International Journal of Research Publication and Reviews

Factors that Influence *Nomophobia* in Indonesian University Students: Literature Review

Revina Julina Marentek[1], Dr. Suhadianto S.Psi, M.Psi, Psychologist[2], Dr. I Gusti Ayu Agung Noviekayati, M.Si, Psychologist[3]

Faculty of Psychology, University of 17 August 1945 Surabaya, East Java, Indonesia
revina.marentek21@gmail.com

ABSTRACT

The development of digital technology has led to a significant increase in the use of *smartphones* among the public, including university students. Despite providing various conveniences, excessive smartphone use can lead to psychological disorders, one of which is *nomophobia*, which is an excessive fear of not being able to access or use the device. This study aims to identify the factors that influence *nomophobia* among university students in Indonesia through a literature study. The review was conducted using the SPIDER approach to determine study inclusion criteria, as well as the PRISMA method in the article selection and analysis process. Data sources were obtained through searches in the *Google Scholar* database, and analyzed using content analysis techniques. The study results showed that university students in Indonesia generally experience nomophobia at mild to severe levels. From the 11 articles reviewed, it was found that several factors such as self-control, loneliness, *fear of missing out (FoMO), self-esteem*, and sleep quality have a significant relationship with the level of *nomophobia*. This finding confirms that individual psychological characteristics contribute to increasing the risk of *nomophobia* in university students.

Keywords: *nomophobia*, university students, Indonesia

ABSTRACT

The advancement of digital technology has significantly increased the use of smartphones among the general public, including university students. Although smartphones offer various conveniences, excessive use can lead to psychological disturbances, one of which is nomophobia-a condition characterized by an intense fear of being unable to access or use a smartphone. This study aims to identify the factors influencing nomophobia among university students in Indonesia through a literature review. The review was conducted using the SPIDER framework to determine inclusion criteria, and the PRISMA method for selecting and analyzing articles. Data were obtained from the Google Scholar database and analyzed using content analysis techniques. The findings indicate that university students in Indonesia generally experience nomophobia at mild to severe levels. Among the 11 articles reviewed, several factors were found to be significantly associated with nomophobia levels, including self-control, loneliness, fear of missing out (FoMO), self-esteem, and sleep quality. These findings suggest that individual psychological characteristics play a substantial role in increasing the risk of nomophobia among students.

Keywords: nomophobia, university students, Indonesia

Introduction

The term technology in our hands seems to be relevant to life today. Almost all lines of life are closely related to technology. Indonesia is the 5th highest *smartphone* user in the world spending 54% of total screen time (Maiseptian et al, 2021). The use of *smartphones* in Indonesia has increased sharply since 2012 where 91% of the Indonesian population has a cellphone with all groups from preschool students to parents (Fadhlurrohman et al., 2020). The development of technology has a positive impact, namely smart phones or *smartphones* that can facilitate work. The positive impact of using *smartphones* is undeniable if used consciously (Sela et al., 2022). But on the other hand, *smartphones* can have a negative impact. Durak (2018) found that excessive *smartphone* use can lead to dependence, namely excessive anxiety when away or when not using a *smartphone*.

Paray, et al. (2020) explained that *smartphones* can cause anxiety in a person, such as anxiety when not using a *smartphone*, worrying if the *smartphone* suddenly breaks, runs out of battery, loses internet connection, or when it is difficult to communicate with friends and family. The phenomenon of anxiety when away from the *smartphone* is known as *nomophobia* (Irham, 2022). *Nomophobia*, or excessive fear when unable to access a *smartphone*, is a phenomenon that is increasingly widespread among students, especially in today's digital era. Students as a young age group who are very familiar with digital technology have a high risk of experiencing *nomophobia*.

Research shows that the factors that influence *nomophobia* in college students are very diverse, ranging from psychological to social factors. Some studies identify that low self-esteem contributes significantly to the tendency of *nomophobia*, where students with moderate to low self-esteem are more prone to experiencing anxiety when not connected to a *smartphone* (Maryani et al., 2021). In addition, the intensity of *smartphone* use is also a major factor that is closely related to the level of *nomophobia*; the higher the intensity of use, the higher the risk of *nomophobia* (Hesita et al., 2021).

