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RESEARCH ARTICLE

Exploring the Role of Gender Differences in the Development of Nomophobia among College Students

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Abstract: This particular investigation was conducted to identify the impact of gender on the level of concern and anxiety associated with using mobile technology (the fear being disconnected from a mobile device). This research was a cross-section of a population of 500 (265 males and 235 females) public college students in Gujrat City, Pakistan, and was conducted using a non-probability convenient sample method in which all students were enrolled and possessed at least one mobile device (smartphone) for data collection purposes. Participants were asked to respond to the Urdu version of the Nomophobia Questionnaire (NMP-Q), which had a total of 14 items and was based on the definition of specific phobias in the DSM-V. Data collection and analysis were performed using descriptive statistics and Independent Samples t-tests to evaluate the statistical significance of the differences between the means of the two groups. The average age of the sample was 20.93 years. Female participants were found to have an overall higher average score (M = 43.70, SD = 8.98) than male participants (M = 42.01, SD = 9.81) who scored lower. An Independent Samples t-test confirmed that there was a statistically significant difference between males and females (t (498) = -2.00, p = .046), with a difference of 1.69 points between the means, and with a 95% Confidence Interval for the mean difference (-3.35, -0.03), leading to the conclusion that female participants were more likely than male participants to experience higher levels of nomophobia.

Keywords: Nomophobia, Gender Differences, College Students, Smartphone Dependence, Emerging Adulthood, Digital Anxiety, Nomophobia Questionnaire (NMP-Q)

Introduction and Background

Because of the rise in mobile phone usage, as well as the increase in the number of people attending college/university, individuals will rely heavily on their mobile devices to communicate with one another, academically, and socially. Therefore, as usage increases so will the incidence of nomophobia (the fear of not being able to access your mobile device). This condition, considered by many researchers to be a very real issue in the present time, is believed to interfere with an individual's ability to function normally both socially (King et al., 2010) and in academic situations, thereby contributing negatively to an individual's psychological health. Nomophobia is the acronym used for the word "no mobile phone phobia." Yildirim and Correia (2015) define nomophobia as the "fear of being disconnected from a mobile phone, either through lack of use or unavailability of services." The literature describes the following components associated with nomophobia: The behaviour of compulsively checking one's mobile device, and the need to keep a mobile phone within reach or plugged in to the electrical outlet constantly (Bragazzi & Del Puente, 2014).

Cognition: The fear of losing your mobile device or running out of battery or data storage.

Emotion: The feelings of anxiety, distress, or panic experienced when you cannot use your mobile device or get in touch with people (King et al., 2010). Nomophobia has been conceptualised as part of the "Modern

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Digital Anxiety" seen in "Emerging Adulthood" (King et al., 2010), and is closely related to either digital or smartphone dependency/ addiction.

Nomophobia among College Students

Students enrolled at colleges or universities are more susceptible than other populations to experience nomophobia, as these students face the demands of constant social interaction, academic activities, entertainment, etc. Studies have demonstrated that college/university students are among the highest consumers of mobile phones, with many students experiencing moderate to severe levels of nomophobia (Soomro et al., 2025). For example, in a recent study in Pakistan, almost all (99.1%) of the participants were found to experience some level of nomophobia, with a range of severity from mild to severe (Al Maghaireh et al., 2025). Nomophobia is believed to be related to academic stress, peer pressure, and dependency on technology. College/university students frequently use their mobile devices as coping strategies for both their academic stressors and to maintain or achieve peer social acceptance. As such, students often become distressed when they cannot use their mobile devices to maintain their social status and connections (Chiu, 2014).

There have been mixed results in the literature regarding the role of gender in relation to nomophobia and technology use.

1. Supportive Evidence of Female Bias in Nomophobia

Studies show that women may have a stronger emotional connection to communication technologies (Çakto et al., 2025). Evidence of this comes from a study conducted in Lahore, Pakistan that found that women reported an overall greater amount of nomophobia compared to men, particularly in the factor of "Not able to communicate." This finding supports the general trend of women being more active on social networks and being at a higher risk for feelings of loneliness or fear of losing contact with someone, which are two primary factors of nomophobia (Ferreira et al., 2025). A different study conducted in Pakistan and Turkey that compared students from both countries also found a statistically significant effect of gender on nomophobia, with female students being at the highest risk (Schwaiger & Tahir, 2020).

