Self-Esteem and Tendency of Nomophobia in College Students

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Abstract
Nomophobia is defined as the fear of not having anything to do with cell phones. Research shows various psychological factors are involved when someone uses a cell phone excessively, such as low self-esteem. This phenomenon seems to be increasing globally. Addictive behavior related to smartphone use can be considered as part of the broader Nomophobia construct. Excessive use of smartphones is also seen by students who are in the Z generation group and are said to be digital natives. In general, students who are in the age range of 18-22 have quite an extreme dependence on smartphones and digital information using the internet. Examining this phenomenon, this study aims to determine the relationship between self-esteem and the tendency of Nomophobia in college students. This research was conducted on students in East Bekasi with a total sample of 100 male and female students. The research method uses a quantitative approach with a correlational method. The results of the correlation test between self-esteem and Nomophobia tendencies in students in East Bekasi showed a Pearson Product Moment correlation coefficient of 0.069 with a two-tailed test at a confidence level of 0.05 (5%). This means that there is no significant relationship between self-esteem and the tendency of Nomophobia among students.

Keywords: Self-esteem; Nomophobia tendency; College students

INTRODUCTION

Students according to KBBI (Setiawan, 2012-2023) are people who study at universities. Based on the stage of student development is in adolescence, because in general the age of students is in the range of 18-22 years. Adolescence is a transitional period in the human life span, which bridges childhood with adulthood (Santrock, 2012). The psychological development of adolescents encourages them to try many things and try to find things that suit them; changes in self-esteem also take place in adolescence (Harter in Santrock, 2012). Based on the results of the study, it is known that both men and women have high self-esteem in childhood, but tend to decline dramatically during adolescence (Robins, et al in Santrock, 2012).

According to Strauss-Howe's generation theory, those grouped under generation Z are people born between 2005 and the present (Artese, 2019). The criteria for when a generation begins and ends relate to historical events and the generations that follow (Troksa, 2016). Generation Z is said to be a generation born in times of crisis (Karashchuk, 2020). This criterion changes the grouping of birth periods, quoting Fry (National Academies of Sciences, Engineering, and Medicine, 2020) who are included in the generation Z group are those born in the time range of 1997 to the current generation. This generation is called the postmillennial generation or generation Z. Looking at the birth range of generation Z, students are in the generation Z group. Generation Z is said to love the internet more than other age groups in Indonesia. This can be seen from the number of Gen Z who are included in the category of addicts whose internet connection time exceeds seven hours a day (addicted users). Dataindonesia.id (Mahmudan, 2022) released the results of an Alvara Research Center survey which showed that there were 34% of respondents from that generation who became addicted users. Details, as many as 20.9% use the internet 7-10 hours a day, 5.1% as much as 11-13 hours a day, and 8% reach above 13 hours a day.

In this modern era where technology has become more sophisticated and developed rapidly. Information and communication technology become inseparable things from our lives. We cannot simply close our eyes to the ever-evolving technological advances. This development will certainly affect how the communication process between people. As an example of the case, before the 80s people used communication channels through telephones, facsimiles, while getting information only through print and electronic media. After the 90s, the world was introduced to the internet.

Through satellite intermediaries, the world's communication processes are completely changed. Smartphones were then invented in the 1990s, making it easier for humans to communicate. They no longer must communicate only by telephone by being in a certain location. Anyone can make and receive calls anywhere if there is a signal from the telecommunications service. Smartphones are a refinement of the previous mobile phone features, so the use of mobile phones is becoming more massive. Reporting from socialmediaweek.org (Sagita, 2018), millennials (generation Y) spend an average of six to seven hours per week on social media, while 44% of Gen Z check their social media or smartphones at least every hour. The current condition of generation Z is a generation that
is very close to smartphones compared to parents who have a less positive attitude towards various technologies and tend not to use new technology products.

