



The Effect of Social Media Use Intensity on Anxiety, Depression and Stress Level During Covid-19 Pandemic Outbreak

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Abstract. Background: The Covid-19 pandemic has had a significant impact on living things. Discussions about the issue of the coronavirus in Indonesia on social media have changed the behavior of social media users. Excessive use of social media will have the potential to cause mental health problems such as depression, anxiety, stress, risk of suicide, and impaired self-concept. **Objective:** This study aimed to determine the effect of social media on anxiety, depression, and stress during the pandemic. **Method:** This research used quantitative analytic analysis with a cross-sectional approach. A total of 200 people were selected by using random sampling. The research instrument used the intensity scale of social media use (SIPMS) and the Depression, Anxiety, Stress Scale (DASS 21) questionnaire. **Result:** The results showed that most respondents had a high intensity of social media use, as many as 118 respondents (59%). **Conclusion:** in conclusion that there was a significant relationship between the intensity of social media use and the level of anxiety, depression, and stress in adolescents in Sirnagalih Village, as evidenced by the results of Kendall's tau $b = 0.000$ statistical test < 0.05 and $r_{anxiety}=0.263$, $r_{depression}=0.257$, and $r_{stress}=0.172$.

Keywords: anxiety, covid-19, depression, social media

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INTRODUCTION

Covid-19 is a pandemic that is taking the world by storm. According to the World Health Organization (WHO), a coronavirus is a group of viruses that can cause disease in animals or humans. Several coronaviruses are known to cause respiratory tract infections in humans ranging from coughs, colds to more serious ones such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) (1). Coronavirus is a new type found to cause the disease Covid-19 (2). This virus, including Indonesia, has infected nearly 200 countries in the world. As a result, everyone feels restless, fearful, and anxious. Anxiety is a feeling of worry or discomfort as if something will happen that is perceived as a threat (3-5).

The coronavirus pandemic has had a significant impact on living things. The government took several quick steps so that the coronavirus did not spread quickly, such as implementing work from home (WFH), Social Distancing, and others (5,6). Like other countries, Indonesia has also made a policy to dismiss all educational institutions from taking offline class activities but asked to apply learning technology online. This is intended as an effort to prevent the spread of Covid-19 (7). With new habits like this, social media becomes a new alternative to fill time during activities at home (8).

The rise of notifications on several social media related to Covid-19 makes us not aware of reading information related to the coronavirus that can create panic (9). Information or news is distributed individually or in groups that cannot be justified or are better known as a hoax. The term hoax is defined as information or communication containing things that are not certain or not facts that happened (10). Data on conversations about the coronavirus issue in Indonesia on online media (websites) and social media (Youtube and Facebook) are 37,600,765, proving that Indonesia's digital world is

high-speed and widespread. The Covid-19 pandemic has changed the behavior of social media users (11,12). The public began to monitor every development related to Covid-19 through various media, social networking media, television, and online. Notifications about the coronavirus have become a terrifying thing. The negative effect of using social media is mental health problems (13).

Excessive use of social media will have the potential to cause mental health problems such as depression, anxiety, stress, risk of suicide, and impaired self-concept. Other research conducted by (14) states that depression is the most likely thing to happen to those who use social media with high intensity. Previously, researchers conducted an initial survey of several teenagers. They said that they became irritable, difficult to sleep, anxious, depressed, and stressed during this pandemic due to online learning activities and social media notifications about Covid-19 issues and information (15).

This study aimed to determine the effect of social media on anxiety, depression, and stress during the pandemic. The benefits for researchers from this research are to increase creativity and increase the knowledge and skills of researchers regarding the influence of social media on anxiety and stress during the pandemic, expand the understanding of science, especially psychiatric nursing, and become a reference and input in developing further research. The results of this study for adolescents are expected to be input and learning in the use of social media. In this part, you have to explain why this study (GAP) should be conducted. Explain to others why your work is meaningful by being able to recount the bigger picture

OBJECTIVE

The study aimed to determine the effect of social media on anxiety, depression, and stress during the pandemic and broaden understanding of science, especially psychiatric nursing.

