The Relationship of Problematic Smartphone Use and Academic Cyberloafing with Phubbing Behavior in College Students

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ABSTRACT: Phubbing is the behavior of someone who focuses on a smartphone while talking to others, ignoring other people and the social interactions that we often encounter. This study aims to identify whether there is a correlation between problematic smartphone use and academic cyberloafing with phubbing behavior among university students. The subjects of this study were 146 students in Kupang East Nusa Tenggara using quota sampling. This research instrument uses a phubbing scale, problematic smartphone use scale, and academic cyberloafing scale. Based on the results of data analysis, the first hypothesis in this study reads problematic smartphone use and academic cyberloafing correlate with phubbing behavior, which is accepted. The second hypothesis which reads problematic smartphone use positively correlates with phubbing behavior, is assumed. In the third hypothesis which reads academic cyberloafing is positively correlated with phubbing behavior, it is rejected. This study also shows that problematic smartphone use and academic cyberloafing with phubbing behavior have a relationship of 32.3% where problematic smartphone use and academic cyberloafing contribute directly to the increase in phubbing behavior, the rest is influenced by variables outside of it.

KEYWORDS: Academic cyberloafing, Phubbing, Problematic smartphone use, College Student

I. INTRODUCTION

The development of smartphone usage facilitates communication and sharing information, without having to meet face to face directly and separated by distance (Aziz & Nurainiah, 2018). The use of smartphones, especially in Indonesia as revealed in the publication of statistik Telekomunikasi Indonesia in 2022 (BPS, 2022) has become a trend in itself with the highest increase reaching 67.88% which is a record in the last decade. The increasing prevalence of smartphone use in Indonesia, according to Farhan and Rosyidah (2021) is prone to smartphone addiction, and even according to Muflih et al. (2017) can have an impact on minimal social interaction to the emergence of apathy and indifference to the surrounding environment when interacting (Retalia et al., 2022). Although smartphones are an important tool for accessing information, be it news, entertainment, social media, and others (Adiarsi et al., 2015), the tendency to use smartphones that result in the inability to be separated from smartphones can also be detrimental to the lives of their users.

One form of excessive smartphone use that makes individuals around them because they are too focused on their smartphones has become an unavoidable phenomenon among students in Indonesia. This condition is referred to by Karadağ et al. (2015) as phubbing, which is when individuals tend to stare at their smartphones when talking to other people, are more engrossed in their digital devices, and ignore their social interactions. Phubbing as a form of behavior that ignores other people in a social environment by diverting attention to smartphones (Chotpitayasunondh & Douglas, 2018), describes the condition of individuals who choose to ignore other people when interacting and focus more on their smartphones, and even avoid communicating with those around them.

The phenomenon of phubbing in students that often occurs can be influenced by many things, one of which is problematic smartphone use or problematic smartphone use (Arya & Dangri, 2023; Sun & Miller, 2023; Świątek et al., 2023), namely the inability of individuals to regulate smartphone use, which ultimately involves negative consequences in everyday life (Billieux, 2012). Psychological or behavioral dependence on smartphones involves a preoccupation with mobile communications, spending too much money or time on smartphone, and using smartphone in socially or physically inappropriate situations, such as while driving a car. Especially when away from the smartphone, to the point of experiencing anxiety, which can negatively affect relationships, Arya and Dangri (2023) stated can occur due to uncontrolled or excessive smartphone use, which has an impact on everyday life. Arya and Dangri's (2023) research also revealed that problematic smartphone use is a predictor of phubbing that is

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most strongly related to smartphone addiction and is characterized by repeated use of smartphones to engage in behaviors that are known to be counterproductive to health.

According to Billieux (2012), problematic smartphone use is associated with an individual's inability to regulate smartphone use, resulting in various negative consequences in daily life, including symptoms of dependence, and the occurrence of social, behavioral, and affective problems in a person's life. Similarly, Sun and Miller (2023) explain that poor control over smartphone use, psychological dependence on devices, ignoring negative consequences, and/or feelings of anxiety without a smartphone are what support increased phubbing behavior.

