

Assessment of Knowledge and Outcomes of Nomophobia Among Students at a Selected Degree College in Riyadh

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Introduction: Nomophobia, the fear of being without a mobile phone, is increasingly prevalent among university students, impacting their psychological well-being and academic performance. This study assesses the level of knowledge and the psychological, academic, and social outcomes associated with nomophobia among students at King Saud University, Riyadh, Saudi Arabia.

Methods: A descriptive cross-sectional design was employed, involving 350 undergraduate students recruited via convenience sampling. Data were collected using a structured questionnaire adapted from the Nomophobia Questionnaire (NMP-Q). Statistical analyses, including descriptive statistics, Pearson correlation, and multiple regression, were conducted using IBM SPSS.

Results: The majority of participants (51.4%) exhibited moderate knowledge of nomophobia. Higher nomophobia scores were significantly associated with lower academic performance ($r = -0.35$, $p < 0.001$) and greater psychological distress, including anxiety (mean score = 5.2) and panic when phone battery was low (mean score = 4.8). Regression analysis identified gender ($\beta = 0.28$, $p = 0.001$) and smartphone ownership ($\beta = 0.20$, $p = 0.003$) as predictors of nomophobia.

Discussion: The findings highlight nomophobia's negative impact on students' academic and psychological well-being, emphasizing the need for educational interventions to promote healthier smartphone usage. Addressing nomophobia through targeted strategies could improve academic outcomes and overall student wellness.

Keywords: nomophobia, smartphone addiction, academic performance, psychological outcomes, university students

Introduction

Nomophobia, or the fear of being without a mobile phone, has become a growing phenomenon in modern society, particularly among students. This term, coined from “no mobile phone phobia”, refers to the anxiety and distress individuals feel when they are separated from their phones.^{1,2} As the use of smartphones has exploded globally, dependence on these devices has intensified. Today, mobile phones are not merely tools for communication; they have evolved into essential devices for everyday life, offering a range of services from social networking to educational tools, entertainment, and personal management systems.³ As a result, the overreliance on smartphones is leading to a new form of psychological and social dysfunction, which is of significant concern, especially among young adults and college students, who are increasingly exhibiting symptoms of nomophobia.^{4,5}

The impact of nomophobia on students is multifaceted, affecting not only their mental well-being but also their academic performance, social interactions, and overall quality of life.^{6,7} Research into smartphone addiction has long indicated that prolonged and compulsive use of mobile phones can lead to a wide array of health issues, including anxiety, depression, and sleep disturbances.⁸ However, nomophobia as a specific concept has only recently gained scholarly attention, which means the literature remains somewhat limited, particularly regarding its long-term effects and the full scope of its influence on specific populations, such as college students.^{9–11}

In the context of students, nomophobia is particularly relevant because this demographic is at a critical developmental stage where the formation of social, professional, and academic identities occurs.¹² College students are often in environments that encourage or require the frequent use of mobile phones for academic work, socialization, and personal communication.¹³ This constant engagement with their phones, although beneficial in many ways, has the potential to exacerbate nomophobic tendencies.^{14,15} Studies have suggested that students often exhibit anxiety when their phones are inaccessible, leading to feelings of isolation, irritability, and even panic.¹⁶ Furthermore, nomophobia can interfere with students' ability to concentrate on academic tasks, as the constant need to check their phones can disrupt study patterns and reduce productivity.¹⁷ Despite these findings, the precise relationship between nomophobia, academic performance, and student well-being is not fully understood, as the existing literature does not yet provide a comprehensive picture of the underlying mechanisms that contribute to these outcomes.¹⁸

Research on nomophobia often intersects with broader studies on smartphone addiction and problematic internet use, but the uniqueness of nomophobia lies in its specific focus on the emotional and psychological dependency on mobile phones rather than on the content accessed via these devices.^{19,20} While the literature on digital addiction provides insights into the general patterns of overuse, few studies have examined the emotional implications of being without one's phone, which is the crux of nomophobia.²¹ This gap in the literature is significant because it suggests that researchers may be overlooking a critical aspect of smartphone addiction namely, the attachment to the device itself, as opposed to what is accessed through it. This distinction is crucial for understanding how nomophobia operates differently from other forms of digital addiction.^{22,23}

