



## Study Analyzing the Role of Nomophobia Tendencies with Friendship Quality: A Study of Indonesian College Students

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### ABSTRACT

**Introduction:** Smartphones have become a primary need in the technological era. However, anxiety can arise when individuals are not near their smartphones, which is known as nomophobia. This study aims to determine the relationship between nomophobia tendencies and friendship quality. **Methods:** This research uses a quantitative correlational method with a cross-sectional design. A sample of 371 students aged 18-25 years in Indonesia was taken using non-probability convenience sampling. Data were collected using the nomophobia questionnaire (NMP-Q) and the McGill Friendship Questionnaire-Friend's Functions (Short) (MFQ-FFS) questionnaires. **Results:** The results showed that there was a significant relationship between nomophobia tendencies and friendship quality ( $r = 0.294$  and  $p = 0.000$ ). The higher an individual's nomophobia tendencies, the higher the quality of friendships formed. **Conclusion:** Nomophobia has a positive relationship with friendship quality. This shows that individuals with nomophobia tendencies find it easier to establish and maintain friendly relationships.

### 1. Introduction

In the current technological era, smartphones have become a primary need for society. These devices are no longer just communication tools but have transformed into personal assistants that help individuals in various aspects of life. Smartphones allow individuals to communicate easily and quickly via telephone, text messaging, and social media applications. Smartphones are also able to access unlimited information from the internet, including news, knowledge, entertainment, connect with other people around the world through various online platforms and carry out various daily activities, such as shopping, ordering food, and managing finances. Smartphones have provided many benefits to individuals and have changed the way people live. However, excessive smartphone use can have negative

impacts, one of which is nomophobia.<sup>1-4</sup>

Nomophobia is an abbreviation of "No Mobile Phone Phobia", which is excessive anxiety or fear when individuals are not near their smartphone or cannot access it. Symptoms of nomophobia can include anxiety, panic, stress when unable to use the smartphone, constantly checking the smartphone, feeling uncomfortable when there are no notifications, having difficulty focusing on other activities because of thinking about the smartphone, and feeling lonely and isolated when unable to connect with others through the smartphone. Nomophobia was first identified by Dr. Richard Greenfield in 2008. Since then, research on nomophobia has increasingly been carried out and shows that nomophobia can affect various aspects of an individual's life. Individuals with nomophobia may have difficulty focusing on their work due to being

constantly distracted by their smartphones. Excessive smartphone use can interfere with social interactions and cause individuals to become less focused on other people. This can cause misunderstandings, conflicts, and a decrease in the quality of social relationships. Nomophobia can be associated with depression, anxiety, and stress.<sup>5-9</sup>

Friendship is an interpersonal relationship characterized by mutual trust, affection, and support. Quality friendship can provide various benefits for individuals, such as increasing happiness, mental well-being, a sense of belonging, social connection, self-confidence, and self-esteem, as well as providing emotional and instrumental support in facing difficulties. The quality of friendship can be measured by several indicators, namely how much individuals feel confident that they can trust their friends, how much individuals feel loved and appreciated by their friends, how much individuals feel their friends are there for them when needed, how well individuals can communicate with their friends as well as how comfortable individuals feel when they are with their friends. Some research suggests that nomophobia can affect the quality of friendships. Excessive use of smartphones can disrupt social interactions and cause individuals to become less focused on other people, cause misunderstandings and conflicts because individuals do not give their full attention to their friends, decrease mutual trust and affection because individuals feel their friends are more concerned with their smartphones and increase feelings of jealousy and envy because individuals feel their friends have a better social life on social media.<sup>10-14</sup> This research aims to determine the relationship between nomophobia tendencies and the quality of friendship among Indonesian college students.

## 2. Methods

The research design used was cross-sectional. This design examines the relationship between nomophobia variables and friendship quality at a certain time. The sampling technique used was

