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Research Article

The Effect of Fear of Missing Out on Phubbing Behavior: Self-Control as a Moderating Variable among Indonesian Science Students

Emannuel Realeno Isyaalma Wahyu Prakoso[1,*], Yulia Ayriza[1]
[1] Department of Psychology, Faculty of Psychology, Yogyakarta State University, Yogyakarta, Indonesia

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ABSTRACT

Purpose of the study: The purpose of this study is to examine the effect of Fear of Missing Out (FOMO) on phubbing behavior among Indonesian science students and to investigate whether self-control plays a moderating role in the relationship between FOMO and phubbing behavior.

Methodology: This study uses a quantitative correlational approach with a survey. Data were collected from 402 Indonesian science students aged 19–38 years across 28 regions. The instruments included the Fear of Missing Out Scale, the Phubbing Behavior Scale, and the Self-Control Scale. Data were analyzed using moderation analysis with statistical software.

Main Findings: The results showed that Fear of Missing Out (FOMO) had a positive and significant effect on phubbing behavior ($\beta = 0.655$, $p = 0.001$). Self-control also demonstrated a significant direct effect on phubbing behavior ($\beta = 0.279$, $p = 0.005$). However, the interaction between FOMO and self-control was not statistically significant ($\beta = -0.005$, $p = 0.098$), indicating that self-control did not moderate the relationship between FOMO and phubbing behavior among students.

Novelty/Originality of this study: This study contributes novel empirical evidence by testing self-control as a moderator in the relationship between FOMO and phubbing behavior in a large and diverse Indonesian science student sample. The findings highlight the limitation of trait-based self-control measures and suggest the need to conceptualize self-control as a situational or media-related state.

Corresponding Author:
Emannuel Realeno Isyaalma Wahyu Prakoso,
Department of Psychology, Faculty of Psychology, Yogyakarta State University,
Caturtunggal, Depok, Sleman Regency, Yogyakarta, 55281, Indonesia
Email: emannuelrealeno.2023@student.uny.ac.id

1. INTRODUCTION

The phenomenon of phubbing behavior among students is now a concern for researchers [1]-[3]. This happens because smartphone users become more focused on their phones than responding to the person they are talking to, which is called phone snubbing (phubbing) [4], [5]. The word Phubbing emerged in 2007 in Australia and has since become a social phenomenon that has attracted widespread attention from both the general public and academics worldwide [6]. The term phubbing was first used in the Macquarie dictionary update, when the update team combined the words “phone” and “snubbing” to refer to smartphone addiction, which is considered a modern disorder. Individuals who have high phubbing behavior are those who cannot be separated from their cell phones and have limited direct two-way communication [7].

Phubbing defined as the behavior of someone who prefers to focus on their cell phone during a conversation with other people, is preoccupied with their cell phone, or runs away from interpersonal communication [8], [9]. The increase in the incidence of phubbing behavior is most likely due to the widespread availability and use of smartphones, as well as the widespread interactions that occur in society [2]. The causes of the phenomenon of phubbing behavior are still not widely known and how it has finally become accepted in modern communication even though the phenomenon is still relatively new [10]. A phubber may experience feelings of inability to properly monitor or control their smartphone and internet use. Obsessive concerns about missing out on satisfying experiences and an inability to control phone use and etiquette when faced with new temptations [10]. Thus, various factors have been identified to predict smartphone use during face-to-face interactions with others. Factors such as internet addiction, texting addiction, smartphone addiction, social media addiction, and, to some extent, gaming addiction, can all predict phubbing behavior [7].