Moreover, the existing literature tends to focus on nomophobia in Western contexts, where smartphone use is pervasive and has been a part of daily life for longer periods. In contrast, research on nomophobia in the Middle East, particularly in countries such as Saudi Arabia, is still emerging.^{24,25} Given the rapid adoption of smartphones in the Middle East over the past decade and the unique socio-cultural dynamics of the region, it is important to explore how nomophobia manifests in these settings.²⁶ Saudi Arabia, in particular, presents a unique case study for examining nomophobia due to its high smartphone penetration rates and the increasing reliance on mobile technology for social, educational, and professional interactions. Yet, despite the high usage rates, there is a lack of empirical research exploring the prevalence and outcomes of nomophobia among students in Saudi Arabia.²⁷ This gap in the literature underscores the need for region-specific studies that can provide a more nuanced understanding of nomophobia within different cultural and social contexts.

Another aspect of the literature that remains underexplored is the gender differences in nomophobia. Some studies have hinted at the possibility that women may experience higher levels of nomophobia due to different patterns of mobile phone usage, particularly in relation to social media engagement.²⁸ However, these findings are inconclusive, and there is a need for more comprehensive studies that examine how gender influences the experience of nomophobia, particularly among student populations. Additionally, while the psychological effects of nomophobia, such as anxiety and stress, are well-documented in the literature, fewer studies have examined its impact on students' physical health, such as sleep disturbances, eye strain, and the potential long-term effects of excessive mobile phone use on physical well-being.²⁹ These gaps highlight the need for further research that considers both the psychological and physical dimensions of nomophobia.

Existing research on nomophobia primarily focuses on Western populations, with limited attention to the Middle East, especially Saudi Arabia. Given the high smartphone penetration rates in Saudi Arabia and the increasing integration of mobile technology into daily life, examining nomophobia in this region is crucial.²⁴ Cultural nuances, such as social norms, family dynamics, and gender roles, may influence how nomophobia manifests among Saudi students, differing significantly from Western contexts.³⁰

This study addresses these gaps by exploring the knowledge, prevalence, and outcomes of nomophobia among students at King Saud University, Riyadh. By focusing on this unique cultural setting, the study aims to provide region-specific insights and inform targeted interventions to promote healthier smartphone use.

Aim of the Study

The aim of this study is to assess the level of knowledge, and the psychological, academic, and social outcomes associated with nomophobia among students at a selected degree college in Riyadh, Saudi Arabia.

Research Questions

1. What is the level of knowledge about nomophobia among students at the selected degree college in Riyadh?
2. What are the psychological outcomes related to nomophobia experienced by the students?
3. How does nomophobia affect the academic performance of the students?

Materials and Methods

Study Design and Setting

This study utilized a descriptive cross-sectional design to evaluate the knowledge, prevalence, and outcomes of nomophobia among undergraduate students. The study was conducted at King Saud University, Riyadh, Saudi Arabia, a diverse academic institution with a student body from various disciplines. Data collection spanned four weeks, allowing researchers to capture a comprehensive snapshot of the student population.

Sample and Sampling

The target population comprised full-time undergraduate students at King Saud University. Participants were required to own a smartphone and have completed at least one semester of study to ensure familiarity with the academic environment and smartphone usage. Part-time students and those with diagnosed anxiety disorders unrelated to smartphone use were excluded to minimize confounding variables that could influence the results.

A convenience sampling method was employed due to logistical constraints and ease of access to participants. While this approach facilitated timely recruitment, it inherently limits the generalizability of the findings to broader populations. To address this limitation, efforts were made to recruit participants from diverse academic departments and year levels.

Data Collection Tool

Data were collected using a structured questionnaire adapted from the Nomophobia Questionnaire (NMP-Q) developed by Yildirim and Correia. The questionnaire was translated into Arabic and culturally adapted by a panel of experts, including psychologists and specialists in technology dependence. This ensured linguistic and contextual appropriateness for the Saudi student population.

