Health Behavior, Information Sources and Anxiety among Mother in Facing the Covid-19 Pandemic

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Abstract:

Background*: The Covid-19 pandemic has a psychological effect on society, especially on mothers, becoming a severe stressor that can cause anxiety in mothers. Unclear sources of information can also be a trigger for mothers to experience anxiety. This study aims to determine the relationship between knowledge, attitudes, behavior, sources of information and anxiety in mothers during the Covid-19 pandemic.*

Materials and Methods*: The research sample was all mothers who had filled out a questionnaire distributed online using a google form. As many as 271 mothers became respondents in this study. Descriptive analysis used in order to determine the characteristics of the mother and each variable, while bivariate analysis used the Spearman Rank Correlation test to determine the relationship between the research variables.*

Results: *The results showed that most of the research respondents were mothers aged 20-40 years, still had a spouse or married status, with a high school education level and acted as housewives or did not work, and had health insurance. There is a relationship between sources of information, knowledge, attitudes and behavior with maternal anxiety in dealing with the Covid-19 pandemic.*

Conclusion: *The recommended advice based on the results of the study is the need for community service activities to increase mother's knowledge about covid-19 and prevent anxiety so that depression does not arise in mothers, the need to check dubious sources of information to find out the truth.*

Key word*: Anxiety, Mother, Pandemic, Covid-19, Information*

I. Introduction

The world is being hit by a fairly worrying pandemic, namely COVID-19. Almost all countries in the world are experiencing the COVID-19 pandemic, including Indonesia [1]. Uncertainty, confusion, and urgency are signs of a pandemic [2]. In the early stages of a pandemic, there is uncertainty about the likelihood and seriousness of the virus. Along with uncertainty comes the possibility of misinformation about the best prevention and treatment methods [3]. Uncertainty can persist until the end of the pandemic, especially regarding the question of whether the pandemic is really over. The COVID-19 pandemic is classified as an extraordinary event, so the effects are also large covering various aspects. The impact of COVID-19 includes economic and social aspects due to the implementation of several rules, such as physical distancing and large-scale social restrictions (PSBB). The determination of these rules is caused by the way the virus spreads which is quite fast and invisible [3].

Diseases that cause pandemics are a group of infectious diseases. Corona virus disease (COVID19) is an infectious disease caused by a new virus, namely the corona virus. COVID-19 can spread easily. This is due to the spread of the COVID-19 virus itself through droplets from saliva or snot that come out when a person who is positive for COVID-19 coughs or sneezes [4].

Facing this difficult situation, various efforts have been made by the government, one of which is to campaign for the use of masks. The violations that occurred in West Java were indeed fewer than in Jakarta, but the two most common reasons recorded by the officers were "forgetting" and "don't care about Covid-19". The high number of violations that occur massively in the community is not only in one place, which is a social problem in Indonesia in the context of handling Covid-19, but what is more worrying is the community's "indifference" or "indifference" to health protocols [5].

The condition of the emergence of public distrust from this inconsistent policy is exacerbated by an information atmosphere that makes the public "saturated". Too much information about COVID-19 is received by families and communities. Indifference on the basis of distrust of public performance, saturating information conditions, plus public observation of what is seen in the surrounding environment leads to a lack of community compliance with health protocols, even though physically and even health protocol rules are clearly visible in

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many public facilities. Deeper in the community has their own views which may be more important than following the health protocol [5].

Anxiety is a common response that occurs during times of crisis. Anxiety is a common condition of fear or discomfort [6]. Anxiety is characterized by a variety of symptoms, which include physical, behavioral and cognitive symptoms. Physical symptoms include shaking, tightness in the abdomen or chest, heavy sweating, sweaty palms, headache or feeling faint, dry mouth or throat, shortness of breath, racing heart, cold fingers or limbs and nausea . Behavioral symptoms include avoidant behavior, dependent behavior and restless behavior. Cognitive symptoms include worrying, feeling fearful or anxious about the future, overthinking or being overly aware of the sensations that arise in the body, fear of losing control, constantly thinking distracting thoughts, and difficulty concentrating or focusing thoughts. Everyone's anxiety level can be different depending on the related factors. Various factors including demographic factors can influence anxiety about a pandemic. In addition, the perception of the risk of exposure may also affect the level of anxiety [7].