In addition to problematic smartphone use, several studies have shown that phubbing can also be influenced by cyberloafing (Hamrat et al., 2019; Chakraborty & Ray, 2022; Hanoum et al., 2023), which is the behavior of accessing the internet that is not related to the work being done (Askew, 2012). Cyberloafing behavior does not only occur in the workplace. Students in the classroom are also not immune to cyberloafing (Akbulut, 2016), which is when students use the internet or digital devices for non-academic activities when they should be studying in class or participating in academic activities (Nahar, 2024), including surfing social media, playing online games, or accessing entertainment content during class or while studying.

Phubbing is defined as an individual who stares at his smartphone while talking to others, focuses on his device, and ignores his social interactions characterized by the emergence of communication disturbance and smartphone use obsession (Karadağ et al., 2015). This phubbing phenomenon is increasing in line with the increasing ownership of smartphones and involvement in internet access. The combined impact of problematic smartphone use and academic cyberloafing can lead to a decrease in the quality of social interactions. Students who frequently phub may not realize how much impact it has on their relationships. This cycle creates a situation where students feel increasingly isolated, even though they have greater access to digital connections, this alienation can worsen feelings of loneliness and reduce feelings of closeness among classmates.

According to Karadağ et al. (2015), students with phubbing are characterized by aspects of communication disturbance, which are indicated by disrupted face-to-face communication due to smartphone use, be it use while talking to others, notifications on smartphones that are continuously checked while with others, and calling or sending short messages while others are talking. This behavior will make students have minimal empathy because they are too focused on smartphones, tend to be less sensitive to the social situations around them, and neglect of the environment, the inability to observe and respond to others around them can worsen phubbing, because individuals are not aware of the impact of their actions on others.

This aspect of communication disturbance is related to problematic smartphone use according to Pamuk and Atli (2016) in their research, they brought up aspects related to problematic smartphone use, namely the aspect of adverse outcomes, namely, negative consequences that arise due to excessive or unhealthy smartphone use, in this case communication disturbance is a form of adverse outcomes that arise due to smartphones and also the next aspect, namely interaction avoidance, namely, the tendency of individuals to avoid social interactions in the real world due to excessive focus on smartphones. Excessive smartphone use can reduce an individual's desire and ability to engage in conversation or social activities with others

Karadağ et al (2015) also mentioned that another aspect that characterizes phubbing is the aspect of smartphone use obsession, namely the need to use smartphones continuously, both when alone and when with other people, a dependency that makes individuals lose track of time so that they unknowingly spend more time on their phones than they should have allocated for other activities. Smartphone use obsession is characterized by attachment to smartphones, the emergence of feelings of anxiety when the smartphone is not within reach, and difficulty in managing smartphone use. Interest in the latest information or entertainment can make individuals continuously check their smartphones, even when interacting with other people.

Aspect of smartphone use obsession is related to problematic smartphone use according to Pamuk and Atli (2016) in their research, raising aspects related to problematic smartphone use, namely the aspect of deprivation, namely, problematic smartphone use refers to feelings of deprivation experienced by individuals when they cannot access their devices, which is characterized by the emergence of feelings of anxiety because they cannot use smartphones, feeling dependent on the presence of smartphones around them, and feeling dissatisfied if they lose access to their digital connections and also related to the aspect of control problems, namely the difficulty of individuals to regulate and control the time and direction of smartphone use. When individuals experience an obsession with smartphone use, they feel the need to be constantly connected. The inability to access the smartphone triggers deprivation and control problems.