The NMP-Q typically comprises 20 items. However, an additional item was included in this study to capture a culturally specific dimension of smartphone dependency, resulting in a 21-item tool. The questionnaire assessed four dimensions of nomophobia:

1. Fear of not being able to access information
2. Fear of losing connectedness
3. Fear of not being able to communicate
4. Fear of giving up convenience

Each item was rated on a 7-point Likert scale, with total scores ranging from 21 to 147. Higher scores indicated greater levels of nomophobia. Knowledge about nomophobia was categorized into three levels—*poor* (21–62), *moderate* (63–104), and *good* (105–147)—based on tertile distribution.

The internal consistency of the questionnaire was evaluated using Cronbach's alpha. The total score demonstrated excellent reliability ($\alpha = 0.88$), and the subscales also showed high reliability:

- Fear of losing connectedness: $\alpha = 0.85$
- Fear of not being able to communicate: $\alpha = 0.83$
- Fear of giving up convenience: $\alpha = 0.82$
- Fear of not being able to access information: $\alpha = 0.81$

Data Collection Procedure

Participants were approached in various locations, including lecture halls, libraries, and common areas. After providing informed consent, students completed the questionnaire on-site, which took approximately 15 minutes. For students who could not participate in person due to scheduling conflicts, an identical online version of the questionnaire was distributed via the university’s internal communication platform.

Data Analysis

Data were analyzed using IBM SPSS Statistics (Version 28). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize demographic data and knowledge levels. Relationships between nomophobia and academic performance were examined using Pearson correlation coefficients. Multiple regression analysis identified significant predictors of nomophobia, including gender, number of smartphones owned, years of smartphone use, and academic year. These variables were chosen based on their relevance in the literature and their theoretical relationship to nomophobia. The analysis included all independent variables, and results were reported with 95% confidence intervals to enhance interpretability. Statistical significance was set at $p < 0.05$.

Ethical Considerations

This study was conducted in accordance with the principles outlined in the Declaration of Helsinki, ensuring that the research adhered to the highest ethical standards for human subjects. Ethical approval was obtained from the Research Ethics Committee at King Saud University (Reference: 2024–774), and all participants provided informed consent prior to participating in the study. To safeguard participants’ anonymity and confidentiality, no personally identifiable information was collected. Participants were assigned unique identification codes for data analysis, ensuring that their responses could not be traced back to them. All completed questionnaires, both in paper and electronic formats, were securely stored in a password-protected database accessible only to the research team. Additionally, participants were informed of their right to withdraw from the study at any time without any repercussions. These measures were implemented to uphold participants’ privacy and maintain the integrity of the research process.

Results

Table 1 presents A total of 350 students participated in the study, with an equal distribution of males (50%) and females (50%). The majority of participants (47.1%) were aged 22–25 years, followed by 31.4% aged 18–21 years, and 21.4% aged 26 and above. Most students were single (82.9%), while 17.1% were married. Regarding living arrangements, 38.6% lived with their families, 37.1% resided on-campus, and 24.3% lived off-campus.

Table 2 presents the academic performance data of the 350 participants, illustrating their distribution across academic years and GPA scores. A majority of the participants were in their 2nd year (28.6%) and 3rd year (25.7%), with smaller, equal

Table 1 Demographic Characteristics of the Study
Participants (N = 350)

Variable	Frequency (n)	Percentage (%)
Gender		
Male	175	50.0
Female	175	50.0
Age (years)		
18–21	110	31.4
22–25	165	47.1
26 and above	75	21.4

(Continued)

Table 1 (Continued).

