

The Relative Contribution of the Big Five Personality Traits to Predicting Nomophobia among Yarmouk University Students

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Excessive smartphone dependence has given rise to nomophobia, the fear of being without one's mobile phone, and personality is thought to shape how strongly students experience this fear. This study examined the relative contribution of the Big Five personality traits to predicting nomophobia among Yarmouk University students and tested whether personality traits and nomophobia differ by gender, college, and academic level. A descriptive correlational design was used with a convenience sample of 798 male and female Yarmouk University students, who completed an electronic form that combined the Big Five Personality Traits Scale and the Nomophobia Scale, distributed via Google Forms. Openness to experience ranked highest among the Big Five traits, and agreeableness ranked lowest; agreeableness differed significantly by gender, favoring male participants, while extraversion and neuroticism differed significantly by academic level, favoring undergraduates. No differences emerged across colleges. Nomophobia was moderate overall, with no significant differences by gender or academic level, but a significant difference by college, favoring students in the humanities and social sciences. Stepwise regression showed that agreeableness and neuroticism together explained 25.10% of the variance in nomophobia (19.80% and 5.30%, respectively), whereas openness to experience, conscientiousness, and extraversion did not contribute significantly. These findings support developing guidance and prevention programmes that target agreeableness and neuroticism specifically, alongside broader efforts to promote balanced smartphone use among university students.

Keywords: nomophobia, personality traits, relative contribution, Yarmouk University students

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INTRODUCTION

University is one of the most important transitional periods in the lives of young people, as it opens them up to broad intellectual and social horizons. With the digital acceleration of the world, technology has become an integral part of the academic tasks of university students, especially in leading academic institutions such as Yarmouk University. Yarmouk University has always been at the forefront of integrating digital instruments into its educational environment. Sometimes, this complete reliance on the virtual world goes beyond functionality. This “excessive use” creates new psychological and behavioral challenges. Perhaps the most prominent of these challenges is “nomophobia,” or the fear of being separated from one's mobile phone. Smartphones have transformed from a mere means of communication into a “constant companion” that never leaves the student's side, whether in lecture halls or public spaces. This digital attachment has created a state of anxiety and tension whenever the Internet connection is lost or the battery runs out.

Nomophobia refers to the discomfort, anxiety, and nervousness caused by smartphone dependence (Mudgal et al., 2024). Nomophobia is also considered a disorder in today's digital and virtual society, referring to the discomfort, anxiety, nervousness, or insomnia caused by separation from a mobile phone. Nomophobia is linked to a state of discomfort and psychological anxiety due to the inability to use the phone or separation from it, which may appear as behavioral and psychological symptoms that affect an individual's daily behaviors and thoughts (Tuco, 2023).

Nomophobia among university students is of particular importance because this group is going through a critical stage of growth, where social, professional, and academic identities are being developed. University students are often found in environments that encourage or require frequent use of mobile phones for academic work, social interaction, and personal communication (Mohammed, 2025). Alodhialah et al. (2025) indicated a high level of nomophobia among university students in Riyadh and that nomophobia was associated with decreased academic performance and increased psychological stress. Meanwhile, Al-Mamun et al. (2025) found a moderate level of nomophobia among students, with a positive correlation between nomophobia and smartphone and Facebook addiction, identifying a higher prevalence among first-year students. Similarly, recent studies have indicated a high prevalence of nomophobia among university students, explaining that excessive smartphone use directly contributes to increased anxiety and fear of losing access to smartphones.

The Big Five personality traits explain the variability in the severity of nomophobia. High neuroticism is associated with greater levels of anxiety and obsessive thoughts about losing one's phone. Extraversion and openness to experience may contribute to seeking alternatives to social interaction away from digital dependency. In a study involving university students, extraversion, openness, and neuroticism positively predicted nomophobia, whereas agreeableness and conscientiousness did not show strong correlations (Turan & Yılmaz, 2024).