Problematic Smartphone Use (PSU) can be defined as the inability to regulate mobile phone use, which ultimately involves negative consequences in everyday life (Billieux, 2012). When students find it difficult to detach themselves from their mobile devices, real-world social interactions are often neglected. Addiction to mobile phones, which is characterized by a constant desire to check social media or other applications, makes students focus more on the screen than on the people around them. Valuable moments to interact and build social relationships are lost. Research by Arya and Dangri (2023), states that problematic smartphone users are more likely to incur high costs due to using smartphones for gambling, and they are also more likely to use them when prohibited, such as on planes or while driving. Individuals also prefer to use social media platforms or online communication rather than face-to-face communication.

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Phubbing is also associated with academic cyberloafing, According to Taneja et al. (2015) cyberloafing develops in academic settings, especially in the world of lectures where most students access the internet during lecture hours for non-academic purposes. This behavior causes disturbances such as diverting students' focus in receiving the material delivered by the lecturer. Akbulut (2016), explains that academic cyberloafing has several aspects, namely, the sharing aspect, which includes activities where individuals spend time on the internet to interact with content shared by others. The shopping aspect is the individual's habit of visiting online shopping sites and using online banking services for payment needs. The real-time updating aspect, namely individuals who always share current conditions or show their activities on social media. The online content aspect, namely the habit of accessing video streaming content or just listening to music. The gaming/gambling aspect, namely spending time playing games and also getting involved in online betting. These aspects as a whole focus on individuals who spend their time on the internet, if done continuously it can result in communication disturbances which are indicated by disrupted face-to-face communication due to smartphone use, whether it is use while talking to other people (Karadağ et al., 2015), the habit of spending time on the internet can also result in smartphone use obsession, namely the need to use smartphones continuously, both when alone and when with other people, a dependency that makes individuals lose track of time.

Phubbing behavior that arises from problematic smartphone use and academic cyberloafing has a negative impact on students. When students are more focused on their phones, their attention to lecture materials or group discussions is disrupted. This has the potential to reduce productivity and overall academic performance, creating a vicious cycle where dissatisfaction with academic performance can exacerbate unhealthy phone use. The relationship between problematic smartphone use, academic cyberloafing, and phubbing. A deeper understanding of how these three phenomena interact with each other can help in designing effective interventions. By increasing awareness of the negative impacts of these behaviors, students can be encouraged to develop healthier habits in using their phones, as well as improve their social interactions and academic performance.

II. METHODS

The research method used in this research is a quantitative research method with a correlational research design. with the aim of knowing the strength and direction of the relationship between the variables measured, namely problematic smartphone use and academic cyberloafing with phubbing in college student

A. Subjects

Population in this study according to The criteria used in this study are active students in Kupang City, who have and actively use smartphones. The total number of students in the Kupang City area from 2021 to 2022 was 73,883 people, consisting of 73,166 students under the Ministry of Education and Culture and 717 students under the Ministry of Religion and Culture (BPS East Nusa Tenggara Province, 2024). The population in this study were all students in Kupang area, East Nusa Tenggara.

The sample in this study using quota sampling, and the determination of sample size using G Power 3.1.9.7 based on the calculation of the minimum number of samples using G Power, with an effect size of 0.15 and an alpha error probability of 0.05 with a power of 0.95 number of predictors as many as 2, the minimum number of research samples is 107 people. The sampling technique uses quota sampling, namely a sampling technique by setting a certain number as a target that must be met in sampling. After the data collection process was carried out, 146 were collected so the researcher decided to use the total obtained, namely 146 respondents.

B. Measurement

This research instrument used phubbing scale, problematic smartphone use scale and academic cyberloafing scale.The measuring instrument used in the phubbing variable consists of 42 items. This measuring instrument was constructed by researchers referring to the aspects of phubbing based on the theory of Karadag et al., (2015), Communication Disturbance and Smartphone Use Obsession. The results of the phubbing scale test after conducting content validity on 12 raters and then item validity with three analyses, obtained a Cronbach's Alpha reliability coefficient of 0.912 with a valid number of 29 items.

