JURNAL BIKOTETIK
(Bimbingan dan Konseling: Teori dan Praktik)
Volume 08 Number 2, 2024, pp 151- 161
ISSN: Online 2580-5827
Open Access
https://journal.unesa.ac.id/index.php/jbk

SMARTPHONE ADDICTION AMONG COLLEGE STUDENTS: DO SELF-ESTEEM AND SELF-CONTROL PLAY ROLE?

Niken Pramudita[1] , Eko Sujadi[2] , Bukhari Ahmad[3]
[123]Islamic Education Guidance and Counseling Department, Institut Agama Islam Negeri Kerinci
Corresponding author, e-mail: nikenpramudita04@gmail.com

Received June 08, 2024;
Revised August 12, 2024;
Accepted October 24, 2024;
Published Online
November 11, 2024

The Bikotetik Journal is a Guidance and Counseling journal published by the Department of Guidance and Counseling, Faculty of Education, State University of Surabaya in collaboration with the Asosiasi Bimbingan dan Konseling Indonesia (ABKIN)

Abstrak

Kecanduan smartphone semakin menjadi isu yang serius di kalangan mahasiswa. Penelitian ini bertujuan untuk menganalisis pengaruh self-esteem dan kontrol diri terhadap kecanduan smartphone pada mahasiswa. Studi ini menggunakan desain survei dengan metode korelasional. Sebanyak 130 mahasiswa yang ditentukan dengan teknik convenience sampling berpartisipasi dalam penelitian. Peneliti mengadaptasi skala penelitian Smartphone Addiction Scale, Rosenberg Self-Esteem Scale, dan Self-Control Scale. Teknik analisis data yang diterapkan untuk mengungkapkan perevelensi setiap variabel menggunakan statistik deskriptif. Kemudian pengujian hipotesis menggunakan regresi sederhana dan regresi berganda. Hasil analisis menunjukkan bahwa baik secara parsial maupun simultan, self-esteem dan kontrol diri memiliki pengaruh negatif terhadap kecanduan smartphone. Ini menunjukkan bahwa semakin tinggi self-esteem dan kontrol diri maka akan semakin rendah tingkat kecanduan smartphone yang dialami responden. Studi ini menawarkan kebaruan dengan menganalisis pengaruh self-esteem dan kontrol diri secara bersamaan, memberikan wawasan baru tentang peran kedua faktor psikologis ini dalam memprediksi kecanduan smartphone pada kelompok mahasiswa di Indonesia. Temuan ini memiliki implikasi penting bagi upaya pencegahan dan intervensi permasalahan kecanduan smartphone dengan memperhatikan aspek self-esteem dan kontrol diri.

Kata Kunci: Kecanduan Smartphone, Self-Esteem, Kontrol Diri

Abstract

Smartphone addiction has increasingly emerged as a significant concern among college students. This study aims to investigate the impact of self-esteem and self-control on smartphone addiction within this demographic. Adopting a survey design with a correlational approach, the study involved 130 students selected using convenience sampling. The researchers employed the Smartphone Addiction Scale, Rosenberg Self-Esteem Scale, and Self-Control Scale for data collection. Descriptive statistics were used to examine the variables, followed by hypothesis testing through simple and multiple regression analyses. The results indicate that both self-esteem and self-control negatively affect smartphone addiction, both independently and collectively. Specifically, higher levels of self-esteem and self-control are associated with lower levels of smartphone addiction among participants. This study provides

a novel contribution by examining the combined effects of self-esteem and self-control, offering new insights into the roles of these psychological factors in predicting smartphone addiction among Indonesian university students. These findings have significant implications for addressing smartphone addiction through interventions that enhance self-esteem and self-control.

Keywords: Smartphone Addiction, Self-Esteem, Self-Control

How to Cite:
Author 1, Author 2. (Year). Title Manuscript. *Jurnal Bikotetik (Bimbingan Dan Konseling: Teori Dan Praktik)* , Vol (No): pp xx-xx

INTRODUCTION

Technological advancements have profoundly impacted various aspects of human life, particularly education. Technology serves as a source of great optimism, as all facets of life, including learning processes, increasingly rely on digital media (Sulistyarini & Fatonah, 2022). However, technological advancements are not always accompanied by corresponding moral development. Smartphone addiction has emerged as a significant issue among adolescents in this digital era, despite the potential of technology to address critical societal challenges such as climate change, hunger, and disease (Wolff, 2021). Conversely, technology can also act as a tool for generating fear, oppression, bias in decision-making, exacerbating economic and social inequalities, and creating new pathways for warfare (Wolff, 2021). The domain of education is significantly influenced by this technological progress. According to Sulistyarini & Fatonah, the digital era signifies a time when landscape (Panova & Carbonell, 2018).

Fundamentally, smartphones are designed to streamline various human activities, including those of student groups (Nasirudin, Sunardi, & Riadi, 2020). For instance, students now face fewer challenges in accessing up-to-date information as most data is readily available through smartphones. As explained by Gustilawati et al., smartphones aid students in acquiring information, serving as a versatile tool for accessing general knowledge and learning new concepts whenever needed (Gustilawati, Utami, & Farich, 2020).