Personality traits are fundamental to understanding human behavior and refer to relatively stable patterns of thoughts, feelings, and behaviors that reflect how individuals respond to different situations. The Big Five model, also known as the Big Five personality traits, helps define personality traits. This model includes five key traits representing different aspects of personality: neuroticism, which relates to a tendency toward anxiety and emotionality; extraversion, which reflects sociability and

openness to new experiences; openness to new experiences, associated with imagination and creative thinking; conscientiousness, which refers to organization and the ability to self-discipline; and agreeableness, which reflects a tendency toward cooperation and empathy for others. These traits are used as instruments to understand individual behavior and predict how individuals respond to various life situations. It is also a key reference for psychological and social research (Bleidorn et al., 2021). Nazzal et al. (2025) indicated high levels of extroversion, openness to experience, agreeableness, and conscientiousness among university students. These results contrasted with low neuroticism, with gender-based differences in neuroticism favoring female participants. Meanwhile, Zerroui and Sahraoui (2025) found differences in personality traits following the Big Five model following gender (favoring male participants) and cultural environment (favoring those from northern states). Fayed's (2024) study also showed that neuroticism, extroversion, agreeableness, and conscientiousness were at moderate levels among students, while openness to experience was at a high level, with no significant differences following gender. Al-Hadrami's (2023) study showed that agreeableness was the most common trait among Sultan Qaboos University students, while neuroticism was the least common. Furthermore, neuroticism and conscientiousness can be used to predict Internet addiction, with neuroticism positively predicting addiction and conscientiousness negatively predicting it. Additionally, differences favoring male participants were found in Internet addiction, extroversion, and agreeableness. Begum et al. (2021) also indicated that extroversion was the most common personality trait among university students in the UAE, while neuroticism was the least common, and that poor academic performance was associated with high neuroticism and extroversion.

PROBLEM STATEMENT AND RESEARCH QUESTIONS

The problem addressed in this study stems from the observations of the two researchers, given their direct connection to the university environment—one a student and the other a faculty member at Yarmouk University—regarding the widespread phenomenon of excessive reliance on smartphones among students. It was noted that students frequently checked their phones during lectures and displayed anxiety and tension when asked to turn them off or when internet access was unavailable. Furthermore, many students are preoccupied with their phones during breaks, commutes, and meals, which may limit their face-to-face and social interactions. The researchers also noted that this excessive reliance on smartphones can negatively impact students' psychological, social, and academic well-being, potentially leading to decreased concentration during lectures, reduced direct social interaction, and feelings of isolation or anxiety when separated from their phones, a phenomenon known as nomophobia. With the significant expansion in the use of digital technology in daily life and university education, it has become necessary to study this phenomenon scientifically to reveal its extent and the factors associated with it.

This problem is particularly acute at the university level, a stage characterized by psychological and social sensitivity, identity formation, and a growing sense of independence, making students more susceptible to the negative effects of excessive technology use. Furthermore, the persistence of this phenomenon can negatively impact students' psychological well-being and academic and social adjustment, necessitating research into the relationship between nomophobia and

relevant psychological or demographic variables. This study aimed to reveal the level of nomophobia among Yarmouk University students and identify differences in nomophobia levels based on certain variables. This will contribute to providing a scientific framework that can be used to develop guidance and awareness programmes to mitigate the negative effects of excessive smartphone use. Considering the above, this study also seeks to determine the relative contribution of the Big Five personality traits to nomophobia among the students. Specifically, this study attempts to answer the following questions:

1. What are the Big Five personality traits of Yarmouk University students? Do these traits differ following gender, college, and academic levels?
2. What is the level of nomophobia among Yarmouk University students? Does this level differ following gender, college, and academic level?
3. What is the relative contribution of the Big Five personality traits in predicting nomophobia among Yarmouk University students?

Operational and Conceptual Definitions

Nomophobia: A type of technology-related anxiety characterized by feelings of insecurity and distress when a mobile phone is unavailable or disconnected, potentially impacting mental health and daily behavior (Jaber et al., 2024). Operationally, it was defined as the total score obtained by participants on the nomophobia scale used in the current study.

The Big Five personality traits are a set of characteristics that distinguish individuals based on five key factors (neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience) (Abdul-Khaliq, 2021). Operationally, they are defined as the scores obtained by the sample members on the Big Five Personality Trait Scale used in the current study.

STUDY METHODOLOGY

A descriptive correlational approach was used to reveal the relative contribution of the Big Five personality traits in predicting nomophobia among the participants.

