



#### RESEARCH PAPER

### Role of Parenting Styles in Increasing Pattern of Nomophobia Among Students: Moderating Role of Gender

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#### ABSTRACT

The current study aim was to examine the role of parenting styles in increasing pattern of nomophobia among students: moderating role of gender. The fear or anxiety associated with losing mobile phone service is known as nomophobia. The phrase came around as people's dependence on mobile communication increased. When the UK Post Office initially employed it in a survey in 2008, more over half of respondents said they were nervous when they weren't using their phones (León et al., 2021). 378 students (both male and female) with age range of 18-35 years were selected through purposive sampling technique from different district of Hazara division including Abbottabad and Mansehra. Two questionnaires; Nomophobia Questionnaire and Perceived Parenting Style Scale were used for the collection of responses. The results revealed that authoritative parenting style negatively predict nomophobia whereas authoritarian and permissive parenting styles positively predict nomophobia. However, the interaction term between authoritative, authoritarian and permissive parenting styles and gender was not statistically significant, suggesting that gender did not significantly moderate the relationship between authoritative, authoritarian and permissive parenting and nomophobia. The outcomes of this study might help educators and parents to use an appropriate parenting approach for students to avoid nomophobia.

**Keywords:** Nomophobia, Parenting Styles, Authoritative, Hazara Division, Students

#### Introduction

These days, one of the most important technologies that make life easier and more convenient for people is the smartphone. Mobile phones are utilized for many different purposes, such as online shopping, personal organization, and communication. Students are the primary victims of the new, addictive epidemic of the twenty-first century cell phone use. This problem has had detrimental consequences on many students' lives because of its negative psychological and physical effects. According to Jilisha et al. (2019), students utilize cellphones to stay connected, stay out of stressful circumstances, and maintain relationships.

University students' excessive usage of mobile gadgets, particularly smartphones, seems to have led to problems and concerns for their parents. The physiological, psychological, and social issues are the most urgent ones (Hussain et al., 2017). One of the psychological issues is nomophobia, which is exemplified by university students' and other users' compulsive use of smartphones and other mobile devices (Yildirim, 2015).

Negative outcomes caused by cellphones grown dramatically in the last several years, and nomophobia is one of the psychological issues connected to overuse of smartphones (Williams, 2024). Nomophobia, also known as the fear, worry, anxiousness, and severe discomfort experienced when one is unable to use a cell phone (Yilmaz et al., 2023). According to Chen et al. (2022), university students generally use their smartphones to do their daily activities independently. Accordingly, NMP is most common in young individuals and ranges from 77% to 99% in both developed and developing nations (Smith & Jones, 2022). A study done by Rawalpindi Medical University in Pakistan found that many medical students had moderate NMP, with mild, moderate, and severe NMP accounting for 17.4%, 61.7%, and 20.9% of cases, respectively (Safdar et al., 2020).

Parenting style is one of the elements that contributes to nomophobia in children. Morin et al. (2020) define parenting style as a psychological construct that represents the specific techniques parents use to raise their kids. Main parenting types were developed by the research of parent-child relationships, and these included control methods and nurturing (as opposed to conflict or neglect) (Lascala, 2019). Thus, the bridge of nurturing, conflict, and control gave rise to three different parenting types: permissive (high balminess and low control), authoritarian (low warmth, greater conflict, and oppressive and punishing), and authoritative (friendliness, positive/principled control, and high expectations in childhood).

Future behavior of children has been found to be frequently associated with these three categories (Morin et al., 2020). Individuals who were raised by authoritative parents tend to be very pragmatic, socially, and academically capable, and very least symptomatic. Additionally, children raised by parents who are both authoritarian and permissive have the worst social and intellectual results (Muyana et al., 2018).

## **Literature Review**

Chinese study discovered that adolescents with greater levels of nomophobia had parents that were permissive, which is defined as having less control and a lot of warmth. (Liu et al., 2020). A Turkish study found that children of authoritative parents were less likely to exhibit nomophobic behavior patterns than children of authoritarian parents. Since authoritarian parents frequently place strict rules and restrictions on their conduct, their children may grow up fearing punishment if they are denied access to or prevented from using their phones. Conversely, authoritative parents use a more balanced approach to parenting, setting reasonable expectations and boundaries while also providing guidance and support (Ayas et al., 2019).

