



RELATIONSHIP BETWEEN SOCIAL MEDIA ADDICTION AND ANXIETY AMONG JUNIOR HIGH SCHOOL STUDENTS

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ABSTRACT

Mental health has many components that can be influenced by various factors. One such factor that can disrupt mental health is anxiety. It is estimated that 4% of the world's population currently suffers from anxiety disorders. Therefore, this study is important to pay attention to the use of social media among students, as it may lead to anxiety and affect the learning process. This study aims to investigate the relationship between social media addiction and anxiety among junior high school students in selected sub-urban area of Samarinda, Indonesia. Method: This study employs a quantitative approach specifically a cross-sectional study. The sample for this study consists of 685 junior high school students. The sampling technique used was cluster random sampling. Data collection was conducted using the BSMAS and DASS-42 questionnaires. The validity of questionnaires using item-total correlation ranged between 0.44 to 0.83 for the BSMAS questionnaire and 0.532 to 0.86 for the DASS-42 questionnaire. Meanwhile, the reliability value with Cronbach's Alpha for each questionnaire was 0.823 for the BSMAS questionnaire and 0.804 for the DASS-42 questionnaire. Based on the Spearman Rank statistical test results, there was a significant relationship between social media addiction and anxiety among junior high school students with a p-value of 0.001 (< 0.05). The correlation coefficient was 0.499, indicating a positive relationship with moderate strength. Schools need to conduct specific educational programs using interesting media to raise awareness about the dangers of excessive social media use, which may lead to anxiety and stress.

Keywords: anxiety; junior high school students; negative impacts of social media; social media addiction

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INTRODUCTION

According to the World Health Organization (WHO), health is a state of complete physical, mental, and social well-being and not merely the absence of disease. Mental health is a condition of emotional, psychological, and social well-being, characterized by satisfying interpersonal relationships, effective coping behaviors, a positive self-concept and stable emotions. Mental health has many components that can be influenced by various factors, one of which is anxiety (WHO, 2023). Essentially, anxiety is a natural experience for every human being. Anxiety arises due to perceived threats or dangers that are not tangible and may occur at any time to the individual as well as societal rejection which can cause anxiety in new environments (Fortuna, Saputri, & Wowor, 2022). Anxiety is a disorder characterized by excessive and often unrealistic feelings of worry and fear about various events in daily life (Liesay, Mainase, & Yakobus, 2023).

Adolescence is a transitional period from childhood to adulthood and constitutes a significant portion of the global population. According to WHO, more than 3 billion people out of a total of 7.2 billion worldwide are under the age of 25, accounting for 42% of the global population. Approximately 1.2 billion of these young people are adolescents aged between 10 and 24 years old, comprising 18% of the world's population (WHO, 2021). According to data from the Indonesian Central Statistics Agency, it is estimated that there are more than 64.19 million adolescents across Indonesia, which is nearly a quarter (24.01%) of the total population of 272.24 million. Meanwhile, according to Central Statistics Agency East Kalimantan Province, the population of East Kalimantan has increased over the past decade from 3.05 million in 2010 to 3.77 million in 2020 (BPS, 2020). The ease of using the internet or social media provides opportunities for individuals, especially adolescents, to seek relevant and accurate information, which can evoke positive feelings and eventually lead to addiction (Nurina Hakim & Alyu Raj, 2017). Asia has the highest prevalence of internet addiction among adolescents, ranging from 8.1% to 26.5%, compared to 1% to 11% in Europe and 0.3% to 8.1% in the United States. Cultural differences, where Asian adolescents find it difficult to express themselves in the real world and consequently begin expressing themselves on social media, are among the primary factors contributing to this trend (Tereshchenko & Kasparov, 2019). According to a report from We Are Social published on dataindonesia.id (accessed March 3, 2024, at 23:30), Indonesia had 167 million active social media users as of January 2023.

It is estimated that currently, 4% of the world's population suffers from anxiety disorders. In 2019, 301 million people worldwide experienced anxiety disorders, making anxiety the most common mental health disorder (GBD, 2019). Anxiety is not only experienced by adults but can also affect children and adolescents who are still in school. For students, anxiety is one of the emotional disturbances that can disrupt learning in school (Mukholil, 2018). According to the Indonesian Association of Psychiatrists, who conducted examinations on 14,988 individuals from 2020 to 2022, there has been an increasing trend in psychological issues: 70.7% had psychological problems in 2020, 80.4% in 2021, and 82.5% in 2022. For anxiety issues specifically, the percentages reported by the Indonesian Association of Psychiatrists are as follows: 68.8% in 2020, 76.1% in 2021, and 75.8% in 2022 (Evan Wijaya, Asmin, & B.E. Saptanno, 2023).

