address book or memorize phone numbers of the ones they have to frequently make calls to. But, at present, the scenario has changed; people save phone numbers in digital gadgets and hardly remember or memorize anybody's phone numbers. We can experience the digitalization. People, staying within a room can select, order and make payments for food items or daily commodities from online stores. One can open bank account or transfer money between different branches without physically visiting a bank. There has been a dramatic change in the way works are performed. Educators always opt to find smart solutions to implement new and the best teaching practices, and improve quality of education (Donald, 2014). The digital era, indeed, is transforming the way children and young people play, access information, communicate with each other and learn (Lonka & Cho, 2015). Teachers and students in the digital era have easy and instant online access to infinite information and numerous teaching and learning activities of adults and children at school, at home, and in public places (Battro & Fischer, 2012). So, educating and learning, in a sense, is an easy task; but yet a challenging task as children and students should be able to determine and process only information what are right for them. Distance learning, m-learning, e-learning are some of the new trends of education system that are being practised in the present digital world. The digital learning provides a non-threatening environment (fear) for learners to study and learn subject matter at their own pace.

Nomophobia can be referred to as a form of behavioural addiction towards smartphone that causes anxiety by disconnection from the mobile network or inability to have access to a smartphone (Anshari et al., 2019). Nomophobia has multi-dimensional traits ranging from social, physiological, and physical symptoms that are summarized into very dependency upon smartphone. The study (Anshari et al., 2019) examined nomophobia among youth and how to overcome nomophobia. The study deployed a qualitative approach by interviewing respondents mostly at their first-year undergraduate level and text mining analytics from respondents' conversation to extract the common patterns, characteristics, and proposed solutions for nomophobia.

Nomophobia is defined as the fear of being out of mobile phone contact and is considered a modern digital phobia introduced to our lives as a by-product of the interaction between people and mobile information and communication technologies, especially smartphones (Yildirim et al., 2016). A nomophobia is characterized by four dimensions: a) not being able to communicate, b) losing connectedness, c) not being able to access information, and d) giving up convenience.

Besides smartphones help students being motivated and act as effective tools in building up confidence level and self-esteem, the smartphone also has negative impacts on the students when they overuse it. It helps teachers in preparing lecture notes, have frequent communication with their colleagues and students, check emails and many more. It may cause users being stressed with disturbed health. It affects neck pain, lack of sleep, headache, shoulder ache, finger pain, eye strain and many more. “The mobile phone has been dubbed as one of the biggest non-drug addictions of the 21st century”. (Dongre et al., 2017)

Another study research carried out illustrated certain psychiatric disorders of nomophobia. It emphasized its study on symptoms of nomophobia such as anxiety, nervousness, discomfort, and distress when contact with the smartphone was lost, mainly in the youngest users. The study included a representative sample of 461 students in different years of study engineering (21% women, 79% men, over 17 years of age). Three symptomatic factors of nomophobia were identified: feelings of anxiety, compulsive smartphone use, and feelings of anxiety and panic. (Rosales-Huamani et al., 2019)

A cross sectional study was conducted among the students of a medical college of Wayanad District in India to find out the prevalence of nomophobia and its determinants among students of a medical college using new nomophobia questionnaire (NMP-Q). The prevalence of nomophobia was found to be 97%. Nomophobia was not found to be associated with sex, quota of admission, place of origin, and place of stay. 99.06% students were using smart phones for calling family members, 91.84% for calling friends and 88.57% for listening to music. (M, P, TV, Gopi, & Fernandes, 2017)

A study to investigate the prevalence of nomophobia among young adults was carried out in Turkey. The Nomophobia Questionnaire (NMP-Q) was administered among 537 Turkish college students. The results revealed 42.6% of young adults had nomophobia, and their greatest fears were related to communication and information access. The study also found that gender and the duration of smartphone ownership had an effect on young adults' behaviours related to nomophobia, whereas age and the duration of normal mobile phone ownership had no effect. (Yildirim et al., 2016)

A study was carried on 1500 smartphones in India to give an insight into the levels of nomophobia and its psychological aspects. Snowball Sampling was used to collect data through NMP-Questionnaire. The study correlated different variables such as age, gender and occupation and found that females had higher levels of nomophobia in comparison to male students and students of ages 18 to 24 had higher level of nomophobia than working class people.(Kanmani, 2017)(Bhavani & Maragatham, 2017)

