

## EXPLORING THE ROLE OF GENDER AND ITS RELATIONSHIP WITH NOMOPHOBIA AND PSYCHOLOGICAL WELL-BEING AMONG UNDERGRADUATES OF THE UNIVERSITY OF JOS, NIGERIA

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### **ABSTRACT**

*This study examined the role of gender and its relationship with nomophobia and psychological well-being among undergraduates of the University of Jos, Nigeria. One hundred and twenty (120) students, consented to participate in the study, comprising 64 males and 56 females (N=120), ranging in age between 16 to 35 years. The Nomophobia Questionnaire (Yildirim & Correia, 2015) and the Psychological Well-being Scale (Ryff, 1989), were used to collect data for testing two (2) hypotheses. The test results indicated a negative correlation between nomophobia and psychological well-being of undergraduate students, while nomophobia had no significant relationship with psychological well-being, but there was a significant positive relationship between gender and psychological well-being. However, gender did not significantly moderate the relationship between nomophobia and psychological well-being. Based on these findings, it was recommended that counsellors and management of universities should as a matter of policy, counsel students on the safe use of their smart-phones in order to improve their psychological wellbeing and overall quality of life.*

**Keywords:** Gender, Nomophobia, Psychological Well-being, Undergraduates.

### **1. Introduction**

Nomophobia, a term derived from the phrase “NO MOBILE PHONE phOBIA” is used to describe fear of, or anxiety, caused by getting detached from one's mobile phone connectivity (Bhattacharya, Bashsar, Srivastava, & Singh, 2019). Prior to this description, Davies (2018) had earlier defined nomophobia as the irrational fear of losing or not having access to one's mobile phone. According to the GilPress

statistics, globally, the population of smart-phone users rose from 3.668 billion in 2016 to 6.567 billion users in 2022, and to 6.92 billion as of December, 2023. This tremendous global development in the number of smart-phone users is attributable to the fact that being disconnected from the digital world is equivalent to not existing at all. In recent years, most, if not all academic opportunities, job opportunities, social opportunities, and many other necessities for human survival have become practically available and technologically accessible digitally.

Irrespective of the basic necessity to possess and utilise a smart-phone in modern society, smart-phone use has certain negative implications if not used responsibly. One of these is the propensity to induce a modern-age phobia, known as nomophobia (Yildirim & Correia, 2015). It has been discovered that people who use or check their Smart-phones excessively during the day can experience sleeping disorder, stress, anxiety and decreased academic performance, as well as a reduction in their physical activities (Thomee, Harenstam, & Hagberg, 2011).

Although nomophobia has not been officially recognized in the diagnostic and statistical manual of mental disorder, fifth edition (DSM-5), the DSM-5 diagnostic symptoms which characterize anxiety disorders have been practically observed in people diagnosed with nomophobia (Davies, 2018). These include (i) excessive and unreasonable fear or anxiety associated with being separated from one's mobile phone or even by mere anticipation of getting separated from one's mobile phone, (ii) the fear or anxiety is beyond the person's control, (iii) the fear or anxiety causes physiological symptoms such as increased heart rate, increased blood pressure, sweating, shortness of breath, panic, trembling, depression, and discomfort, (iv) when the fear and anxiety is not as a result of another psychopathology such as separation anxiety, (v) when the fear or anxiety is not as a result of physiological effect of drug, (vi) When the fear or anxiety cause significant impairment in the individual's academic, social, occupational, and other important life endeavours (Yasan & Yildirim, 2018; Yildirim & Correia, 2015,). Yildirim et al. (2015) examined the prevalence of nomophobia among university students and determined that 42.6% of the participants had nomophobic behaviours. This finding has been confirmed by Kubrusly, Silva, Vasconceios, Deiano, Santos, and Rocha, (2021), who found that nomophobia is likely to increase anxiety, stress, and depression, and can also decrease academic performance. In a related study, it was found that the nomophobia level of university students was above average (Adnan & Gezgin, 2016). These scholars also observed that students who tend to develop nomophobia exhibit behaviors such as checking their phones frequently during the

day, carrying the charger with them at all times, not turning off their smart-phones during the night, spending time on their phones in bed before going to sleep, and checking their phones as soon as they wake up in the morning.

Nomophobia is not only a problem that is limited to the outer world alone as it has also been investigated by some scholars in this part of the globe. In Kaduna State, Nigeria, Abdullahi, Muhammad and Muhammad (2020) investigated the prevalence of nomophobia among postgraduate students. This finding discovered high level of nomophobia among male students than their female counterparts. In a related study, Personality traits as predictors of nomophobia was examined among Nnamdi Azikiwe University students, Awka, Anambra State, by Okoye, Harry, and Obikwelu (2017). This finding revealed that extraversion, conscientiousness, neuroticism and openness positively predicted nomophobia, while agreeableness did not predict nomophobia.