nonprobability sampling with convenience sampling type. The sample for this research is active students aged 18-25 years who are willing to fill out a research questionnaire. The respondents for this research were 371 active students (132 men and 239 women) aged 18-25 years, living in 25 provinces representing all provinces in Indonesia. Data collection was carried out online via Google Forms. Respondents filled out a questionnaire containing questions about nomophobia tendencies and friendship quality. Two research instruments were used in this study: 1. Nomophobia scale: This scale consists of 20 statement items that measure the level of nomophobia. This scale uses a 1-7 Likert scale (1 = "Strongly Disagree" to 7 = "Strongly Agree"). 2. Friendship quality scale: This scale consists of 30 statement items that measure the quality of friendship. This scale uses a 0-8 Likert scale (0 = "Never" to 8 = "Always"). Data analysis was carried out using SPSS 22.0 software. The validity test is used to measure the authenticity of the research instrument. Reliability tests are used to measure the stability and consistency of research instruments. The normality test is used to determine whether the data distribution is normal or not. The correlation test was used to analyze the relationship between nomophobia variables and friendship quality. Statistical test results are considered significant if the p-value is <0.05. This research was conducted by observing the principles of research ethics. The researcher ensures that the research data will be kept confidential and that respondents will not be harmed in this research.

## 3. Results

Participants involved in the study consisted of 371 active students, including 132 (35.5%) males and 239 (64.5%) females aged 18-25 years, originating from 25 provinces in Indonesia. The majority of participants came from DKI Jakarta province, with a total of 85 (23%) participants, and were dominated by participants aged 21 years, totaling 99 (26.7%) participants. Table 1 shows the characteristics of the participants.

Table 1. Participants characteristics.

Characteristics		Total (n)	Percentage
Gender	Male	132	35.5%
	Female	239	64.5%
Age	18	20	5.4%
	19	58	15.6%
	20	66	17.8%
	21	99	26.7%
	22	78	21%
	23	29	7.8%
	24	7	1.9%
	25	14	3.8%
Domicile	DKI Jakarta	85	23%
	West Java	59	15.1%
	Central Java	47	12.7%
	East Java	38	10.2%
	Yogyakarta	37	10%
	West Kalimantan	31	8.3%
	East Kalimantan	3	1%
	Central Kalimantan	3	1%
	North Sumatera	7	2%
	South Sumatera	13	3.5%
	West Sumatera	2	0.5%
	Riau	2	0.5%
	Riau Islands	5	1.3%
	Jambi	1	0.3%
	Lampung	1	0.3%
	Bangka Belitung	1	0.3%
	Bali	7	2%
	Banten	18	4.8%
	West Nusa Tenggara	3	1%
	Aceh	1	0.3%
	North Sulawesi	1	0.3%
	Central Sulawesi	3	1%
Gorontalo	1	0.3%	
Maluku	1	0.3%	
Papua	1	0.3%	

In this study, 11 (3%) respondents were classified as having mild nomophobia, 125 (33.7%) respondents were classified as having moderate nomophobia, and 235 (63.3%) respondents were classified as having

severe nomophobia. This indicates that the majority of research participants fall into the severe nomophobia category. Table 2 shows the norm categories.

Table 2. Norms categories,

Category	Score ranges	Total (n)	Percentage
None	≤ 20	-	-
Mild	≤21 - < 60	11	3%
Moderate	≤ 60 - < 100	125	33,7%
Severe	≤ 100 - ≤140	235	63,3%

The Spearman correlation test indicates that there is a positive relationship between nomophobia tendency and friendship quality with a p-value of 0.000 ( $p < 0.05$ ). Both variables correlate positively with weak strength, as seen from the result of  $r$ , which

falls within the coefficient range of 0.2 - <0.4 ( $r = 0.294$ ). This means that the higher the level of nomophobia experienced by an individual, the higher their friendship quality. Similarly, the lower the level of nomophobia, the lower the quality of friendship.

Therefore, H1 is accepted, indicating a significant relationship between nomophobia tendency and

friendship quality among students. Table 3 shows the correlation test results.

Table 3. Correlation test.

Variable	p-value	Correlation coefficient (r)
Nomophobia tendency	0.000	0.294
Friendship quality		

The nomophobia tendency variable correlates positively with all aspects of friendship quality. Therefore, it is concluded that there is a relationship between nomophobia tendency and the six aspects of

friendship quality, which include stimulating companionship, help, intimacy, reliable alliance, self-validation, and emotional security. Table 4 shows friendship quality.

Table 4. Friendship quality.