Study Population and Sample

The study population comprised all students at Yarmouk University registered in the second semester of the academic year 2025/2026, totaling 38,094 male and female students. A total of 798 male and female students were selected from among them using convenience sampling by converting the two study instruments into an electronic response form using Google Forms and distributing them to the study sample members via email. Table 1 shows the distribution of the study sample by gender, college, and academic level.

Table 1

Distribution of Study Participants Following Study Variables

Variable	Category	Number	%
Gender	Female	501	62.80
	Male	297	37.20
Faculty	Humanitarian or Social	538	67.40
	Scientific or Healthy	260	32.60
Academic Level	Bachelor	523	65.50
	Higher Studies	275	34.50
Total		798	100%

Study Instruments

First: The Big Five Personality Traits Scale

The Big Five Personality Traits Scale was prepared by John and Srivastava (1999) and used in the study by Hussein et al. (2025). The scale in its initial form comprised 44 items distributed into five dimensions: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism.

Scale Validity Indicators

(Hussein et al., 2025) verified the scale's validity indicators by conducting exploratory and confirmatory factor analyses of the scale items, which revealed that the scale consists of five dimensions (factors). In the current study, the scale's face validity indicators were verified by translating it from English to Arabic and presenting it to 10 expert referees from Jordanian university faculty members with expertise in the fields of psychological counseling and educational psychology. Based on their feedback, the wording of some items was modified, and two items were deleted from the scale. The final version of the scale comprised (42) items distributed across the five dimensions. The construct validity was also verified by administering the scale to a pilot sample of 30 male and female students from within and outside the study population. The corrected item-total correlation coefficient was calculated between the item score and the corresponding dimension score. The correlation coefficients for the scale items and their respective dimensions ranged from 0.40 to 0.81, all of which were greater than 0.30 and significant.

Scale Reliability Indicators

Hussein et al. (2025) verified the scale's reliability by calculating the internal consistency coefficient (Cronbach's alpha), which ranged from 0.73 to 0.80 across the scale's dimensions. In the current study, the internal consistency reliability of the scale and its dimensions was estimated using Cronbach's alpha from data collected during the first application to the pilot sample. The test-retest reliability of the scale was also verified by reapplying it to the previous pilot sample, with a two-week interval between the first and second applications, and calculating the Pearson correlation coefficient between the first and second applications for the pilot sample. The test-retest reliability values for the Big Five personality traits ranged from 0.78 to 0.84, and the internal consistency reliability values ranged from 0.75 to 0.81, both of which are considered acceptable.

Second: The Nomophobia Scale (Morbid Fear of Being Without a Mobile Phone)

This study relied on the Arabic version of the Nomophobia Scale prepared by Yildirim (2014). The scale, in its initial form, comprised 16 items distributed across four dimensions: inability to communicate, loss of communication, inability to access information, and comfort abandonment.

Scale Validity Indicators

Previous studies using the Arabic version of the scale indicated that the instrument had appropriate validity indicators; the item-total correlation coefficients ranged from 0.47 to 0.71. The correlation values of the items with their respective dimensions ranged from 0.54 to 0.81. The validity of the scale was verified by presenting its initial version to ten Jordanian referees who were university faculty members in psychological counseling and educational psychology. Based on their feedback, the wording of some items was modified, and one item was deleted. The final version of the scale comprised (15) items distributed across the four dimensions. Construct validity was also verified by administering the scale to a pilot

sample and calculating the Corrected Item-Total Correlation coefficient between the item score, corresponding dimension score, and total scale score. The correlation coefficients for the scale items ranged from 0.49 to 0.77 in all dimensions, and from 0.44 to 0.70 with the total scale score, all of which were greater than 0.30 and significant.