The measuring instrument used in the problematic smartphone use variable consists of 48 items. This measuring instrument was constructed by researchers referring to the aspects of problematic smartphone use based on the theory of Pamuk and Atli (2016), deprivasi, adverse outcomes, control problem and interaction avoidance . The results of the problematic smartphone use scale test after conducting content validity on 12 raters and then item validity with two analyses, obtained a Cronbach's Alpha reliability coefficient of 0.943 with a valid number of 33 items.

The measuring instrument used in the academic cyberloafing variable consists of 56 items. This measuring instrument was constructed by researchers referring to the aspects of problematic smartphone use based on the theory of Akbulut (2016), sharing, shopping, real-time updating, accessing online content and gaming/gambling . The results of the problematic smartphone use scale test after conducting content validity on 12 raters and then item validity with three analyses, obtained a Cronbach's Alpha reliability coefficient of 0.957with a valid number of 31 items.

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III. RESULT

This research is a correlational quantitative research whose data is analyzed using multiple regression analysis techniques. This mutiple regeresion analysis produces several outputs, namely Simultaneous Regression to test the first hypothesis, Partial Regression to test the second and third hypothesis.

Based on the research results, it shows that the total number of research respondents is 146 respondents. Research respondents were dominated by 93 female respondents with a percentage of 63,6%, while there were 53 male respondents with a percentage of 36,3%. Based on age, there are 10 groups, based on age consists of 1 sample aged <18 years with a percentage of 0.7%, 10 samples aged 18 years with a percentage of 6.8%., 39 samples aged 19 years with a percentage of 26.7%, 40 samples aged 20 years with a percentage of 27.4%, 25 samples aged 21 years with a percentage of 17.1%, 9 samples aged 22 years with a percentage of 6.2%, 9 samples aged 23 years with a percentage of 6.2%, 8 samples aged 24 years with a percentage of 5.5% and 2 samples aged 25 years with a percentage of 1.4% and 3 samples aged >25 years with a percentage of 2.1%.

Based on semesters consisting of semesters 1-2 as many as 8 samples with a percentage of 5.5%, semesters 3-4 as many as 81 samples with a percentage of 55.5%, semesters 5-6 as many as 32 samples with a percentage of 21.9%, semesters 7-8 as many as 12 samples with a percentage of 8.2% and semesters 9-onwards as many as 13 samples with a percentage of 8.9%. and Based on the type of college, the research sample is dominated by state colleges as many as 128 samples with a percentage of 87.7%. While private colleges as many as 18 samples with a percentage of 12.3%.

A. First Hypothesis Test Results

The first hypothesis in this study is that problematic smartphone use and academic cyberloafing are correlated with phubbing. The test results can be seen that the significance value is 0.000 <0.05 and the F count value is 34.038 so it can be concluded that the first hypothesis is accepted which means there is a correlation between problematic smartphone use and academic cyberloafing with phubbing.

F	P	Result
34,038	0,000	Significant Correlation (p<0.05); The first hypothesis is accepted

Source: SPSS Version 26 Output

B. Second Hypothesis Test Results

The second hypothesis in this study is that problematic smartphone use is positively correlated with phubbing. The results of the hypothesis test show a significance value of 0.000 <0.05 and a t-value of 7.545, so it has a significant positive relationship. The value is positive, meaning that if problematic smartphone use increases, phubbing also increases. Conversely, if problematic smartphone use decreases, phubbing decreases. These results illustrate that problematic smartphone use is positively correlated with phubbing in students in Kupang City.

Model	t	p	Result
Problematic Smartphone Use - Phubbing	7,545	0,000	Positive correlation Significant p<0.05); Second hypothesis is accepted

Source: SPSS Version 26 Output

C. Third Hypothesis Test Results

The third hypothesis in this study is that academic cyberloafing is correlated with phubbing. The results of the hypothesis test show a significance value of 0.093> 0.05 and a t-value of -1.692, so it has an insignificant negative relationship. This value indicates that the hypothesis that there is a positive correlation between academic cyberloafing and phubbing is rejected. This means that students who have academic cyberloafing do not affect phubbing in students in Kupang City.