Furthermore, the ease of information access provided by smartphones has been shown to enhance students' motivation to engage in the learning process (Gustilawati et al., 2020). While the use of smartphones facilitates information retrieval for students, excessive reliance on them raises concerns. The prevalence of smartphone addiction among teenagers, stemming from unrestricted smartphone use, is evident in the neglect of adverse impacts. Smartphone addiction is typified by compulsive behavior despite negative consequences (Philibin & Crabbe, 2015). Although a consensus on its definition is lacking, smartphone addiction often denotes a recurring inability to control addictive behavior leading to functional impairments or distress, aligning with behavioral addiction criteria (Ting & Chen, 2020). Some literature equates smartphone addiction with problematic use, characterized by compulsive device reliance resulting in various forms of harm - physical, psychological, or social (Ting & Chen, 2020).

As a behavior to be avoided, smartphone addiction exerts negative impacts across various life domains. It can adversely affect the learning process (Sujadi & Ahmad, 2023; Sunday, Adesope, & Maarhuis, 2021), disrupt sleep quality among university students (Zhang & Wu, 2020), diminish life satisfaction due to excessive use (Samaha & Hawi, 2016), and is linked to problematic mental health outcomes (Gligor & Mozoș, 2019). Individuals ensnared by smartphone addiction may withdraw and struggle with daily activities, fostering social difficulties (Rumapea, Sinurat, & Barus, 2023). Nomophobia, which induces anxiety in college students when phones or internet access is unavailable, is prevalent (Bragazzi & Del Puente, 2014).

Physiologically, excessive smartphone use, particularly at night, can disrupt the body's circadian rhythm and impair melatonin production, a hormone crucial for sleep processes (Sohn, Krasnoff, Rees, Kalk, & Carter, 2021). This disruption can lead to sleep disorders, such as insomnia, which subsequently impacts daytime concentration and productivity (Liu et al., 2022). Additionally, prolonged exposure to smartphone screens may trigger eye health issues, such as Computer Vision Syndrome (CVS), characterized by dry eyes, fatigue, and blurred vision (Özalp, 2024). Socially, smartphone addiction is often linked to a decline in the quality of interpersonal interactions. Users who spend excessive time in digital environments tend to experience reduced empathy and social isolation (Al-Kandari & Al-Sejari, 2021). This phenomenon, known as "phubbing," refers to the act of ignoring those around in favor of focusing on one's smartphone (Bajwa, Abdullah, Zaremohzzabieh, Wan Jaafar, & Abu Samah, 2023).

Although smartphone addiction is a behavior that should be avoided, in reality there are still students who experience this problem. Several studies show the prevalence of smartphone addiction. Taufik stated that around 70% of internet usage is recorded, mostly teenagers and they are very vulnerable to the negative effects of advances in smartphone technology (Eduardo, Suzy, & Hikmah, 2020). Studies conducted in South Korea revealed that 30.9% of students are a group that is vulnerable to smartphone addiction (Cha & Seo, 2018). A study conducted by Soni et al. revealed that 33.3% experienced a high risk of smartphone abuse (Soni, Upadhyay, & Jain, 2017). Furthermore, 48% of students experience smartphone addiction (Aljomaa, Mohammad, Albursan, Bakhiet, & Abduljabbar, 2016). The impact of smartphone addiction is highly perilous for students as they struggle to regulate themselves, leading to behaviors like neglecting sleep, irregular eating habits, and an inability to focus during classes. Prolonged smartphone usage can impede students' concentration in lessons, hamper brain development and function, and potentially slow down cognitive processes. Excessive smartphone dependency may result in addiction and nomophobia, ultimately increasing the risk of mental health disorders and associated complications (Andriani, Sriati, & Yamin, 2019).

Low self-esteem emerges as a significant factor influencing smartphone addiction (Ding et al., 2022; Kim & Koh, 2018; Sfeir, Hallit, Akel, Salameh, & Obeid, 2021). Self-esteem, integral to self-assessment and interpersonal dynamics, shapes goal-setting behaviors and achievement aspirations (Oktaviani, 2019). Individuals with heightened self-esteem tend to set ambitious goals and strive for their attainment, whereas those with lower self-esteem may avoid situations that challenge their self-image (Hutabarat, Widyorini, & Rahayu, 2021). This pivotal factor, as noted by Nikmarijal et al., significantly influences life achievements, with high self-esteem correlating with future success and low self-esteem predisposing individuals to failure (Srisayekti & Setiady, 2015). Recognized for its impact on motivation and self-regard, self-esteem plays a crucial role in deterring smartphone addiction (Baumeister, Campbell, Krueger, & Vohs, 2003).