Scale Reliability Indicators

The psychometric reports for the Arabic version showed high reliability indicators; the value of the internal consistency reliability coefficient using Cronbach's Alpha method for the scale as a whole was (0.83), and its values for the scale dimensions ranged between (0.75-0.82), while the value of the test-retest reliability with a time difference of two weeks between the two applications was (0.86) for the scale as a whole, and its values for the scale dimensions ranged between (0.78-0.84). In the current study, the significance of the internal consistency reliability of the scale and its dimensions was verified by applying Cronbach's alpha equation to the data of the pilot sample. The significance of the test-retest reliability of the scale was also verified by reapplying the scale to the previous pilot sample, with a time difference of two weeks between the first and second applications, and then calculating Pearson's correlation coefficient between the first and second applications to the pilot sample. The test-retest reliability of the scale was 0.85. The test-retest reliability values for its dimensions ranged from 0.75 to 0.83. The internal consistency reliability of the scale as a whole reached 0.81. The internal consistency reliability values for its dimensions ranged from 0.71 to 0.80, which are considered acceptable.

STUDY RESULTS AND DISCUSSION

Results of the first question: "What are the Big Five personality traits of Yarmouk University students? Do they differ, following the variables of gender, college, and academic level?" To answer this question, the arithmetic means and standard deviations of the Big Five personality traits were calculated for the study sample.

Table 2

Arithmetic Means and Standard Deviations of the Big Five Personality Traits among Yarmouk University Students, Ranked in Descending Order

Rank	Big Five Trait	<i>M</i>	<i>SD</i>	Level
1	Openness to experience	3.60	0.62	High
2	Neuroticism	3.50	0.63	High
3	Extroversion	3.46	0.59	High
4	Conscientiousness	3.42	0.55	High
5	Agreeableness	3.30	0.55	Average

Table 2 shows that the Big Five personality traits among the sample of Yarmouk University students were ranked as follows: openness to experience in first place, at a high level, followed by neuroticism in second place, at a high level, followed by extraversion in third place, at a high level, followed by conscientiousness in fourth place, at a high level. Agreeableness ranked last, with an average score. The fact that openness to experience ranked first and at a high level can be explained by the nature of the university environment at Yarmouk University and the diverse educational, cultural, and intellectual opportunities it provides through libraries, cultural centers, academic activities, and interactions with students from different social and cultural backgrounds. This environment can foster curiosity, openness to new ideas, and a desire for research and discovery—characteristics inherent to the university stage, which

encourages students to broaden their horizons, explore diverse sources of knowledge, and engage in new educational and social experiences. This outcome can also reflect students' inclination toward critical and creative thinking and their utilization of modern learning resources, aligning with digital transformation and contemporary trends in higher education.

The fact that the agreeableness dimension ranked last and at an average level can be explained by the fact that university students at this developmental and academic stage are in the process of building independence and self-affirmation, in addition to the academic and social competition that the university environment may impose on them. This may lead to the emergence of cooperation, tolerance, and consideration for others to a moderate degree compared with other traits. This result does not necessarily indicate a lack of agreeableness among the sample, but rather that it was the least prominent trait compared to openness to experience. This finding differs from those of Al-Hadrami (2023) and Begum et al. (2021), who found that agreeableness was the most prevalent trait in their samples.

To reveal the effect of the variables (gender, college, and academic level) on the Big Five personality traits, the arithmetic means and standard deviations of the Big Five personality traits were calculated for these variables.

Table 3
Arithmetic Means and Standard Deviations of the Big Five Personality Traits among Yarmouk University Students Following the Study Variables

Variable	Category		Open.	Consc.	Extr.	Agree.	Neur.
Gender	Female	<i>M</i>	3.61	3.43	3.48	3.26	3.51
		<i>SD</i>	0.59	0.53	0.58	0.54	0.61
	Male	<i>M</i>	3.58	3.39	3.42	3.38	3.50
		<i>SD</i>	0.67	0.58	0.62	0.56	0.67
Faculty	Humanitarian /Social	<i>M</i>	3.62	3.43	3.48	3.31	3.52
		<i>SD</i>	0.61	0.52	0.57	0.53	0.61
	Scientific/Healthy	<i>M</i>	3.54	3.39	3.41	3.28	3.47
		<i>SD</i>	0.65	0.61	0.63	0.60	0.68
Academic Level	Bachelor	<i>M</i>	3.62	3.44	3.50	3.32	3.55
		<i>SD</i>	0.56	0.48	0.54	0.48	0.57
	Higher Studies	<i>M</i>	3.54	3.38	3.38	3.27	3.42
		<i>SD</i>	0.71	0.66	0.68	0.67	0.74

Note. Open. = openness to experience; Consc. = conscientiousness; Extr. = extraversion; Agree. = agreeableness; Neur. = neuroticism; *M* = mean; *SD* = standard deviation.