Model	t	p	Result
Academic Cyberloafing - Phubbing	-1,692	0,093	Negative correlation is not significant (p>0.05); The third hypothesis is rejected.

Source: SPSS Version 26 Output

IV. DISCUSSION

The results of the study indicate that the first hypothesis of this study, namely problematic smartphone use and academic cyberloafing together correlate with phubbing, is accepted. This shows that students who have problematic smartphone use can experience increased phubbing behavior. Students who ignore others to focus on smartphones have become a common

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phenomenon among students (Nasution, 2018; Amelia et al., 2019; Kamil, 2020). With the increasing use of technology, direct social interaction is often replaced by digital communication. Phubbing in academic environments is also found that students underestimate the learning process, interfere with attention while studying (Abramova et al., 2017), or the occurrence of academic procrastination which will affect academic performance (Syifa, 2020). The causes that support the increase in phubbing in students are problematic smartphone use and academic cyberloafing found in the academic field, especially in the world of lectures where most students access the internet during lecture hours for non-academic purposes, when individual smartphones can interfere with their daily lives, such as disruption to work, study, or social relationships which are often accompanied by a tendency to ignore social interactions in the real world, this can increase phubbing behavior.

The second hypothesis in this study is that problematic smartphone use is positively correlated with phubbing. The results of the study showed that problematic smartphone use has a significant positive relationship with phubbing. This indicates that problematic mobile phone use in students directly affects the level of phubbing that will occur. This finding is in line with the general view that problematic smartphone use contributes to increased phubbing behavior in individuals (Geng et al., 2021; Arya & Dangri, 2023; Sun & Miller, 2023)

The strongest predictor of phubbing is problematic smartphone use. In addition to daily use, especially problematic smartphone use and addiction in various forms of technological dependence have a strong positive influence on phubbing behavior, namely smartphone addiction and online game addiction (Arenz & Stockmann, 2023), inability to regulate smartphone use, which ultimately has negative consequences in everyday life. Problematic smartphone users are more likely to incur high costs due to using smartphones for things they shouldn't, such as for games, and can also use them when prohibited, such as on airplanes or while driving. Smartphone users also prefer to use social media platforms or online communication rather than face-to-face communication (Arya & Dangri, 2023).

The third hypothesis in this study was rejected with the results of the study showing that academic cyberloafing has no effect on phubbing. Academic cyberloafing has a significant effect on phubbing when tested together with problematic smartphone use. However, when viewed separately, academic cyberloafing is not significant in phubbing. Problematic smartphone use has an effect both separately and collectively with academic cyberloafing on phubbing. This finding is in line with the results of research conducted by Hanoum et al. (2023) which found that cyberloafing does not have a significant direct effect on phubbing but has an effect when combined with other variables, which means that academic cyberloafing, in this case, the habits of students who use the internet in the campus environment is not the cause of increased phubbing, but it does not rule out the possibility of cyberloafing outside the campus environment which can increase phubbing.

The use of internet facilities on campus while studying in class or while on campus can make students ignore other people, be it lecturers or friends, so cyberloafing can trigger the emergence of phubbing behavior (Fauzan, 2018). Cyberloafing in students according to Akbulut (2016) is a deviation in student behavior in using the internet, namely the emergence of negligent behavior in using it for purposes unrelated to learning. According to cyberloafing, it develops in academic settings, especially in the world of lectures where most students access the internet during lecture hours for non-academic purposes (Taneja et al., 2015). This behavior causes disturbances such as diverting students' focus in receiving the material presented by the lecturer. Based on this, if cyberloafing behavior continues to be carried out by students while studying in class, this makes them ignore teachers and friends because they are too focused on using smartphones, which results in phubbing behavior.