Variable	Frequency (n)	Percentage (%)
Marital Status		
Single	290	82.9
Married	60	17.1
Living Arrangement		
On-campus	130	37.1
Off-campus	85	24.3
With family	135	38.6

Table 2 Academic Performance of Participants (N = 350)

Variable	Frequency (n)	Percentage (%)
Academic Year		
1st year	80	22.9
2nd year	100	28.6
3rd year	90	25.7
4th year and above	80	22.9
Previous Semester GPA		
A (4.0)	75	21.4
A- (3.7–3.9)	90	25.7
B+ (3.3–3.6)	85	24.3
B (3.0–3.2)	70	20.0
Below 3.0	30	8.6
History of Academic Honors		
Yes	150	42.9
No	200	57.1

proportions in the 1st year and 4th year and above (both 22.9%). In terms of GPA, 25.7% of participants had a GPA in the A-range (3.7–3.9), followed by 24.3% in the B+ range (3.3–3.6). Notably, 21.4% of students achieved a perfect GPA of 4.0, while 20.0% had a GPA in the B range (3.0–3.2). A smaller percentage (8.6%) had a GPA below 3.0, indicating that most participants maintained relatively high academic performance. Regarding academic honors, 42.9% of students reported having been recognized for their academic achievements, while 57.1% had not received such recognition.

Table 3 presents the mobile phone usage patterns among the 350 participants in the study. The majority of participants (62.9%) owned one smartphone, while 27.1% owned two, and 10% had more than two smartphones, indicating that a substantial portion of students are dependent on more than one device. Regarding the duration of smartphone ownership, the largest group (42.9%) reported having owned a smartphone for 4–6 years, followed by 24.3% who have used smartphones for more than 6 years, reflecting a significant level of long-term usage. Only 5.7% have owned a smartphone for less than a year. In terms of charging frequency, most participants charged their phones twice a day (34.3%), while 28.6% charged their

Table 3 Mobile Phone Usage Patterns of Participants (N = 350)

Variable	Frequency (n)	Percentage (%)
Number of Smartphones Owned		
1	220	62.9
2	95	27.1
More than 2	35	10.0
Years of Smartphone Ownership		
Less than 1 year	20	5.7
1–3 years	95	27.1
4–6 years	150	42.9
More than 6 years	85	24.3
Frequency of Charging Phone per Day		
1 time	100	28.6
2 times	120	34.3
3 times	70	20.0
More than 3 times	60	17.1

phones once a day, and 20% needed to charge their phones three times a day. A notable 17.1% of participants reported charging their phones more than three times daily, potentially reflecting high usage levels.

Table 4 presents the level of knowledge about nomophobia among the 350 participants. The majority of students, 51.4%, demonstrated a moderate understanding of nomophobia, indicating that while many students have some awareness of the condition, their knowledge is not extensive. A significant portion of participants, 28.6%, exhibited a good level of knowledge, suggesting that nearly one-third of the students are well-informed about nomophobia and its implications. However, 20.0% of the participants showed poor knowledge, reflecting a gap in awareness that could contribute to insufficient recognition of nomophobia's effects.

Table 5 highlights the psychological, academic, and social outcomes associated with nomophobia among the study participants. The results show that participants experienced a high level of psychological distress related to their phones, with mean scores of 5.2 for anxiety when without a phone and 5.0 for nervousness when unable to check their phones, indicating frequent and significant anxiety. Panic when the battery was low also scored relatively high at 4.8, suggesting that battery life is a common source of stress. In terms of academic outcomes, students reported moderate disruption in their studies due to phone usage, with a mean score of 4.6, and difficulty concentrating during lectures at 4.3. Socially, participants reported feeling isolated when they could not access their phones, with a mean score of 4.9, indicating a strong reliance on their devices for social connection.

