Threat of Nomophobia to Prospective Teachers
An Empirical Study

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Abstract

In the present times, smartphones have become an essential part of everyone's life and prospective teachers are not an exception to it. The study was trying to find out the threat of nomophobia to prospective teachers in Kangra district of Himachal Pradesh. The present study was carried out to know how many prospective teachers suffer from nomophobia. Lottery method was used to select 300 prospective teachers from various B.Ed. colleges in Kangra district of Himachal Pradesh. The data were collected by using a self-developed questionnaire. In this study, the researcher tried to assess the comfort or discomfort level of prospective teachers in absence of their smartphone. The results show that the majority of prospective teachers feel discomfort or disappointment when the internet speed is reduced. Most of the prospective teachers felt disheartened when they were unable to get the information through their smartphones.

Introduction

In the present times, a smartphone with internet facilities can be found in everybody's hands. The internet makes it easy to access anywhere in the world individually without discrimination (Saxena and Singh 2019). If we see a glimpse of the education system in ancient times, it was a Gurukul system where the Gurus used to transmit their knowledge to their Shishyas through

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talks only, and the Shishyas were supposed to understand and cram the knowledge provided by the Gurus. Gradually, the Shishyas started to preserve knowledge by writing on leaves. In due course of time, with the invention of paper and the printing press, the knowledge shared by Gurus was preserved in the form of books, etc.

But it was very difficult to store or preserve the material for a very long time. With the invention of computers in the early 19th century, ancient knowledge was preserved electronically. When we look at the late 20th century, the internet revolution made life easier. With the help of the internet, stored knowledge can be disseminated within no time. Earlier, it was used through desktop computers only but in 1995 the internet was made available publicly on mobile phones also. During the pandemic, it was found more beneficial in all spheres of life, be it marketing, ticket booking, online payments, education, etc. The pandemic changed the whole system of education overnight. Before the pandemic, the school administration was not allowing mobile phones for students while they come to attend school but now the whole system of education revolves around smartphones. The digital revolution accelerate human development during the pandemic. The digital revolution has now touched several areas of relevance to the common people or students. The students were supposed to attend the class through smartphones which had created a classroom in their respective homes. Many times it has been observed that the students after joining the class put off the video and audio, and the teacher did not have any mechanism that the student is involved in the teaching-learning process or the student is busy with other apps on the smartphone. This online teaching has made the students habitual of using smartphones. In recent times, it has been witnessed that technology has turned into an important part of human life (Salehan and Nehahban, 2013). With over 6567 million smartphone users worldwide in 2022, this number is expected to increase by 6,841 million by 2023 and hundreds of millions over the next few years (Statista, 2022). The smartphone has positive and negative effects on its users, be it students or common people. They may get addicted of using smartphones. It seems very difficult that they may live without smartphones. Too much use of anything including smartphones can lead to habit formation. Such habits may bring a new form of addiction (Khurana, 2015). This type of addiction can lead to nomophobia. Nomophobia is a word that evolved from digital technology. It is the illogical fear of being without a smartphone (Vanitha, 2014). It is a state of worry, uneasiness, or distress due to the unavailability of smartphones. This new technology addiction on the other hand may

lead to various psychological problems like social isolation, anxiety, distraction, tiredness, and low success (Kirschner and Karpinski, 2010). The new generation and smartphone seems inseparable. If youngsters face problems, during the use of their smartphone, i.e., improper signals in a smartphone, battery depletion, absence of smartphone, and notifications not received by a certain period of time, they become anxious, and this anxiety creates various problems among the new generation (Yildrim et al., 2016) that may be called nomophobia.