The relationship between parenting styles and nomophobia is becoming more and more prominent in psychological research. Different parenting styles can have an impact on children's emotional and behavioral development as well as their connection to technology (Chao, 2020). Healthy technology use has been associated with authoritative parenting, which is characterized by structure and boundaries along with warmth and responsiveness. Nomophobia is less common in children who grow up in such settings since they typically have a balanced perspective on mobile devices (García, 2020). Due to their rigidity and lack of response, authoritarian parenting may cause kids to become more anxious and nomophobic by making them rely on smartphones for social connection. Permissive parenting raises the likelihood of nomophobia by failing

to establish boundaries, which can lead to excessive gadget use and inhibit children's ability to develop self-control (Mengi et al., 2020).

The distinction between men and women in Pakistani homes is significant, so it's critical to investigate how gender affects the connection between nomophobia and parenting styles. Parenting practices are perceived differently in Pakistan than in Western societies. Religious and cultural traditions are vital in Pakistan's traditional collectivistic society (Bronstein, 2020). While parents in Pakistan tend to give boys more freedom to socialize and make their own decisions, they tend to be more overly protective of their daughters. Children are expected to absolutely obey and show respect to their parents and other family elders (Berndt et al., 2022).

In Asian societies, mothers are frequently perceived as more permissive or authoritative, whereas fathers are perceived as authoritarian. But in recent years, fathers have taken a more active role in raising their children, and parenting roles have changed (Bhattacharyya & Pradhan, 2019). Asian culture has different social expectations for boys and girls, and parenting styles vary according to gender. Gender norms in Pakistani society demand that girls should be more submissive, dependent, and passive, whereas boys should be assertive, dominant, and independent (Khan & Rehman, 2021).

This study aims to contribute to a more comprehensive understanding of nomophobia by examining how different parenting styles impact children's dependence on smartphones and the moderating effect of gender. The ultimate objective is to offer knowledge that will enable parents, teachers, and mental health specialists create practical plans to reduce the risks connected to students' nomophobia.

### Conceptual Model

The suggested model was ascertaining how gender moderates the relationship of perceived parenting styles (authoritative, authoritarian, permissive) and nomophobia.

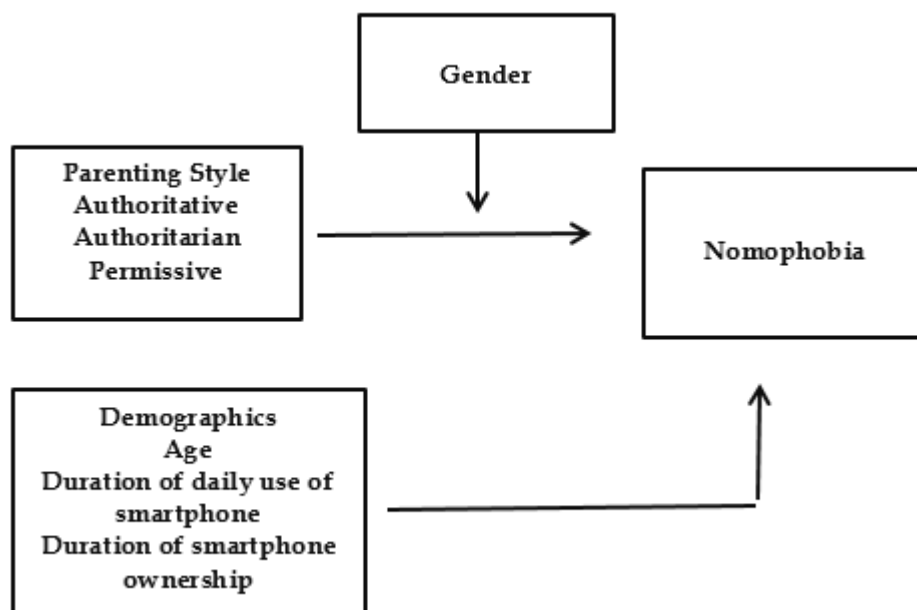


Figure 1 Conceptual Model

*Note.* Figure indicates parenting styles (authoritative, authoritarian, permissive) are independent variable whose effect was examined on nomophobia which is dependent variable in the current study. Moreover, gender was used as a moderator in the relationship of parenting styles and nomophobia.