Table 3 shows the apparent differences between the arithmetic means of the five major personality traits, attributed to the different categories of variables (gender, college, and academic level). To verify the significance of the differences between the arithmetic means, a three-way multivariate analysis of variance (MANOVA) was performed.

Table 4

Results of the Three-Way MANOVA of the Big Five Personality Traits among Yarmouk University Students Following the Study Variables

Source	Dependent Variable	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Gender (Hotelling's Trace=0.035, Sig=0.001*)	Openness	0.177	1	0.177	0.463	.497
	Conscientiousness	0.255	1	0.255	0.842	.359
	Extroversion	0.555	1	0.555	1.596	.207
	Agreeableness	2.710	1	2.710	8.954	.003*
	Neuroticism	0.008	1	0.008	0.021	.886
Faculty (Hotelling's Trace=0.005, Sig=0.561)	Openness	1.095	1	1.095	2.857	.091
	Conscientiousness	0.372	1	0.372	1.229	.268
	Extroversion	0.977	1	0.977	2.807	.094
	Agreeableness	0.231	1	0.231	0.762	.383
	Neuroticism	0.594	1	0.594	1.496	.222
Academic Level (Hotelling's Trace=0.024, Sig=0.032*)	Openness	1.190	1	1.190	3.104	.079
	Conscientiousness	0.742	1	0.742	2.454	.118
	Extroversion	2.463	1	2.463	7.077	.008*
	Agreeableness	0.520	1	0.520	1.717	.190
	Neuroticism	3.187	1	3.187	8.024	.005*
Error	Openness	304.305	794	0.383		
	Conscientiousness	240.084	794	0.302		
	Extroversion	276.301	794	0.348		
	Agreeableness	240.299	794	0.303		
	Neuroticism	315.328	794	0.397		

Note. *SS* = sum of squares; *df* = degrees of freedom; *MS* = mean square. * $p < .05$.

Table 4 shows that there are significant differences at the significance level ($\alpha = 0.05$) between the arithmetic means of the dimension of agreeableness among YU students, which are attributed to the gender variable. As shown in Table 3, the arithmetic means for male participants were higher than those for female participants. This result can be explained by the nature of the social opportunities available to male participants within and outside the university environment, as these opportunities may give them a wider space to participate in group activities, build social relationships, and interact with others in situations that require cooperation and support. This result may also reflect differences in socialization patterns and the expected roles of male participants and female participants in the social context, which could influence how cooperation, empathy, and helping others are expressed in both cultures. This result does not necessarily imply that these traits are lower in female participants but rather suggests that male participants in the current study sample scored higher on these dimensions. This result is consistent with Al-Hadrami's (2023) findings, which revealed significant differences in the agreeableness trait by gender, favoring male participants.

The results showed no significant differences at the significance level ($\alpha = 0.05$) between the arithmetic means of all five major personality traits among Yarmouk University students following the college variable. This result can be explained by the nature of the shared university environment, which brings together students from both scientific and humanitarian colleges in a single academic and social context, where students are subject to similar educational and administrative systems. They also share a

number of university courses and general requirements, in addition to their daily interactions in various university facilities, such as libraries, common rooms, and student activities and clubs. This similarity in university experiences may contribute to behavioral, social, and emotional convergence among students, thus reducing differences in personality traits based on college affiliations. This differs from the results of Al-Hadrami (2023), who found significant differences between students in humanities and science disciplines in favor of students in humanities disciplines.

The results also showed significant differences at the significance level ($\alpha = 0.05$) between the arithmetic means of extroversion and neuroticism among (YU) students, following the academic level variable. As shown in Table 3, the arithmetic means for undergraduate students were higher than those for graduate students. The high level of extroversion among graduate students can be explained by the nature of this stage, which requires a greater degree of academic and social interaction through scientific discussions, research presentations, communication with supervisors and colleagues, and participation in seminars and conferences, which may contribute to enhancing the tendency to communicate, take initiative, and express opinions. The increased neuroticism of graduate students can be explained by the increasing academic and research pressures they face. It is related to the requirements of dissertations, publications, discussions, and thinking about their professional and academic futures. These requirements may increase levels of anxiety, stress, and psychological preoccupation compared with undergraduate students.

