

21st Century Phobia: The Role of Loneliness and Social Anxiety in Adolescent Nomophobia

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Abstract - Nomophobia, or the fear of being disconnected from smartphones, is a phenomenon that has emerged in the 21st century. Excessive smartphone usage can lead to feelings of anxiety when not connected to a smartphone, thus affecting the quality of life and social interactions of an individual. The aim of this study is to investigate the relationship between loneliness and social anxiety with nomophobia among adolescents. The respondents in this study consist of 145 teenagers aged 15-18 who are active smartphone users. The research method used is quantitative, employing multiple regression analysis. The research results showed an $F = 13.433$ with a significance level = 0.000 ($p < 0.05$). This indicates that loneliness and social anxiety have an influence on nomophobia among adolescents. Subsequently, it was found that loneliness exhibited a positive relationship with nomophobia among adolescents, with a t -value = 2.187 and a significance level = 0.030 ($p < 0.05$). Similarly, social anxiety demonstrated a positive relationship with nomophobia among adolescents, as evidenced by a t -value = 2.538 with a significance level = 0.012 ($p < 0.05$).

Keyword : Nomophobia, Loneliness, Social Anxiety.

I. INTRODUCTION

Nomophobia, or the fear of being disconnected from one's smartphone, is a 21st-century issue. Excessive smartphone usage can lead to anxiety when not connected to one's device. According to a survey by Nationwide Building Society's Flexplus Current Account, approximately 58% of people cannot go without their phones for more than one day (Infiatech, 2016). A study by the American Psychiatric Association (2022) indicated that nearly 70% of teenagers in the United States experience symptoms of nomophobia. In Indonesia, recent research also shows a relatively high prevalence of nomophobia among adolescents, with around 57.5% of the sampled individuals experiencing it (Sugiyanti, 2021).

The high usage of smartphones is evident from a survey conducted by Ozdemir et al. (2018), where 95% of mobile phone users watch videos on YouTube, WhatsApp, or other social media platforms before going to sleep. Data from the US Census Bureau shows that the demand for information and technology is on the rise in Indonesia, with 72 million active internet users, and 62 million of them having active Facebook accounts (Ariansyah, 2014).

The excessive use of smartphones is alarmingly high among teenagers and young adults. Kwon et al. (2013) suggest that adolescents are more susceptible to phone addiction compared to adults. On the other hand, excessive phone use can deteriorate the quality of social relationships and even foster feelings of loneliness (Leung, 2007). The impact of nomophobia among students can affect both physical and psychological health, leading to increased depression, anxiety, stress, nervousness, emotional instability, poor sleep quality, headaches, eye strain, and redness (Argumosa-Villar et al., 2017). Short-term effects observed in teenagers with a tendency for nomophobia include anxiety, loneliness, panic, sadness, sweating, and tremors when separated from their smartphones (Bagazzi & Puenete, 2014). The long-term effects of nomophobia may result in a permanent decline in brain function, causing a loss of concentration, persistent stress, and even permanent mental disorders (Lisnawati, 2018).

Based on research regarding the phenomenon of nomophobia, several characteristics of individuals experiencing anxiety about not having their mobile phones or cellular devices include a strong dependency on technology (King et al., 2013). They tend to rely heavily on their phones for various daily activities and functions. Additionally, they often worry about missing out on something important (Bragazzi et al., 2014). This discomfort may arise from their fear of missing critical information or opportunities without their phones.

Furthermore, they rely on their phones for communication with others (Cao et al., 2007), meaning that phones serve not only as communication tools but also as sources of comfort and social support.

Excessive phone usage, exceeding 4 hours per day, and feeling uncomfortable without their phones nearby are also characteristic features of individuals experiencing nomophobia (Peng, 2014; Yildirim et al., 2018). This indicates that excessive phone usage not only affects their time but also their comfort and self-confidence. All of these are signs of a serious issue that can impact the well-being and quality of life of individuals experiencing nomophobia.

According to the results of interviews with Guidance and Counseling teachers at a high school, almost all students bring and use smartphones within the school environment for entertainment and social interaction, including through mobile games. Based on interviews with 10 teenagers, 8 out of 10 teenagers exhibit a tendency towards nomophobia. They feel anxious when separated from their phones, have a constant need to be close to their phones, and feel uncomfortable when unable to access the internet. The characteristics of nomophobia as proposed by Yildirim & Correia (2015) are also met. This condition demonstrates that the phenomenon of nomophobia is increasingly prevalent among teenagers and requires serious attention.

Several factors influencing the occurrence of nomophobia among teenagers include the intensity of mobile phone and social media usage, sleeping habits, and personality factors such as neuroticism (Thomé et al., 2011; Yildirim & Correia, 2015).