METHOD

Design

The method used in this study was a quantitative analytic study, a cross-sectional design. The design of this study focused on the measurement time of the independent variable data in the form of the intensity of social media use and the dependent variable in the form of anxiety, depression, and stress only once at a time. This study examined how the intensity of social media use affects anxiety, depression, and stress during the Covid-19 pandemic.

Sample and sampling technique

The population used in this study is teenagers in the Kampung Sirnagalih area, as many as 399 people. The samples were selected using simple random sampling and obtained 200 people. Inclusion criteria include writing and reading, adolescents aged 16-18 years, who use mobile phones based on Android, IOS, Windows Phone, have social media accounts and are actively using them. At the same time, the exclusion criteria in this study were teenagers who were new social media users (less than one month).

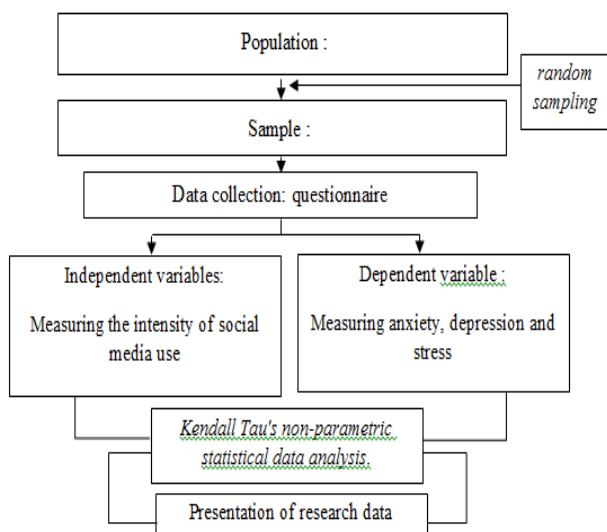


Diagram 1.
Research Framework

An instrument for data collection

In this study, the data was obtained directly from the research object by

distributing questionnaires to respondents. The first instrument used in this study was the social media use intensity scale (SIPMS) to measure the intensity of social media use variables consisting of aspects of content, features, duration, frequency, and type. The questionnaire uses the Guttman scale and has 25 questions in the original form. Then the previous researcher conducted a statistical test with Pearson's product-moment to get 23 valid items with counts 0.500-0.654. The reliability test was carried out after completing the validity test to find out the similarity of the results if it was carried out on different people and at other times with (Cronbach's Alpha 0.625) from (Cronbach's Alpha > 0.60) so that the questionnaire was reliable as a data collection and research tool(16)

Another questionnaire is the Depression, Anxiety, Stress Scale (DASS 21) questionnaire developed by Lovibond (1995). This instrument consists of 21 question items covering three sub-variables, including physical, emotional, and behavioral. The levels on this instrument are classified into five levels, namely normal, mild, moderate, severe, and very heavy. The Depression, Anxiety, Stress Scale (DASS-21) instrument has the lowest validity value of 0.36 and the highest validity value of 0.71. The reliability value of 0.93 was processed based on the assessment of Cronbach's alpha so that this research instrument was reliable. The instrument was adapted from differences in language and culture that created it (17).

Statistical analysis

The type of statistics used in this study is descriptive statistics to collect and present a cluster of data to provide helpful information. Classification into descriptive statistics is done based on the activities carried out. The variables measured using descriptive statistics are the intensity variable for the use of social media and the variable levels of depression, anxiety, and stress.

The data obtained were analyzed using bivariate analysis. The aim was to determine the intensity of social media use on depression, anxiety, and stress. The data

analysis process in this study uses the Kendalls tau correlation test with a sig value above 0.05, then Ho is accepted, and if the sig value is below 0.05, then Ho is rejected. This analysis is used to determine which variables have the most substantial influence.