Apart from the problem of smartphone usage, a study found that internet addiction, fear of missing out (FOMO), and lack of self-control predict the extent to which people phub [10]. Thus, it can be seen that the fear of missing out (FOMO) is one of several factors that can cause phubbing behavior. Fear of missing out (FOMO) is a widespread concern among individuals that they might miss out on valuable moments enjoyed by others, and this is indicated by the urge to constantly monitor other people's activities on social media [11]. FOMO has been identified as a potential trigger for ignoring or insulting others due to focusing on one's phone (phubbing behavior) during social interactions [12]. A recent study of 319 social media users analyzed the relationship between FOMO and phubbing behavior, showing a moderate and positive correlation ($p = 0.001$ and $r = 0.446$) among adolescent Instagram users [13]. In line with that, Ali et al. [14] In his research, he showed that fear of missing out (FOMO) had a positive influence on the tendency of phubbing behavior among social media users in Makassar City ($p = 0.000$, $r = 0.207$, and $ß = 0.689$).

In line with this research, another study was conducted on 243 professionals working in the United States (US) to determine the relationship between FOMO and phubbing behavior. The results showed that FOMO had a positive impact or relationship with phubbing behavior ($p = 0.001$ and $\beta = 0.27$), which in turn was positively related to psychological and relational responses [15]. Further studies were conducted by Correa-Rojas et al [16] to 209 selected students from a private university in Lima, Peru. The results showed that FOMO was found to be a significant determinant of phubbing behavior among Lima students ($p = 0.001$ and $ß = 0.34$). Similar research was also conducted by Chi et al. [17] A study of 938 college students in Taiwan showed that FOMO was a significant predictor of phubbing behavior ($p = 0.023$ and $ß = -0.068$). On the other hand, a study conducted on college students in Bandung City showed that 55.9% of students with high levels of neuroticism tended to spend time online, triggering anxiety and a fear of being left behind, known as FOMO. Students who experience FOMO will have a negative impact on their education, mental health, and well-being [18]

Referring to previously reported studies, FOMO is one of several factors that can predict phubbing behavior [19], [20]. However, previous research findings show that the influence of FOMO on phubbing behavior varies at high and low coefficient (B) values. This indicates that other factors may influence the influence of these two variables. Therefore, researchers attempted to introduce moderator variables to determine their influence on FOMO on phubbing behavior. Moderator variables are variables that can strengthen or weaken the relationship between variables [21]. The reason for conducting this research is that research examining the influence of FOMO and phubbing behavior with self-control as a moderating variable has not yet been found. This refers to several studies conducted in Indonesia, such as the study Sugiharto et al. [22] Although the research examined the same variables, it did not examine self-control as a moderator variable. The research conducted by Fazria et al. [23] examines self-control but not as a moderator variable but as an independent variable that is analyzed to determine its influence on FOMO. Arya and Dangri [24] In their research, they analyzed the influence of FOMO on phubbing behavior but did not examine self-control. Therefore, the studies described above are similar to this study but differ in that they examined self-control as a moderating variable.

Meanwhile, previous research has been conducted to determine whether self-control and phubbing behavior are related in adolescents, both boys and girls. The research findings showed that self-control and phubbing behavior were negatively correlated (sig. 0.000 and $r = -0.511$), in addition, self-control contributed 26.1% to phubbing behavior. Therefore, if an adolescent has high self-control, they can have low phubbing behavior. This means that someone with high self-control is able to regulate themselves when communicating and not be busy with their cell phone when communicating face to face. Thus, adolescents with good levels of self-control tend to show lower phubbing behavior. This condition can explain that someone with strong self-control abilities can limit the urge to use a cell phone during face-to-face interactions. Conversely, if an adolescent's self-control is low, their phubbing behavior will be high. This means that individuals who have low self-control tend not to think about being together with their partners during a conversation, are less able to restrain themselves from using cell phones, are more focused on other activities and look away, thus ignoring eye contact during the interaction [25].