A study was conducted by (Gezgin et al., 2017) Nomophobia, sometimes known as "phobia of the modern era," is the term used to describe the worry and anxiety that a person experiences when they are unable to access or use mobile devices. It is believed that a rise in the use of smartphones has led to a rise in nomophobia among people in society due to the greater engagement with these devices. People with nomophobia have trouble concentrating on their job in all facets of their lives. Nomophobic behaviors can alter regular routines including sleeping patterns and focus during class; in particular, nomophobia negatively impacts students' academic performance and school life. This study aims to determine the prevalence of nomophobia among 818 pre-service teachers enrolled in several departments at a Turkish state university in the fall semester of 2015–2016. Descriptive statistics, an independent sample t-test, and one-way ANOVA analyses were employed in this causal-comparative investigation. The instrument's mean score indicated that pre-service teachers had higher levels of nomophobia than the average group, and they were concerned about their inability to communicate and obtain knowledge. Furthermore, despite no discernible difference in the number of hours spent using a mobile phone, female pre-service teachers were shown to be more nomophobic than their male counterparts. Furthermore, it has been seen that nomophobia reduces with age; however, the opposite is true when it comes to the frequency of smartphone use, with nomophobia increasing as such usage increases.

A cross sectional study was carried out by (Kubrusly et al., 2021), on “Nomophobia among medical students and its association with depression, anxiety, stress and academic performance” which has been described as technology adoption continues to be one of the key indicators of human progress as the world grows more linked. The mental illness known as nomophobia, or NO MOBILE PHONE PhOBIA, is brought on by the anxiety of being cut off from mobile phone connectivity. This kind of condition is closely linked to stress, anxiety, and depression. Nomophobia can also result in structural brain damage.

The purpose of this study is to evaluate how nomophobia affects medical students at a private university and how it relates to stress, anxiety, depression, and academic achievement.

This cross-sectional observational study was conducted at Centro Universitário Christus with medical students. The Nomophobia Questionnaire (NMP-Q) was used to quantify nomadism. 20 questions make up the NMP-Q, and each question is rated on a 7-point Likert scale. Validation of this scale has been done for Brazilian Portuguese. A condensed version of the DASS instrument, the DASS-21, was used to measure stress, anxiety, and depression. Brazilian Portuguese language validation was also performed for the DASS-21 questionnaire. The API, the outcome of a difficult mathematical process that yields the student's average grade for the semester and serves as a reference index for pedagogical follow-up in the evaluated institution, was used to quantify academic performance. The behaviors of using devices were also evaluated. Bivariate studies of association and correlation were carried out, and descriptive results were given. The research ethics committee gave their approval for this project. A sample of 292 pupils underwent evaluations. 99.7% of students reported having some degree of nomophobia, while 64.5% reported moderate to severe symptoms. Over 50% of the students reported stress levels greater than mild, and 19.5% and 11.2% of students, respectively, reported severe or very severe levels of anxiety and depression. Upon examining the relationship between NMP-Q and DASS-21 scores, it was shown that lower API scores are linked to lower DASS-21 outcomes, and that rises in NMP-Q result in increases in the overall DASS score ($p < 0.001$). The study was concluded as nomophobia was likely to worsen anxiety, tension, and sadness, which will lower academic performance.

A journal has been published on “Adaptation of the European Portuguese Version of the Nomophobia Questionnaire for Adolescents, Factor Structure and Psychometric Properties” by (Galhard et al., 2022) as illustrated Nomophobia as a phobia specific to the digital age that is characterized by an overwhelming fear of not having a smartphone. The effects of nomophobia on one's physical and mental well-being are particularly severe in young people. The purpose of this study was to evaluate the factor structure and psychometric qualities of the Nomophobia Questionnaire for Adolescents (NMP-Q-A), which is available in European Portuguese. Sample 1 was used to investigate the factor structure, psychometric qualities, and correlation with other constructs of the NMP-Q-A. It included 338 teenagers (58.6% female), with a mean age of 13.55 (SD = 2.07). To examine the NMP-Q-A factor structure further, sample 2 consisted of 193 teenagers (53.9% boys) with a mean age of 13.61 (SD = 0.80) years. A structure consisting of one higher-order factor and four lower-order factors demonstrated a satisfactory match to the data in both samples. The NMP-Q-A demonstrated strong concurrent validity, construct validity, and reliability. There was more nomophobia in girls. Teens with higher levels of nomophobia also reported higher levels of smartphone addiction, psychopathological symptoms, and a

worse standard of living. In clinical and educational contexts, the NMP-Q-A has proven to be a viable and trustworthy assessment.