Currently, smartphones are communication devices that are very often used by people of various ages. A more recent study in the United States (in 2015) found that quite a few smartphone users in the United States (11%) are concerned that they are spending too much time with their smartphones, and this number is higher among people with iPhones (15%) and young adults 18-24 (21%) (Rosen, et al, 2015). The need for constant contact and compulsive behavior of checking their smartphones is still considered prevalent in these examples: nearly two-thirds of Americans, ages 18-34 sleep next to their smartphones so they don’t miss anything or wake up during the night to answer text messages, and more than three-quarters of them check messages or missed calls even when they don’t hear the phone ringing (Smith in Rosen, et al, 2015). There is a tendency for the existence of smartphones to make individuals less sensitive and less concerned with the circumstances around them. As reported in detik.com (Parikesit, 2013), one of the effects that arises is that people rarely observe the surrounding environment, because they are more immersed with their gadgets. As a result, the sense of caring for the surroundings is reduced, caring more about the issues in the social media than the gadget.

The term Nomophobia is used to describe a psychological condition when people have a fear of detaching from cell phone connectivity or fear of getting out of smartphone contact (Bivin, et al., 2013). Research shows a variety of psychological factors involved when someone uses a cell phone excessively, such as low self-esteem. This phenomenon seems to be increasing globally (Bhattacharyya, et al., 2019). Addictive behaviors related to smartphone use can be considered part of a broader construction of Nomophobia. Rosen, et al. (2015) define Nomophobia as the fear of being without mobile technology, such as a phone or mobile computer, and if the latest media coverage and polls are accurate, it afflicts millions of people around the world. Nomophobia is a term that refers to a collection of behaviors or symptoms associated with smartphone use. Apparently, millions of people suffer from "no mobile phobia", which has been given the name Nomophobia. A form of fear of not being able to communicate technologically, far from smartphones or not connected to the Web (King, et al in Uysal, Özen, &; Madenoglu, 2016). Nomophobia is considered a modern-age phobia introduced to our lives as a by product of interactions between people and mobile information and communication technologies, particularly smartphones (Yildirim in Uysal, et al., 2016). Like what King, et al. (2014) argue, Nomophobia is a modern fear of not being able to communicate via smartphone or internet.

Nomophobia is a situational phobia associated with agoraphobia and includes the fear of becoming ill and not receiving immediate help (Yildirim & Correia, 2015). Although Nomophobia does not appear in the current DSM-V, it has been proposed as a "specific phobia", based on the definition given in the DSM-IV (Diagnostic & Statistical Manual of Mental Disorders, 4th Ed) (Bragazzi & Puente, 2014). There are several concrete signs of smartphone addiction observed from a clinical perspective is when a person (Yan, 2015): (1) Experiencing anxiety when the smartphone is misplaced; (2) Feel uncomfortable if more than two hours pass without checking the phone to see the message; (3)
Experiencing extreme emotions when the smartphone connection is lost; (4) Answer calls and text messages while driving; (5) Start calls and send messages while driving; (6) The first thing to do when you wake up is to check your phone for messages; (7) Sleeps next to phone that is on and wakes up to return late night texts; (8) Answering smartphones while in an intimate embrace with a loved one. Smartphone engagement includes measures such as keeping the smartphone near the individual, frequently thinking about the phone, interfering with activities to respond to the phone, feeling depressed without a phone, and not being able to reduce phone use.

Bianchi and Phillips (in Bragazzi and Puente, 2014) found that psychological predictors of smartphone use problems may be: young age, negative self-perception, low esteem and low self-efficacy, inability to regulate arousal (such as in high extroversion or in introversion). Impulsivity, a sense of urgency, and sensation-seeking can also be related to excessive smartphone use. According to Baron and Branscombe (2012) there are two dimensions of self-esteem based on high and low, or positive and negative, namely: (1) High self-esteem is a positive self-evaluation by comparing individuals with others who are worse in certain attributes; (2) Low self-esteem is a negative self-evaluation by comparing an individual's self with others who are less fortunate in certain characteristics. Self-esteem is a self-evaluation made by everyone, a person's attitude towards himself in the positive-negative range (Baron &; Branscombe, 2012). According to S. Coopersmith (in Bragazzi and Puente, 2014) Self-esteem is a relatively stable evaluation that a person does and takes care of himself and tends to be an assessment of self-esteem.