## **Hypotheses**

1. Authoritative parenting style will negatively predict nomophobia.
2. Authoritarian parenting style will positively predict nomophobia.
3. Permissive parenting style will positively predict nomophobia.
4. Gender will moderate the relationship between parenting styles (authoritative, authoritarian, and permissive) and nomophobia.

## **Material and Methods**

### **Operational Definition of Variables**

#### **Parenting Styles**

The term parenting style describes how children view their parents (Divya & Manikandan, 2013). It is operationally defined by the scores obtained on the Perceived Parenting Styles Scale, which evaluates permissive, authoritative, and authoritarian styles separately (PPSS; Divya & Manikandan, 2013).

#### **Authoritative Style**

It includes open communication, clear expectations, guidance, support, love, and time spent together to help children make decisions (Divya & Manikandan, 2013). This study aims to contribute to a more comprehensive understanding of nomophobia by examining how different parenting styles impact students' dependence on smartphones and the moderating role of gender.

#### **Authoritarian Style**

It includes stringent guidelines, consequences for disobeying them, comparing oneself to friends, a lack of love and support, limitations, and an inability to address problems (Divya & Manikandan, 2013). Higher scores on the Perceived Parenting Styles Scale indicate a more authoritarian approach, which is operationally characterized as an authoritarian parenting style.

#### **Permissive Style**

This approach allows children to take charge of their own activities since parents are inconsistent, treat children like friends, set few boundaries, and have low expectations (Divya & Manikandan, 2013). Higher scores on the Perceived Parenting Styles Scale indicate a more lenient approach, which is operationally characterized as a permissive parenting style.

#### **Nomophobia**

According to Yilmaz et al. (2023), nomophobia is another name for the extreme discomfort, anxiety, worry, and panic that come with not being able to use a cell phone.

Nomophobia is operationally defined by the scores obtained on the Nomophobia Questionnaire, where higher scores indicate more severe levels of nomophobia.

### **Research Design**

Study employed cross- sectional correlational research design.

### **Sample**

Data were collected from the districts of Abbottabad and Mansehra, comprising a sample of 378 students. A purposive sampling method was used to gather the data.

The study sample included students aged between 18 and 35 years. A total of 450 individuals were approached using in-person administration, resulting in an 84% response rate and 378 completed responses. The sample was non-clinical in nature. Before participation, proper informed consent was obtained from all participants.

### **Inclusion Criteria**

The inclusion criteria for this study were that participants must be students between the ages of 18 and 35 years, currently enrolled in educational institutions. Students who belong to a stable family system, where at least one parent is residing with them.

### **Exclusion Criteria**

Students who were mentally disturbed and who live in orphanages or SOS villages were excluded from the study. Participants who did not use a smartphone were excluded from the study.

### **Instruments**

#### **Perceived Parenting Style Scale**

Divya and Manikandan (2013) created the Perceived Parenting Style Scale to study how children perceive their parents' actions. Three dimensions, namely authoritarian, authoritative, and permissive, are used to measure the subject's perceived parenting style. It has thirty items with five-point Likert scale responses elicited for each category: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree(1). Strongly Agree received the greatest score, while Strongly Disagree received the lowest. Every item on the scale is positively stated and evaluated on a scale of 1 to 5. The permissive type is comprised of items 3, 6, 9, 12, 15, 18, 21, 24, 27, 30; authoritative is represented by 1, 4, 7, 10, 13, 16, 19, 22, 25, 28; and authoritarian by 2, 5, 8, 11, 14, 17, 20, 23, 26, 29. The results showed that the permissive style had an Alpha coefficient of 0.86, the authoritarian style of 0.81, and the authoritative style of 0.79.

#### **Nomophobia Questionnaire NMP-Q**

The Nomophobia Questionnaire (NMP-Q) was created by Yildirim & Correia in 2015. The 20-item Nomophobia Questionnaire (NMP-Q) was utilized to assess nomophobia. A 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) was used for each NMP-Q item. The scores for all the items were put together to get the final score. Scores less than 20 indicates no nomophobia however scores equal to

21 or greater than 21 indicates nomophobia. Cronbach's alpha reliability of the scale reported by author is .94. Current reliability of the scale is .89.