The previous studies show that lots of research studies have been carried out to explore the fact on how excessive use of smartphone is related with nomophobia. The studies tried to relate nomophobia with different demographic variables such as age, gender, education qualification, and so on. The studies were carried out to find factors that are instrumental for increment of nomophobia level. Many studies have been carried out in abroad countries to examine and explore facts about nomophobia and develop awareness among people. However, there seems to be no study to my knowledge that any study related to nomophobia has been carried out in Nepal. So, with a view point to examine the prevalent of nomophobia among teacher and students and to what extent it exists, this study is carried out. Hope this will make people knowledgeable about nomophobia and develop some strategies to tackle the issues resulted from nomophobia in this digital era.

The current study is an attempt to support the previous studies that dealt with nomophobia and pattern of mobile phone use. Probably this study will put an extra effort to previous studies carried out so far.

2.1 Conceptual Framework

The study puts light on what nomophobia is and its prevalence among students. It tries to explore nomophobia relating with different demographic variables and pattern of use of smartphones by teachers and students.

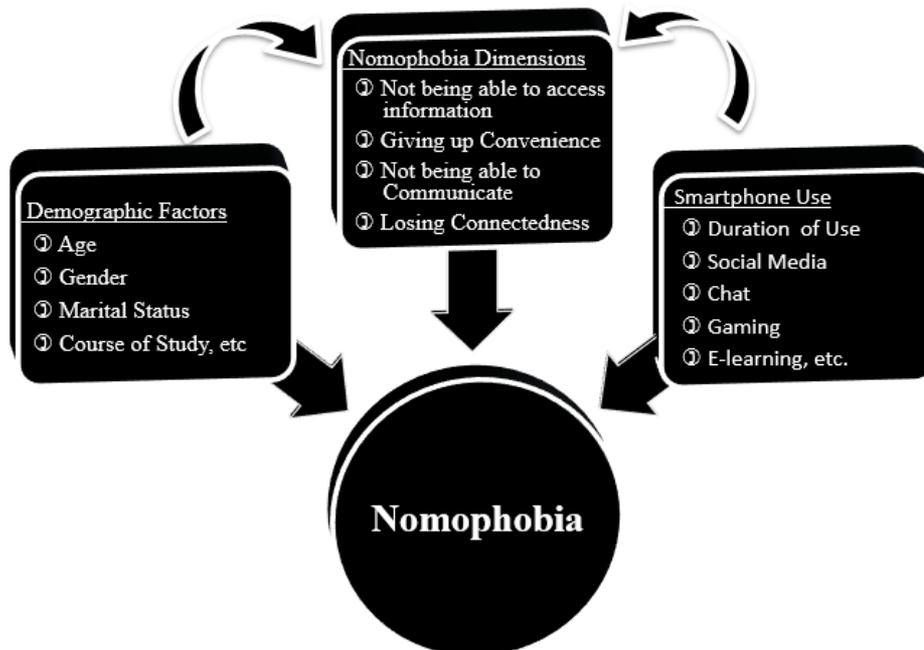


Figure 1: Conceptual Framework

The study focuses on the four dimensions of nomophobia. They are:

- a. Not being able to communicate
- b. Losing connectedness
- c. Not being able to access information
- d. Giving up convenience

The aforementioned variables are influenced by both smartphone usage patterns and demographic factors as age, gender, marital status, academic standing, and course of study. The length of time a person has owned a smartphone, how long they have used it, the apps they utilize, and other factors make up their usage pattern. These are the contributing elements of nomophobia, and they are all connected to one another in one way or another.

2.2 Research Design

A correlational strategy was used to determine the prevalence of nomophobia. The goal of a correlational design is to investigate the link between two or more variables. It aims to determine the relationship between two or more variables. The goal of the current study was to determine how nomophobia correlated with demographic factors such as age, gender, educational attainment, and position in the academic community. The study also sought to determine whether smartphone use had an impact on nomophobia.

2.3 Population and Sample

The research population included teachers working at various schools and colleges in the Bhaktapur district as well as students pursuing degrees ranging from secondary to higher education. Approximately 150 students and 45 teachers from various institutions and schools made up the study's overall population. Research samples were chosen using non-probability convenience sampling. The convenience with which the researcher could reach the respondents who took part in the study was a deciding factor.