Smartphone addiction shares several traits of other types of cyber behavior and addiction (Billieux, 2012). For example, psychological traits such as self-esteem and impulsivity are shared risk factors for different types of cyber addiction (Billieux, 2012). Someone who is addicted to using smartphones, must experience a tendency to Nomophobia. Because when their smartphone cannot be used, such as, running out of battery, not connected to the internet, unable to signal, etc., they will panic, anxious, afraid of missing important news, anxious if family or friends contact. The increased utilization and penetration of new technological devices and virtual communications involving personal computers and tablets so called computer-mediated communication and smartphones is causing changes in individuals’ daily habits and behaviors, as well as in identities and general ways of perceiving reality (Handy in Bragazzi and Puente, 2014). Self-esteem has a negative effect on smartphone addiction (Hong, et al, 2012). It is also very likely that the symptoms of Nomophobia may be caused by other underlying and pre-existing mental disorders, with possible candidates including social phobia or social anxiety disorder, and panic disorder (Uysal, et al., 2016).

A national study delved deeper into children's and adolescents' habits toward media (Rideout in Santrock, 2012). By surveying more than 2,200 children and adolescents from ages 8-18, it confirms that today's youth are surrounded by the media. On average, teens spend 6.5 hours a day (44.5 hours a week) with media, spending only 2.25 hours a day with parents, and 50 minutes a day doing homework. A major trend in technology use is the dramatic increase in multitasking media (Roberts in Santrock, 2012). Recent estimates indicate that when multi-tasking media is considered children aged 8 until 18 year old use...
digital media an average of eight hours a day (Robert and Foehr in Santrock, 2012). Recent research reveals that 17 percent of adolescents in Singapore use the internet excessively, which is five hours a day, even more per day (Mythily in Santrock, 2012). Students who are in the developmental stage fall into the adolescent category are indicated to have greater access to smartphone use. Recent estimates indicate that when multitasking media is considered children aged 8 until 18 years use digital media for an average of 8 hours a day (Robert & Foe in Santrock, 2012).

Although research on addiction to social media is still limited, the existence of similar symptoms has been medically validated in the context of increasing frequency of social media use as a form of internet addiction (Kuss & Griffiths, 2017). Durkee et al., (2012) argue that basically someone is not addicted to technology but addicted to certain (social) activities they do using the internet. For example, interactive online activities, such as playing games, chatting, and using social networks. It is confirmed that a person increases the frequency of being online on social media longer than they anticipate as increasing the risk of addiction. Kuss and Griffiths (2017) state that, for some individuals, the use of social networking sites can be the single most important activity they do, which is to feel satisfaction in the use of social media. This is due to the fear of missing out on the latest information and trends (De Calheiros, Velozo & Stauder, 2018). Studying the phenomena described above, researchers want to know "Are there relationships between self-esteem and the tendency of Nomophobia in students".

RESEARCH METHODS

This study used quantitative methods with a correlational approach. This study aims to test the hypothesis that there is a relationship between Self-Esteem and Nomophobic Tendencies. Conceptually, self-esteem is defined as the self-evaluation made by everyone, a person's attitude towards himself within the limits of positive and negative dimensions. Nomophobia tendencies are defined as fears without mobile technology, such as phones or mobile computers. Self-esteem measurement uses positive and negative assessments on a high to low scale. Nomophobia tendencies are measured based on an individual's fear of being away from a smartphone and not being able to access the internet based on indicators such as preoccupation with the internet, the need to increase the amount of time used, attempts to control use, negative feelings that arise when trying to stop use, prolonged use than expected, disruption of work or education, and smartphone use as an escape from trouble.

The population in this study is S1 students who are still actively participating in lectures at several universities. For practical reasons, samples were taken in the East Bekasi area using incidental sampling techniques. The limitations or characteristics of the subjects of this study are male and female S1 students who are still actively studying at universities and residing in East Bekasi aged 18 to 22 years. Data collection is carried out face-to-face, not using google forms so that the subjects who are sampled are not limited to those who are very active in digital media and are familiar with filling out google forms. The population number in this study is unknown, so to facilitate the determination of the number of samples, the Cochran formula is used (Uakarn, Chaokromthong, & Sintao,
2021). The confidence level in this study was determined at 95% then the Z value was 1.96. The level of sampling error was 10%, with calculations using the Cochran formula, the number of samples needed was 96.04 people and in this study was rounded up to 100 students, this was done to facilitate the process of statistical calculations and analysis (Djarwanto & Subagyo, 2013).