## **2. Literature review**

### **2.1 Theoretical Framework**

Attachment theory (Bowlby, 1958) appears to explain the concept of nomophobia better than other theories. This theory hypothesizes that early caregiver relationships establish socio-emotional developmental foundations, but changes can occur across lifespan as a result of interpersonal relationships during childhood, adolescence, and adulthood. Attachment is defined by Mcleod (2024) as a deep and enduring emotional bond between two people in which each seeks closeness and feels more secure in the presence of the attachment figure. It is a known fact that the largest population of smart-phone users have a deep and enduring emotional bond with their smart-phones and experience a sense of insecurity when separated from their smart-phones. Based on the outcome of their experiment, Ainsworth, Blehar, Waters, and Wall, (1978) have categorized attachment styles into three- secure, anxious (ambivalent), and insecure attachment styles. Secure attachment is the ability to connect strongly and securely in a relationship with others while having the capacity for autonomous actions at appropriate situations. This attachment style seems to be more related with the phenomenon of nomophobia than others. That is, in situations where people are strongly and securely connected to their phones without the capacity for autonomous actions, nomophobia can set in.

## 2.2 Nomophobia and Psychological Well-being

Psychological Well-Being (PWB), according to Burns (2017) is defined as inter and intra individual's levels of positive functioning, including one's relationship with others and self-referent attitudes such as sense of mastery and personal growth. Ryff, and Keyes (1995) conceptualized psychological well-being as consisting of six (6) dimensions: autonomy, environmental mastery, personal growth, positive interpersonal relationships, purpose in life, and self-acceptance. Studies on the relationship between nomophobia and psychological well-being have yielded mixed findings. For example, Ozdemir, Cakir, and Hussain, (2018), measured the correlation between nomophobia and happiness, self-esteem and other measures of psychological well-being among Pakistani and Turkish undergraduate university students. Using Nomophobia Questionnaire (NMP-Q), UCLA Loneliness scale (ULS-8), Self-Happiness Scale and Rosenberg Self-esteem Scale, it was found that nomophobia had the highest correlation with loneliness, followed by self-happiness and self-esteem. Female students' self-esteem was higher than that of their male counterparts.

Also, Kubrusly et al., (2021) looked at nomophobia among medical students and its association with depression, anxiety, stress and academic performance. They found that 64.5% of the respondents had a moderate or severe level of nomophobia and that nomophobia increased anxiety, stress and depression with resultant decrease in academic performance. In a related study, relationship and effects of emotional loneliness level of university students to nomophobia level was examined by Gezgin and Ummet (2021). The study used social and emotional loneliness scale to assess loneliness and nomophobia questionnaire to measure nomophobia. It was found that there was a significant relationship between the level of nomophobia and loneliness.

In a related cross-sectional study aimed at evaluating nomophobia among medical students who are using smart phones, Bartwal and Nath (2020) established that 15.5% of students had mild nomophobia, 67.2% had moderate nomophobia and 17.3% were suffering from severe nomophobia. Moreso, Abdoli et al, (2023) investigated the association between nomophobia and symptoms of depression, anxiety, stress, insomnia and obsessive - compulsive disorder (OCD). Using self-rating questionnaire to measure demographic information and symptoms of nomophobia, depression, anxiety, insomnia, and OCD, results confirmed association between nomophobia and depression, anxiety and stress. However, nomophobia had no relationship with insomnia and OCD. Meanwhile, regression result indicated that symptoms of anxiety predicted nomophobia.

The objectives of the study are to:

1. Explore the role of nomophobia and its correlation with psychological well-being among undergraduates.
2. Examine if gender will moderate the relationship between nomophobia and psychological well-being among undergraduates.

The hypotheses to be tested in this study are:

1. There will be a significant negative relationship between nomophobia and psychological well-being.
2. Gender will significantly moderate the relationship between nomophobia and psychological well-being.

### **3. Method**

#### **3.1 Design**

A Survey design was adopted for this study. Reason being that the study utilized and administered questionnaires to determine the relationship between the variables of interest.

#### **3.2 Participants**

The population for this study were University of Jos undergraduate students. 120 students, comprising 64 males and 56 females, whose age range from 16-35 years, volunteered to participate in the study.

#### **3.3 Instruments**

Two scales were used to generate data for this study, namely, Nomophobia Questionnaire and the Ryff's Psychological Well-being Scale.