In East Kalimantan, the prevalence of emotional mental disorders was 5.8% in 2013, which increased to 9.8% in 2018. Meanwhile, in Samarinda City the prevalence of emotional disorders reached 9.58% based on the results of the Self Reporting Questionnaire-20 (Riskasdas, 2018). According to data from the Samarinda City Health Office in 2021, regular health examinations for junior high school students did not find any cases of emotional disorders. However, in 2022, health screenings using the Strengths and Difficulties Questionnaire (SDQ) revealed 24 cases of emotional problems, 25 cases of behavioral problems, 10 cases of hyperactivity, 27 cases of peer relationship problems, and 4 cases of prosocial problems, totaling 90 cases of emotional disorders among junior high school students in the Palaran District. Therefore, based on the background above, it is crucial to conduct research on social media addiction and anxiety among junior high school students in the Palaran District of Samarinda City. The objective of this study was to analyze the relationship between social media addiction and anxiety among junior high school students.

METHOD

The type of research used is quantitative research with an analytical design specifically aiming to understand how and why a phenomenon occurs using statistical methods through a

cross-sectional study approach. Based on the Lemeshow formula, the minimum required sample size was 331 students. However, considering the design effect, this sample size was multiplied with 2 becomes 662 student. The sample was selected using cluster random Sampling technique, with a total of 685 students as research respondents at junior high school. The study was conducted during the period of May-June 2024, covering the stages of data collection, processing, and analysis. The research instrument used to collect data in this study was questionnaires containing questions provided to the respondents. The instruments used include the DASS 42 (Depression Anxiety Stress Scales) questionnaire and the BSMAS (Bergen Social Media Addiction Scale).

The Depression Anxiety Stress Scales (DASS 42), developed by Lovibond and Lovibond (1995), have been modified and adapted to describe the condition of the research subjects. DASS questionnaire consists of 42 statements, with 14 statements each measuring stress, anxiety, and depression. The DASS questionnaire utilizes an ordinal scale with four scores for each statement: 0, 1, 2, and 3. After obtaining the total score for the variable, it will be categorized into several categories: normal, mild, moderate, severe, and extremely severe. This study utilizes the DASS 42 questionnaire, specifically focusing on statements related to anxiety, namely numbers 2, 4, 7, 9, 15, 19, 20, 23, 25, 28, 30, 36, 40, and 41, as the aim is to measure the level of anxiety among students. The Bergen Social Media Addiction Scale (BSMAS) Indonesian version has been modified by Maheswari and Dwiutami (2013). The BSMAS questionnaire consists of 18 items covering 6 indicators: Salience, Tolerance, Mood Modification, Withdrawal, Relapse, and Conflict. Each question is scored from one to five, where 1 = very rarely, 2 = rarely, 3 = sometimes, 4 = often, and 5 = very often. After scoring all items, the results are categorized as follows: if the score is ≥ 80 , the respondent is classified as addicted; scores between 50-79 classify the respondent as being on alert; and scores < 50 classify the respondent as normal.

However, to ensure the consistency of the research instruments, namely the DASS 42 and BSMAS questionnaires, the researchers conducted a reliability test with respondents who had similar characteristics to the research sample. Based on the reliability test results using Cronbach's alpha at one of the schools located in the Palaran District as well involving 66 respondents, the reliability coefficient for the DASS 42 questionnaire was 0.804 and for the BSMAS questionnaire was 0.823. According to Sugiyono (2019), if Cronbach's alpha $\alpha > 0.60$, the questions or statements in the questionnaire can be considered reliable. Therefore, it can be concluded that the DASS 42 and BSMAS questionnaires are reliable for use in this research. To conduct data analysis, the research utilized the Spearman's Rank Correlation test, which was a non-parametric method of data analysis (Priyastama, 2017). The Rank Spearman correlation was chosen because both variables are measured in ordinal form (ranks), as indicated in the questionnaire where ranks start from the smallest value. In Spearman's Rank correlation test, the relationship between two variables is considered significant if the p-value is < 0.05 . The coefficient (r) indicates the direction and strength of the correlation between the two variables. A positive sign (+) indicates a positive correlation, meaning that as one variable increases, the other variable tends to increase as well. Conversely, a negative sign (-) indicates a negative correlation, where as one variable increases, the other tends to decrease. To assess the strength of the relationship between variables, interpretation is based on the value of the correlation coefficient generated from the SPSS output.