Research by Thomé et al. (2011) found that excessive mobile phone usage can lead to sleep disturbances in teenagers, which can have negative implications for both their mental and physical health. In addition to these factors, personality traits can also influence the occurrence of nomophobia in teenagers. Yildirim and Correia's study (2015) demonstrated that teenagers with high levels of neuroticism tend to be more susceptible to nomophobia.

Mobile phone phobia, or the popular term nomophobia, is the fear of being without a mobile phone or not having access to information through it. This condition refers to the anxiety and discomfort experienced by individuals when they are separated from their phones. Nomophobia is considered a modern-day phobia that has emerged relatively recently in human life due to the interaction between humans and information technology, particularly smartphones (Yildirim & Correia, 2015).

The following research has been made possible by the findings of previous studies. Gezgin et al.'s research in 2018 indicated that the more often teenagers check their smartphones in a day, the higher the level of nomophobia they experience. The duration of internet usage can also contribute to levels of loneliness and nomophobia in teenagers. Güner and Demir's study in 2022 involved high school students as respondents. Regression analysis revealed that nomophobia, self-control, and anxiety together can explain 58.7% of the variance in nomophobia. Furthermore, Kara et al.'s research in 2019 showed that the longer the daily duration of smartphone usage among teenagers, the higher the levels of loneliness and anxiety experienced, which are also associated with an increase in nomophobia behavior.

Listening to several studies related to the relationship between loneliness and social anxiety with nomophobia in teenagers, the researcher generally observes differences between this thesis and previous studies. The differences in this study include the focus on teenagers within the age range of 15-18 years, differences in the research location, and differences in the research variables, where this study utilizes loneliness and social anxiety as independent variables and nomophobia as the dependent variable. The aim of this study is to analyze the relationship between loneliness and social anxiety with the tendency towards nomophobia in teenagers, the correlation between loneliness and nomophobia in teenagers, and the relationship between social anxiety and nomophobia in teenagers.

II. METHOD

This research employs a quantitative research design. Data collection in this study utilizes quota sampling technique. The sample used in this research consists of teenagers who use smartphones, with the criteria being high school students aged 15-18 years who own a smartphone. The scales used in this study include the nomophobia scale, loneliness scale, and social anxiety scale. The nomophobia scale was developed based on several aspects proposed by Yildirim & Correia (2015) with a reliability value of Cronbach's Alpha at 0.872. The measurement of the loneliness variable was constructed using the UCLA Loneliness Scale (Russel, 1996), which had been previously used and translated by Nursyahrurahman (2018). The reliability value obtained was Cronbach's Alpha at 0.887. The social anxiety scale was developed by the researcher based on the concept of social anxiety behavior indicators proposed by Greca & Lopez (1998), with a reliability value of Cronbach's Alpha at 0.933. Data analysis for this research was conducted using Multiple Linear Regression analysis to test the research hypotheses, utilizing SPSS version 27.

III. RESULT AND DISCUSSION

A. Result

The results of the frequency distribution analysis indicate that the majority of the research subjects fall into the moderate category of Nomophobia. This can be observed in Table 1, which shows that 80 respondents (55.2%) out of 145 respondents belong to the moderate category.

Table 1. Nomophobia Categorization

Category	Number of Respondents	Percentage
Very High (96-120)	6	4,1%
High (80-95)	50	34,5%
Moderate (64-79)	80	55,2%
Low (48-63)	8	5,5%
Very Low (24-47)	1	0,7%
Total	145	100%

The results of the frequency distribution analysis indicate that the majority of the research subjects have a moderate level of loneliness. This can be observed in Table 2, which shows that 70 respondents (48.3%) out of 145 respondents belong to the moderate category.

Table 2. Loneliness Categorization

Category	Number of Respondents	Percentage
Very High (80-100)	4	2,8%
High (67-89)	30	20,7%
Moderate (53-66)	70	48,3%
Low (40-52)	34	23,4%
Very Low (20-39)	7	4,8%
Total	145	100%

The results of the frequency distribution analysis indicate that the majority of the research subjects have a moderate level of social anxiety. This can be observed in Table 3, which shows that 67 respondents (46.2%) out of 145 respondents belong to the moderate category.

Table 3. Social Anxiety Categorization

Category	Number of Respondents	Percentage
Very High (132-165)	9	6.2%
High (110-131)	49	33.8%
Moderate (88-109)	67	46.2%
Low (66-87)	17	11.7%
Very Low (33-65)	3	2.1%
Total	145	100%

Table 4 shows that the multiple regression analysis yielded an F-value of 13.433 with a significance of 0.000 ($p < 0.05$). This condition indicates that there is a significant correlation between loneliness and social anxiety with nomophobia. Based on these analysis results, the first hypothesis, which states that there is a correlation between loneliness and social anxiety with nomophobia in teenagers, can be accepted. The total effective contribution of loneliness and social anxiety is 15.90%.