### Procedure of the Study

After obtaining formal permission from the administrations of colleges and universities in Abbottabad and Mansehra, data collection was conducted with the assistance of faculty coordinators. A purposive sampling technique was used to recruit 378 student participants. Prior to participation, students were informed about the study's objectives, assured of confidentiality, and provided informed consent. Participation was entirely voluntary, and no coercion was involved. Data were collected in person through structured questionnaires, and only fully completed responses were included in the analysis, ensuring adherence to ethical research standards.

### Ethical Approval

The research topic received approval from the Graduate Research Committee (GRC) within the Department of Psychology. Furthermore, ethical approval was obtained from the Advanced Studies and Research Board (ASRB) at Hazara University. Research was conducted as per APA 7 ethical standards.

### Data Analyses and Interpretation

To access objectives of the present study and to examine hypotheses appropriate statistical analyses were done by using SPSS version 26.

### Results and Discussion

**Table 1**  
**Correlation coefficient among Variables (N= 378)**

S.NO	Scales	N	M	SD	I	II	III	IV
I	Authoritative	378	32.71	9.67	-	.019	-.572**	-.539**
II	Authoritarian	378	27.73	10.12	-	-	-.017	.493**
III	Permissive	378	27.34	9.87	-	-	-	.591**
IV	Nomophobia	378	80.43	38.22	-	-	-	-

Note. *M* = Mean, *SD* = Standard Deviation, *N* = Number of Participants.  $P > .05$ , \*\* $p < .01$ .

Table 1 revealed that authoritative parenting style has a non significant positive relationship with authoritarian parenting style ( $r = .02$ ,  $p > 0.05$ ). Authoritative parenting style showed a significant negative relationship with permissive parenting style ( $r = -.57^{**}$ ,  $p < 0.01$ ) and nomophobia ( $r = -.54^{**}$ ,  $p < 0.01$ )

Authoritarian parenting style has a non significant negative relationship with permissive parenting style ( $r = -.02$ ,  $P > 0.05$ ). However authoritarian parenting style ( $r = .49^{**}$ ,  $p < 0.01$ ) and permissive parenting style ( $r = .49^{**}$ ,  $p < 0.01$ ) has a significant positive relationship with nomophobia.

**Table 2**  
**Regression Coefficient of Authoritative, Authoritarian and Permissive Parenting Styles on Nomophobia ( N = 378 )**

Variables	B	SE	T	P	95%CI
Constant	22.04	8.31	2.66	.008	{5.71, 38.37}
Authoritative	-1.208	.15	-8.38	.001	{-1.50, -.93}
Authoritarian	1.92	.12	16.90	.001	{1.69, 2.14}

Permissive	1.65	.15	11.62	.001	{1.37. 1.93}
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Note. CL = Confidence Interval, SE = Standard Error.

Table 2 showed the impact of authoritative, authoritarian and permissive parenting styles on nomophobia. The  $R^2$  value of .67 revealed that the predictors explained 67% variance in the outcome variable with  $F(3, 374) = 247.48, P < .001$ . The findings revealed that authoritative parenting style negatively predict nomophobia ( $\beta = -.31, P < .001$ ) whereas authoritarian ( $\beta = .51, P < .001$ ) and permissive parenting styles positively predict nomophobia ( $\beta = .43, P < .001$ ).

**Table 3**  
**Summary of Moderating Role of Gender in the Relationship of Authoritative Parenting Style and Nomophobia (N = 378)**

	B	t	P	95%CI	
				Low	Up
Conatant	65.77	10.23	.000	55.20	76.35
Authoritative(A)	-2.71	-4.99	.000	-3.79	-1.65
Gender(B)	9.61	2.90	.003	3.10	16.12
AxB	.42	1.22	.219	-.25	1.09

A moderated regression analysis was conducted using the Process Macro (Model 1) to examine the role of authoritative parenting style in predicting nomophobia among students, with gender as a moderator. Altogether, 30.8% of the variability in nomophobia was predicted by all variables,  $R^2 = .308, F(3, 374) = 55.72, p < .001$ . Table 3 results indicated that authoritative parenting style was significantly and negatively related to nomophobia ( $B = -2.71, SE = 0.54, t = -4.99, p < .0001$ ), suggesting that higher levels of authoritative parenting were associated with lower levels of nomophobia. Gender was also a significant predictor of nomophobia. However, the interaction term between authoritative parenting and gender ( $A \times B$ ) was not statistically significant ( $B = 0.42, SE = 0.34, t = 1.23, p = .219$ ), indicating that gender did not significantly moderate the relationship between authoritative parenting style and nomophobia.