Academic cyberloafing in students does not directly affect the level of phubbing that will occur in students. This finding differs from the view that academic cyberloafing contributes to increased phubbing directly with a significant positive relationship (Fauzan, 2018; Chakraborty & Ray, 2022; Students in the classroom are also not immune to cyberloafing (Akbulut, 2016), which is when students use the internet or digital devices for non-academic activities when they should be studying in class or participating in academic activities (Nahar, 2024), including surfing social media, playing online games, or accessing entertainment content during class or while studying. Individuals who regularly phubbing tend to be due to cyberloafing even during work hours and use their cellphones for purposes unrelated to the business they should be doing, thus contributing to the detrimental effects of excessive cyberloafing on productivity (Chakraborty & Ray, 2022). The use of internet facilities at school during class or while studying can cause students to ignore teachers or friends so cyberloafing is said to be able to predict phubbing behavior (Hanoum., et al. 2023), but in this study, it was not proven that academic cyberloafing contributed to the increase in phubbing behavior in students.

Problematic smartphone use, when individuals have a negative impact on their daily lives, such as disruption to work, study, or social relationships which are often accompanied by a tendency to ignore social interactions in the real world, can increase phubbing behavior. Furthermore, academic cyberloafing, which refers to the activity of surfing the internet for personal gain during work or study time, is also an important factor that needs to be studied. Academic cyberloafing can trigger a lack of focus, which in turn can increase the risk of phubbing. Phubbing factors in this study include the use of certain technical devices or their characteristics, such as smartphones or internet access. Although this has only been studied in a few studies, many studies have

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focused on the influence of technology usage patterns. The influence of daily use or problematic use, leads to problematic and inappropriate smartphone & internet use therefore.

The involvement of research on problematic smartphone use and academic cyberloafing towards phubbing is very relevant in the context of higher education today. This study involves various parties, including students, lecturers, and university management, to provide a comprehensive picture of how smartphone use affects social interaction and academic productivity. In addition, this involvement aims to create collective awareness of the challenges faced by the digital generation, as well as encourage dialogue between students and lecturers regarding the wise use of technology that can be used as a basis for developing effective intervention programs involving all elements in the academic community.

The results of the study showed an effective contribution of problematic smartphone use and academic cyberloafing variables together towards phubbing of 32.3%. The rest is influenced by other variables, namely fear of missing out (Arya & Dangri, 2023), self-control (Kurnia et al., 2020), nomophobia (Lestari & Suratmini, 2024), and loneliness (Yaseen et al., 2021)

Fear of missing out refers to the pervasive fear that others may have satisfying experiences that they do not have (Przybylski et al., 2013). Simply put, it is the feeling or perception that others are having more fun, having satisfying experiences, living a better life, or experiencing something better than you. This is characterized by deep jealousy and affects self-esteem. Often exacerbated by social media sites such as Instagram and Facebook. Social media use continues to emphasize the expression of their lives that are unnatural, exaggerated, or fake in their online profiles, which makes other users jealous (Arya & Dangri, 2023)

Self-control refers to the ability to guide one's own behavior, which means the individual's ability to suppress behavior. This self-control concerns how strong the individual is in holding the values and beliefs that serve as references when acting in making decisions. There are three aspects of self-control according to Averill, namely behavioral control, cognitive control, and decisional control. Adolescents are less able to restrain themselves from using gadgets or have no self-control over the use of gadgets during discussions. Adolescents choose to be busy with other activities that are carried out and ignore eye contact when communication takes place by concluding that phubbing behavior is thought to be related to self-control (Kurnia et al., 2020)

Nomophobia which refers to not being able to separate oneself from a cellphone, which can affect social interactions due to apathy with the surrounding environment which is called phubbing behavior. Shows the consequences of excessive smartphone use in terms of mental health problems in the form of difficulty concentrating, attention deficit hyperactivity disorder, and the possibility of phubbing among adolescents. Nomophobia and phubbing are things that many teenagers experience today. This problem has the potential to disrupt the psychosocial development of adolescents (Lestari & Suratmini, 2024).