Table 6 highlights the relationship between nomophobia and academic performance among 350 participants. A significant negative correlation was observed between nomophobia scores and GPA ($r = -0.35$, $p = 0.001$), indicating

Table 4 Level of Knowledge About Nomophobia (N = 350)

Knowledge Level	Frequency (n)	Percentage (%)
Poor	70	20.0
Moderate	180	51.4
Good	100	28.6

Table 5 Psychological, Academic, and Social Outcomes of Nomophobia (N = 350)

Outcome Dimension	Mean (SD)	Range
Psychological Outcomes		
Anxiety when without phone	5.2 (1.3)	1–7
Panic when battery is low	4.8 (1.5)	1–7
Nervousness when unable to check phone	5.0 (1.4)	1–7
Academic Outcomes		
Disruption in study due to phone	4.6 (1.6)	1–7
Difficulty concentrating during lectures	4.3 (1.8)	1–7
Social Outcomes		
Isolation when phone is not accessible	4.9 (1.5)	1–7
Conflict with family/friends over phone use	3.8 (1.9)	1–7

Table 6 Correlation Between Nomophobia and Academic Performance (N = 350)

Variable	r	p-value
Nomophobia score and GPA	−0.35	0.001*
Nomophobia score and academic concentration	−0.42	0.001*

Note: *Significant relation.

that students with higher levels of nomophobia tend to have lower academic performance. This suggests that nomophobic behaviors, such as frequent phone checking and reliance on smartphones, may detract from study time, disrupt learning routines, and ultimately reduce GPA. Similarly, a stronger negative correlation was found between nomophobia scores and academic concentration ($r = -0.42$, $p = 0.001$). This implies that nomophobia more directly impairs students' ability to maintain focus during academic activities, such as lectures and study sessions. Disruptions caused by smartphone dependency may lead to frequent multitasking, reduced attention span, and an inability to fully engage with academic tasks.

The regression analysis was conducted to identify predictors of nomophobia among the 350 participants. Table 7 presents all independent variables, including both statistically significant and non-significant predictors, along with their regression coefficients and 95% confidence intervals (CI).

Table 7 Regression Analysis Predicting Nomophobia (N = 350)

Predictor Variable	B (Unstandardized)	95% CI	t-value	p-value
Gender (Female)	5.87	[3.15, 8.59]	4.20	0.001*
Number of smartphones owned	4.23	[1.77, 6.69]	3.50	0.003*
Years of smartphone ownership	3.14	[0.98, 5.30]	2.90	0.005*
Academic year	−6.45	[−9.65, −3.25]	−4.00	0.002*
Age	0.85	[−1.20, 2.90]	1.10	0.273
Marital status (Single)	1.25	[−0.85, 3.35]	1.03	0.310
Living arrangements (On-campus)	0.95	[−1.05, 2.95]	0.96	0.340

Note: *Significant at $p < 0.05$.

The analysis revealed that gender was a significant predictor, with females scoring higher on nomophobia than males ($B = 5.87$, 95% CI [3.15, 8.59], $p = 0.001$). The number of smartphones owned also predicted higher nomophobia scores ($B = 4.23$, 95% CI [1.77, 6.69], $p = 0.003$). Similarly, years of smartphone ownership was positively associated with nomophobia ($B = 3.14$, 95% CI [0.98, 5.30], $p = 0.005$). Conversely, academic year showed a negative relationship, indicating that students in higher academic years experienced lower levels of nomophobia ($B = -6.45$, 95% CI [-9.65, -3.25], $p = 0.002$). Other independent variables, such as age, marital status, and living arrangements, were included in the model but did not show statistically significant associations with nomophobia ($p > 0.05$).

Discussion

This study aimed to assess the level of knowledge and outcomes associated with nomophobia among students at King Saud University in Riyadh, Saudi Arabia. The findings reveal significant insights into the prevalence, understanding, and impact of nomophobia on university students, highlighting the complex relationship between smartphone use and various aspects of student life.

Knowledge and Awareness of Nomophobia

The results indicate that while the majority of students (51.4%) demonstrated a moderate understanding of nomophobia, a significant portion (28.6%) exhibited good knowledge, and 20% showed poor knowledge. This distribution suggests that awareness of nomophobia as a concept is growing among university students, but there is still room for improvement in educating the student population about this phenomenon. The moderate level of knowledge aligns with findings from other studies that have shown an increasing awareness of technology-related behavioral issues among young adults.^{31,32} However, the presence of a substantial group with poor knowledge highlights the need for more comprehensive education on the potential risks associated with excessive smartphone use.^{33,34}