Another variable that contributes to smartphone addiction is self-control, as elucidated in Soedarto's research, where self-control was found to contribute effectively by 16.8% to the smartphone addiction variable (Mulyati & Nrh, 2018). Khasanah & Winarti's study results reveal a negative correlation between self-control and smartphone addiction in adolescents, indicating that higher self-control levels correspond to lower smartphone addiction levels and vice versa - lower self-control levels correlate with higher smartphone addiction (Khasanah & Winarti, 2021). Additional research underscores that a lack of self-control can lead to smartphone addiction (Bragazzi & Del Puente, 2014).

Self-control represents an individual's capacity to manage behavior and resist internal impulses to achieve desired objectives (Muna & Astuti, 2014). Yang et al. describe self-control as the ability to regulate emotions, desires, and behaviors in alignment with goals and values, even in challenging or tempting circumstances (Yang, 2016). Nurningtyas et al.'s research emphasizes that uncontrolled smartphone use can engender social issues, fostering social withdrawal and smartphone dependency, which may induce anxiety when separated from the device (Nurningtyas & Ayriza, 2022).

This study aims to provide an in-depth description of the respondents' self-esteem, self-control, and level of smartphone addiction. This analysis encompasses an understanding of respondents' self-esteem levels, the extent of their self-control across various situations, and their degree of dependence on smartphone use. Beyond describing these variables, the study also seeks to examine the influence of self-esteem and self-control on smartphone addiction. Through this examination, the research aims to explore the relationship between self-esteem and self-control as psychological factors and the respondents' susceptibility to smartphone addiction. Several previous studies have examined the relationship between variables such as self-esteem, self-control, and smartphone addiction, either separately or partially. However, limitations remain in studies that integrate self-esteem and self-control as factors influencing smartphone addiction simultaneously. This study introduces novelty by investigating how self-esteem and self-control jointly impact the level of smartphone addiction among respondents. The findings are expected to offer new insights into the complex and interconnected psychological factors involved in predicting smartphone addiction. This contribution not only enriches theories related to technology addiction but may also serve as a basis for developing more effective interventions to address smartphone addiction, considering the simultaneous importance of self-esteem and self-control.

METHOD

Research Design and Participants

The study employed a survey research design, with 130 college students selected through convenience sampling as participants. Data collection was conducted over three weeks in December 2023. The initial page of the

OPEN ACCESS

survey included a consent form to obtain respondents' willingness to participate, followed by sections for demographic information and questionnaire items. The demographic characteristics of the respondents are presented in Table 1.

Based on the gender breakdown, the majority of participants were female, comprising 82 individuals (63.1%), while male participants accounted for 48 individuals (36.9%). In terms of academic year/semester characteristics, there is a relatively consistent distribution, with the highest number of students in semester 7 (34 individuals, 26.1%), followed by semester 3 (32 individuals, 24.6%), semester 1 (27 individuals, 20.7%), semester 9 (19 individuals, 14.6%), and semester 5 (18 individuals, 13.8%).

Table 1. Characteristics of Research Respondents

Demographic Variables	Category	Frequency	Percentage
Sex	Male	48	36.9
	Female	82	63.1
Semester/Cohort	2023/1	27	20.7
	2022/3	32	24.6
	2021/5	18	13.8
	2020/7	34	26.1
	2019/9	19	14.6

Research Scale

Smartphone Addiction Scale

Researchers adapted the smartphone addiction scale developed by Min Kwon et al. (Kwon, Kim, Cho, & Yang, 2013). This scale employs a Likert scale model with four response options: SS (Strongly Agree), S (Agree), TS (Disagree), and STS (Strongly Disagree). Statements are divided into positive and negative categories, with positive statements scored as 4, 3, 2, 1, and negative statements scored as 1, 2, 3, 4. The internal consistency and construct validity of the scale were assessed, yielding a Cronbach's alpha of 0.911.

Rosenberg Self-Esteem Scale

Self-esteem was assessed using the Rosenberg Self-Esteem Scale (M. Rosenberg, 1979). This scale comprises 10 statements aimed at gauging an individual's self-esteem level. Respondents rate their agreement with each statement on a Likert scale with four response options: SS (Strongly Agree), S (Agree), TS (Disagree), and STS (Strongly Disagree). The scale demonstrates good content validity, ensuring the questions cover essential aspects of self-esteem, and exhibits high reliability.

Brief Self-Control Scale (BSCS)

Self-control was evaluated using the Brief Self-Control Scale (BSCS) developed by Christoph Lindner (Lindner, Nagy, & Retelsdorf, 2015). Researchers made adaptations to this scale by adjusting to several conditions. The BSCS is a concise assessment tool designed to measure an individual's self-regulation abilities. It assesses the capacity to manage impulses, control emotions, delay gratification, and focus on long-term objectives. Comprising 12 statements, respondents rate their agreement with each item to provide insights into their level of self-control. The BSCS demonstrates robust validity and reliability.

Statistical Analysis

Descriptive statistics, including percentages, deviations, means, and standard deviations, were employed in this study to assess the status of respondents across each variable. The hypothesis testing method utilized in this study involved both simple and multiple regression analyses. The statistical analysis process commenced with classical assumption testing. Evaluating the classical regression assumptions is crucial to validate the results derived from the linear regression model. All data were analyzed using SPSS version 25.00.