Other research has revealed that there is a negative correlation between self-control and FOMO, meaning that someone with a higher level of self-control shows weaker FOMO [26]. This is because the self-

regulation process of someone with high trait self-control is not only able to manage their behavior, emotions and attention more skillfully but also actively make psychological adjustments to minimize somatization, compulsion, depression, anxiety, hostility and other symptoms [27]. In contrast, people with lower self-control do not have the ability to suppress their compulsive desires, so they experience more FOMO [28] Self-control is an important aspect an individual must possess in their behavior because it can help them control themselves. Therefore, an individual with good self-control can determine their actions when faced with a situation and can support students in avoiding negative behavior [29]. Based on expert opinion, this study employs self-control as a moderating variable to examine its role in the influence of Fear of Missing Out (FOMO) on phubbing behavior. Research using a moderating variable is considered crucial to determine the extent to which self-control can strengthen or weaken the influence of FOMO on phubbing behavior. Accordingly, this study aims to examine whether FOMO influences phubbing behavior among students and to investigate whether self-control moderates the relationship between FOMO and phubbing behavior. Specifically, this study hypothesizes that FOMO has a positive effect on phubbing behavior, that self-control also has a significant effect on phubbing behavior, and that self-control functions as a moderating variable that may strengthen or weaken the influence of FOMO on phubbing behavior among students.

2. RESEARCH METHOD

This study uses a quantitative correlational approach with a survey. A research method that aims to measure and analyze the relationship between two or more variables objectively through the collection of numerical data. The data are obtained using a survey as the research instrument, enabling researchers to identify the strength and direction of the relationships among variables without manipulating the variables under study. Data collection was conducted online through a questionnaire distributed using the Google Forms platform. The population comprised active university students in Indonesia, and the selection of students as research subjects was based on their opinions. Chotpitayasunondh and Douglas [10] which states that the phenomenon of phubbing behavior often affects university students. Meanwhile, the research sample was determined using a non-probability sampling technique, namely accidental sampling is a non-probability sampling technique in which respondents are selected based on chance encounters, provided they meet the research criteria., with a recommended sample size of 400 respondents based on the Slovin formula.

Data collection resulted in 402 respondents from 28 regions in Indonesia. The variables in this study consist of phubbing behavior as the dependent variable, fear of missing out (FOMO) as the independent variable, and self-control as the moderator variable. Furthermore, the research scale consists of three instruments: Phubbing Behavior (PS-10) by Karadağ et al. [7], Fear of Missing Out (FOMO) by Przybylski et al. [11], and Self-Control (BSCS) by Tangney et al. [29]. Content validity was determined using Gregory's formula and yielded a value of 1 for both the phubbing behavior instrument, the FOMO instrument, and the self-control instrument. Meanwhile, the reliability of the three instruments was in the very high category with a Cronbach's Alpha value of 0.906 for the phubbing behavior instrument, 0.927 for FOMO, and 0.952 for self-control. Data analysis in this study was conducted systematically through several stages. The initial stage consisted of descriptive analysis to describe the characteristics of the research data, including the minimum, maximum, mean, and standard deviation of each variable. Next, prerequisite tests were conducted, including normality tests to ensure that the residuals were normally distributed, heteroscedasticity tests to ensure that there was no variance inequality in the residuals, and multicollinearity tests to ensure that there was no high correlation between the independent variables. Once all assumptions were met, hypothesis testing was conducted using multiple linear regression analysis and Moderated Regression Analysis (MRA), with a significance level of 5% ($\alpha = 0.05$). The effect of a variable is considered significant if the significance value (p-value) is < 0.05, both in the partial test (t-test), simultaneous test (F-test), and in the interaction coefficient in the moderation model. The strength of this study lies in the adequate sample size for regression analysis and MRA, thereby increasing statistical power and producing more stable and accurate coefficient estimates.

3. RESULTS AND DISCUSSION

The results of measuring the three variables can be shown in the descriptive data as detailed in Table 1.