3. Findings

The purpose of this study was to determine how common nomophobia is among educators and learners. It also looks at many elements that contribute to nomophobia. Participants in the study included male and female instructors and students from a variety of academic backgrounds and age groups. A total of 195 individuals provided data for the study, of which 150 students (76.9%) and 45 teachers (23.1%) were the subjects. The results of the questionnaire were statistically calculated and analyzed in relation to several research variables. The research's principal conclusions were:

The majority of sample participants exhibited moderate nomophobia. Of the 195 respondents in all, 51 (26.2%) showed severe nomophobia, 103 (52.8%) showed moderate nomophobia, 39 (20.0%) showed mild nomophobia, and only 2 (1.0%) showed no nomophobia at all.

- a. Compared to the student group, the instructor group displayed a higher degree of nomophobia. 45 teachers and 150 students made up the teaching population. Of them, 13 teachers (28.9%), 24 (53.3%), 8 teachers (17.8%), and nil teachers showed signs of severe, moderate, or no nomophobia, respectively. Similarly, 38 (25.3%), 79 (52.7%), 31 (20.7%), and 2 (1.3%) of the student body showed severe, moderate, mild, and no nomophobia, respectively.
- b. The average score ($\bar{X}=4.11$) was lower than the means score ($\bar{X}=4.34$) and ($\bar{X}=4.25$) from the two sub-dimensions of nomophobia, "Not being able to access information" and "Not being able to communicate." The dimensions of "Losing Connectedness" ($\bar{X} = 3.93$) and "Giving up Convenience" ($\bar{X} = 4.11$) yielded mean scores that were below average.
- c. It was shown that the demographic variable gender significantly influenced the degree of nomophobia; the female gender ($\bar{X}=86.86$) showed a higher degree of nomophobia than the male gender ($\bar{X}=78.30$).
- d. The possession of a smartphone was a blatant sign of nomophobia. The individuals (93.3%) who had smartphones exhibited a higher degree of nomophobia than the individuals (13%) who lacked smartphones.
- e. Calling (71.3%), texting and chatting (73.8%), making video calls (492–5%), emailing (50.3%), using social media (83.1%), browsing the internet (73.3%), getting news (67.2%), watching movies and listening to music (66.2%), gaming (47.2%), taking pictures (492–5%), and passing the time (52.3%) were the top reasons for using smartphones.
- f. A major contributing cause to the rise in nomophobia is the usage of smartphones for social media, gaming, music and movie streaming, phone calls, texting, and general conversation. The degree of nomophobia was unaffected, nevertheless, by using a smartphone for activities including sending emails, making video calls, obtaining news, and taking pictures.

4. Conclusion

The study shows that instructors and students both suffer from nomophobia. The majority of teachers and pupils, according to the survey, show a moderate degree of nomophobia, which is concerning. Furthermore, significant nomophobia has been reported in some teachers and pupils. If the required acts and steps are not done, the

incidence of severe nomophobia will undoubtedly grow. One could characterize this as a dangerous circumstance in the educational sector. The lovers of education are the instructors and students. Their commitment and diligence will only bear fruit in a healthy, sound atmosphere free from psychological disorders like nomophobia.

According to the study, people are more anxious about "not being able to access information" and "not being able to communicate" than they are about losing their online identity and comfort tool. This demonstrates that the widespread use of smartphones is not for the maintenance of a perceived virtual world or as a means of luxury, but rather for the legitimate goal of communication and information access. The results of the study showed that female participants had a higher level of nomophobia than did the male participants. When men and women work together to coordinate and jointly participate to teaching and learning activities, the educational environment is better. Therefore, female participants ought to minimize their fear of being alone.

Recommendations

Three tier government officials, educators, and parents should be cognizant of nomophobia and keep a close eye on their children's and students' smartphone usage. Schools and universities should offer programs to raise awareness about nomophobia and educate parents, teachers, and students on the dangers of excessive and unrestrained smartphone use.

Implication of the study

This study, "A Fear of the Digital Era: Nomophobia and Its Prevalence Among Teachers and Students," was an extremely original attempt to look into how people in the 21st century see and comprehend "A Fear of Digital Gadgets." This study raises management issues for lowering the anxiety associated with not owning a smartphone for other researchers and academics wishing to conduct analogous investigations in the field. The, future conversations regarding the significance of carefully integrating diverse tools and apps within the scope of teacher training will have a forum. It also encourages other educators to be concerned about the regulations in place so they can improve their own experiences and fulfill their professional obligations more successfully. Since this piece emphasizes the importance of having up-to-date information on pertinent topics for teachers, it also encourages policymakers, those working in school education, school staff, and other stakeholders to benchmark the fear of digital era: Nomophobia and Its Prevalence Among Teachers and Students.

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