Loneliness refers to feelings of loneliness or emptiness that are felt. Loneliness is the main reason individuals rely on smartphone use. Individuals prefer to find new friends or join other virtual groups through smartphone media so that they can be free from isolation, but it is difficult for them to turn virtual relationships into close relationships. (Yaseen et al., 2021).

Research on problematic smartphone use and academic cyberloafing towards phubbing provides significant theoretical contributions to understanding the dynamics of social interaction in the digital era. Analyzing how excessive smartphone use can lead to cyberloafing behavior in academic environments, this study expands the study of the impact of technology on interpersonal relationships. These findings can be used to develop new theories about the influence of technology on communication and social engagement and provide insight into the factors that influence phubbing behavior among college students. Practically, this study can provide recommendations for educational institutions to develop policies and programs that increase awareness of healthy smartphone use among college students. By understanding the relationship between problematic smartphone use, cyberloafing, and phubbing, universities can design interventions that encourage students to be more socially and academically involved, and reduce the negative impacts of unproductive technology use. Training programs or workshops on time management and wise use of technology can be implemented to improve the quality of interactions in the classroom and academic environment.

CONCLUSION

Phubbing is a behavior that person focuses on a smartphone while talking to someone else, ignoring other people and their social interactions that we often encounter when there is a lack of attention to the person they are talking to, often checking notifications, and even making calls or sending messages while communicating, high dependence on smartphones so that individuals have difficulty getting away from the device. This study aims to identify whether there is a correlation between problematic smartphone use and academic cyberloafing with phubbing behavior among students. The subjects of this study were 146 students in Kupang e. Based on the results of data analysis and discussion, the first hypothesis in this study states that problematic smartphone use and academic cyberloafing are correlated with phubbing behavior, which is accepted. The second hypothesis states that problematic smartphone use is positively correlated with phubbing behavior, accepted. The third hypothesis states that academic cyberloafing is positively correlated with phubbing behavior, rejected. This study also shows that there is a relationship between problematic smartphone use and academic cyberloafing and phubbing behavior of 32.3%, where problematic smartphone use and academic cyberloafing contribute directly to increasing phubbing behavior, the rest is influenced by variables outside of that.

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SUGESSTION

Based on the results of the study above, the researcher provides the following suggestions, For students, they should be more aware of the negative impacts of excessive smartphone use, especially in an academic context. It is recommended that students develop the habit of using smartphones more wisely, such as setting a specific time to use the device. In addition, they need to actively participate in activities that promote direct social interaction, in order to reduce the tendency of phubbing which can interfere with peer relationships and the learning process. This awareness can be increased through seminars or workshops that discuss the importance of balance between technology use and social interaction.

For universities, it is necessary to take proactive steps in addressing the issue of problematic smartphone use among students. Educational institutions can integrate educational programs that emphasize the importance of ethical use of technology in an academic environment, developing policies that limit smartphone use in the classroom can help reduce cyberloafing and increase learning focus. Universities are also advised to conduct further research on the effect of smartphone use on academic performance so that they can formulate more effective strategies to support students.

For the General Public, especially parents and communities, it is expected to be more sensitive to the behavior of children and adolescents related to smartphone use. Education about the negative impacts of phubbing and cyberloafing can be done through community activities, such as public discussions or seminars on healthy technology use. The community also needs to encourage interaction between individuals in a more real social environment, for example by holding events that prioritize togetherness and dialogue. Increasing awareness and social interaction is expected to reduce the negative impacts of uncontrolled smartphone use.

For Further Researchers, it is recommended to conduct research that can provide deeper insight into how smartphone use and phubbing behavior develop over time, identifying smartphone usage patterns that have the potential to affect students' academic performance and social interactions. More in-depth research can also consider other factors, such as socio-economic background and the influence of the academic environment, to understand the more complex dynamics between the variables studied, exploring interventions that can reduce the negative impacts of smartphone use, such as experiments that test the effectiveness of education programs on awareness of healthy smartphone use. Further research can provide practical recommendations for educational institutions and the community to create a more supportive environment for students in dealing with the consequences of technology use.

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