RESULTS AND DISCUSSION

Researchers conducted descriptive analysis to ascertain the prevalence of smartphone addiction, self-esteem, and self-control. The average for smartphone addiction was 45.23 with a standard deviation of 5.44, indicating a low level. However, some respondents exhibited moderate levels of smartphone addiction. The self-esteem variable was

classified as high, with an average value of 30.80 and a standard deviation of 2.23. Similarly, the self-control variable was deemed high, with an average value of 36.05 and a standard deviation of 3.25.

Table 2. Descriptive Analysis

Variabel	Mean (SD)	Category				
		Very Low	Low	Moderate	High	Very High
Smartphone addiction	45.23 (5.44)	2 (1.53)	107 (82.30)	21 (16.15)	0 (0)	0 (0)
Self-esteem	30.80 (2.23)	0 (0)	3 (2.30)	25 (19.23)	102 (78.46)	0 (0)
Self-Control	36.05 (3.25)	0 (0)	4 (3.07)	26 (20)	96 (73.84)	4 (3.07)

Classical assumption testing encompasses normality, multicollinearity, and heteroscedasticity. Table 3 illustrates that all variables exhibit normal distributions with significance values exceeding 0.05. The multicollinearity test indicates no multicollinearity among independent variables, as evidenced by VIF values below 10. Additionally, the heteroscedasticity test yielded a Glesjer value above 0.05, indicating the absence of heteroscedasticity.

Table 3. Classical Assumptions

Classical Assumptions	Sig.	Decision
Normality Test	0.183 > 0.05	Normal
Multicollinearity Test	1.046*	There is no multicollinearity
Heteroscedasticity test of self-esteem	0.904**	No heteroscedasticity occurs
Heteroscedasticity test of self-control	0.688**	No heteroscedasticity occurs

*VIF

** *Glejser*

Based on the tests detailed in Table 3, all analytical prerequisites have been satisfied. Moreover, Table elucidates the initial hypothesis testing employing simple regression methodologies. The t-value acquired is -4.121, with a significance level of 0.000, signifying a significant impact of self-esteem on smartphone addiction.

Table 4. Simple Regression Analysis on the Effect of Self-Esteem on Smartphone Addiction

Unstandardized coefficients		Standardized coefficients	T	Sig.
B	Std error	Beta		
36.204	5.900		5.136	.000
-1.043	.206	-.510	-4.121	.000

Table 5 presents the analysis on the impact of self-control on smartphone addiction. The obtained t-value is -7.262 with a significance value of 0.000, indicating a significant influence of self-control on smartphone addiction.

Table 5. Simple Regression Analysis of the Effect Self-Control on Smartphone Addiction

Unstandardized coefficients		Standardized coefficients	T	Sig.
B	Std error	Beta		
36.204	5.900		6.136	.000
-1.399	.193	-.605	-7.262	.000

OPEN ACCESS

Researchers also examined the combined effect of variables. In Table 6, the calculated F-value is 35.014 with a significance level of 0.000. This implies that the regression coefficient is significant. Hence, it can be inferred that both self-esteem and self-control have an impact on smartphone addiction.

Table 6. Multiple Regression Analysis Results of the Effect of Self-Esteem and Self-Control on Smartphone Addiction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4117.560	2	2058.780	35.014	.000[b]
	Residual	7467.517	127	58.799		
	Total	11585.077	129			

In general, smartphone addiction refers to the continuous use of a smartphone by individuals, often without consideration of the negative impacts it may entail (Simangunsong & Sawitri, 2018). The experience of smartphone addiction among students varies, exerting adverse effects on academic performance and emotional well-being (Tripambudi & Indrawati, 2020). The consequences of smartphone addiction on students can manifest in behaviors such as neglecting sleep, irregular eating patterns, lack of focus in class, and an overreliance on smartphones (Nursyifa, Widianti, & Herliani, 2020). Prolonged smartphone use can lead to reduced interaction with the immediate environment, hindering information exchange, rational and higher-level thinking, and impeding cognitive development (Jamun & Ntelok, 2022).

The study indicates that respondents exhibit moderate levels of smartphone addiction, with some students experiencing high levels of addiction, aligning with prior research findings (Firmansyah, Rante, & Hutasoit, 2019). Kumar et al. found that a significant proportion of respondents, primarily men, reported smartphone addiction, with a notable association with depression, anxiety, and other issues (Vanteemar, Uvais, Mohanty, & Kumar, 2019). The prevalence of smartphone addiction among the participants was 29.8%, with 30.% in males and 29.3% in females (Chen et al., 2017). Variances exist in the factors influencing students' susceptibility to smartphone addiction. Among male students, factors such as gaming app usage, anxiety, and poor sleep quality were linked to smartphone addiction. Conversely, significant factors for female students included the use of multimedia applications, engagement with social networking services, along with experiences of depression, anxiety, and poor sleep quality (Chen et al., 2017).