Ethics consideration

In nursing research, almost 90% of the research subjects used are humans. Therefore, researchers must understand the principles of research ethics. In general, ethical principles in research or data collection can be divided into three parts, namely the principle of benefit (free from suffering, exploitation, and risk), the principle of respecting the rights of the subject (the right to participate or not to become a respondent, to obtain guarantees and informed consent), and the principle of justice (right to fair treatment and the right to confidentiality).

RESULTS

The characteristics of the respondents seen in this study were age and gender.

Table 1 Sociodemographic

Variables	n	%
Gender		
Male	59	29.5%
Female	141	70.5%
Age		
16 Years Old	58	29%
17 Years Old	63	31.5%
18 Years Old	79	39.5%
Last education		
Primary school	10	5%
Junior high school	70	35%
Senior High School	120	60%
Total	200	100%

According to age, the age distribution of respondents is from 200 respondents with the highest percentage of age being 18 years with 79 respondents (39.5%). Respondents aged 17 years were 63 respondents (31.5%), and respondents aged 16 years were 58 respondents (29%) with the lowest percentage. The respondents by gender were 59 respondents (29.5%) were male, and 141 respondents (70.5%) were female. The distribution of respondents based on current education is 120 respondents (60%) currently studying in senior high school, 70 respondents (35%) in junior high school, and 10 respondents (5%) in elementary school.

Table 1 Intensity of use of social media

No	Category	N	%
1	High	118	59%
2	Low	82	41%
Total		200	100%

The table above shows that 118 respondents (59%) have a high intensity of using social media.

Table 2 Intensity of social media use indicator

Indicators	High		Low	
	N	%	N	%
Attention	72	36%	128	64%
Appreciation	106	53%	94	47%
Duration	84	42%	116	58%
Frequency	82	41%	118	59%
Total	200	100%	200	100%

A high category (53%) of respondents have a relationship in accessing social media, including appreciating how respondents absorb and understand information to become knowledgeable. The relationship between respondents in accessing social media, which includes time or attention, is (36%), while the indicators of duration and frequency or how long and how often respondents access social media are (42%) and (41%).

Table 3. The relationship between Intensity of Social Media Use with Anxiety Correlation of Intensity of Social Media Use with Anxiety

Intensity	Anxiety					Total
	Normal	Mild	Medium	Heavy	Very heavy	
High	38 (19%)	9 (4.5%)	39 (19.5%)	21 (10.5%)	11 (5.5%)	118 (59%)
Low	49 (24.5%)	7 (3.5%)	16 (8%)	7 (3.5%)	3 (1.5%)	82 (41%)
Total	87 (43.5%)	16 (8%)	55 (27.5%)	28 (14%)	14 (7%)	200 (100%)

Kendall's tau b = 0.000 (< 0.05) and the Correlation Coefficient value = 0.263

Table 5. The relationship between the intensity of social media use and depression

Intensity	Depression					Total
	Normal	Mild	Medium	Heavy	Very heavy	
High	41 (20.5%)	32 (16%)	31 (15.5%)	12 (6%)	2 (1%)	118 (59%)
Low	49 (24.5%)	19 (9.5%)	9 (4.5%)	5 (2.5%)	0 (0%)	82 (41%)
Total	90 (45%)	51 (25.5%)	40 (20%)	17 (8.5%)	2 (1%)	200 (100%)

Kendall's tau b = 0.000 (< 0.05) and the Correlation Coefficient value = 0.257

Table 6. The relationship between the intensity of social media use and stress

The intensity of using social media	Stress					Total
	Normal	Mild	Medium	Heavy	Very heavy	
High	91 (45.5%)	20 (10%)	5 (2.5%)	5 (2.5%)	0 (0%)	121 (60.5%)
Low	69 (34.5%)	5 (2.5%)	5 (2.5%)	0 (0%)	0 (0%)	79 (39.5%)
total	160 (80%)	25 (12.5%)	10 (5%)	5 (2.5%)	0 (0%)	200 (100%)