The data collection technique in this study uses the Likert scale by providing several statements logically related to research problems that must be answered by subjects who are research respondents, which are divided into two statements: favorable and unfavorable and have 4 categories of answer choices, namely strongly disagree (STS), disagree (TS), agree (S), and strongly agree (SS). The scoring method used is by giving a score of 4 if the answer is very agreed, a score of 3 if agree, a score of 2 for disagree and a score of 1 for strongly disagree. Table 1 presents the distribution of favorable and unfavorable items obtained from the aspects contained in the self-esteem variable.

Table 1. Self-Esteem Questionnaire Blueprint

<table>
<thead>
<tr>
<th>Variable</th>
<th>Aspects</th>
<th>Indicator</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-esteem (X)</td>
<td>Attitude towards self</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hope</td>
<td>1, 11, 13, 17, 29, 33, 39.</td>
<td>4, 12, 14, 18, 30, 34, 40.</td>
</tr>
<tr>
<td></td>
<td>Desire</td>
<td>2, 9, 19, 23, 27, 35, 37.</td>
<td>5, 10, 20, 24, 28, 36, 38.</td>
</tr>
<tr>
<td></td>
<td>Self-assessment</td>
<td>Feelings of self-worth</td>
<td>3, 7, 15, 21, 25, 31.</td>
</tr>
</tbody>
</table>

While Table 2 shows the distribution of favorable and unfavorable items obtained from the aspects contained in the Nomophobia tendency variable.

Table 2. Self-Esteem Questionnaire Blueprint Tendency to Nomophobia

<table>
<thead>
<tr>
<th>Variable</th>
<th>Aspects</th>
<th>Indicators</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tendency to Nomophobia (Y)</td>
<td>Emerging behavioral disorders</td>
<td>Fun with the internet</td>
<td>1, 49, 51, 54.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Need extra time</td>
<td>2, 29, 41.</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>Attempts to control usage</td>
<td>3, 31, 45, 56.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative feelings that arise when trying to stop use</td>
<td>4, 15, 20, 32, 36, 38, 58.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Longer usage</td>
<td>5, 19, 22, 52.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disruption of work/education</td>
<td>6, 17, 24, 34.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The use of smartphones as an escape from problems</td>
<td>7, 26, 42, 46.</td>
</tr>
</tbody>
</table>

The calculation of validity tests and reliability tests of measuring instruments using the help of the Statistic Package for the Social Science (SPSS) for two variables, namely the self-esteem variable and the Nomophobia tendency variable. The results of the validity test of the Self-esteem scale item at a significant level (α) 0.05 (5%) with the number of
subjects as many as 100 people (r table = 0.1966), obtained a valid item of 31 items. Meanwhile, the results of the validity test of the Nomophobia Tendency scale item to a sample of 100 people at a significant level (α) of 0.05 (5%) obtained a valid item of 25 items.

From the results of the reliability test of the Self-esteem scale item, a reliability coefficient (α) for the self-esteem scale of 0.493 for 31 items was obtained. The test results showed that they were consistent enough to be used in research. The results of the reliability test of the Nomophobia scale item obtained a reliability coefficient (α) of 0.677 from 25 items. The test results show that the scale is reliable for use in research. Data analysis of research results using the statistical formula of product-moment correlation from Karl Pearson (Shaughnessy et al., 2012).

RESULTS & DISCUSSION

To get an idea of the level of self-esteem and nomophobia of research subjects, researchers divided into three categories, namely high, medium, and low categories. The results obtained can be described as follows:

Table 3. Frequency Distribution Graph and Level of Self-Esteem and Nomophobia

<table>
<thead>
<tr>
<th>Category</th>
<th>Self-Esteem</th>
<th>Nomophobia</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>34</td>
<td>47</td>
</tr>
<tr>
<td>Medium</td>
<td>59</td>
<td>45</td>
</tr>
<tr>
<td>Low</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 1. Self-esteem and Nomophobia Level Graph

The grouping of Self-Esteem and Nomophobia levels is based on the calculation of frequency distribution where the mean Self-Esteem = 93, Range = 22, and Standard Deviation = 3.7; while in the Nomophobia variable obtained mean = 145, Range = 28, and
Standard Deviation = 4.7. Based on calculations made on research data using the product moment correlation formula using SPSS 20.0, the following results were obtained.