The results of observations on public health behavior, there are still many who do not comply with health protocols. They only obey when someone is watching. The message from the government "Obey Mother's Message, Use Your Mask" is the reason for researchers to conduct research on mothers, who are part of families and communities who are expected to be examples in implementing health protocols. This condition is very likely to occur given the patriarchal culture that is still dominant in Indonesian society. Taking care of the household is a housewife's job, which is formally written on a housewife's identification [8]. Based on this background, researchers are interested in exploring more about public health behavior and anxiety in dealing with COVID-19. The purpose of this study was to determine the health behavior, sources of information and maternal anxiety in dealing with the COVID-19 pandemic.

II. Material And Methods

This type of research is descriptive research. This study aims to describe or describe a situation in a community or society to find out a description of the health behavior and maternal anxiety in dealing with COVID-19. The population of this study were all mothers who could be reached by the researcher using an online instrument using an online instrument/questionnaire made using google form/WA and telephone. The sample was taken by accidental sampling, namely all respondents who met the research criteria who could fill out online or found by researchers. Data collection is planned to start on April 1-30 May 2021. A total of 271 mother were involved in this study.

Study Design: Observational study, with cross sectional design.

Study Location: This was an online study, using google form and spread out for every mother who can reach the link and willing to fulfil the instrument.

Study Duration: April 1-30 May 2021

Sample size: 271 respondents

Sample size calculation: The sample was taken by accidental sampling, namely all respondents who met the research criteria who could fill out online or found by researchers.

Exclusion criteria: The sample exclusion criteria included: 1) not willing to be involved in the study; 2) not reachable by internet;

Inclusion criteria: 1) being able to communicate well online and 2) having the facility to fill in the data in the online questionnaire.

The results of online data collection obtained as many as 274 respondents who filled out the questionnaire completely, but there were 3 respondents who did not meet the requirements, so they were excluded from the sample. The number of research respondents was 271 people.

Procedure methodology

The research design used was a cross sectional study. Data was collected online and 271 mothers filled out the questionnaire. After that, data processing and analysis was carried out using the help of computer programs for data processing. The research variables studied included independent variables and dependent variables. the dependent variable consists of: information, knowledge, attitudes and health behavior. The dependent variable includes: maternal anxiety in dealing with the covid-19 pandemic. Creating categories for each variable based on the results of data normality. Data that are normally distributed use the mean cut off point, while data that are not normally distributed use the median.

The instrument used was a questionnaire to determine the characteristics of respondents and sources of information, while the health behavior instrument was adapted from research that had been conducted previously with the validity value for each question item more than 0.3 and the reliability value more than 0.6 [9]. The instrument used to determine anxiety is the Beck Anxiety Inventory (BAI). Aspects of anxiety were measured using the Indonesian version of the Beck Anxiety Inventory (BAI). This instrument has been standardized and is widely used in research related to anxiety. The Beck Anxiety Inventory (BAI) scale consists

of 21 questions. This variable uses an ordinal scale with an overall score of 0 to 3 obtained from 21 assessment components [10].

Statistical analysis

The data from the research were analyzed descriptively by displaying a measure of the central tendency and the frequency distribution of each variable. Data processing starting from editing to determine the completeness of the instrument that had been filled out by the respondents, coding by providing codes for the categories of each variable, and analyzing by processing the data to obtain descriptive statistics and tabulations to display the frequency distribution of each research variable.

Bivariate analysis between independent and dependent variables used Spearman's Rank correlation test because all variables were not normally distributed and aimed to determine the relationship between the variables studied. If the p value in the Spearman Rank correlation test is < 0.05, the decision is the rejection of H0, or it can be concluded that there is a significant relationship between the independent variable and the dependent variable. Data was analyzed using SPSS version 25.