#### **Nomophobia Questionnaire (NMP-Q)**

The NMP - Q, developed by Yildirim and Correia (2015) measures nomophobia. NMP-Q is a Likert-type 20- item scale with 7 range of response from 1 (1) Strongly disagree to (7) strongly agree. The NMP – Q comprises four factors which include: (a) Not being able to communicate (b) Losing connectedness (c) Not being able to access information and (d) giving up convenience. NMP-Q does not require any special conditions for administration. The highest scale score is 140 and the lowest is

20. The responses are summed up to arrive at the total score as higher scores correlate with higher levels of nomophobia and vice versa. A score 20 = no nomophobia, 21 to <60 = mild, 60 to <100 = moderate and 100 to 140 is severe nomophobia. The Cronbach's alpha (C) was excellent across the entire NMP – Q. C = .945 and in each factor = .814 – .939 and is said to have a good validity.

### **Ryff's Psychological Well-being Scale**

The Ryff's Psychological Well-being Scale is a 42 – item scale developed by Ryff, (1989) and it measures psychological well-being. It is a Likert-type scale with 6 responses, ranging from (1) Strongly agree to (2) Strongly disagree. The scale was designed to measure psychological well-being across six dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance. Administration of the scale does not require any special condition. The first step in scoring responses on these scales is to reverse-score each of the negatively worded items, before totaling all the values. The formula for reverse-scoring an item is:

(Number of scale points + 1) – (Respondent's answer). For example, if a respondent checked 5 in response to one of the negatively worded items, this response would be changed to a value of 2 (6+1-5). Once all the values are computed, it is summed up to get the total score for each sub-scale. The new value is presented against a possible total for each sub-scale. The scale score ranges from 18 – 108, with higher scores representing greater well-being.

The six sub-scales exhibit acceptable internal consistency ( $\alpha$ ) ranging from .86 to .93 and good validity of .73.

### **3.4 Procedure**

The researchers along with research assistants administered 150 questionnaires to students in the Zion Hostel, the “Man O War” lodge, and various other students within the University of Jos. The purpose of the research was explained to participants, after which their consent to participate was sought for. Some questionnaires were filled and returned on the spot, while others, especially those at the Zion Hostel were administered and left with the students to return the next day. Those who returned the questionnaire immediately took about 30 minutes to finish. Out of the total number of 150 questionnaires issued, only 120 were retrieved. It took 3 days to collect the data and the data so collected was subjected to analysis, using the Statistical Package for the Social Sciences (SPSS), version 23.

#### 4. Method of Data Analysis

Both descriptive and inferential statistics were used for data analysis. Descriptive statistics, namely, the range, mean, frequency table and standard deviation were used, because they are easy to understand. In order to test the two hypotheses, simple linear regression and moderation inferential statistics was used. This method of data analysis is appropriate because the study aims at establishing the role of gender and its relationship with nomophobia and psychological well-being among undergraduates.

#### 5. Results

##### 5.1 Descriptive Results

This section presents results for the socio-demographic characteristics of the study participants, including information on their age, gender, and course level. Additionally, it provides the mean and standard deviation scores of the study variables, offering valuable insights into the participants' attributes and the distribution of data.

**Table 1: Demographic Characteristics of Study Participants**

	Frequency	Percentage %
<b>Age</b>		
16-20 years	20	16.7
21-25 years	86	71.7
26-30 years	11	9.2
31-35 years	3	2.5
<b>Gender</b>		
Male	64	53.3
Female	56	46.7

Table 1 displays the demographic characteristics of the study participants. The largest percentage observed was in the age group of 21-25 years, representing 71.7% of the total sample. The second most prominent age group was 16-20 years, comprising 16.7% of the participants. Smaller percentages were found in the 26-30 years age group (9.2%), followed by the 31-35 years group (2.5%). In terms of

gender distribution, the study had a relatively balanced representation, with 53.3% of participants identified as male and 46.7% as female.

**Table 2: Mean and Standard Deviation Scores of Nomophobia and Psychological well-being of the study Participants (N = 120)**

	Mean	Standard Deviation
Nomophobia	100.92	26.61
Psychological well-being	152.71	29.55

Table 2 presents the mean and standard deviation scores of nomophobia and psychological well-being for the study participants (N = 120). The participants' average score on the nomophobia scale was 100.92, with a standard deviation of 26.61, indicating variability in the responses. In contrast, the average score on the psychological well-being scale was 152.71, and the standard deviation was 29.55, suggesting some dispersion in the well-being scores as well. This means that on the average, participants reported a moderate level of nomophobia and a relatively higher level of psychological well-being. The standard deviations indicate that individual responses varied around the mean, reflecting diversity in participants' experiences with nomophobia and psychological well-being.

## 5.2 Inferential Results

### Hypothesis 1:

There will be a significant negative relationship between nomophobia and psychological well-being.

The simple linear regression statistics was used to test whether nomophobia has a significant negative relationship with psychological well-being. The model summary and the coefficient of the regression are presented in details in tables 5.3 and 5.4.