Variable	Nomophobia tendency	
	p-value	Correlation coefficient (r)
<b>Friendship quality</b>		
Stimulating companionship	0.000	0.238
Help	0.000	0.220
Intimacy	0.000	0.311
Reliable alliance	0.001	0.170
Self-validation	0.000	0.293
Emotional security	0.000	0.317

#### 4. Discussion

Based on the conducted research, the correlation results indicate a relationship between nomophobia tendency and the six aspects of friendship quality (with a weak correlation). These results can be concluded that the higher the level of nomophobia in individuals, the higher the level of friendship quality, and conversely, the lower the level of nomophobia in individuals, the lower the level of friendship quality. A study found that people experiencing nomophobia will continue to seek networks to communicate with their friends. Intensive communication with friends can improve friendship quality. Thus, this explains how the nomophobia tendency may be positively associated with friendship quality. The tendency of nomophobia can influence individuals' decisions to prefer virtual social interactions over face-to-face meetings. It can be understood that nomophobia tendencies are found to be associated with anxiety in social interactions. Individuals who are highly anxious in social interactions prefer virtual relationships over face-to-face interactions to avoid discomfort and anxiety. This

perspective can be understood as the unavailability of access to smartphones or the thought of not being able to use smartphones can be considered a source of anxiety for individuals experiencing high levels of social interaction anxiety because the use of smartphones is one of the coping strategies that help them reduce social discomfort.<sup>15-19</sup>

The study revealed that nomophobia can decrease social interaction and skills among students, such as being more apathetic and having low empathy. The explanation for the difference between the two studies and the researchers' findings lies in the type of relationship quality formed. The use of smartphones can make it more difficult for individuals to engage in face-to-face social interactions, but they can still engage in social interactions virtually. Therefore, the tendency of nomophobia as a psychological phenomenon that can make individuals more frequent smartphone users does not rule out the possibility of improving the quality of individuals' relationships in terms of virtual interaction. In addition to virtual social interactions, face-to-face interactions among

individuals experiencing nomophobia can also support the development of good friendship quality. Although individuals experiencing nomophobia have high intensity and activity in accessing the virtual world, they still rely on direct interaction when building friendships. The use of smartphones can also be useful in enhancing closeness among nomophobia sufferers and their friends. The numerous features available on smartphones can trigger individuals to interact with each other by exchanging information about the latest features on their smartphones. Individuals can rely on their smartphones as a media support tool for learning, such as when working on group assignments related to academic tasks with their friends, thus resulting in more stimulating and meaningful friendships.<sup>20-24</sup>

Based on the results of statistical tests, nomophobia tendencies correlate positively with aspects of friendship quality. The presence of a stimulating companionship aspect can encourage friendships to build relationships involving shared activities, thus eliciting positive and stimulating emotions. Nomophobia tendencies in individuals stimulate a desire to constantly interact and connect with their friends. Individuals experiencing nomophobia may send text messages or make phone calls with their friends more regularly. This can strengthen friendships because they will communicate more frequently with their friends. Additionally, with smartphones, friends can interact through various social media applications or play games, which can be factors in increasing closeness by sharing experiences and engaging in virtual activities together. Individuals actively involved in developing online businesses with friends serve to meet living needs and also serve as a meaningful learning tool in friendship. However, this can lead to nomophobia tendencies, such as frequently checking smartphone notifications to monitor business messages.<sup>25-27</sup>

Nomophobia tendencies also correlate positively with the aspect of help in friendship quality. This aspect is beneficial for friendships to enhance the fulfillment of social support needs, thus alleviating

and reducing problems often faced by individuals. Nomophobia tendencies in individuals stimulate a desire to always be connected and access important information without barriers. Individuals experiencing nomophobia will more frequently ensure the presence of incoming messages or calls by regularly checking their smartphone screens. This can be one of the factors that strengthen friendships; when friends are in difficult situations or need assistance, individuals can immediately know and ensure their friends' condition to provide assistance promptly. This can also be an indicator that strengthens friendships due to the presence of social support with quick responses provided. Nomophobia tendencies were found to have a positive correlation with the aspect of intimacy in friendship quality. This aspect is beneficial for friendships to enhance the sense of being valued, cared for, and accepted. Nomophobia tendencies or the anxiety of not being able to access smartphones in individuals can result in the emergence of one of the characteristics of nomophobia tendencies, such as using smartphones regularly and spending a lot of time playing with smartphones. With smartphones, individuals can utilize this tool to deepen relationships and enhance intimacy with their friends. Individuals experiencing nomophobia will communicate more frequently with their friends via smartphone, even in situations that are not too urgent. The use of smartphones can also serve as a source of conversation topics when meeting friends face-to-face. These activities can strengthen friendships by increasing the need for mutual appreciation and attention from their friends.<sup>21-24</sup>