Table 1. Statistical Description

Variables	N	Max	Min	M	SD
Phubbing Behavior	402	50	24	37.28	6,149
Fear of Missing Out	402	50	17	34.25	7,306
Self-control	402	65	22	43.47	10,306

In Table 1, The results of hypothetical statistical calculations for 402 respondents with reference to the three scales used showed that the majority of phubbing behavior in respondents, namely 166 (41%) students, fell into the high category. This means that based on the hypothetical mean categorization, it can be seen that the students in this study had a high level of phubbing behavior. Furthermore, from the FOMO scale, it was known that the majority of respondents' FOMO, namely 156 (39%) students, fell into the high category. This means that based on the hypothetical mean categorization, it can be seen that the students in this study had a high level of FOMO. Meanwhile, regarding self-control, it was known that 131 (33%) students fell into the high category. This means that based on the hypothetical mean categorization, it can be seen that the students in this study had a high level of self-control.

Table 2. Normality Test

Unstandardized Residual		
N		402
Normal Parametersa,b	Mean	.0000000
	Standard Deviation	4.66270318
Most Extreme Differences	Absolute	.036
	Positive	.022
	Negative	-.036
Test Statistics		.036
Asymp. Sig. (2-tailed)		.200c,d

Table 2 shows the results of the two-tailed Kolmogorov-Smirnov one-sample normality test, with an asymptotic value of 0.200 ($p > 0.05$), so it can be concluded that the data in this study is normally distributed. In addition, the results of the Glejser test show that the FOMO variable (X) does not exhibit heteroscedasticity because the significance value is 0.262 ($p>0.05$). Symptoms of heteroscedasticity also do not occur in the self-control moderator variable because it has a sig value of 0.414 ($p>0.05$). Thus, it can be concluded that the FOMO and self-control variables are free from symptoms of heteroscedasticity. Meanwhile, based on the multicollinearity test, it is known that the FOMO variable has a VIF value of 1.175 (VIF <10) and the self-control variable has a VIF value of 1.175 (<10). On the other hand, the tolerance value of both variables is 0.851 (> 0.1) so it can be concluded that there is no multicollinearity in the FOMO variable (X) and the self-control variable (M) in this study.

Table 3. T-test

Model		Unstandardized Coefficients		t	Sig.	Information
		B	Std. Error			
1	(Constant)	9,679	4,184	2,313	,021	Significant
	Fear of Missing Out (FOMO) (X)	,655	,122	5,382	,000	Significant
	Self-control (M)	,279	,100	2,804	,005	Significant
	X*M	-,005	,003	-1,657	,098	Not Significant

Based on Table 3, FOMO has a regression coefficient of 0.655 with a t-test of 5.382 and a p-value of 0.000 ($p < 0.05$). This shows that FOMO has a significant influence on phubbing behavior in a positive direction. This means that the FOMO variable is able to predict the emergence of the phubbing behavior variable. Furthermore, self-control (M) has a regression coefficient of 0.279 with a t-statistic of 2.804 and a p-value of 0.005 ($p < 0.05$). This shows that self-control has a significant influence on phubbing behavior in a positive direction. This means that self-control is able to predict the emergence of the phubbing behavior variable. Meanwhile, the Fomo*self-control (X*M) interaction obtained a regression coefficient of -0.005 with a t-statistic of -1.657 and a p-value of 0.098 ($p > 0.05$). This shows that the interaction between self-control and FOMO (b3) does not significantly influence phubbing behavior. This means that self-control has not been shown to significantly moderate the effect of FOMO on phubbing behavior.

Table 4. Model Significance Test (F Test)

	Model	Sum of Squares	Mean Square	F	Sig.	Information
1	Regression	6506.007	2168.669	99.688	.000b	Significant
	Residual	8658.344	21/755			
	Total	15164.351				

Table 4 shows that the calculated F value is 99.688 with a significance value of 0.000 ($p < 0.05$). Thus, it can be concluded that the FOMO variable, the self-control variable, and their interaction together have a significant influence on the phubbing behavior variable.