Smartphone addiction has been linked to poor mental health and reduced physical activity levels (Frydenlund, Guldager, Frederiksen, & Egebæk, 2023). Additionally, a considerable percentage of students face sleep disturbances due to smartphone addiction (Putra & Ulia, 2023). Regarding the impact of self-esteem on smartphone addiction, studies have highlighted its role as a significant factor influencing addiction levels. Research by Ismayanti suggests that self-esteem contributes to smartphone addiction (Ismayanti & Annisa, 2022). Higher self-esteem correlates with lower problematic smartphone use, while lower self-esteem elevates the risk of smartphone addiction (Mulyana & Afriani, 2018). High self-esteem has been identified as a protective factor against smartphone addiction in adolescents (Wang et al., 2017). Students self-disclosure on social media to enhance psychological well being through online service (Soputan, 2021).Conversely, low self-esteem has been associated with increased addictive behaviors and a higher likelihood of smartphone addiction (Hutabarat et al., 2021);(Lee et al., 2018). Self-esteem is linked to various behavioral outcomes related to smartphone addiction, including anxiety, depression, and self-regulation (Shahjehan, Shah, Qureshi, & Wajid, 2021). The influence of self-esteem on smartphone addiction pertains to how an individual's self-perception and self-confidence impact their propensity to develop addictive tendencies with smartphone usage. Elevated self-esteem typically serves as a protective shield against smartphone addiction, while diminished self-esteem commonly correlates with a heightened susceptibility to developing addictive behaviors linked to smartphone use (Saaduddin, Sujadi, Sasferi, & Jumiarti, 2023).

Likewise, the study underscores the influence of self-control on smartphone addiction, consistent with prior research findings. Nurningtyas et al. demonstrate that self-control negatively impacts teenagers' smartphone usage frequency (Nurningtyas & Ayriza, 2022). Irawan et al. suggest that self-control plays a dominant role in smartphone addiction (Irawan, Tania, & Pratami, 2020). Lack of self-control can lead to smartphone addiction and mental health issues (Andriani et al., 2019). Insufficient self-control in smartphone usage can disrupt daily life due to poor time management (Azizah, 2021). Studies have indicated that smartphone addiction can stem from a lack of self-control, emphasizing the pivotal role of self-control in understanding and overcoming addiction (Rumapea et al., 2023). Strong self-control functions as a protective mechanism against smartphone addiction, enabling individuals to resist excessive or problematic smartphone usage. Those with elevated levels of self-control are better positioned to regulate their smartphone usage patterns, establish boundaries, and prioritize alternative activities over prolonged screen time,

thereby diminishing the probability of developing addictive behaviors linked to smartphone use (Sujadi & Meditamar, 2020). Conversely, individuals with lower levels of self-control may encounter challenges in moderating their smartphone usage, heightening the likelihood of developing addictive behaviors and reliance on their devices. Fundamentally, self-control plays a pivotal role in determining an individual's capacity to cultivate a healthy rapport with their smartphone and mitigate the risk of smartphone addiction (Sujadi, Yusuf, & Marjohan, 2016).

To address this issue, various intervention programs have been developed to help university students manage their smartphone use. Peer relationship enhancement programs can be implemented to prevent smartphone addiction among adolescents. These programs encourage adolescents to develop social skills and build positive relationships with peers. Through more meaningful, direct interactions and social support from peer groups, adolescents can cultivate self-confidence and emotional satisfaction, which may reduce their reliance on smartphones as a primary source of entertainment or social support (Jo & Bang, 2022). Additionally, university counselors can implement mindfulness and CBT interventions, offering a broader intervention model for the prevention and treatment of smartphone addiction in university settings, with long-term benefits for enhancing students' mental well-being and behavioral health (Lan et al., 2018).

There are several limitations in this study. First, this study only examined the influence of self-esteem and self-control on smartphone addiction. Surely a more complex structural model can be developed, such as adding several variables that are predicted to have an influence on smartphone addiction. Second, the respondents in this study are still very limited to 130 students. It is crucial to broaden the sample size by incorporating a more diverse range of participants, including students from multiple universities in Indonesia, to enhance the generalizability of the findings and the representation of the broader population

CONCLUSION

Summary

This study examines the growing concern of smartphone addiction among university students, which affects their academic focus, mental well-being, and social interactions. Contrary to initial expectations, the findings indicate that respondents exhibit low levels of smartphone addiction alongside high levels of self-esteem and self-control. Hypothesis testing reveals a partial effect of self-esteem and self-control on smartphone addiction, with further analysis confirming their combined impact.

Suggestions

Given the potential negative consequences of smartphone addiction, proactive measures are recommended. Collaborating with counselors, students can devise strategies for time management, impulse control, and heightened awareness regarding smartphone usage. Moreover, fostering interpersonal skills, stress management techniques, and problem-solving abilities can aid in reducing smartphone dependency. Furthermore, guidance and counseling services that focus on enhancing self-esteem and self-control are essential in this effort. Students with healthy self-esteem and strong self-control are generally better equipped to regulate their behavior patterns, including technology use. By adopting an approach centered on strengthening these two aspects, counseling services can support students in reducing excessive smartphone use, thus promoting their overall well-being and academic performance.