RESULTS

Table 1.
Distribution of Respondents Based on Age, Gender, Grade, Anxiety Status, and Level of Social Media Addiction

Age	f	%
11	1	0.15
12	53	7.7
13	337	49.2
14	252	36.8
15	35	5.1
16	6	0.88
17	1	0.15
Gender		
Male	366	53.4
Female	319	46.6
Class		
Class VII	385	56.2
Class VIII	300	43
Anxiety		
Normal	114	16.6
Mild	70	10.2
Moderate	239	34.9
Severe	156	22.8
Very Severe	106	15.5
Social Media Addiction		
Addict	71	10.4
Alert	70	10.2
Normal	544	39.4

Based on Table 1, the majority of respondents were in the age range of 12 to 15 years, with the highest number at 13 years old, totaling 337 respondents (49.2%). Based on Table 1, the lowest percentage was found at the ages of 11 and 17 years, each with only 1 respondent (1%). The average age of students at junior high school was 13.42 years. It shows that the male group constitutes the majority with 366 respondents (53.4%). Additionally, it was noted that there were more respondents in Grade 7 with a total of 385 respondents (56.2%) compared to those in Grade 8. From this table it can also be seen that 106 respondents (15.5%) had very severe anxiety, while 114 respondents (16.6%) did not experience anxiety. The largest number of respondents were those who experienced moderate anxiety, namely 239 respondents (34.9%). Furthermore, regarding social media addiction, 71 respondents (10.4%) were in the addicted category, while the majority of 544 respondents (39.4%) were in the normal category in terms of social media addiction.

Table 2.
Analysis of Social Media Addiction Based on Respondents' Gender

		Social Media Addiction			Total
		Addict	Alert	Normal	
Gender	Male	32 4.7%	40 5.8%	294 42.9%	366 100.0%
	Female	39 5.7%	30 4.4%	250 36.5%	319 100.0%

Table 2 shows that females were more likely to experience social media addiction, with a total of 39 respondents (5.7%). Meanwhile, the majority of males were categorized as normal, totaling 294 respondents (42.9%).

Table 3.
Analysis of Social Media Addiction Based on Respondents' Age

Age	Social Media Addiction			Total
	Addict	Alert	Normal	
11	0 0.0%	0 0.0%	1 0,1%	1 0.1%
12	7 1.0%	6 0.9%	40 5.8%	53 7.7%
13	39 5.7%	35 5.1%	263 38.4%	337 49.2%
14	23 3.4%	23 3.4%	206 30.1%	252 36.8%
15	1 0.1%	5 0.7%	29 4.2%	35 5.1%
16	1 0.1%	1 0.1%	4 0.6%	6 0.9%
17	0 0.0%	0 0.0%	1 0.1%	1 0.1%

Based on Table 3, respondents aged 13 years old experienced the highest level of social media addiction, totaling 39 respondents (5.7%). Meanwhile, respondents aged 11 and 17 years old did not experience social media addiction according to the table.

Table 4.
Analysis of Anxiety Based on Respondents' Gender

Gender	Anxiety					Total
	Normal	Mild	Moderate	Severe	Very Severe	
Male	57 15.6%	40 10.9%	131 35.8%	87 23.8%	51 13.9%	366 100.0%
Female	57 17.9%	30 9.4%	108 33.9%	69 21.6%	55 17.2%	319 100.0%

Table 4 shows that the majority of students with severe anxiety were females, with 55 respondents.. Meanwhile, the majority of students with mild anxiety were male, as many as 51 students.

Table 5.
Analysis of Anxiety Based on Respondents' Age

Age	Anxiety					Total
	Normal	Mild	Moderate	Severe	Very Severe	
11	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1 100.0%
12	8 15.1%	6 11.3%	17 32.1%	14 26.4%	8 15.1%	53 100.0%
13	51 15.1%	35 10.4%	121 35.9%	78 23.1%	52 15.4%	337 100.0%
14	48 19.0%	23 9.1%	88 34.9%	52 20.6%	41 16.3%	252 100.0%
15	5 14.3%	5 14.3%	11 31.4%	9 25.7%	5 14.3%	35 100.0%
16	2 33.3%	1 16.7%	2 33.3%	1 16.7%	0 0.0%	6 100.0%
17	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1 100.0%

Based on Table 5, students aged 13 years old were the highest number who experienced moderate, severe, and very severe anxiety, with 121, 78, and 52 students, respectively.