Table 5. Coefficient of Determination Test (R2)

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.625a	.391	.390	4.80475
2	.655a	.429	.425	4.66419

a. Predictors: (Constant), Fear of Missing Out (FOMO) (X)
b. Predictors: (Constant), XM, Fear of Missing Out (FOMO) (X), Self-control (M)

Model 1 in table 5 is a model before moderation so that the R value is obtained = 0.625 with an R Square (R^2) value = 0.391 then after moderation or in this case called model 2, the R value is obtained = 0.655 with an R Square (R^2) value = 0.429. The change in the R^2 value after moderation is 0.038, while the R^2 value in model 2 means that 42.9% of this variation can explain phubbing behavior, while the remaining 57.1% (e) is influenced by other factors not included in this study.

The results of this study show that self-control is unable to moderate the effect of fear of missing out (FOMO) on phubbing behavior. Therefore, the hypothesis in this study, namely that self-control can moderate the effect of FOMO on phubbing behavior, is rejected. This means that students with high or low self-control have no relationship in the effect of FOMO on phubbing behavior. Although the initial hypothesis assumed that self-control can moderate the effect of FOMO on phubbing behavior, the findings of this study do not support this hypothesis, so the results of this study can provide new insights.

On the other hand, these findings indicate the existence of other variables that may moderate the relationship between FOMO and phubbing behavior, which, to date, the researchers have not identified. This research is a response to the hope of new research to confirm previous research. This research is research Gao et al. [12] which aims to explain the complex mechanisms by which FOMO influences phubbing behavior and highlights the important role of self-control in preventing and overcoming phubbing behavior among college students. The suggestions provided by Gao et al. [12] namely to conduct further investigations to address the limitations and initial understanding of the complex dynamics associated with FOMO, self-control, and phubbing behavior.

The selection of students as research subjects was because according to Chotpitayasunondh and Douglas [10] phenomenon of phubbing often affects college students. Based on the XM interaction test between FOMO and self-control (see Table 1), it shows a negative moderating effect of FOMO and self-control on phubbing behavior. This means that every one-unit increase in XM interaction will decrease phubbing behavior, assuming that other variables remain constant. This moderation result supports research conducted by Meng and Xuan [30] who also found a negative correlation between self-control and phubbing behavior. However, although the moderating effect of self-control weakened the effect of FOMO on phubbing behavior, the interaction was not significant. Therefore, it cannot be concluded that self-control acts as a moderating variable in this relationship, as the effect of FOMO on phubbing behavior remains the same for students with high and low self-control. Therefore, these results indicate that other factors may be more relevant as moderating variables in this relationship.

The role of self-control as a moderating variable has been tested by various researchers, and the results show that self-control is not a moderating variable in several studies. First, research conducted by Ibrahim et al [31], the results showed that self-control could not moderate the relationship between problematic internet use (PIU) and negative health impacts. According to Ibrahim et al. [31] Several reasons why self-control is not significant as a moderator variable include; first, the proportion of male samples is greater; second, the small sample size. Opinion Ibrahim et al. [31] supported by Shekarkhar and Gibson [32] which states that men tend to have lower levels of self-control than women. In line with this Chapple et al. [33] confirmed that compared to boys, girls scored significantly higher on measures of self-control.

On the other hand, it is also known that girls have significantly higher levels of maternal monitoring on average and that boys are significantly more likely to receive physical punishment when they misbehave. Based on this, it can be assumed that the predominance of male respondents in this study may have caused self-control to be insignificant as a moderating variable. Second, the study conducted by Charolina et al. [34] This study aimed to examine self-control as a moderator in the relationship between loneliness and cyberviolence in adolescent girls. The results showed that self-control did not moderate loneliness and cyberviolence, but correlation tests indicated that self-control played a role or contributed to the occurrence of loneliness and cyberviolence. According to Charolina et al. [34] The reason that caused self-control to be insignificant as a moderator variable in the study was that the self-control measuring instrument items were assumed to be less descriptive of the self-control that is typical for victims of cyber violence because the self-control instrument used contained general self-control item sounds.