BIBLIOGRAPHY

Aljomaa, S. S., Mohammad, M. F., Albursan, I. S., Bakhiet, S. F., & Abduljabbar, A. S. (2016). Smartphone addiction among university students in the light of some variables. *Computers in Human Behavior*, *61*, 155–164. doi: 10.1016/j.chb.2016.03.041

Andriani, W. S., Sriati, A., & Yamin, A. (2019). Gambaran Kontrol Diri Penggunaan Smartphone Pada Siswa Sekolah Menengah Atas Dan Sederajat Di Kecamatan Jatinangor. *Jurnal Keperawatan Komprehensif (Comprehensive Nursing Journal)*, *5*(2), 101–117. doi: 10.33755/jkk.v5i2.143

Azizah, M. (2021). the Relationship Between Time Management, Self Regulation, and Smartphone Addiction. *Empati : Jurnal Bimbingan Dan Konseling*, *8*(2), 82–98. doi: 10.26877/empati.v8i2.8057

OPEN ACCESS

Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does High Self-Esteem Cause Better Performance, Interpersonal Success, Happiness, or Healthier Lifestyles? *Psychological Science in the Public Interest : A Journal of the American Psychological Society*, *4*(1), 1–44. doi: 10.1111/1529-1006.01431

Bragazzi, N. L., & Del Puente, G. (2014). A proposal for including nomophobia in the new DSM-V. *Psychology Research and Behavior Management*, *7*, 155–160. doi: 10.2147/PRBM.S41386

Cha, S. S., & Seo, B. K. (2018). Smartphone use and smartphone addiction in middle school students in Korea: Prevalence, social networking service, and game use. *Health Psychology Open*, *5*(1). doi: 10.1177/2055102918755046

Chen, B., Liu, F., Ding, S., Ying, X., Wang, L., & Wen, Y. (2017). Gender differences in factors associated with smartphone addiction: A cross-sectional study among medical college students. *BMC Psychiatry*, *17*(1), 1–9. doi: 10.1186/s12888-017-1503-z

Ding, Y., Wan, X., Lu, G., Huang, H., Liang, Y., Yu, J., & Chen, C. (2022). The associations between smartphone addiction and self-esteem, self-control, and social support among Chinese adolescents: A meta-analysis. *Frontiers in Psychology*, *13*, 1029323. doi: 10.3389/fpsyg.2022.1029323

Eduardo, T., Suzy, Y. D., & Hikmah, M. (2020). Hubungan kecanduan smartphone dengan kecenderungan perilaku phubbing pada remaja di SMAN 34 Jakarta Selatan. *Seminar Nasional Riset Kedokteran*, 321–330.

Firmansyah, M. F., Rante, S. D. T., & Hutasoit, R. M. (2019). Hubungan Kecanduan Penggunaan Smartphone Terhadap Kualitas Tidur Mahasiswa Fakultas Kedokteran Universitas Nusa Cendana Tahun 2019. *Cendana Medical Journal*, *18*(3), 535–543.

Frydenlund, G., Guldager, J. D., Frederiksen, K. O., & Egebæk, H. K. (2023). Do young people perceive their smartphone addiction as problematic? A study in Danish university college students. *Heliyon*, *9*(10), e20368. doi: 10.1016/j.heliyon.2023.e20368

Gligor, Șerban, & Mozoș, I. (2019). Indicators of smartphone addiction and stress score in university students. *Wiener Klinische Wochenschrift*, *131*(5–6), 120–125. doi: 10.1007/s00508-018-1373-5

Gustilawati, B., Utami, D., & Farich, A. (2020). The Level of Smartphone Addiction and Self Efficacy with Student Achievements in the Faculty of. *Medicine at Malahayati University*,*Jiksh*, *11*(1), 109–115. doi: 10.35816/jiskh.v10i2.230

Hutabarat, Y. S. ., Widyorini, E., & Rahayu, E. (2021). Jurnal Ilmiah PSIKOLOGI. *Jurnal Ilmiah*, *14*(1), 62–73.

Irawan, E., Tania, M., & Pratami, A. S. R. (2020). Hubungan Kontrol Diri Dengan Kecanduan Internet Pada Remaja di Sman 11 Bandung. *Jurnal Keperawatan BSI*, *8*(2), 215–233.

Ismayanti, R., & Annisa, D. F. (2022). Hubungan Self Esteem terhadap Kecanduan Smartphone Siswa Kelas VII di SMP Negeri 2 Cimahi. *Journal of Educational Psychology*, *1*(1), 659.

Jamun, Y. M., & Ntelok, Z. R. E. (2022). Dampak Penggunaan Smartphone di Kalangan Mahasiswa. *Edukatif : Jurnal Ilmu Pendidikan*, *4*(3), 3796–3803. doi: 10.31004/edukatif.v4i3.2832

Khasanah, D. N., & Winarti, Y. (2021). Literature Review: Hubungan Kontrol Diri dengan Kecanduan Smartphone pada Remaja. *Borneo Student Research*, *3*(1), 2021.