The results related to the second question, “What is the level of nomophobia among Yarmouk University students, and does it differ following the variables of gender, college, and academic level?” To answer this question, the arithmetic means and standard deviations of nomophobia were calculated in terms of its overall significance and sub-dimensions for the study sample.

Table 5

Arithmetic Means and Standard Deviations of Nomophobia in Its Overall Significance and Sub-Dimensions among Yarmouk University Students, Ranked in Descending Order

Rank	Nomophobia Dimension	<i>M</i>	<i>SD</i>	Level
1	Inability to communicate	3.26	0.99	Average
2	Inability to access information	3.22	0.95	Average
3	Abandonment of comfort	3.09	0.90	Average
4	Loss of communication	2.98	0.93	Average
	Nomophobia as a Whole	3.13	0.79	Average

Table 5 shows that the level of nomophobia (as a whole) among Yarmouk University students was moderate, and the dimensions of nomophobia came in the following order: inability to communicate in first place, at a moderate level, followed by inability to access information in second place, at a moderate level, followed by giving up comfort in third place, at a moderate level, and the dimension of loss of communication came in last place, at a moderate level. This result can be explained by the increasing reliance of university students on smartphones for communication, academic requirements, and various applications in their daily lives. For many students, mobile phones are no longer just a means of communication; they have become an instrument for feeling secure, staying in constant contact with others, and keeping up with messages, calls, and notifications. Therefore, the inability to use a phone or loss of

internet connectivity may cause anxiety and distress. However, the moderate level indicates that this phenomenon exists among students but did not reach a high or severe level in the study sample. This moderate level may also be attributed to the widespread use of smartphones and wireless Internet services both inside and outside the university, making students more dependent on their phones for educational, social, and personal use. Conversely, students' awareness of the academic nature of phone use and the relative ability of some to control their use may have prevented a significant increase in nomophobia. This finding aligns with the results of (Al-Mamun et al., 2025), who indicated that the level of nomophobia among university students was moderate; this result differs from the results of (Alodhialah et al., 2025). Studies have shown that the level of nomophobia among university students is high, reflecting a variation in students' susceptibility to digital anxiety triggers. This variation is often attributed to variations in the cultural, environmental, and academic characteristics of the samples studied.

To reveal the effect of (gender, college, and academic level) variables on nomophobia in its overall significance, the arithmetic means and standard deviations of nomophobia were calculated, following these variables.

Table 6

Arithmetic Means and Standard Deviations of Nomophobia in Its Overall Significance among Yarmouk University Students Following the Study Variables

Variable	Category	<i>M</i>	<i>SD</i>
Gender	Female	3.08	0.79
	Male	3.18	0.78
Faculty	Humanitarian or Social	3.16	0.79
	Scientific or Healthy	3.03	0.78
Academic Level	Bachelor	3.14	0.76
	Higher Studies	3.08	0.84

Table 6 shows the apparent differences among the arithmetic means of nomophobia in its overall significance, which are attributed to the different categories of variables (gender, college, and educational level). To verify the significance of these differences between the means at the overall nomophobia score level, a three-way ANOVA was performed.

Table 7

Results of the Three-Way ANOVA of Nomophobia and Its Overall Significance among Yarmouk University Students Following the Study Variables

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Gender	1.849	1	1.849	3.006	.083
Faculty	2.952	1	2.952	4.800	.029*
Academic Level	0.662	1	0.662	1.077	.300
Error	488.342	794	0.615		
Overall Total	493.643	797			

Note. *SS* = sum of squares; *df* = degrees of freedom; *MS* = mean square. * $p < .05$.