Based on this, it can be seen that the use of instruments that are too general and non-specific in assessing self-control in the context of phubbing behavior can be assumed to not accurately capture the dynamics of moderation. This can be seen from the BSCS instrument items. Tangney et al. [29], the items include; I am lazy (item no. 3), I do things that are bad for me if they are fun (item 5), I wish I had self-discipline (item 7), people would say that I have strong self-discipline (item 8), I have difficulty concentrating (item 10), and I often act without thinking through all the alternatives (item 13). On the other hand, another factor that may contribute to the rejection of this hypothesis is cultural factors. This study used student subjects throughout Indonesia who are spread across various regions with various cultures. Therefore, cultural factors play an important role in various aspects of the study, from design to interpretation of research results. According to Khosrowjerdi and Bornmann [35] In his research, he found that cultural values such as self-expression and social trust contribute to better scientific communication systems, greater collaboration, and better research quality. Therefore, it can be assumed that the reason why the self-control variable in this study was not significant as a moderator variable could be due to the presence of different cultural factors among the research subjects.

Although the research hypothesis was rejected, the results revealed a significant direct relationship between the variables studied. The analysis showed that FOMO had a positive and significant relationship with phubbing behavior. This means that the stronger the fear of missing out (FOMO), the greater the tendency for phubbing behavior to occur (see Table 1). This result aligns with the findings showing that FOMO has a positive and significant relationship with phubbing behavior [15], [16], [17]. According to experts, FOMO is defined as a persistent anxiety or worry experienced by someone during work hours about the absence or loss of socially rewarding experiences that someone might share on social media platforms [11], [15], [36], On the other hand, a finding states that students who have FOMO can have a negative impact on their education, mental health, and well-being [18]. Meanwhile, other test results show that self-control, when used as an independent variable, has a positive and significant relationship with phubbing behavior. This means that the stronger the self-control, the greater the likelihood of phubbing behavior (see Table 1).

These findings support research conducted by Lapalelo and Purnomo [37], the study examined 337 participants using 2 self-control instruments, namely the Brief Self-Control Scale (BSCS) created by Tangney et al. [38] where this instrument is the same instrument as the instrument used by researchers and the Generic phubbing scale (GSP) created by Chotpitayasunondh and Douglas [10]. Research conducted by Lapalelo and Purnomo [37] shows that the hypothesis is rejected because the relationship between FOMO and phubbing behavior is positive and significant. According to Lapalelo and Purnomo [37] There are two possible reasons why self-control has a positive relationship with phubbing behavior. First, the ability to multitask. Multitasking is an activity that can support and strengthen a person's productivity level efficiently and effectively. In other words, multitasking allows a person to work on several tasks simultaneously, thus completing work more effectively. Salvucci and Taatgen [39] On the other hand, multitasking can be a driving force behind the emergence of phubbing behavior in someone because the presence of a cell phone often makes individuals encouraged to do activities simultaneously, even while interacting with other people, which in the end can be considered an act of phubbing [37].

Ariyanti et al. [40] It states that the majority of phubbing is experienced by Generation Z, who are considered a multitasking generation, capable of carrying out more than one activity simultaneously. Second, self-control is not the only major factor in reducing phubbing; other factors contribute to low phubbing, such as limiting cell phone usage time, social media addiction, a tendency towards boredom, conformity, and demographic factors. This finding certainly contradicts existing theories that suggest that self-control plays a crucial role and focuses on self-change, preventing self-destructive actions, having confidence in one's abilities, a sense of autonomy, or freedom from the influence of others. In line with this Ghufronm [41] defines self-control as a mechanism that functions to control and guide behavior. Self-control refers to the activity of self-control over behavior that reflects an individual's tendency to consider things carefully before taking action.

Supporting this statement, lack of self-control has been linked to various behavioral and impulse control problems, poor education, increased aggression and substance abuse, high levels of phubbing behavior, a significant predictor of cyberbullying, sexual harassment and sexual teasing, internet dependency, and is associated with negative interpersonal outcomes that ultimately have interpersonal consequences such as exclusion which further results in loneliness [38], [42], [43], [44], [45], [46], [47]. Self-control can also be linked to emotional problems, poor school performance, lack of persistence, multiple failures in task performance, relationship and breakup problems, and more [48].