Demographic factors such as gender and age also play a role in influencing *nomophobia*. A meta-analysis study revealed that women and the 18-24 age group, who are mostly university students, experience *nomophobia* more often than other groups (Rahma et al., 2024). Other psychological factors such as loneliness and low self-control also contribute to the emergence of *nomophobia*, because *smartphones* are often used as a means of distraction from these feelings (Mustaqim et al., 2024). Based on the explanation of the background of the problem, this study aims to determine the factors that influence *nomophobia* behavior.

Methods

The method used in writing this article is a literature review by collecting several references relevant to *nomophobia*. The author obtained research articles from Google Scholar with a publication year range of 2020-2024, from reputable journals. The keywords included in the search included "*nomophobia*" and "university students". The first step the researcher took was to search the literature, read the abstract of each article, then select articles according to the research topic. Next, the researcher conducted an analysis that included previous research findings and provided research directions related to the research context in the literature review.

This research used a *systematic literature review* (SLR). The literature review procedure used the PRISMA model. The researcher also set a number of inclusion and exclusion criteria. Both criteria are contained in table 1 below.

Criteria	Description
Inclusion	Subjects are university students in Indonesia
	In the form of scientific journals that have been published
	Studies that examine the factors that influence *Nomophobia* (*Nomophobia* as variable Y)
	Articles come from trusted sources
Exclusion	Articles published under 2020
	Articles in the form of books or final assignments (thesis, thesis, dissertation or others)
	Articles come from unreliable sources
	Articles whose subjects are not students

The PRISMA model consists of a number of stages including *identification*, *screening*, *eligibility*, and *inference* analysis. Further explanation is contained in the systematic literature review diagram.
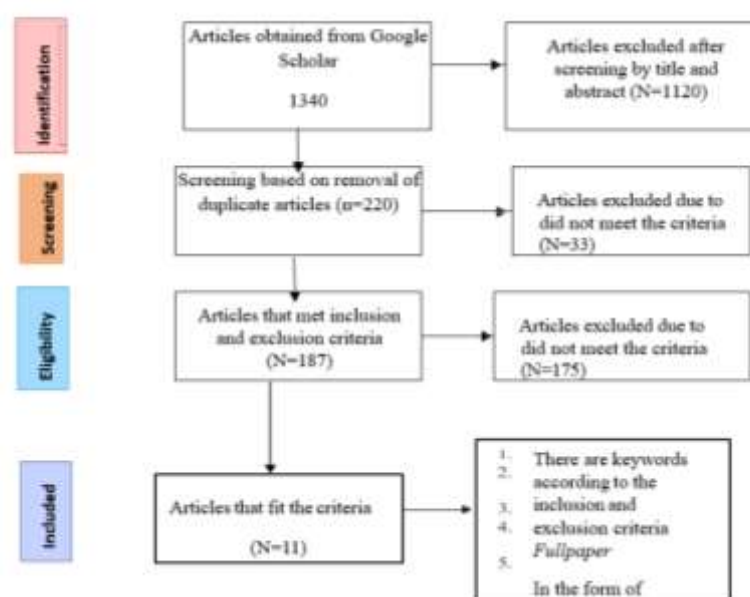

Diagram of Systematic Literature Review with PRISMA Model

In the first stage, namely the *identification* stage, researchers conducted a search for scientific articles through the help of *Google Scholar* with a time span from 2020 to 2024. The keywords used in the search for scientific articles are *nomophobia*, and Indonesian students. The results obtained were 1340 which will be selected. Based on the selection process, 1120 articles were excluded because they did not match the title or abstract of the research, so that 220 articles remained.

At the *screening* stage, 33 articles were excluded because there were duplicate studies and the same variables, leaving 187 articles. Through the *eligibility* stage, 174 articles were excluded because they were not in accordance with the research objectives, in the form of skirpsi or thesis. At the final stage, namely *included*, 11 articles were obtained that met the criteria and eligibility to be used as study material. Furthermore, researchers reviewed, analyzed and drew conclusions from 11 articles that had passed the selection and met the eligibility criteria.