Table 7 shows that there are no significant differences at the significance level ($\alpha = 0.05$) among the arithmetic means for nomophobia following gender and academic level variables. This result can be explained by the fact that smartphone usage has become a common and widespread daily behavior among students, regardless of gender or academic level. Male and female undergraduates and graduates rely on their phones for social interaction, staying informed about university announcements, educational platforms, accessing knowledge resources, and managing academic and personal affairs. The lack of gender differences may also be attributed to the fact that smartphone ownership and Internet access have become nearly equal for both men and women, resulting in a similar level of anxiety related to losing or being unable to use their phones. The lack of differences following academic level can be explained by the fact that the requirements of university life at the undergraduate and graduate levels require a continuous digital presence, whether for educational, social, or administrative purposes. This makes reliance on smartphones a phenomenon that extends across different academic stages.

The results also showed significant differences at the significance level ($\alpha = 0.05$) between the overall arithmetic means for nomophobia following the college variable. Table 6 shows that the arithmetic means for students in humanities or social sciences colleges are higher than those for students in science or health colleges. This result can be explained by applying the study to humanities and social sciences colleges, which may rely more heavily on communication, discussion, information retrieval, and continuous engagement with digital platforms and social media, potentially increasing students' reliance on smartphones for academic and social aspects. This may also be attributed to the fact that students in the humanities and social sciences colleges often engage in broader communication and social activities, both on campus and through digital applications, making the phone an essential instrument for maintaining

relationships, receiving messages, participating in study groups, and staying informed about university announcements. Conversely, students in science or health science colleges may be more involved in applied laboratories or practical academic activities that require focused attention and longer time spent in labs or practical training, which may reduce their opportunities for continuous phone use during the school day.

Results related to the third question: “What is the relative contribution of the Big Five personality traits to predicting nomophobia among Yarmouk University students?” To answer this question, the interlinear correlation coefficients between the independent predictor variables (Big Five personality traits) and the dependent variable (nomophobia) among Yarmouk University students were calculated.

Table 8

Matrix of Inter-Variable Correlation Coefficients among Predictive-Model Variables

	Openness	Conscien.	Extrov.	Agree.	Neurot.
Conscientiousness	0.622*				
Extroversion	0.591*	0.632*			
Agreeableness	0.498*	0.588*	0.584*		
Neuroticism	-0.414*	-0.506*	-0.545*	-0.569*	
Nomophobia	-0.289*	-0.325*	-0.371*	-0.445*	0.442*
(Total)					

Note. Values are Pearson correlation coefficients. * $p < .05$.

Table 8 shows significant correlations at the significance level ($\alpha = 0.05$) between the predictive variables, with values ranging from (-0.569 to 0.632). The correlation coefficients between the predictors and the criterion ranged from (-0.445 to 0.442), all of which were significant at the significance level ($\alpha = 0.05$).

To determine the proportion of variance in nomophobia explained by the Big Five personality traits, stepwise multiple linear regression analysis was used.

Table 9a

Model Summary of the Stepwise Regression Analysis of the Effect of the Big Five Personality Traits on Nomophobia

Model	R	R ²	Adjusted R ²	SE of Estimate
1	.445	.198	.197	0.705
2	.501	.251	.249	0.682

Table 9b

Change Statistics for the Stepwise Regression Model

Model	ΔR^2	F Change	df1	df2	p for F Change
1	.198	196.189	1	796	$p < .001$
2	.053	56.352	1	795	$p < .001$

Note. Model 1 predictors: constant and agreeableness. Model 2 predictors: constant, agreeableness, and neuroticism. * $p < .05$.

Table 9 shows that the two variables (agreeableness and neuroticism) explained 25.10% of the variance in nomophobia; the agreeableness variable explained 19.80% of the total explained variance of the predictive model, and the neuroticism variable explained 5.30% of the total explained variance of the predictive model, while the percentage of explained variance for the variables (openness to experience, conscientiousness, and extraversion) was not significant at the significance level ($\alpha = 0.05$).

The unstandardized and standard regression weights and the calculated (*t*) test values for the independent (predictor) variables of the predicted (dependent) variable were calculated for the sample of Yarmouk University students in the predictive model.

Table 10

Non-Standard and Standardized Weights of Variables Predicting Nomophobia among Yarmouk University Students

Predictors	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	0.442	0.167		2.640	.008*
Agreeableness	-0.356	0.058	-0.250	-6.167	<i>p</i> < .001
Neuroticism	0.315	0.049	0.253	6.440	<i>p</i> < .001

Note. *B* = unstandardized coefficient; *SE* = standard error; β = standardized coefficient. * *p* < .05.