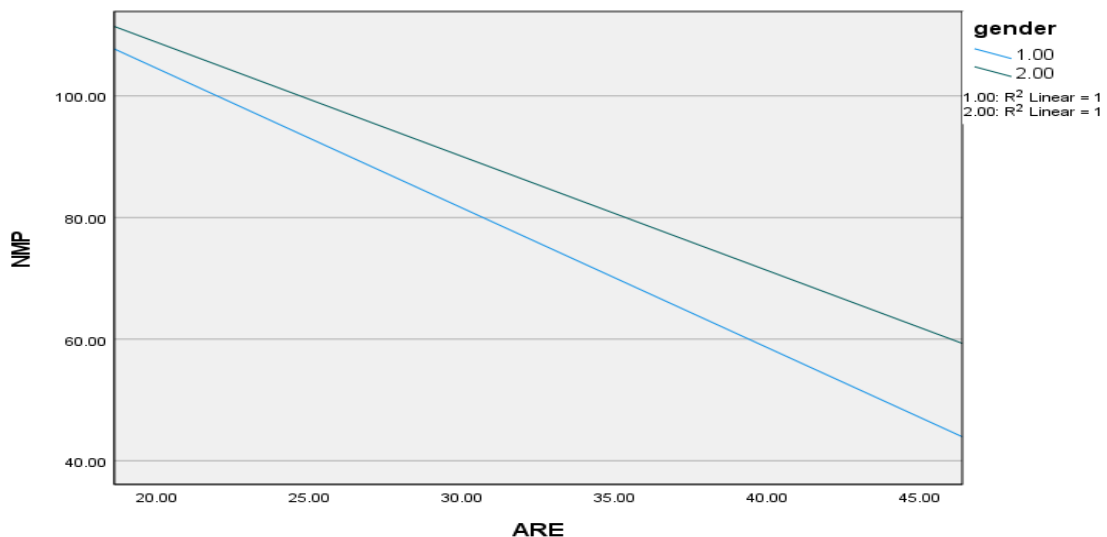


Figure 2 Interaction between authoritative parenting style and gender on nomophobia.

Figure 2 indicated that the interaction was not statistically significant ( $p > .05$ ), suggesting that the relationship between authoritative parenting and nomophobia does not differ by gender.

**Table 4**  
**Summary of Moderating Role of Gender in the Relationship of Authoritarian Parenting Style and Nomophobia (N = 378)**

	B	t	P	95%CI	
				Low	Up
Conatant	64.27	11.57	.000	53.34	75.19
Authoritarian(A)	1.66	2.83	.004	.50	2.82
Gender(B)	10.43	3.05	.002	3.70	17.16
AxB	.09	.27	.787	-.59	.78

Altogether, 26.1% of the variability in nomophobia was predicted by all variables,  $R^2 = .261$ ,  $F(3, 374) = 44.15$ ,  $p < .001$ . Table 4 results indicated that authoritarian parenting style was a significant predictor of nomophobia, with higher levels of authoritarian parenting associated with higher levels of nomophobia ( $B = 1.66$ ,  $SE = 0.59$ ,  $t = 2.83$ ,  $p = .004$ ). Additionally, gender was found to be a significant predictor of nomophobia. However, the interaction term between authoritarian parenting style and gender ( $A \times B$ ) was not statistically significant ( $B = 0.09$ ,  $SE = 0.35$ ,  $t = 0.27$ ,  $p = .787$ ), suggesting that gender did not significantly moderate the relationship between authoritarian parenting and nomophobia.