Various studies related to nomophobia were conducted. Saxena and Kaur (2014) revealed that male prospective teachers had more computer anxiety than female prospective teachers. Further, it has been found that urban prospective teachers showed less anxiety towards computers whereas Chandak et al., (2017) reported that 53 per cent to 58 per cent of master's degree resident students are nomophobic. Yin et al., (2019) scrutinised the relationship between smartphone usage, smartphone addiction, internet addiction, and nomophobia in University Malaysia Sabah (UMS). They found that there is a positive relation between nomophobia and smartphone usage. Further, they found that the higher the addiction intensity, the higher the level of nomophobia. Yang et al., (2019) conducted a study on smartphone dependence and adolescent. The role of awareness to reduce stress. The study found the relationship between mobile phone dependence, anxiety, depression and awareness in adolescents. Further, the study revealed after controlling gender and grade, that smartphone dependence was positively related to causing worry and sadness. The stress level was also found higher in adolescent students due to a lower level of awareness. Kaviani et al., (2020) looked at three symptoms of phobias and found symptoms of problematic cell phone use, prohibited use, and dangerous cell phone use. They found symptoms of phobias, and further reported that there was a positive correlation between phobias and problems with cell phone use. Nomophobia is not caused by using the phone in the right way, apart from this, using more phones in problematic ways becomes dangerous and one becomes dependent on it; due to which, the level of nomophobia increases. Farchakh et al. (2021) conducted a cross-sectional study between January to July 2020 and reported a positive correlation between psychological condition and nomophobia, whereas Sahin and Bulbuloglu (2021), investigated the effect of nomophobia, on the intellectual thinking of university students of Turkey. They revealed that nomophobia prevents intellectual development and had negative effects on their overall life. According to Dana et al. (2022) excessive use of smartphones affects the behaviour of adolescents before and during

COVID-19. They suggested that physical activities promote healthy living among adolescents.

From the above corpus of available literature, it has been found that nomophobia is a major problem in the present society due to over-dependence on smartphones. Nomophobia is a serious problem in Indian society and in the world too. For the well-being of the students, some measures should be adopted to remove nomophobia from the society. This will happen when our society is made aware of this serious problem. Despite all the services and utility of digital advancement in smartphones, there is rising distress about the possible negative impact of smartphones which may have a serious effect on their mental and physical health. According to Lemola et al. (2015), excessive use of smartphones create various problems, i.e., depression, anxiety, stress, and other psychological problems are becoming progressively more common. On the basis of the review of the previous studies, various psychological problems related to smartphones were found. Therefore, the researchers conceptualised objectives to identify the new threat of nomophobia among prospective teachers.

Need and Significance of the Study

Nomophobia, another name for 'no-mobile-phone phobia', is the fear of not having a mobile device or of not being able to use one. The dangers of nomophobia for prospective teachers can be multifaceted, and an empirical investigation of the issue's necessity and importance might provide insightful information. The possible fields of investigation are summarised as follows:

1. Distraction at Work and Productivity: Examine how a prospective teacher's fear of being alone during work hours could contribute to more distractions and analyse how it affects lesson planning, productivity, and the capacity to concentrate on teaching duties.
2. Educator-Pupil Relations: Analyse how nomophobia affects interactions between pupil and the educator both within and outside of the classroom. And, examine how the quality of the interactions among educators and pupils is impacted by their ongoing connectedness.
3. Career Advancement: Examine if prospective teachers in career growth possibilities are hampered by nomophobia and further analyse the effects on social networking, lifelong learning, and keeping abreast of developments in education.
4. Classroom Organisation: Examine how nomophobia affects management in the classroom abilities and analyse whether being always connected affects one's capacity to manage behaviour problems and sustain a disciplined learning environment.

Objectives

To conduct the study the following objectives were framed:

1. To study the usage of smartphones.
2. To find out the threat of nomophobia among prospective teachers.
3. To explore the psychological symptoms of nomophobia among prospective teachers.
4. To give suggestions to overcome nomophobia among prospective teachers.

Research Methodology

The research methodology involves a systematic process by which the researchers initiate the process from the initial diagnosis to the conclusion. Keeping in view the research objectives, descriptive survey method was used.

Sampling

For the present study, 300 prospective teachers of different streams were selected randomly from teacher education colleges situated in Kangra district of Himachal Pradesh. Researchers used self-constructed tools for the study, i.e., smartphone usages questionnaire and nomophobia scale for prospective teachers to identify the threat of nomophobia among prospective teachers. Further, researcher established reliability through test-retest method, and validity through content validity and construct validity of the tools. For collecting the data, Google form was prepared and the link of Google form sent to prospective teachers of selected three colleges. Only 245 prospective teachers, for example 66 prospective teachers in the medical stream, 83 prospective teachers in the non-medical stream, 80 prospective teachers in the arts stream, and 16 prospective teachers in the commerce stream) submitted the Google form which is created by the researchers to collect the data.

Data analysis and interpretation

The data was analysed through percentage and frequency analysis.