Prevalence and Intensity of Nomophobic Behaviors

The high mean scores for anxiety (5.2) and nervousness (5.0) when separated from smartphones indicate that nomophobia is a significant issue among the studied population. These findings are consistent with previous research that has identified similar levels of distress among university students in other countries.^{12,35} The relatively high score for panic when the battery is low (4.8) further underscores the emotional dependence on smartphones, which has been noted in other studies as a key indicator of nomophobia.³⁶

Academic Impact

The negative correlation between nomophobia scores and both GPA ($r = -0.35$) and academic concentration ($r = -0.42$) is a crucial finding of this study. This relationship suggests that nomophobia may have a detrimental effect on academic performance, possibly due to the disruptive nature of constant smartphone checking and the anxiety associated with being separated from one's device. These results are in line with previous research that has found negative associations between excessive smartphone use and academic achievement.^{37,38} The stronger correlation with academic concentration implies that nomophobia may primarily impact students' ability to focus on their studies, which in turn affects their overall academic performance.³⁹

Psychological and Social Outcomes

The high mean scores for feeling isolated when unable to access phones (4.9) and experiencing conflicts with family or friends over phone use (3.8) highlight the social dimension of nomophobia. These findings suggest that smartphones play a central role in students' social lives, potentially to the detriment of face-to-face interactions. This aligns with research indicating that excessive smartphone use can lead to social isolation and interpersonal conflicts.⁴⁰⁻⁴² The psychological distress associated with nomophobia, as evidenced by the high anxiety and nervousness scores, underscores the need for interventions that address the emotional aspects of smartphone dependence.⁴³

Predictors of Nomophobia

The regression analysis revealed several significant predictors of nomophobia among university students. The finding that females exhibit higher nomophobia scores ($\beta = 0.28$) is consistent with some previous studies that have reported gender differences in smartphone addiction and nomophobia.^{44,45} This gender disparity could be attributed to differences in social media use, communication patterns, or societal expectations, and warrants further investigation.^{46,47}

The positive relationship between the number of smartphones owned ($\beta = 0.20$) and nomophobia scores suggests that multi-device ownership may exacerbate nomophobic tendencies. This finding is novel and adds to the understanding of how device proliferation might contribute to technology dependence. Similarly, the positive association between years of smartphone ownership ($\beta = 0.18$) and nomophobia indicates that prolonged exposure to smartphones may increase the risk of developing nomophobic behaviors, a finding that aligns with research on the cumulative effects of technology use.⁴⁸

Interestingly, the negative relationship between academic year and nomophobia scores ($\beta = -0.25$) suggests that as students progress in their studies, they may develop better coping mechanisms or time management skills that reduce their dependence on smartphones. This finding contrasts with some studies that have found persistent or increasing levels of smartphone addiction throughout university years,⁴⁹ highlighting the need for longitudinal research to better understand the trajectory of nomophobia over time.

Gender-Specific Findings and Implications for Intervention Design

A significant finding of this study is that females reported higher levels of nomophobia compared to males. This may be attributed to gender-specific patterns of smartphone use, such as a greater reliance on social media and communication apps, which heighten the fear of disconnection. These differences highlight the importance of tailoring interventions to address the unique needs of female students. For instance, workshops focusing on healthy digital habits, especially for managing social media use, could be particularly beneficial for female students. Additionally, peer support programs could help foster a sense of connectedness without over-reliance on smartphones.^{50–55}

Policy Implications in the Saudi Arabian Context

Given the high smartphone penetration in Saudi Arabia, the findings have significant policy implications. Educational institutions should consider integrating digital well-being programs into their curricula to promote balanced smartphone use. For example, universities could implement “phone-free” zones or designated times during lectures and study sessions to minimize distractions. Additionally, counseling services could include assessments for nomophobia and provide guidance on managing its psychological and academic effects.⁵⁶

At a broader level, policymakers could develop national campaigns to raise awareness about the risks of excessive smartphone use. These campaigns could target students, parents, and educators, emphasizing the importance of setting boundaries and encouraging healthy digital practices. In culturally specific contexts like Saudi Arabia, it is essential to account for the societal norms and values that influence smartphone use, such as the role of family and social expectations. Tailoring interventions and policies to align with these cultural factors will likely enhance their effectiveness.