Tabel 4. Correlation of Self-esteem with Nomophobic Tendencies

<table>
<thead>
<tr>
<th></th>
<th>Self-esteem</th>
<th>Nomophobia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.069</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Nomophobia</td>
<td>Pearson Correlation</td>
<td>0.069</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.497</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

The correlation coefficient between Self-esteem and Nomophobia tendencies in students in East Bekasi was 0.069 with two-tailed testing at a significance level of 0.05 (5%). From these results, the p value > alpha (α) is 0.05 (5%). So Ho was accepted, and Ha was rejected. This means that there is no significant relationship between Self-esteem and Nomofobic tendencies in students.

Based on the results obtained from measuring the correlation between Self-esteem and Nomophobic tendencies in students, it was found that there was no relationship between self-esteem and Nomophobic tendencies. The same results were also shown by the results of previous studies where it was found that there was no significant relationship between Nomophobia and self-esteem. (Mayangsari & Ariana, 2015); This is different from what Bianchi & Philips (in Bragazzi and Puente, 2014) said that low self-esteem can predict problematic smartphone use. People with negative or bad self-views have a great tendency to seek reassurance, smartphones give everyone the opportunity to be contacted at any time. People with low self-esteem tend to use smartphones inappropriately or excessively. Recent research has also shown that this relationship persists. Recent research on the relationship between nomophobia and self-esteem among Greek university students has shown similar results. The study was conducted on 1,060 research samples consisting of male and female students aged 18 to 25 years. They participated voluntarily through anonymous questionnaires distributed online. Data were collected through the "Nomophobia Questionnaire (NMP-Q)" and Rosenberg’s self-esteem scale (RSES)”. All participants showed some degree of Nomophobia, with moderate levels (59.6%). Regarding the self-esteem category, 18.7% of participants showed low self-esteem, while the rest showed normal or high levels. Students with low self-esteem were twice as likely to show higher levels of Nomophobia compared to those who were normal or high (adj OR = 1.99, p grade <0.001). In addition, women and students who had fathers without university education had a higher risk of showing higher levels of Nomophobia (adj OR = 1.56 and 1.44, respectively, p values ≤ 0.008). It is observed that low self-esteem and Nomophobia are closely related. Further investigation into this issue is needed to explore the potential causality between them (Vagka, et.al., 2023).

There are several possibilities that cause differences in research results with the theory used. The first possibility is due to other uncontrolled factors that can play a role in determining the high and low tendency of Nomophobia, as according to Bianchi and
Phillips (in Bragazi and Puente, 2014), there are several factors that influence the occurrence of Nomophobia, namely: gender, age, extraversion personality, self-esteem, and personality neuroticism. In addition, there are many other independent variables that contribute to the tendency of Nomophobia, including loneliness, shyness, leisure boredom, and self-control. Thus, the contribution of these various variables needs to be considered both in the form of moderator variables and involved as independent variables that are predictors of dependent variables.

The second possibility as the cause of the unproven results of this study is the impact of current technological developments where the need to use smartphones in everyday life is a necessity, especially for students. In this era all the needs and needs of a person are available in a smartphone, where in one smartphone there are various uses and multifunctions, such as someone can shop online, order food or vehicles, arrange personal schedules, pay bills, and transfer some money, do a job, etc. Even since the Covid-19 pandemic, the use of smartphones and the internet is a primary need that is the main medium in working and participating in academic activities. Seeing the high need for smartphones as a medium for daily activities, dependence on smartphone use is not necessarily related to self-esteem. The results of Hasmawati’s research, found that Nomophobia and generation Z who are digital natives tend to become anxious when they are not connected to their smartphones. Digital natives tend to rely on this technology more than anything else (Hasmawati, et al., 2020).

CONCLUSION

From the results of a correlational analysis of self-esteem variables with nomophobic tendencies in students, it was found that the hypothesis upheld by the researcher was rejected. This means that the results showed that there was no significant relationship between Self-esteem and the tendency of Nomophobia in students. Thus, dependence on smartphones is not solely caused by low self-esteem of students.

BIBLIOGRAPHY