Table 10 shows that the level of nomophobia decreases by (0.250) standard units for every one standard unit (standard deviation), increasing the level of agreeableness. It increases by (0.253) standard units for every one standard unit (standard deviation), increasing the level of neuroticism. Therefore, the regression equation for predicting nomophobia is as follows:

$$(\text{Nomophobia}) = 0.442 - 0.356 (\text{Agreeableness}) + 0.315 (\text{Neuroticism})$$

The dimensions of agreeableness and neuroticism were the most significant predictors of nomophobia among the participants, together explaining 25.10% of the variance in nomophobia. This percentage indicates that certain personality traits play an important role in understanding the individual differences among students in the degree of anxiety related to the inability to use mobile phones. The agreeableness dimension ranked first in terms of predictive ability, explaining 19.80% of variance. This can be attributed to the connection between this dimension and the nature of social relationships, eagerness to communicate with others, and the need to maintain social ties. This makes mobile phones an important means of continuous communication. Neuroticism explained 5.30% of the variance, suggesting that students with higher neuroticism are more prone to anxiety, stress, and distress when their phones are lost, communication is interrupted, or immediate contact is unavailable. In contrast, openness to experience, conscientiousness, and extraversion did not significantly predict nomophobia, indicating that nomophobia among the sample was more closely linked to the emotional and social aspects of personality than to cognitive, organizational, or general socialization tendencies.

CONCLUSION

The overall findings of this study show that nomophobia among university students is not simply a matter of technical attachment to mobile phones. However, it is a complex behavior directly linked to personality structure and students' surrounding circumstances. This study successfully demonstrated that personality traits, specifically neuroticism and agreeableness, are vital to understanding and predicting this behavior. This is because anxiety and psychological stress (neurosis) sometimes drive the student to cling to their phone as a safety instrument to escape a stressful reality, while the nature of interaction with others and the pursuit of self-affirmation within the university community (agreeableness) determine the form and strength of this attachment.

Contextually, the moderate levels of nomophobia recorded in the study at Yarmouk University reveal a neutral and critical area that students are going through; they are well aware of the boundaries of safe use, but at the

same time they are under the burden of daily dependence on phones to complete their academic and social requirements. Perhaps the most interesting point here is the differences observed in favor of female and male students in humanities colleges; a result that cannot be isolated from lived reality. It is because the academic pressures specific to these disciplines and nature of daily social interactions make these be anxious or stressed when getting away from their digital world.

In conclusion, addressing nomophobia in university settings requires a shift from traditional counseling to awareness and therapeutic programmes that focus on understanding individual differences and the traits of students' personalities. Designing guidance programmes that consider these psychological aspects will contribute to helping students achieve a balance between utilizing technology and protecting their psychological and academic well-being.

LIMITATIONS OF THE STUDY

Several limitations should be considered when interpreting these findings. The sample was drawn using convenience sampling from a single public university in Jordan, so the results may not generalize to students at other institutions or in other cultural settings. Data were collected through a self-report electronic questionnaire, which is subject to social desirability and recall biases and does not allow verification of participants' actual smartphone use. In addition, the cross-sectional design captures personality traits and nomophobia at a single point in time, preventing any causal interpretation of the relationships observed between the two constructs. Future studies could address these limitations by using randomized or stratified sampling across multiple universities, combining self-report measures with behavioral or objective indicators of phone use, and adopting longitudinal designs capable of tracking how personality traits and nomophobia develop together over time.

RECOMMENDATIONS

Considering the study's findings, the researchers recommend the following:

- Organizing workshops and awareness campaigns, particularly in humanities and social sciences colleges, on the dangers of excessive smartphone use and the importance of balanced usage.
- Promoting student activities based on teamwork and positive communication, which contributes to developing a sense of community and reducing excessive reliance on smartphones.
- Activating the role of psychological counseling centers in the early detection of students most susceptible to nomophobia, especially those with high levels of neuroticism, and providing them with appropriate counseling.
- Designing guidance and prevention programmes to reduce nomophobia among Yarmouk University students, focusing on agreeableness and neuroticism as predictors of nomophobia, and promoting skills for balanced smartphone use.

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