Table 1
Gender-wise Distribution of the Sample

Gender	Number of Prospective Teachers	Percentage (%)
Male	27	11
Female	218	89
Total	245	100

Table 1 depicts gender-wise distribution of the entire sample. From the population, we selected only 27 male and 218 female samples for our study which corresponds to 11 per cent of the entire population, and selected 89 per cent of female prospective teachers based on the Google forms they had filled.

Table 2
Age-wise Distribution of the Sample

Age	Number of Prospective Teachers	Percentage (%)
Below 20	00	0
20–25	172	70.2
26 and above	73	29.80
Total	245	100

Analysis of Table 2 shows the age-wise distribution of the sample. The maximum number of prospective teachers was found in the age group of 20–25 years is (70.20 per cent), and only 29.80 per cent were in the age group of 26 and above. On the basis of the above table, it can be inferred that most of the samples included in this study were female and they were in the age group of 20–25 years.

Table 3
Stream-wise Distribution of Prospective Teachers

Streams	Number of Prospective Teachers	Percentage (%)
Medical	66	26.9
Non-Medical	83	33.9
Arts	80	32.7
Commerce	16	6.5
Total	245	100

The stream-wise distribution is given in the Table 3, and this table shows that out of the entire sample, 83 (33.9 per cent) were non-medical students, followed by art students, i.e., 80 (32.7 per cent) and then 66 (26.9 per cent) medical students and 16 commerce students were included in our study. In this study, students from various streams were included to identify the risk of smartphone usage and the danger of nomophobia.

Table 4
Duration of Smartphone Usage by Prospective Teachers in a Day

Duration	No. of Responses	Percentage (%)
Less than 2 hours	39	15.9
2–4 hours	81	33.1
4–8 hours	110	45
More than 8 hours	15	6

Table 4 shows how much prospective teachers use their smartphones in a day. It was found in the study that 45 per cent prospective teachers use their smartphones for 4 to 8 hours a day, and 33.1 per cent prospective teachers 2 to 4 hours and 15.9 per cent prospective teachers use their smartphones between 0 and 2 hours per day. It was found that there are only 6 per cent prospective teachers who use their smartphones for more than 8 hours in a day. So most of the prospective teachers

use their smartphones between 4–8 hours a day. This excessive usage shows that most of the prospective teachers are addicted to their smartphone.

Table 5
Time Duration to Check their Smartphone in Entire day by Prospective Teachers

Time	No. of Responses	Percentage (%)
Less than 10 times	37	15
10–20 Times	78	32
20–40 Times	118	48
40–80Times	10	4
More than 80 Times	2	1

Table 5 shows how often prospective teachers look at their smartphones per day. In this, it was found that 48 per cent of prospective teachers check their smartphones 20 to 40 times per day, followed by 32 per cent of prospective teachers checking their smartphone 10 to 20 times, while 15 per cent for less than 10 times a day and there are very few, i.e., 4 per cent (10 prospective teachers) and 1 per cent (2) prospective teachers who use it between 40–80, and more than 80 times a day. From the above study, it can be concluded that most of the prospective teachers, i.e., 48 per cent keep checking their smartphone for 20 to 40 times in a day.

Table 6
Top Four Social Networking Sites Searched by Prospective Teachers

S. No.	Top Four Most Social Networking Sites	No. of Responses	Per-centage (%)
1.	Whatsapp	223	91.1
2.	Youtube	181	74.2
3.	Instagram	158	64.5
4.	Facebook	126	51.6

Table 6 reveals the usage of top four social networking sites. According to www.statists.com site, the most popular social networking sites worldwide as of January 2022 are Facebook, YouTube, WhatAapp and Instagram. That's why the authors selected these top four sites for their study. In the study, it was found that 223 (91.1 per cent) prospective teachers use WhatsApp the most, followed by YouTube which is the second number used site by 181 (74.2 per cent) prospective teachers, and Instagram, was used by 158 (64.5 per cent) prospective teachers. And finally, Facebook by 126 (51.6 per cent) prospective teachers on their smartphones. Based on these percentages, we can say that WhatsApp, the social networking site is the most commonly used by prospective teachers, which was 91.1 per cent. As a result, we can say that most of the prospective teachers used these social networking sites to their personal use and were more

engaged in their virtual world than in their real world.