Table 6.
Bivariate Analysis: Relationship Between Social Media Addiction and Anxiety in Junior High School Students

		Anxiety					Total	P -value	Correlation Coefficient
		Normal	Mild	Moderate	Severe	Very Severe			
Social Media Addiction	Addict	58 (8,5%)	0 (0%)	1 (0,1%)	0 (0,0%)	12 (1,8%)	71 (10,4%)	0.001	.499
	Alert	0 (0,0%)	70 (10,2%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	70 (10,2%)		
	Normal	56 (8,2%)	0 (0,0%)	238 (34,7%)	156 (22,8%)	93 (13,7%)	544 (79,4%)		

Based on Table 6, the Spearman's Rank correlation test revealed a significance value (2-tailed) of 0.001 for the relationship between Social Media Addiction and Anxiety among junior high school students. Since the significance value (2-tailed) of 0.001 (< 0.05), it could be interpreted that there was significant relationship between social media addiction and students' anxiety. Furthermore, the correlation coefficient of 0.499 indicated a moderate strength of relationship between social media addiction and anxiety among junior high school students. The positive value of 0.499 indicated a positive direction, meaning that as social media addiction increased, anxiety in junior high school students also increased.

DISCUSSION

Social media addiction, or social media dependency, is considered as the inability of an individual to control themselves, leading to problems that can result in addiction to this particular aspect. Therefore, it can be concluded that social media addiction occurs when an individual excessively engages in social media use, leading to continuous usage without considering the time spent on accessing social media platforms (Putri, Rohaeti, Sekar, & Ningrum, 2023). Everyone has experienced anxiety at some point, and the way they react to these feelings varies. Some people can control it, but often these feelings can overwhelm them. People will try to reduce or eliminate the impending dangers by using various defense mechanisms to cope with anxiety (Andri & Purnamawati, 2007). Adolescence is a transitional period from childhood to adulthood. During this phase, individuals experience identity formation accompanied by various changes in personality, character, and mood fluctuations (Sejati & Ghozali, 2021). Based on the study conducted at junior high school using the BSMAS questionnaire for social media addiction, it was found that out of 685 respondents, 71 respondents (10.4%) were categorized as addicted to social media. Among those addicted, female students constituted the majority with 39 respondents (5.7%).

This was consistent with previous study conducted by Aisyah Nur Izzati (2017), which found that the majority of social media addiction cases are experienced by females. It also aligns with Vermeran's (2015) statement that women tend to access social media more frequently than men because they are more expressive and enjoy sharing and expressing personal information on social media platforms (Izzati, 2017). Other studies, such as the one conducted by Sella Yunfahnur et al. (2022), also support this finding, where 128 respondents (88.89%) experiencing social media addiction were female, while only 16 respondents (11.11%) were male. This is attributed to women's tendency to enjoy attention and thus be more active on social media platforms (Yunfahnur, R, & Martina, 2022). According to the findings of this

study, among junior high school students at junior high school, those aged 13 years old predominantly experienced social media addiction, comprising 39 respondents (5.7%) out of the total 71 respondents with social media addiction. The distribution among other age groups is as follows: 7 respondents aged 12 years old, 23 respondents aged 14 years old, 1 respondent aged 15 years old, and 1 respondent aged 16 years old.

The findings of this study align with those of Ayub, M. and Sulaeman, S.F. (2022), indicating that individuals aged 13 years and older are capable of using social media and are susceptible to social media addiction (Muhamad Ayub & Sofia Farzanah Sulaeman, 2022). This phenomenon illustrates that social media has become inseparable from the lives of most adolescents. The increasing sophistication of gadgets and the affordability of internet access create a constant need to check notifications and engage in virtual social lives on social media platforms. This makes it difficult for teenagers to break their dependence on social media. The ease and comfort provided by social media sites can lull individuals into excessive use, leading to addiction (Majorsy, Kinasih, Andriani, & Lisa, 2013). Based on the research findings, it was evident that anxiety is more prevalent among female students at junior high school, with 55 respondents (17.2%) categorized as experiencing severe anxiety. On the other hand, the normal anxiety category is more common among male students, comprising 51 respondents (13.9%). This was consistent with research conducted by Triyana Harlia Putri et al. (2024) on the characteristics of adolescents experiencing anxiety during puberty among junior high school students in Pontianak City. They found that out of 174 female students, only 38 did not experience anxiety. This highlights how adolescent experiences significantly influence anxiety levels, with adolescent girls who frequently experience anxiety tending to anticipate excessive worry (Siregar, 2021).