Results

No	Author	Title	Form of Research	Research Results
1	Sry Susilawati Irham, Nurfitriany Fakhri, Ahmad Ridfah	The Relationship Between Loneliness and *Nomophobia* in Overseas Students	Quantitative, Spearmen test	This study involved 202 overseas students of Makassar State University who were selected using accidental sampling technique. The results of the analysis showed a significant relationship between loneliness and *nomophobia*, with a significance value of $p = 0.001$ ($p < 0.05$). Although significant, the strength of the relationship shown by the correlation coefficient of $r = 0.377$ is in the weak category. In addition, this study also found that there was no significant difference in the level of loneliness or nomophobia based on gender. This finding indicates that loneliness contributes to *nomophobic* tendencies, although the effect is not strong, and that gender is not the main differentiator in these variables.
2	Yusrina Tsabita Farhan, Rezkiyah Rosyidah	The Relationship Between *Self-esteem* and *Nomophobia* Tendency	Quantitative product moment correlation	This study involved 349 female students in Surabaya as samples. Based on the results of correlation analysis, a significant negative relationship was found between *self-esteem* and *nomophobia* tendencies, with a significance value of $p = 0.000$ ($p < 0.05$) and a correlation coefficient of $r = -0.471$. This value indicates that the lower a person's *self-esteem* level, the higher the tendency to experience *nomophobia*, and vice versa. The strength of the relationship is classified as moderate based on the interpretation of the correlation value. This finding underscores the important role of self-esteem in preventing excessive tendency towards *smartphone* dependence.
3	Kus Hanna Rahmi, Candias Cathartika Sukarta	*Fear of missing out* with *Nomophobia* in College Students	Quantitative correlation	This study involved 147 respondents who were all students from the Faculty of Psychology, Bhayangkara University. Based on the results of the correlation analysis, the R coefficient value of 0.664 was obtained with a significance level of $p = 0.00$ ($p < 0.05$). These findings indicate a significant positive relationship between *fear of missing out* (FoMO) and *nomophobia* in college students. That is, the higher the level of FoMO felt, the higher the tendency to experience *nomophobia*. Based on these results, it is recommended that students be wiser in using *smartphones*, by managing their time and needs proportionally. This is important to minimize the negative impact on mental health and the quality of social interactions, so that students can undergo daily activities more calmly and adaptively.
4	Yuliana Nata, Fredericksen Victoranto Amseke	The Effect of Impulsive Behavior on the Tendency of Student *Nomophobia*	Quantitative linear regression	Respondents in this study amounted to 89 students. The results of this study prove that there is a positive and significant effect of impulsive behavior on *nomophobia* tendencies with a value of $F = 18.782$ and a p value $= 0.000$ at R Square $= 0.401$. This means that the effective contribution of impulsive behavior variables to the tendency of *nomophobia* is 40.1%, meaning that the higher the impulsive behavior, the higher the tendency of *nomophobia*.