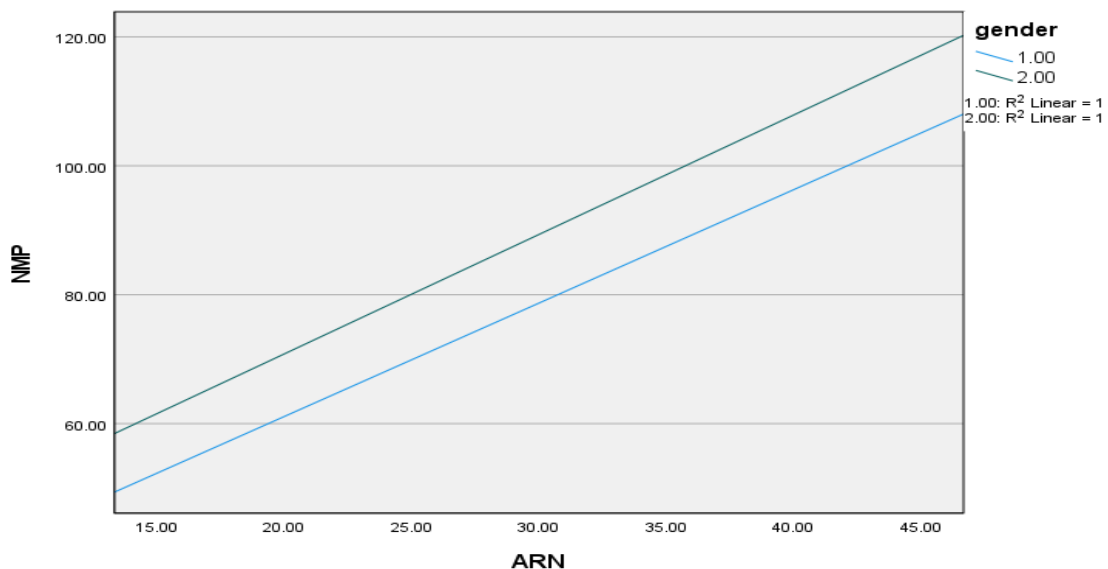


Figure 1 Interaction between authoritarian parenting style and gender in predicting nomophobia.

Figure indicated that, the interaction was not statistically significant ( $p > .05$ ), indicating no meaningful moderating effect of gender.

**Table 5**  
**Summary of Moderating Role of Gender in the Relationship of Permissive Parenting Style and Nomophobia (N = 378)**

	B	t	P	95%CI	
				Low	Up
Conatant	62.72	12.31	.000	52.71	72.74
Permissive(A)	2.90	5.43	.000	1.85	3.96
Gender(B)	11.52	3.67	.000	5.35	17.69
AxB	-.41	-1.26	.207	-1.04	.23



Altogether, 37.4% of the variability in nomophobia was predicted by all variables,  $R^2 = .374$ ,  $F(3, 374) = 74.69$ ,  $p < .001$ . Table 5 results revealed that permissive parenting style significantly predicted nomophobia, with higher levels of permissive parenting associated with higher levels of nomophobia ( $B = 2.90$ ,  $SE = 0.53$ ,  $t = 5.43$ ,  $p < .0001$ ). Gender was also a significant predictor of nomophobia. However, the interaction term between permissive parenting style and gender ( $A \times B$ ) was not statistically significant ( $B = -0.41$ ,  $SE = 0.32$ ,  $t = -1.26$ ,  $p = .207$ ), indicating that gender did not moderate the relationship between permissive parenting and nomophobia.