III. Result

This online research using a google form that was shared through social media. Respondents who filled out the questionnaire completely obtained data of 274 people, which were taken in the period of June 2021. Based on this data, it turned out that there were 3 respondents who did not meet the requirements as respondents, so they were not included in the data analysis. The number of respondents involved in this study were 271 people. The results of data collection are then processed and analyzed so that conclusions can be drawn according to the research objectives. The characteristics of the research can be seen in Table no 1.

Table no 1: Shows an overview of the characteristics of research respondents

Variable	n = 271	%
Age (years)		
20-40	191	70.5
41-50	61	22.5
51-60	17	6.3
>60	2	0.7
Marital status		
Unmarried	0	0.0
Married	271	100.0
Education level		
Elementary school	14	5.2
Junior high school	28	10.3
Senior high school	119	43.9
College/University	110	40.6
Job		
Jobless	124	45.8
Laborer	23	8.5
State civil servants	60	22.1
Soldier	1	0.4
Enterpreneur	61	22.5
Retired	2	0.7
Insurance ownershiop		
No	60	22.1
Yes	211	77.9

The general description of respondents consisting of age, education level, occupation, marital status and ownership of health insurance shown in Table number 1. Most of the respondents are between 20-40 years old, which is 70.5%. The status of the respondents are all married and the education level is mostly high school graduate and college graduate, which are 43.9% and 40.6%, respectively. Most of the respondents' occupations are household or not working, and there is 1 person who has a job as soldier. The occupations of the respondents as state civil servants and entrepreneurs are almost the same, 61 people and 60 people, respectively. Respondents who have health insurance are more than those who do not or do not have it, namely 77.9% who already have health insurance.

The results of the univariate analysis for the research variables shown in Table no 2, which consists of: sources of information, knowledge, attitudes, behavior and anxiety felt by the mother.

Table no 2: Shows the Frequency Distribution of Research Variables

Variabel	n = 271	%
Sources of information		
Inadequate	26	9.6
Adequate	245	90.4
Knowledge		
Not good	3	1.1
Good	268	98.9
Attitude		
Not supportive	18	6.6
Supportive	253	93.4
Behavior		
Not good	22	8.1
Good	249	91.9
Anxiety		
Severe	1	0.4
Moderate	35	12.9
Mild	235	86.7

The results showed that most of the respondents received adequate sources of information about covid-19, which was 90.4%. Almost all respondents have a good level of knowledge (98.9%), with more attitudes in the Good category, which is 91.9%. The anxiety felt by the mother was mostly mild (86.7%), but there was 1 respondent who was in a state of severe anxiety.

Table no 3: Shows shows the relationship between knowledge, attitudes, behavior and sources of information with maternal anxiety

Variables	Maternal Anxiety						p value
	Severe		Moderate		Mild		
	f	%	f	%	f	%	
Source of information							
Inadequate	1	3.8	5	19.2	20	76.9	0.013
Adequate	0	0.0	30	12.2	215	87.8	
Knowledge							
Not good	0	0.0	2	66.7	1	33.3	0.000
Good	1	0.4	33	12.3	234	87.3	
Attitude							
Not supportive	1	5.6	2	11.1	15	83.3	0.013
Supportive	0	0.0	33	13.0	220	87.0	
Behavior							
Not good	1	4.5	5	22.7	16	72.7	0.000
Good	0	0.0	30	12.0	219	88.0	

Bivariate analysis was to determine the relationship between each independent variable and the dependent variable. Bivariate analysis used a cross table and continued with statistical tests. The statistical test based on the results of the data normality test using the Kolmogorov Smirnov test. It was found that all variables were not normally distributed (p>0.05), so the statistical test used to prove the relationship between the independent and dependent variables used non-parametric statistical tests to test the relationship between 2 variables with an interval scale/ ratio (score data used for statistical tests) and not normally distributed, namely the Spearman Rank test.

The results of the analysis using the Spearman Rank Correlation statistical test shown was in Table no 3. Variable sources of information, knowledge, attitudes and behavior have a significant relationship with maternal anxiety. The correlation coefficient value of all relationships between variables is negative and significant, with p value <0.05. A negative value means that there is an inverse relationship between all independent variables and the dependent variable, maternal anxiety. The negative correlation coefficient value means that the higher the variable score, the lower the anxiety level.