5	Luthfi Noor Aini, Martaria Rizky Rinaldi	*Nomophobia* as a Moderator Between Self-Control Against *Cyberslacking* in College Students	Quantitative, Moderated Regression Analysis	The research subjects were 105 student respondents consisting of 46 men and 59 women with an age range of 17-26 years who were pursuing undergraduate education. The results of the study show that self-control has a direct effect on *Cyberslacking*, while *nomophobia* does not moderate the effect of self-control on *Cyberslacking*.
6	Sindi Permata Putri, Sahuri Teguh Kurniawan, Dewi Suryandari	The Relationship between *Nomophobia* and Mental Health in Nursing Students	Quantitative, cross-sectional	The research sample was 74 respondents. The results of the analysis showed a statistically significant relationship between *nomophobia* with depression (p value= 0.000 < 0.05), *nomophobia* with anxiety (p value= 0.000 < 0.05), and nomophobia with stress (p value= 0.001 < 0.05). This study concluded that there is a significant relationship between nomophobia and mental health in S20 nursing students at Kusuma Husada University Surakarta.
7	Rayhan Ilyas Perthama, Elita Donanti, Amir Mahmud	The Effect of *Nomophobia* on Sleep Patterns in Medical Faculty Students	Quantitative, analytic survey	Of the 154 respondents who were 2019 YARSI University Faculty of Medicine students, the results of the questionnaire showed that there were the highest results based on bivariate analysis, 69 respondents (55.8%) experienced middle to upper *nomophobia* with poor sleep patterns. This means that there is no significant relationship between *nomophobia* and sleep patterns of 2019 YARSI University Faculty of Medicine students.
8	Rizaldi Ahmad Fahrezi, Rini Lestari	The Influence of Loneliness and Self-Control on Generation Z Surakarta's *Nomophobia*	Multiple Regression	The sample of this research is 124 Generation Z in Surakarta. The results showed that there is a very significant influence of loneliness and self-control on *nomophobia* (F = 10.141; p = 0.000; p < 0.01). There is no effect of loneliness on *nomophobia* (t = -1.045; p = 0.298; p < 0.01). There is a very significant negative effect of self-control on *Nomophobia* (t = -3.941; p = 0.000; p < 0.01). The level of *nomophobia* in generation Z is high, the level of loneliness in generation Z is low, and the level of self-control in generation Z is very high. The effective contribution is 18.6% with details of self-control having a greater effect of 16.5% and loneliness having an effect of 2.17%.
9	Resha Khofila, Muhammad Putra Dinata Saragi, et al.	The Relationship of *Phubbing*, *Smombie* and *Nomophobia* to Human Behavior	Qualitative case study	This research uses a qualitative approach with an intrinsic case study to deeply understand the influence of phubbing, smombie, and nomophobia behaviors on human behavior. Although this study does not present quantitative data such as R Square values, correlation coefficients (r), or the number of subjects explicitly, researchers reported that around 70% of participants were still able to control their smartphone use, while the other 30% showed significant symptoms of dependence. The results of observations and interviews showed that these three behaviors had an impact on the quality of social interactions, mental health disorders, and physical safety risks such as accidents due to the use of mobile phones while walking. This study concludes that the habit of using smartphones from an early age contributes greatly to the formation of addictive behaviors that are difficult to control, and shows the importance of raising awareness in the wise use of technology.
10	Maulana Galileo, Hamidah Amalia, Siti Nur Asiyah	The relationship between *Extraversion personality* and *Self-esteem* with *Nomophobia* Tendencies	Quantitative, linear regression (n=151)	This study involved the participation of 151 students as samples. The results of the analysis showed that there was no partially significant relationship between extroverted personality and nomophobia (Sig = 0.723 > 0.05) with a coefficient of determination (R²) value of 0.001. Similarly, there was no partially significant relationship between self-esteem and nomophobia (Sig = 0.764 > 0.05) with an R² value of 0.001. In addition, simultaneously, extroverted personality and self-esteem also did not show a significant relationship to the tendency of

				nomophobia in emerging adult Twitter users (Sig = 0.893 > 0.05), with an R² value of 0.002 and an F coefficient of 0.114.
11	Nurul Magfirah, Ahmad Ridfah, Ismalandari Ismail	*The Relationship Between Social Anxiety and Nomophobic Tendencies in Migrant Students in Makassar City*	Quantitative, Spearman rank correlation	The subjects in this study were 158 students. The results of the analysis obtained are p = 0.003 <0.005 or there is a relationship between social anxiety and the tendency of *nomophobia* in overseas students in Makassar city.

Discussion

In the results of research conducted by Irham et al (2022) found that there was a significant relationship between loneliness and *nomophobia* in overseas students at Makasssar State University. Then this study found that there were no differences in the level of loneliness and *nomophobia* based on gender. So that this study illustrates that migrant students who have a high level of loneliness have a high level of *nomophobia*.

In research by Farhan et al (2021) found that there is a significant negative relationship between *self-esteem* and the tendency of *nomophobia* in female students in Surabaya. This means that there is a relationship between *self-esteem* and the tendency of *nomophobia* in female students in Surabaya. When the level of self-esteem is high, the lower the tendency of *nomophobia* in female students in Surabaya. Vice versa, the lower the self-esteem, the higher the tendency of *nomophobia* in female students in Surabaya. Rahmi et al (2020) found that there is a relationship between *fear of missing out* and *nomophobia* in psychology students at Bhayangkara University. There is a positive relationship when the higher the *Fear of missing out*, the higher the level of *nomophobia* experienced by students. This study also managed to reveal that students experience more *nomophobia* with high levels.