2. Evidence That Males Have No Difference or a Higher Amount of Nomophobia

In contrast, some studies indicate that males are more actively engaged in video gaming and information usage (Huey & Giguere, 2023) and may therefore be more likely to be addicted to those two aspects. Some studies have shown that males report higher levels of nomophobia, or no significant difference exists in the amount of nomophobia reported by males and females (Çırak & Tuzgöl Dost, 2022; Ozdemir et al., 2018). For example, a study conducted in Pakistan showed no significant difference in the amount of nomophobia reported by males.

It is important to identify whether gender impacts patterns of development regarding not only how much people use their phones, but what the reasons are for that use and how cultural influences may mediate the connection between gender and how cell phone dependence develops by studying the patterns related to college students.

Rationale and Significance of the Study

Given that college-aged individuals experience the greatest dependence on their cell phones due to many hours of usage, as well as the pressures associated with using their phones for social and academic purposes, researching whether gender impacts the development of cell phone dependence among college-aged students within a defined culture is critical. Existing studies have conflicting findings regarding the influence of gender upon nomophobic symptomatology; therefore further research is needed to clarify if gender is a contributor to the development of nomophobia. It is important that additional empirical data also be added to the

Available literature regarding cell phone dependence in Pakistan or the South Asian region of the world, as cultural differences exist between these and the countries of the West, which may lead to different findings than have historically been found in studies of nomophobia in Western cultures (Noor et al., 2020). This study adds to the existing psychological understanding of digital dependence by providing an understanding of how gender is a contributing factor. Institutions may benefit from the results of this study by developing gender sensitive interventions/prevention programs based upon the specific factors leading to nomophobia for male and female students (for example, a social connectedness motive for females vs an informational/gaming motive for males).

Objectives of the Study

1. To compare the role of gender differences in the development of nomophobia.

Method

Design

A cross-sectional research design was used to compare the role of gender difference in the development of nomophobia in college students.

Population of the study

The population studied in this research was college students who are currently enrolled in the colleges of Gujrat city.

Inclusion/Exclusion Criteria

Based on inclusion criteria participant were recruited from colleges who retained a smartphone and were registered in the public sector colleges within the Gujrat city. Both intermediate and undergraduate college students were included in the study.

Exclusion Criteria

Exclusion criteria specified that students other than enrolled in collages were excluded from the study. Students with any psychological diagnosis or physical health issues were not be taken in the study. Furthermore, students who did not have any smartphone were excluded from the sample.

Sampling technique

The current research study engaged a non-probability convenient sampling approach for the selection of student from colleges based on their willingness and availability to participate. A sample of 500 college students were acquired. The sampling frame can be acquired but due to less time available for research this sampling technique was used.

Measures

Along with demographic form, the scale of nomophobia was used for data collection.

Nomophobia Questionnaire

A self-administered measure of nomophobia that is an Urdu version of the NMP-Q. It was drawn from the DSM-V definition of specific phobias (American Psychiatric Association, 2013). Indigenous nomophobia scale contains 14 items with four factors: giving up convenience, fear of losing connectedness, personal distress and fear of not getting information. It is on 7 point Likert scale. In addition, this scale can be used to identify individuals at risk for developing nomophobia (Naz et al., 2025).

Procedure

For the current research project data was gathered after taking permission from the authorities of college in Gujrat city. Once the permission was taken, students were briefed about the aim of this research study. The students were assured about their confidentiality and the security of data collected from them. Further, participants were informed that their participation was solely voluntary and they can withdraw form research at any time. Informed consent was assembled both verbally and written. Students were then given the response questions that have demographic information and items of Nomophobia Questionnaire. The time taken to complete was just 10 minutes. The research data was collected, assessed for accuracy and completeness, and recorded.

Statistical Analysis

Data analysis was conducted with IBM SPSS (Version 24). In this study, descriptive statistics and independent sample t-test was used to explore the gender differences in relation to nomophobia in college students.

Results

The mean age of college students were 20.93 years, majority were male and unmarried. Mostly college students were studying in 1st year followed by 4th year, 2nd years and 3rd years.