Table 4. Results of Multiple Regression Analysis - F Test

Model	F	Sig.
Loneliness and Social Anxiety with Nomophobia	13,433	0,000

Source: SPSS Output, IBM SPSS Statistics Version 27 for Windows

Table 5 presents the results of the partial test of loneliness with nomophobia, yielding a coefficient of $t = 2.187$ with a significance level of 0.030 ($p < 0.05$). This indicates that loneliness has a significant positive relationship with nomophobia. The analysis supports the research hypothesis, stating that there is a relationship between loneliness and nomophobia in teenagers. The effective contribution of loneliness to nomophobia is 7.21% .

Table 5. Partial Test Results for Loneliness with Nomophobia

Model	t	Sig.
Loneliness with Nomophobia	2.187	0.030 ($p < 0.05$)

Source: SPSS Output, IBM SPSS Statistics Version 27 for Windows

Table 6 presents the results of the partial test of social anxiety with nomophobia, yielding a coefficient of $t = 2.538$ with a significance level of 0.012 ($p < 0.05$). This indicates that social anxiety has a significant positive relationship with nomophobia. The analysis supports the research hypothesis, stating that there is a relationship between social anxiety and nomophobia in teenagers. The effective contribution of social anxiety to nomophobia is 8.70% .

Table 6. Partial Test Results for Social Anxiety with Nomophobia

Model	t	Sig.
Social Anxiety with Nomophobia	2.538	0.012 ($p < 0.05$)

Source: SPSS Output, IBM SPSS Statistics Version 27 for Windows

B. Discussion

Based on the results of the first hypothesis in this study, it is evident that there is a relationship between loneliness and social anxiety with nomophobia in teenagers. Feelings of loneliness and social anxiety can drive individuals to use smartphones as a substitute for real social interaction, which can further reinforce smartphone dependence and the fear of losing connectivity or access to information. Feelings of loneliness and social anxiety make individuals more inclined to seek comfort and diversion through their smartphones.

The findings of this study align with research conducted by Kara et al. (2019), which discovered that teenagers who exhibit excessive smartphone usage, as indicated by extended daily screen time, are influenced by personal factors such as loneliness and social anxiety. Another study conducted by Enez-Darcin et al. (2016) explained that loneliness and social anxiety are significant factors in increasing the risk of nomophobia tendencies among teenagers. Teenagers with high levels of loneliness and social anxiety also tend to have a higher frequency of nomophobia.

The second hypothesis of this study has also been supported, indicating that loneliness in teenagers is positively related to nomophobia in teenagers. In this research, a significant association was found between feelings and behaviors of loneliness and the high tendency of nomophobia in teenagers. Teenagers who lack friends or have low self-confidence tend to experience intense loneliness. They find it challenging to connect with others, feel like they don't belong to a group, and often feel excluded. This loneliness affects their interpersonal interactions, where they feel uncomfortable talking to new people, get anxious in social situations, and worry about the judgment and criticism of others. Previous research has shown a significant positive relationship between loneliness and nomophobia.

Gezgin et al. (2018) found that teenagers who experience loneliness tend to have higher levels of nomophobia. They experience anxiety when they don't have access to their smartphones, fearing the loss of the ability to interact and communicate with others. Similar findings were also observed in Ozdemir et al.'s (2018) study, where higher levels of loneliness were associated with higher levels of nomophobia.

The third hypothesis in this study has also been supported, indicating that social anxiety in teenagers is positively related to nomophobia in teenagers. In this research, a significant association was found between feelings and behaviors of social anxiety and the high tendency of nomophobia in teenagers. Teenagers experiencing social anxiety tend to feel fear and worry about the judgment of others, especially when expressing their opinions. They also feel uncomfortable in social situations involving unfamiliar individuals and tend to become anxious when interacting with them.

Research by Kara et al. (2019) identified that daily smartphone usage in teenagers not only has a direct impact on nomophobia but also operates through factors such as loneliness and anxiety. These findings are consistent with other studies, such as the research conducted by Kubrusly et al. (2021), which indicates that nomophobia can contribute to higher levels of anxiety in individuals. High levels of anxiety can have negative effects on one's mental well-being and quality of life. According to a study conducted by Güner & Demir (2022), anxiety levels in students who use smartphones extensively, check their phones upon waking up, and always carry a charger with them are significantly higher.

IV. CONCLUSION

Drawing from the results of previously conducted research on the relationship between loneliness and social anxiety with nomophobia in teenagers, utilizing multiple regression analysis with 145 subjects aged 15-19 years who actively use smartphones, it can be concluded that there is a significant correlation between loneliness and social anxiety with nomophobia. Therefore, the relationships between loneliness and social anxiety with nomophobia were found to be supported in this study. Based on the results of the partial tests of loneliness with nomophobia, there is an accepted relationship between loneliness and nomophobia in teenagers. In the subsequent partial test between social anxiety and nomophobia, there is also an accepted relationship between social anxiety and nomophobia in teenagers.

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