Research from Aini et al (2024) aims to determine the moderating role of *nomophobia* on the relationship between self-control and *Cyberslacking* behavior in students when carrying out online learning. The results of the study found that there is a significant positive relationship between self-control and student *Cyberslacking* behavior during online learning, where the lower the self-control possessed by students, it will have the opportunity to increase *Cyberslacking* behavior during online learning. Then the results found that *nomopobhia* did not show the moderating influence of *Cyberslacking* self-control on college students.

Then research conducted by Putri et al (2023) in finding out the relationship between *nomophobia* and mental health of S20 nursing students at Kusuma Husada University Surakarta. The results showed that there was a relationship between *nomophobia* and mental health in S20 nursing students at Kusuma Husada University Surakarta. Mental health includes depression, anxiety, and stress. Perthama et al (2023) examined 2019 YARSI University Faculty of Medicine students about the effect of sleep quality on *nomophobia*. The results showed that there was no significant relationship between *nomophobia* and the sleep patterns of 2019 YARSI University Faculty of Medicine students.

Research conducted by Fahrezi and colleagues (2023) on the influence between loneliness and self-control on *nomophobia* in Generation Z in Surakarta shows that self-control has a significant negative influence on *nomophobia*, while loneliness does not show a significant influence. This finding is in line with the results of Galileo and colleagues' study (2023), which revealed that extroverted personality and *self-esteem* have no significant relationship with *nomophobia* tendencies in *emerging adult* Twitter users. Neither extroverted personality nor self-esteem showed a significant relationship with *nomophobia*, so the third hypothesis in the study could not be accepted. The instability of self-esteem in *emerging adulthood* is thought to influence the pattern of the relationship with *nomophobia*.

From a qualitative point of view, Khofila et al (2023) found that *phubbing*, *smombie*, and *nomophobia* greatly affect the lives of individuals who experience *nomophobia*. It is found that the behavior of a person affected by *phubbing*, *smombie*, or *nomophobia* is the result of retaliation from the behavior of individuals who often use *smartphones* since childhood. So, it is very difficult for individuals to stay away from these actions.

Migrant students have not been able to adjust to the new environment and do not have friends so that they are associated with *nomophobia*. This is in line with research conducted by Magfirah et al (2023) explaining that there is a relationship between social anxiety and the tendency of *nomophobia* towards overseas students in Makassar City. The social anxiety possessed by the subjects in this study is classified as moderate, while the tendency of *nomophobia* possessed by the subjects in this study is high.

Closing

This study aims to review the factors that influence *nomophobia* behavior. Based on the results of the literature review that has been conducted, it can be concluded that *nomophobia* in Indonesian students is a complex phenomenon and is influenced by various factors. The main factors found include psychological aspects such as self-esteem, self-control, loneliness, *fear of missing out* (FoMO), and demographic factors such as gender and age. In addition, social factors such as social anxiety, *phubbing* behavior, and the habit of using *smartphones* from an early age also reinforce the tendency of *nomophobia*.

The differences in results between studies suggest that there is not one single factor that predominantly influences *nomophobia*, but rather the interaction of various interrelated factors. These findings emphasize the importance of a multidisciplinary approach in understanding and addressing *nomophobia*

among university students. The impact of *nomophobia* on students' mental health, sleep quality, and academic performance should be of particular concern to higher education institutions and related parties. Promotive and preventive interventions, such as emotion management training, self-esteem enhancement, and healthy *smartphone* use education, are needed to minimize the risk of *nomophobia*.

Future research is expected to dig deeper into the causal relationship between factors and the long-term impact of *nomophobia*, both from psychological, physical, social, and academic aspects. In addition, studies with longitudinal designs and larger populations will provide more comprehensive information about this phenomenon in Indonesia.

Reference

Aini, L. N., & Rinaldi, M. R. (2024). *Nomophobia as a moderator between self-control and Cyberslacking in college students during online learning*. Journal of Digital Psychology, 3(1), 45-53. https://www.researchgate.net/publication/377249179_Nomophobia_Sebagai_Moderator_Antara_Kontrol_Diri_Terhadap_Cyberslacking_Pada_Mahasiswa_Selama_Pembelajaran_Daringsinta.kemdikbud.go.id+2researchgate.net+2scholar.google.com+2

Fahrezi, R. A., & Lestari, R. (2023). *The influence of loneliness and self-control on generation Z nomophobia in Surakarta*. Thesis, Universitas Muhammadiyah Surakarta. https://eprints.ums.ac.id/125729/eprints.ums.ac.id+1eprints.ums.ac.id+1