**Table 3: Regression Summary for the relationship between nomophobia and psychological well-being**

R	R-sq	Adjusted R-sq	F	df 1	df2	P.
.267	.071	.063	9.055	1	118.	.003

Table 3 shows the model summary of regression model for the simple linear regression. The results showed that the coefficient of determination  $R^2 = .071$ ,  $F(1,$

118)= 9.055 (5% level of significance). This showed that the model can be held for 7.1% variation in psychological well-being.

**Table 4: Coefficients of the Relationship Between Nomophobia and Psychological Well-being**

	Unstandardized Coefficients		Standardized Coefficients		p- value
	B	Std. Error	Beta	t	
(Constant)	182.619	10.277	17.770		.000
Nomophobia	-.296	.098	-.267	-3.009	.003

a. Dependent Variable: Psychological Well-being

The results in Table 4 shows the regression coefficients for the relationship between nomophobia and psychological well-being. The result revealed that nomophobia has a significant negative relationship with psychological well-being ( $\beta = -.296, t = -3.009, p = .003$ ). This implies that as nomophobia increases there is a decrease in psychological well-being. Hypothesis one is therefore supported.

**Hypothesis 2:**

Gender will significantly moderate the relationship between nomophobia and psychological well-being.

Moderation analysis was used to determine if gender will have significant moderate relationship between nomophobia and psychological well-being. The summary and coefficients of the regression model are indicated in tables 5 – 7.

**Table 5: Regression Summary of Moderation Analysis for Nomophobia × Gender**

R	R-sq	MSE	F	df1	df2	P
.483	.233	686.552	11.768	3	116	<.001

**Table 6: Coefficients of Moderated Regression Analysis Predicting Psychological well-being: Nomophobia × Gender**

	Coefficient	SE	T	p	LLCI	ULCI	
Constant	19.616	7.432	16.096	<.001	104.896	134.335	
Nomophobia	.086	.273	.313	.754	-.455	.626	
Gender	1	22.651	4.798	4.721	<.001	13.149	32.153
Nomophobia x Gender	-.285	.185	-1.540	.126	.651	.082	

DV = Psychological well-being, IV = Nomophobia, MV = Gender

The results in Table 6 shows the coefficients of the moderation analysis regression for nomophobia and gender. The result revealed that nomophobia has no significant relationship with psychological well-being ( $\beta = .086, t = .313, p = .754$ ); there was a significant positive relationship between gender and psychological well-being ( $\beta = 22.651, t = 4.721, p = <.001$ ). Gender did not significantly moderate the relationship between nomophobia and psychological well-being ( $\beta = -.285, t = -1.540, p = .126$ ).

**Table 7: Summary of R-squared Change for Nomophobia x Gender**

	R2-change	F	df1	df2	p
Nomophobia x Gender	.016	2.372	1	116	.126

The results in Table 7 shows the R-squared ( $R^2$ ) change for moderator regression. The result revealed that the moderator effect of gender accounted for 1.6% change in the relationship between nomophobia and psychological well-being [ $R^2 = .016, F(1, 116) = 2.372, p = .126$ ]. Thus, hypothesis two is not supported

## 6. Discussion of Findings

Generally, the mean and standard deviation scores of Nomophobia and Psychological well-being were found to be 100.92 and a standard deviation of 26.61 and 152.71 and 29.55 respectively. What this reveal is that there is a severe level of nomophobia and a high level of psychological well-being. Specifically, hypothesis one was the idea that there would be a significant negative relationship between nomophobia and psychological well-being. The results showed that as nomophobia increased in students, their psychological well-being decreased significantly. This finding supports earlier findings by Ozdemir, et. al. (2018), which reported that nomophobia significantly affected self-esteem, loneliness and self-happiness. Also, Kubrusly et al. (2021), reported that nomophobia is associated with depression, anxiety, stress and academic performance.

Hypothesis two claimed that gender will significantly moderate the relationship between nomophobia and psychological well-being. The test results fail to support this idea.

## 7. Conclusion and Recommendations

### 7.1 conclusion

The main aim of this study was to investigate the role of gender and its relationship with nomophobia and psychological well-being. The specific objectives were to ascertain if nomophobia has an inverse relationship with psychological well-being of undergraduates, and to examine if gender has a moderating effect on the relationship between nomophobia and psychological well-being of undergraduates. The test results revealed that nomophobia has a negative relationship with psychological well-being of undergraduates. In addition, the results also showed that gender did not have any moderating effect on the relationship between nomophobia and psychological well-being of undergraduates. We therefore conclude that severe nomophobia is associated with poor psychological well-being and that gender does not moderate the relationship between nomophobia and psychological well-being.

### 7.2 Recommendations

Based on the findings of this study, it is recommended that:

- i. The moderating effect of gender on the relationship between nomophobia and psychological well-being of undergraduates should be investigated further, in order to deepen the understanding of the phenomena.
- ii. Counsellors and managements of universities should as a matter of policy, counsel students on the safe use of their phones in order to improve their psychological well-being and their quality of life.

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