Table 1

Independent Samples t-Test Comparing Nomophobia Scores across Gender

Variable	Gender	N	Mean	SD	SE
Nomophobia	Male	265	42.01	9.81	0.60
Nomophobia	Female	235	43.70	8.98	0.59

The female college students (M = 43.70, SD = 8.98) reported greater nomophobia as compared to male students (M = 42.01, SD = 9.81).

Table 2

Independent Samples Test

Test	F	p (Levene's)	t	df	p (2-tailed)	Mean Diff.	SE Diff.	95% CI (Lower to Upper)
Equal variances assumed	1.11	.292	-2.00	498	.046	-1.69	0.84	-3.35 to -0.03
Equal variances not assumed	—	—	-2.01	497.47	.045	-1.69	0.84	-3.34 to -0.03

The assumption of equal variances has been confirmed as a result of this study using a Levene's test (p = .292) therefore the first row of t-test results has been used. A t-test of Independent Sample reveals that there was statistical significant difference in gender in relation to Nomophobia, (t(498) = -2.00, p = 0.046). Nomophobia mean difference was approximately 1.69 points. The 95% confidence interval indicates that the actual mean difference may range from -3.35 to -0.03. This shows that the difference was small but statistically confirmed.

Discussion

The research conducted attempted to assess the nomophobia experienced by college students based upon a gender difference analysis. A cross-sectional research design was used to compare the role of gender difference in the development of nomophobia in college students. A sample of 500 college students were recruited from different colleges of Gujrat city. The smartphone users were retained from public sector

colleges. Both intermediate and undergraduate college students took part in research. The non-probability convenient sampling technique selected students from colleges who were willing and available to participate. Within the context of current literature in regard to this phenomenon, results provide statistically significant evidence for a difference in the experience of nomophobia. Therefore, they will be discussed in conjunction with the implications of the findings for treatment and intervention.

With respect to the demographic data collected, it was found that the average age of college students participating in the study was 20.93 years old; this age is an example of what is typically designated as "emerging adulthood", which is generally associated with increased usage of the smartphone (Yildirim & Correia, 2015). It was noted that Female College Students reported (M = 43.70, SD = 8.98) a higher average score for nomophobia than Male College Students (M = 42.01, SD = 9.81); this implies that Female College Students tend to have greater anxiety or distress related to their disconnection from their mobile devices. A Levene☐s test of equality of variance produced a non-significant result, F(1, 498) = 1.11, p = .292, which indicates that the assumption of equal variance met the criteria necessary to interpret the first line of independent samples t-test. The independent samples t-test found significant differences between the nomophobic scores of males and females, t(498) = -2.00, p = .046, therefore confirming that the p-value is less than the conventional significance level of alpha = .05, thus indicating that it is unlikely that the difference observed between the male and female average scores occurred due to chance alone. A 95% Confidence Interval (CI) for the difference between mean scores of females and males was -3.35 to -0.03. As the entire interval lies below 0 and does not include 0, it supports the results of the analysis that indicated that females average a higher population mean score than do males. The results showing that females reported significantly higher nomophobia scores agree with previous international and regional studies (Çakto et al. 2025). The increased nomophobia experiences in female students have commonly been attributed to the gendered technology use patterns. Females generally use their smartphones for social networking, maintaining connections and communication with others more than males (Ferreira et al. 2025). When mobile phone connectivity is interrupted, it eliminates an essential support mechanism for these social needs; thus, the female has a greater fear of losing contact with others, as well as a greater fear of being unable to communicate (King et al. 2010), both of which are primary components of nomophobia. In the context of South Asia (if applicable), gendered societal norms may also impact how women view and use mobile phones for communication and networking purposes, thus increasing their reliance on personal devices to maintain social connections (Noor et al. 2025). On the other hand, research studies have also highlighted no significant gender differences, with some reporting even higher nomophobia scores in males and attributing these differences to male gaming/addiction, or utilitarian use of mobile phones (Çırak & Tuzgöl Dost 2022). This current study

Conclusion

The finding of the results concluded that gender plays an important and significant role in the development of nomophobia. It intended that females experience slightly higher nomophobia compare to males.

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