Farhan, Y. T., & Rosyidah, R. (2021). *The relationship between self-esteem and nomophobia tendencies among female students in Surabaya*. Personification: Journal of Psychology, 2(1), 33-41. https://journal.trunojoyo.ac.id/personifikasi/article/view/11921journal.trunojoyo.ac.id

Galileo, M., Amalia, H., & Asiyah, S. N. (2023). *The relationship of extraversion personality and self-esteem with nomophobia tendencies in emerging adult Twitter users*. Journal of Social Psychology, 5(1), 65-74. https://ejurnal.untag-smd.ac.id/index.php/MV/article/view/6823ejurnal.untag-smd.ac.id+1ejurnal.untag-smd.ac.id+1

Irham, S. S., Fakhri, N., & Ridfah, A. (2022). *The relationship between loneliness and nomophobia in overseas students of Makassar State University*. J-CEKI: Journal of Scientific Scholarship, 1(4), 318-332. https://ulilalbabinstitute.id/index.php/J-CEKI/article/view/483ulilalbabinstitute.id+1ulilalbabinstitute.id+1

Khofila, R., Saragi, M. P. D., & Lubis, M. A. E. (2023). *The relationship of phubbing, smombie and nomophobia to human behavior*. Journal of Sociotechnology, 15(2), 112-120. https://ojs.uniska-bjm.ac.id/index.php/AN-NUR/article/view/10247ojs.uniska-bjm.ac.id+1ojs.uniska-bjm.ac.id+1

Magfirah, N., Ridfah, A., & Ismail, I. (2023). *The relationship between social anxiety and nomophobic tendencies in migrant students in Makassar City*. Journal of Psychological Research, 7(3), 145-153. https://www.researchgate.net/publication/377718508_The_Relationship_Between_Social_Anxiety_and_Nomophobic_Tendencies_in_Migrant_Students_in_Makassar_Cityresearchgate.net

Maiseptian, F., Rosdialena, R., & Dewita, E. (2021). *Self-control of female students who use smartphones and its implications in Islamic counseling guidance*. Kafa'ah: Journal of Gender Studies, 11(1), 107-120. https://www.kafaah.org/index.php/kafaah/article/view/376

Maryani, D. N., & Colleagues. (2021). *The relationship between self-esteem and nomophobia in college students*. Journal of Psychology Student Talents, 1(1), 20-27.

Mustaqim, M., Firdauz, A., & Kustanti, E. (2024). *The influence of self-control and loneliness on nomophobia in generation Z*. SRAWUNG: Journal of Social Sciences and Humanities, 3(1), 77-85. https://journal.jfpublisher.com/index.php/jssh/article/download/495/554/3511

Paray, A. H., Wani, M. A., & Bhat, S. A. (2020). *Nomophobia: Emerging concerns in digital mental health*. Journal of Behavioral Addictions, 9(1), 34-42. https://doi.org/10.1556/2006.2020.00034

Perthama, R. I., Donanti, E., & Mahmud, A. (2023). *The effect of nomophobia on sleep patterns in YARSI University Faculty of Medicine students*. Journal of Health, 10(2), 56-64.

Putri, S. P., Kurniawan, S. T., & Suryandari, D. (2023). *The relationship between nomophobia and mental health in nursing students*. Indonesian Nursing Journal, 14(1), 98-105.

Purwaningrum, S., Makin, Ernawati, I., & Sidiq, M. S. (2023). *Group counseling with systematic desensitization and cognitive restructuring techniques to reduce student nomophobia*. Journal of Guidance Counseling, 11(1), 30-40.

Rahmi, K. H., & Sukarta, C. C. (2020). *Fear of missing out with nomophobia in college students*. Journal of Adolescent Psychology, 2(1), 21-29.

Sela, A., Rozenboim, N., & Ben-Gal, H. C. (2022). *Smartphone use behavior and quality of life: What is the role of awareness?* PLOS ONE, 17(3), e0260637. https://doi.org/10.1371/journal.pone.0260637

Yuliana, N., & Amseke, F. V. (2023). *The influence of impulsive behavior on students' nomophobia tendencies*. Journal of Clinical Psychology, 8(2), 109-117