Table 7
Stream-wise Percentage of Smartphone Usage by the Prospective Teachers

Streams	Percentage (%) of Smartphone Usage
Medical	24.2
Non-Medical	31.8
Arts	37.5
Commerce	6.5

An analysis of Table 7 leads us to the conclusion that 37.5 per cent prospective teachers using their smartphone, were from Arts streams followed by 31.8 per cent prospective teachers using their smartphone, were from non-medical streams, in medical stream that is 24.2 per cent, whereas in commerce stream, there were very few, i.e., only 6.5 per cent prospective teachers were using their smartphones. From the above table, we can conclude that most of the prospective teachers, i.e., 39.5 per cent using their smartphones were from arts stream. It shows that maximum students who belong to arts stream are more dependent on their smartphone.

Table 8
Percentage of Different Dimension of Nomophobia Scale

S. No.	Dimensions	Total Percentage (%)
1.	Anxiety	40.52
2.	Stress	25.75
3.	Distraction	18.09
4.	Loneliness	10.08
5.	Insecurity	5.56
Total		100

Analysis of Table 8 describes the percentage of various dimensions of nomophobia among prospective teachers. The researchers have identified five dimensions of nomophobia scale, i.e., anxiety, stress, distraction, loneliness, and insecurity. Under these five dimensions, various items were framed. Further, we calculated the frequency and percentage of each item. On the basis of these calculations, we are able to calculate the total percentages of each dimension, i.e., anxiety (40.52 per cent), stress (25.75 per cent), distraction (18.09 per cent), loneliness (10.08 per cent), and insecurity (5.56 per cent) in prospective teachers. On the basis of these percentages, it can be concluded that most of the prospective teachers were nomophobic and without their smartphones, they feel insecure, anxious, stressed, distracted and lonely, etc.

Discussion

Researchers conducted a survey to determine the threat of nomophobia among prospective teachers in the Kangra district of Himachal Pradesh. This study explored various psychological issues which were not good for the mental and physical health of prospective teachers. Most prospective teachers keep their smartphones switched on all the time as they feel insecure when they are not

able to access information through their smartphones. If the internet speed is reduced, they feel anxious and these symptoms, i.e., anxiety and failure in self-control, etc., create anxiety among prospective teachers. In our study, we find that 45 per cent of the prospective teachers use their smartphones per day between 4–8 hours, whereas 33.1 per cent are using their smartphones 2–4 hours per day. Further, we find the top four networking sites, i.e., WhatApp (91.1 per cent) followed by YouTube (74.2 per cent), Instagram (64.5 per cent), and Facebook (51.6 per cent) used by prospective teachers. This figure shows that most prospective teachers were using their smartphones for social networking sites and due to the excessive use of these sites, prospective teachers feel anxiety, insecurity, stress, distraction, and loneliness. These symptoms create nomophobia among prospective teachers. Major problems were arising due to dependence on their smartphone. According to Aggarwal and Saxena (2012), 'Young students need to learn how to become more aware of their emotions and how to handle situations involving emotional changes, and how to fight their emotions with the challenges of life's triumph and despair'.

Suggestion to Overcome Nomophobia

Some suggestions are given below to reduce nomophobia among prospective teachers:

- Prospective teachers should not use smartphones too much.
- They should spend leisure time doing physical activities to reduce nomophobia.
- The Government should monitor and regulate social media usage.
- Teacher education institutes should introduce yoga education to improve good mental health among prospective teachers.
- The establishment of guidance and counseling centres for prospective teachers is essential to promoting good mental health.
- It is important for teachers to educate prospective teachers about the side effects of excessive smartphone usage.
- Implement digital detox and mindfulness training classes to assist instructors in developing a healthy relationship with smartphones.
- Provide professionals with the knowledge and confidence to use smartphones as teaching resources rather than distractions.

Conclusion

In this paper, the authors have made an attempt to explore many psychological symptoms and behavioural problems that have appeared due to nomophobia. Which creates various side effects on the mental and physical health of prospective teachers. Sometimes, smartphones give convenience to

prospective teachers, on the other hand, it create problems related to various dimensions of nomophobia and we should pay close attention to overcome this phobia from societies and prospective teachers.

According to Saxena and Aggarwal 2010, "Every individual has to be well prepared to handle every type of situation in life". Further, we try to find the right way to make a smartphone a useful tool. Therefore, we must remember that the use of smartphones can only be fruitful if used within certain limits and used for learning purposes.

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