Kim, E., & Koh, E. (2018). Avoidant attachment and smartphone addiction in college students: The mediating effects of anxiety and self-esteem. *Computers in Human Behavior*, *84*, 264–271. doi: https://doi.org/10.1016/j.chb.2018.02.037

Kwon, M., Kim, D. J., Cho, H., & Yang, S. (2013). The smartphone addiction scale: Development and validation of a short version for adolescents. *PLoS ONE*, *8*(12), 1–7. doi: 10.1371/journal.pone.0083558

Lee, J., Sung, M. J., Song, S. H., Lee, Y. M., Lee, J. J., Cho, S. M., … Shin, Y. M. (2018). Psychological Factors Associated With Smartphone Addiction in South Korean Adolescents. *Journal of Early Adolescence*, *38*(3), 288–302. doi: 10.1177/0272431616670751

Lindner, C., Nagy, G., & Retelsdorf, J. (2015). The dimensionality of the Brief Self-Control Scale-An evaluation of unidimensional and multidimensional applications. In *Personality and Individual Differences* (Vol. 86). doi: 10.1016/j.paid.2015.07.006

Mulyana, S., & Afriani, A. (2018). Hubungan Antara Self-Esteem dengan Smartphone Addiction pada Remaja SMA di Kota Banda Aceh. *Journal Psikogenesis*, *5*(2), 102–114. doi: 10.24854/jps.v5i2.499

Mulyati, T., & Nrh, F. (2018). Kecanduan Smartphone Ditinjau Dari Kontrol Diri Dan Jenis Kelamin Pada Siswa Sma Mardisiswa Semarang. *Jurnal Empati*, *7*(4), 152–161.

Muna, R. F., & Astuti, T. P. (2014). Hubungan Antara Kontrol Diri Dengan Kecenderungan Kecanduan Media Sosial Pada Remaja Akhir. *Jurnal EMPATI*, *3*(4), 481–491. doi: 10.14710/empati.2014.7610

Nasirudin, N., Sunardi, S., & Riadi, I. (2020). Analisis Forensik Smartphone Android Menggunakan Metode NIST dan Tool MOBILedit Forensic Express. *Jurnal Informatika Universitas Pamulang*, *5*(1), 89. doi: 10.32493/informatika.v5i1.4578

Nurningtyas, F., & Ayriza, Y. (2022). Pengaruh Kontrol Diri Terhadap Intensitas Penggunaan Smartphone Pada Remaja. *Acta Psychologia*, *3*(1), 14–20. doi: 10.21831/ap.v3i1.40040

Nursyifa, F. I., Widianti, E., & Herliani, Y. K. (2020). Gangguan Tidur Mahasiswa Fakultas Keperawatan Universitas Padjajaran Yang Mengalami Kecanduan Game Online. *Jurnal Keperawatan*, *VIII*(1), 32–41.

Oktaviani, M. A. (2019). Hubungan Penerimaan Diri Dengan Harga Diri Pada Remaja Pengguna Instagram. *Psikoborneo: Jurnal Ilmiah Psikologi*, *7*(4), 549–556. doi: 10.30872/psikoborneo.v7i4.4832

Panova, T., & Carbonell, X. (2018). Is smartphone addiction really an addiction? *Journal of Behavioral Addictions*, *7*(2), 252–259. doi: 10.1556/2006.7.2018.49

Philibin, S. D., & Crabbe, J. C. (2015). Addiction. In R. N. Rosenberg & J. M. B. T.-R. M. and G. B. of N. and P. D. (Fifth E. Pascual (Eds.), *Rosenberg's Molecular and Genetic Basis of Neurological and Psychiatric Disease (Fifth Edition)* (pp. 1321–1329). Boston: Academic Press. doi: https://doi.org/10.1016/B978-0-12-410529-4.00108-X

Putra, Y. A., & Ulia, A. (2023). Hubungan Kecanduan Penggunaan Smartphone dengan Kualitas Tidur Mahasiswa D-3 Keperawatan di Akper Bina Insani Sakti. *MAHESA : Malahayati Health Student Journal*, *3*(7), 1889–1898. doi: 10.33024/mahesa.v3i7.10358

Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books. doi: 10.2307/3340091

Rumapea, A., Sinurat, S., & Barus, M. (2023). Hubungan Self Control dengan Adiksi Smartphone pada Mahasiswa. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, *13*(3), 879–886. doi: 10.32583/pskm.v13i3.1009

Saaduddin, S., Sujadi, E., Sasferi, N., & Jumiarti, D. (2023). The Effect of Self-Esteem on Resilience among Victims of Bullying: Does Gender Play a Role? *Educational Guidance and Counseling Development Journal*, *6*(1), 1. doi: 10.24014/egcdj.v6i1.22025