Implications for Practice and Policy

The findings of this study have important implications for both practice and policy, particularly in educational institutions. Given the significant negative impact of nomophobia on students’ academic performance and psychological well-being, universities should consider integrating educational programs that raise awareness about the risks associated with excessive smartphone use. Such programs could be part of broader digital literacy initiatives aimed at fostering a balanced and healthy relationship with technology. Educators and student counselors should be trained to recognize the signs of nomophobia and provide appropriate support or interventions, such as digital detox programs, counseling sessions, or time management workshops. Additionally, institutions may need to consider implementing policies that regulate smartphone use in academic settings, such as limiting phone usage during lectures or promoting phone-free study environments to minimize distractions.

The negative relationship between nomophobia and GPA highlights the potential for smartphone overuse to hinder academic success. Students who exhibit higher nomophobia may struggle to balance their academic responsibilities with constant connectivity, which can lead to missed deadlines, lower-quality assignments, and poorer exam performance.

The stronger correlation with academic concentration underscores the need for interventions targeting smartphone-related distractions during learning activities. Universities could implement strategies such as promoting phone-free study environments, conducting workshops on digital well-being, and encouraging time management skills to help students minimize nomophobia-related disruptions.

On a broader policy level, governments and educational authorities should develop guidelines for the responsible use of smartphones among students. This could include campaigns that emphasize the importance of digital well-being and the risks of nomophobia. In Saudi Arabia, where smartphone penetration is particularly high, these initiatives are crucial for ensuring that students maintain a healthy balance between their digital lives and other aspects of their well-being.

Limitations and Future Research Directions

This study has several limitations that should be acknowledged. First, the data were collected through self-reported questionnaires, which are subject to potential biases, such as social desirability bias and recall inaccuracies. Participants may have underreported or overreported their nomophobia levels, smartphone usage patterns, or academic performance, which could affect the validity of the results. Future studies could address this limitation by incorporating objective measures, such as smartphone usage tracking apps, to complement self-reported data.

Second, the study employed a convenience sampling method, which limits the generalizability of the findings to the broader student population. While efforts were made to recruit participants from diverse academic disciplines and year levels, the sample may not fully represent all university students. A random sampling approach in future research could provide a more representative sample and enhance the robustness of the findings.

Additionally, the exclusion of part-time students and those with diagnosed anxiety disorders may have introduced selection bias. Although this decision was made to minimize confounding variables, it potentially excluded a subset of students who may experience nomophobia differently. Future research should explore the prevalence and impact of nomophobia among these excluded groups to provide a more comprehensive understanding of the phenomenon.

Lastly, the cross-sectional design of this study provides a snapshot of nomophobia at a single point in time, limiting the ability to draw causal inferences between nomophobia and academic or psychological outcomes. Longitudinal studies are recommended to examine how nomophobia evolves over time and its long-term effects on students' academic and psychological well-being.

Conclusion

This study highlights the significant prevalence of nomophobia among university students in Riyadh, Saudi Arabia, and its negative impact on their academic performance and psychological well-being. The findings demonstrate that nomophobia is a multifaceted issue, influenced by factors such as gender, smartphone ownership, and academic year. Female students, those who own multiple smartphones, and students in earlier academic years are particularly at risk of experiencing higher levels of nomophobia. The study underscores the need for targeted interventions in educational settings to raise awareness about the risks of excessive smartphone use and to promote healthier digital habits among students.

By addressing the psychological and academic consequences of nomophobia through educational programs and policy changes, institutions can help students better manage their smartphone use, thereby improving both their academic outcomes and overall well-being. Future research should build on these findings by exploring the long-term effects of nomophobia and developing effective strategies to mitigate its impact on students across different cultural and educational contexts.

Ethics

The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board of King Saud University (2024-774, 11 August 2024).

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Disclosure

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