Based on this, the findings can be explained by the theory of ego depletion according to Baumeister et al [48] This theory states that self-control is like a muscle; if used continuously, it will become fatigued. After using a lot of energy to control oneself in one situation, a person tends to have more difficulty controlling themselves. Furthermore, the ease and near-availability of social media access thanks to an internet connection presents a challenge in social media use. This situation is called social media self-control failure (SMSCF). This can cause social media users to often experience difficulty controlling their social media use while having

important tasks to complete [49]. SMSCF failure is a fairly large part of the daily experience of people who experience failure in self-control [50].

On the other hand, the findings of this study indicate that self-control as a fixed personality trait is incapable or insignificant as a moderating variable in this study (see Table 1). This is because the self-control instrument as a trait measures long-term self-control, whereas the use of the self-control instrument as a state measures a person's self-control ability in specific, temporary situations. Chaplin et al. [51] explains that personality as a trait refers to an individual's relatively stable tendency to respond to certain situations consistently and generally. In contrast, states are more transient and influenced by situational or environmental conditions. Therefore, future research is expected to use instruments that measure self-control as a temporary state related to media. Thus, overall, this study contributes data regarding the moderation of self-control variables, which were not significantly proven as moderators of the influence of FOMO on phubbing behavior. This is assumed to occur because self-control fails to perform its function due to excessive energy being used to control oneself in a single situation, which subsequently results in a person tending to have more difficulty controlling themselves, a phenomenon known as ego depletion. Baumeister et al. [48] On the other hand, although the moderating effect ultimately showed a negative direction, the insignificant interaction between FOMO and self-control as moderating variables could be a research gap that can be further examined by researchers in the future.

4. CONCLUSION

The results of this study indicate that self-control does not moderate the influence of fear of missing out (FOMO) on phubbing behavior. FOMO has a positive and significant effect on phubbing behavior, as does self-control; however, the interaction between self-control and FOMO is not significant. This finding suggests that differences in students' levels of self-control, whether high or low, do not alter the effect of FOMO on phubbing behavior. From a practical perspective, these findings highlight the importance for students to develop awareness of the negative impact of FOMO on social interactions and to practice responsible social media use, particularly during face-to-face communication, in order to reduce phubbing behavior. For practitioners, the results provide a basis for designing psychoeducational programs that focus on managing FOMO and promoting healthy and mindful use of digital media as a strategy to minimize phubbing among students. Regarding future research, given that self-control did not function as a significant moderating variable, further studies are encouraged to examine alternative moderators such as time restrictions on mobile phone use, social media addiction, boredom proneness, conformity, and demographic factors. In addition, future research is recommended to employ instruments that conceptualize self-control as a situational or state-based construct related to media use, which may better capture contextual dynamics and provide a more nuanced understanding of its role in influencing phubbing behavior.

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AUTHOR CONTRIBUTIONS

Conceptualisation, Emannuel Realeno Isyaalma Wahyu Prakoso and Yulia Ayriza; Methodology, Emannuel Realeno Isyaalma Wahyu Prakoso and Yulia Ayriza; Data Curation, Emannuel Realeno Isyaalma Wahyu Prakoso and Yulia Ayriza; Writing - Initial Draft Preparation, Emannuel Realeno Isyaalma Wahyu Prakoso and Yulia Ayriza; Writing - Review & Editing, Emannuel Realeno Isyaalma Wahyu Prakoso; Visualisation, Yulia Ayriza.

CONFLICTS OF INTEREST

The author(s) declare no conflict of interest.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

The authors declare that no artificial intelligence (AI) tools were used in the generation, analysis, or writing of this manuscript. All aspects of the research, including data collection, interpretation, and manuscript preparation, were carried out entirely by the authors without the assistance of AI-based technologies.

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