Kendall's tau b = 0.012 (< 0.05) and Correlation Coefficient = 0.172

Table 4 shows the relationship between the Intensity of Social Media Use with Anxiety. The results of Kendall's tau b test = 0.000 (< 0.05) show a relationship between the intensity of social media use and anxiety. The Correlation Coefficient value is 0.263 with the relationship between the two variables in the same direction, which means that if the intensity level of social media uses increases, the anxiety level will also increase and have a sufficient level of relationship between the two variables.

Table 5 shows the relationship between the intensity of social media use and depression. The results of the value of Sig. (2-tailed) of 0.000 (< 0.05), which means a relationship between the intensity of social media use and depression. With the Correlation Coefficient value of 0.257, the higher the intensity level of social media use, the higher the level of anxiety. And the level of relationship between the intensity of social media use and the level of anxiety has a good relationship.

Table 6 shows the relationship between the intensity of social media use and stress. The data above explains that there is a relationship between the intensity of social media use and stress, and the higher the intensity level of social media use, the higher the stress level with a fragile relationship (Correlation Coefficient = 0.172)

DISCUSSION

The intensity of the use of social media among adolescents in Sirnagalih Village has a high level of intensity; namely, there are 118 respondents (59%). With indicators of the intensity of using social media in the high category (53%), respondents have a relationship in accessing social media, which includes an appreciation of how respondents absorb and understand information to become knowledgeable. The relationship between respondents in accessing social media, which provides for time or attention, is (36%), duration (42%), and frequency indicators (41%).

The intensity of adolescent social media use in Sirnagalih Village is very high. Excessive use of social media will have the potential to cause mental health problems such as depression, anxiety, stress, risk of suicide, and impaired self-concept. Social media can be a vehicle for difficulties in social relationships, vulnerability to negative experiences, and neglecting relationships and responsibilities in the real world. Especially during a pandemic like now when there are many notifications on some social media related to Covid-19.

The study results illustrate a positive relationship between the intensity of social media use and the level of depression and stress of adolescents in Surnagalih Village. That is, the higher the intensity of social media use, the higher the level of depression. This is in line with research (18) which states that depression arises because of social relationship problems and an attitude of comparing oneself with other users on social media, which causes a negative view of oneself or what is commonly referred to as a feeling of insecurity which ultimately demeans oneself. Social media turns out to be even

more dangerous because it is a place to express freedom (19). Freedom in writing makes posts that are good and posts that argue, curse, create hoax news, sarcasm, sadness, and many more negative things from the freedom to play social media (20). This can lead to depression and stress in social media users (21). It is also strengthened by research with the results of statistical tests with a p-value: $0.002 < 0.05$, which means that there is a significant relationship between the use of social media and stress levels in adolescents at SMP N 2 Dukun, Magelang Regency in 2019.

Anxiety in adolescents in Sirnagalih Village has a relationship with the high intensity of social media use. From the study results, there is a positive relationship between the intensity of social media use and anxiety in adolescents (22). This is contrary to research (23) which states that there is no significant relationship between the intensity of social media use and anxiety. This may be due to factors other than social media use that affect anxiety disorders. But in line with the discovery, who said that high use of social media led to increased social anxiety.

CONCLUSION

Based on the analysis results, it was concluded that there was a significant relationship between the intensity of social media use and the level of anxiety, depression, and stress in adolescents in Sirnagalih Village, as evidenced by the results. It was recommended for further researchers to develop research that researchers have carried out by conducting further research on the intensity of social media use, depression, anxiety disorders, and stress disorders during the pandemic with different populations and more susceptible to COVID-19 and nurses who deal directly with patients, being treated or quarantined.

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