This study was also in line with previous study conducted by S.J. Zhou et al. (2020), which indicated that the proportion of male students with symptoms of depression and anxiety is lower compared to female students (41.7% versus 45.5% for depression; 36.2% versus 38.4% for anxiety) (Zhou et al., 2020). Based on the research findings, anxiety categorized as very severe was most prevalent among 13-year-old students, totaling 52 respondents (15.4%). Meanwhile, the normal anxiety category was most common among 14-year-olds, with 48 respondents (19.0%). According to the researcher, this may be because 13-year-old respondents are typically in the seventh grade, having recently transitioned from primary school to junior high school. This transition may involve immature thinking abilities, as education level significantly affects cognitive abilities. Higher education levels generally enable individuals to think more rationally and effectively process and filter new information (Stuart, G.W. and Laraia, 2015). Excessive and unhealthy use of social media can increase the risk of several factors, including anxiety. These negative impacts are often attributed to uncontrolled social media usage or excessive online interactions. Therefore, it is important to understand the relationship between social media addiction and anxiety among adolescents (Afrilia, 2020).

Based on the results of the bivariate analysis using Rank Spearman, the decision-making process showed a p-value of 0.001, which is less than the significance level of $\alpha < 0.05$. Therefore, with a p-value of $0.001 < 0.05$, the null hypothesis (H_0) is rejected, indicating that there is a significant relationship between social media addiction and anxiety among junior high school students in Palaran District, Samarinda City. The content circulating on social media can indeed induce anxiety. For instance, some students may feel anxious when they come across a WhatsApp status from a friend that seems to indirectly criticize them. This can lead the student to perceive themselves as the target of such remarks. This aligns with the

viewpoint of Rudatiningtyas (2018), who suggests that spending excessive time on social media can unknowingly expose adolescents to negative emotional experiences. Thus, social media addiction can serve as a trigger for health issues such as anxiety disorders. The results of the analysis were consistent with research conducted by Azka (2018), indicating a significant correlation between anxiety and social media addiction. Individuals experiencing severe anxiety are more likely to exhibit signs of social media addiction (Azka, Firdaus, & Kurniadewi, 2018). Similar with these findings, Parlak and Baskale (2023) in their study concluded that anxiety and time spent on social media contribute to social media addiction among students in Turkiye.

The findings of this study were also consistent with research conducted by Prayoga and Akmal (2014), which indicates a correlation between anxiety and social media addiction. Individuals may excessively use social media to cope with personal obstacles, highlighting the negative impacts of social media on interpersonal functioning (Morin & Rahardjo, 2021). Fredj et al. (2024) identified anxiety as one of risk factor for the co-occurrence of Problematic Facebook and Video Game Use among adolescents. The other previous study revealed that there was significant associations between higher levels of social media addiction and increased depression and anxiety, as well as lower academic performance among Romanian nursing students (David et al., 2024). Meanwhile, Chowdhury, Rad, & Rahman (2024) in their study identified social media addiction and poor academic performance as major contributors to high levels of anxiety, depression, and insomnia among Bangladeshi students. In this regard, it is crucial for schools and parents to pay attention and actively monitor their children's use of social media. Landa-Blanco, García, Landa-Blanco, Cortés-Ramos, & Paz-Maldonado (2024) in their study concluded that social media platforms can enhance social capital and psychological well-being but may also lead to addictive behaviors that interfere with daily life and responsibilities.

Educating students about the risks of social media addiction and its impact on mental health, including potential anxiety, is essential. Organizing educational activities that promote mental health awareness and encourage responsible technology use is also highly beneficial. This proactive approach can help mitigate the negative effects of excessive social media use and support students in developing healthier online behaviors. In Hanoi, Vietnam, Dien et al. (2023) suggested the importance of developing targeted interventions and educational programs to support adolescents' mental well-being in the digital age. The author acknowledges the limitations and shortcomings of this research, such as the methodological challenge posed by the non-conductive behavior of junior high school students when answering questionnaires. However, to address this limitation, the researcher consistently reassured students to refocus on completing the questionnaire sheets. Furthermore, this study is also constrained by the large sample size, which required a considerable amount of time to complete.

CONCLUSION

Based on the research findings, there was a significant relationship between social media addiction and anxiety in students, indicated by a p-value of 0.001. This relationship has a moderate strength with a correlation coefficient of 0.499 and is positively correlated, meaning that as social media addiction increases, so does anxiety among students. Based on the research findings, which indicate da relationship between social media addiction and anxiety among junior high school students in Palaran District, Samarinda City, it is necessary to conduct specific education using appropriate and interesting media about the dangers of excessive social media use, which may lead to anxiety and stress.

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