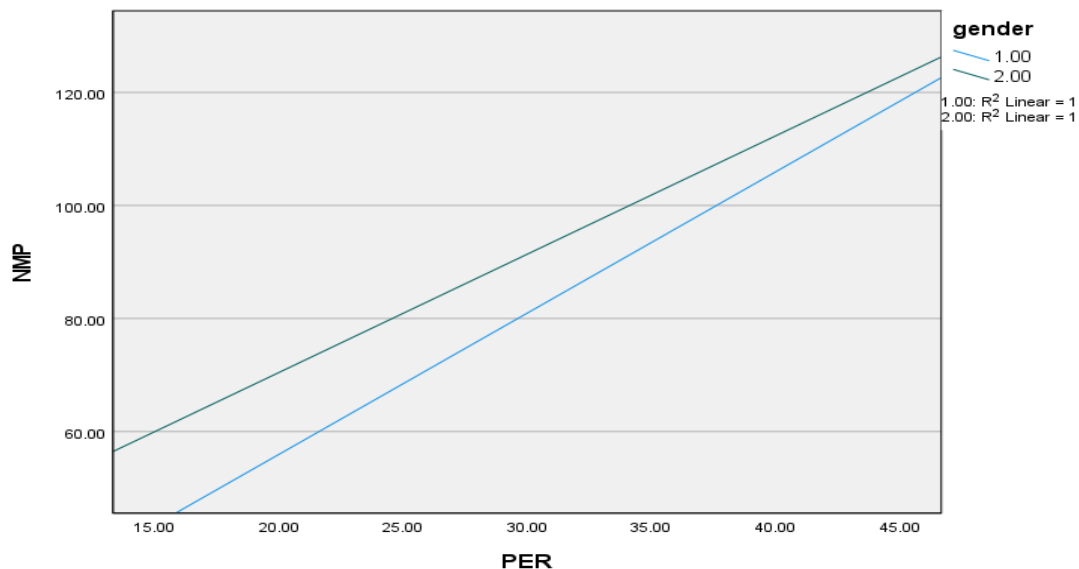


Figure 4 Interaction between permissive parenting style and gender in predicting nomophobia.

As shown in Figure , the interaction effect was not statistically significant ( $p > .05$ ), suggesting that gender does not moderate the relationship between permissive parenting and nomophobia.

## Discussion

In the current study it was hypothesized that authoritative parenting style will negatively predict nomophobia. The hypothesis was confirmed because the findings revealed that authoritative parenting style negatively predict nomophobia (see Table 1). According to earlier studies, children who had authoritative parents reported having less nomophobia, while students who had permissive and authoritarian parents reported having more nomophobia (Deka & Bhattacharyya, 2020).

Findings of the present study showed authoritarian parenting style positively predict nomophobia as shown in table 1. A study found a negative correlation between nomophobia and authoritative parenting, and a positive correlation between nomophobia and authoritarian parenting (Sahin et al., 2018).

The third hypothesis of the study proposed that permissive parenting style will positively predict nomophobia. The current study findings supported this hypothesis (table 9). One study in Pakistan examines how parenting styles affect smartphone addiction in Pakistani youngsters, which is a prologue to nomophobia. The results demonstrate that whereas authoritarian and permissive parenting styles increase the

likelihood of addiction, authoritative parenting, which is defined by emotional support and proper limits, dramatically lowers addiction (Zulfiqar & Khan, 2021).

The fourth hypothesis of the research stated that gender will moderate the relationship between parenting styles (authoritative, authoritarian, and permissive) and nomophobia. In this study, process macro analysis was utilized to examine the moderating role of gender on nomophobia and parenting styles. Contrary to the hypothesis, the result presented in the table indicates that gender did not significantly moderate the relationship between authoritative, authoritarian and permissive parenting styles and nomophobia (Table 2, 3 & 4).

Kuss and Griffiths (2017) investigated the effects of permissive, authoritarian, and authoritative parenting styles on adolescents' vulnerability to internet and smartphone addiction. The study discovered that whereas parenting styles had a direct impact on smartphone use, the association between parenting styles and addiction was not moderated by gender. This shows that adolescents' vulnerability to smartphone addiction may be more significantly influenced by factors other than gender. The study conducted in China investigated the connection between adolescent smartphone addiction and parental practices. The findings showed that while gender was not a significant moderating factor, parenting styles did have significant effects on smartphone addiction (Xie et al., 2019).

## **Conclusion**

The findings highlight a complex interplay between parenting styles, nomophobia and gender, where finding indicated that authoritative parenting style negatively predict nomophobia and authoritarian and permissive parenting style positively predict nomophobia. Age, duration of smartphone daily usage and duration of smartphone ownership further shape this relationship, suggesting that nomophobia differ across these demographics. Finding also indicating that the relationship between parenting styles and nomophobia not moderated by gender.

## **Implications**

- The study's findings help educational psychologists guide parents and educators in balancing emotional growth and technology use, preventing nomophobia, and improving student outcomes.
- This study helps clinical psychologists understand the link between gender, parenting, and nomophobia, enabling focused interventions and promoting healthy digital practices.
- The findings provide the groundwork for further research that looks at additional variables affecting nomophobia.
- The findings of this research are useful for counseling psychologists, as they can help identify students at risk of nomophobia and provide personalized interventions. Educating students and parents on healthy smartphone use can promote better mental well-being.

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