Nomophobia tendencies were also found to have a positive correlation with the aspect of reliable alliance in friendship quality. This aspect is beneficial for friendships to enhance friendship quality due to the presence of a relationship that can always be relied upon in all situations, thus increasing loyalty in friendship. Individuals experiencing nomophobia have a need to always stay connected with their closest people through smartphones. When individuals feel anxious due to separation from their smartphones,

they can rely on their friends for support and comfort. In forming strong friendships, several characteristics are required such as trust, loyalty, and reliability in all situations. Individuals experiencing nomophobia tend to need friends who can be trusted and loyal to help them overcome the anxiety they experience. Therefore, individuals who have strong friendship quality with the aspect of reliable alliance can be a valuable source of support for individuals experiencing nomophobia. Furthermore, nomophobia tendencies were found to have a positive correlation with the aspect of self-validation in the variable of friendship quality. This aspect is beneficial for friendships to evoke enthusiasm for life, increase self-esteem, and feel more meaningful. Individuals experiencing nomophobia may rely on their smartphones to obtain social validation and have a desire to be recognized by their friends, both virtually and in person. According to study, these individuals may use social media or messaging applications to continuously check and respond to messages from their friends, as well as post content that can attract attention and seek likes or positive comments on the displayed content. Individuals experiencing nomophobia also have a desire to share content directly from their smartphones with their friends in order to receive judgment or recognition from them in person. When individuals receive social validation and attention from their friends through smartphones, it can boost their self-confidence and make them feel valued by their friends.<sup>27-29</sup>

Lastly, nomophobia tendencies were also found to have a positive correlation with the aspect of emotional security in the variable of friendship quality. This aspect is beneficial for friendships to maintain emotional stability in all situations and conditions. Individuals experiencing nomophobia may tend to rely on their smartphones as a source of comfort and emotional support. Individuals may feel safer and more comfortable when near their smartphones, which can be used to contact their friends or as a source of media that can be directly shared with their friends regarding something or information that their

friends need to know. This condition may make individuals more willing to be open or honest when communicating about their personal feelings. Thus, this can provide a sense of security and control needed by individuals and be one of the factors that positively impact the aspect of emotional security in friendship quality. In this study, it has been found that individuals who easily feel anxious when unable to access their smartphones tend to be more open and active in forming friendships. Individuals with nomophobia tendencies may contact their closest people more frequently and find it easier to open up in conversations. Moreover, they may also be more active in arranging meetings and social events with their friends. Although nomophobia has negative impacts, such as inducing anxiety in individuals that can affect daily productivity, individuals can redirect this anxiety by focusing on improving the quality of friendships in the context of virtual social interactions that wisely utilize smartphone usage. Individuals can schedule their smartphone usage to avoid disruptions when with friends, such as agreeing to a "no gadget" rule for a certain period or activating the "do not disturb" mode on their smartphones. Utilizing social media to upload inspiring and meaningful content, seeking educational content to enhance knowledge and sharpen skills together. Thus, the establishment of good friendship quality will support the formation and development of adolescents and enhance individual social skills.<sup>30-32</sup>

There are limitations in this study. The measuring instrument used by the researcher to assess the quality of friendship relationships in this study did not specifically differentiate between the quality of virtual or face-to-face relationships, so the researcher was unable to test the relationship between nomophobia and the establishment of friendship quality that is virtual or face-to-face in individuals. The researcher suggests that future researchers could examine in more detail and construct measuring instruments related to the construct of friendship quality that can be differentiated or adapted to the type of interaction, whether face-to-face or virtual. Future researchers also need to consider other factors that can affect

friendship quality, such as similarity, acceptance, trust, respect, mutual assistance, positive assessment, gender, age, cultural background, openness, sensitivity or understanding, physical attraction, and reciprocity.

## 5. Conclusion

Nomophobia tendency has a significant positive relationship with friendship quality among students. Nomophobia's tendency correlates positively with the aspects of stimulating companionship, help, intimacy, reliable alliance, self-validation, and emotional security present in friendship quality. This means that the higher the nomophobia tendency in individuals, the more likely they are to exhibit behaviors that encourage friendship relationships, willingness to help, formation of intimacy, establishment of reliable relationships, self-recognition, and emotional security formation.

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