Sfeir, E., Hallit, S., Akel, M., Salameh, P., & Obeid, S. (2021). Smartphone addiction and personality traits among Lebanese adults: the mediating role of self-esteem. *Psychology, Health & Medicine*, 1–11. doi: 10.1080/13548506.2021.1995886

Shahjehan, A., Shah, S. I., Qureshi, J. A., & Wajid, A. (2021). a Meta-Analysis of Smartphone Addiction and Behavioral Outcomes. *International Journal of Management Studies*, *28*(2), 103–125. doi: 10.32890/ijms2021.28.2.5

Simangunsong, S., & Sawitri, D. R. (2018). Hubungan Stres Dan Kecanduan Smartphone Pada Siswa Kelas X Sma Negeri 5 Surakarta. *Jurnal EMPATI*, *6*(4), 52–66. doi: 10.14710/empati.2017.19988

Soni, R., Upadhyay, R., & Jain, M. (2017). Prevalence of smart phone addiction, sleep quality and associated behaviour problems in adolescents. *International Journal of Research in Medical Sciences*, *5*(2), 515. doi: 10.18203/2320-6012.ijrms20170142

Soputan, S. D. M. (2021). Keterbukaan Diri Sebagai Prediktor Kesejahteraan Psikologis Siswa. *Jurnal Bikotetik (Bimbingan Dan Konseling: Teori Dan Praktik)*, *5*(1), 33–42. doi: 10.26740/bikotetik.v5n1.p33-42

Srisayekti, W., & Setiady, D. A. (2015). Harga-diri (Self-esteem) Terancam dan Perilaku Menghindar. *Jurnal Psikologi*, *42*(2), 141. doi: 10.22146/jpsi.7169

Sujadi, E., & Ahmad, B. (2023). Academic Procrastination in College Students: Do Academic Burnout and Smartphone Addiction Matter? *Psychocentrum Review*, *5*(3), 161–174. doi: 10.26539/pcr.531511

Sujadi, E., & Meditamar, M. O. (2020). Perbedaan Locus of Control ditinjau dari Perspektif Agama pada Siswa SMA. *Analitika: Jurnal Magister Psikologi UMA*, *12*(1), 44–54. doi: http://dx.doi.org/analitika.v11i1.3506

Sujadi, E., Yusuf, A. M., & Marjohan, M. (2016). Hubungan antara Locus Of Control dan Efektivitas Komunikasi antar Pribadi dengan Problem Focused Coping. *Konselor*, *5*(1), 25–31. doi: https://doi.org/10.24036/02016516490-0-00

Sulistyarini, W., & Fatonah, S. (2022). Pengaruh Pemahaman Literasi Digital Dan Pemanfaatan Media Pembelajaran Terhadap Kompetensi Pedagogik Guru Era Digital Learning. *Journal of Educational Learning and Innovation (ELIa)*, *2*(1), 42–72. doi: 10.46229/elia.v2i1.383

Sunday, O. J., Adesope, O. O., & Maarhuis, P. L. (2021). The effects of smartphone addiction on learning: A meta-analysis. *Computers in Human Behavior Reports*, *4*, 100114. doi: https://doi.org/10.1016/j.chbr.2021.100114

Ting, C. H., & Chen, Y. Y. (2020). Smartphone addiction. *Adolescent Addiction: Epidemiology, Assessment, and Treatment*, 215–240. doi: 10.1016/B978-0-12-818626-8.00008-6

Tripambudi, B., & Indrawati, E. S. (2020). Hubungan Antara Kontrol Diri Dengan Perilaku Konsumtif Pembelian Gadget Pada Mahasiswa Teknik Industri Universitas Diponegoro. *Jurnal EMPATI*, *7*(2), 597–603. doi: 10.14710/empati.2018.21683

Vanteemar, S. S. S., Uvais, U., Mohanty, S., & Kumar, S. (2019). Indian nursing students' attitudes toward mental illness and persons with mental illness. *Industrial Psychiatry Journal*, 195–201. doi: 10.4103/ipj.ipj

Wang, P., Zhao, M., Wang, X., Xie, X., Wang, Y., & Lei, L. (2017). Peer relationship and adolescent smartphone addiction: The mediating role of self-esteem and the moderating role of the need to belong. *Journal of Behavioral Addictions*, *6*(4), 708–717. doi: 10.1556/2006.6.2017.079

Wolff, J. (2021). How Is Technology Changing the World, and How Should the World Change Technology? *Global Perspectives*, *2*(1), 1–5. doi: 10.1525/gp.2021.27353

Yang, K.-M. (2016). The Effect of Self-Esteem and Depression on Smartphone Addiction among University Students. *Journal of the Korea Convergence Society*, *7*(1), 113–123. doi: 10.15207/jkcs.2016.7.1.113

Zhang, M. X., & Wu, A. M. S. (2020). Effects of smartphone addiction on sleep quality among Chinese university students: The mediating role of self-regulation and bedtime procrastination. *Addictive Behaviors*, *111*, 106552. doi: 10.1016/j.addbeh.2020.106552