IV. Discussion
1. Relationship between Information Sources and Mother's Anxiety

The results showed that there was a relationship between sources of information and maternal anxiety in dealing with the COVID-19 pandemic. Mothers who received adequate information had the highest proportion of mild anxiety, and none had severe anxiety, while mothers who received insufficient information experienced severe anxiety. The more adequate sources of information the mother gets, the less anxiety she faces.

The results of this study are in accordance with research that has been carried out at the Balikpapan Hospital, which shows that there is a relationship between sources of access to information on anxiety levels

with a p value of 0.000 and the direction of the relationship is negative [11]. A negative relationship means that the better the source of information received by the mother, the lower the anxiety felt. Similarly, research conducted by Pratiwi and Sukarta (2020), the results of this study show that there is a significant relationship between social media coverage and women's anxiety levels during the Covid-19 pandemic [12].

Anxiety about unclear sources of information not only experienced by mothers, but also by children. With the clarity of good information support, it can reduce or even eliminate anxiety in children [13]. The results showed that the better the information about COVID-19 received, the lower the mother's anxiety. The mother's ability to search for information can determine the level of anxiety felt, and vice versa. If the mother experiences anxiety, then by seeking or trying to get the necessary information from relevant and valid sources, it will be able to reduce and even eliminate the anxiety.

2. Relationship between Knowledge and Mother's Anxiety

Knowledge significantly relate to maternal anxiety in dealing with the COVID-19 pandemic. Mothers with good knowledge mostly only have mild anxiety, while mothers with less knowledge have a lower percentage than those with good knowledge. The better the knowledge, the lighter the anxiety faced.

The results of this study are in line with several previous studies, which discussed the relationship between level of knowledge and perceived anxiety. Research conducted at the Pancasila Islamic Boarding School in Bengkulu City found that there was a relationship between knowledge and anxiety levels. Information obtained from teachers and supervisors can reduce the anxiety they feel [14]. Research on mothers about knowledge about dengue hemorrhagic fever with maternal anxiety levels because their children were treated at the RSUP. Prof. Dr. R. D. Kandou Manado, it was found that there was a significant relationship with the p value <0.05. Another study on pregnant women regarding the Covid-19 pandemic found that there was a negative relationship between knowledge of pregnant women and anxiety due to the COVID-19 pandemic. The higher the knowledge, the lower the anxiety felt [15]. Research on postpartum mothers also obtained results that are in line with this study, namely the better the mother's knowledge, the better the mental condition, thereby reducing maternal anxiety [16]. The knowledge possessed can reduce anxiety levels and remain motivated to come to health workers [17].

The results of this study are not in accordance with the results of research conducted on the elderly, apparently there is no relationship between knowledge and the level of elderly anxiety about Covid-19 (Sitohang & Simbolon, 2021), as well as research conducted on adolescents in Balikpapan, there is no relationship between knowledge who have anxiety about Covid-19 [18].

3. Relationship between Attitude and Mother's Anxiety

Mother's attitude and anxiety negatively related, meaning that the more favorable and supportive the mother's attitude was, the less or less anxious the anxiety would be. Mothers with a less supportive attitude, 5.6% experienced severe anxiety, while mothers with a supportive attitude did not experience severe anxiety, only at moderate and mild levels, with the highest percentage in the mild category.

Research that is in line with the results carried out on pregnant women in implementing the Covid-19 prevention protocol. The results showed that a positive attitude from pregnant women and hospital management would reduce anxiety [19]. Furthermore, research conducted in Turkey explained that of the 172 pregnant women involved in the study, 65% had a good attitude and believed in the government and health workers in handling and preventing COVID-19 [20].

Attitude is a reaction or response that is still closed from a person to a stimulus or object. Attitude manifestations cannot be seen directly, but can only be interpreted beforehand from closed behavior. Attitudes clearly show the connotation of appropriate reactions to certain stimuli which in everyday life are emotional reactions to social stimuli. According to Newcomb, that attitude is a readiness or willingness to act and is not an implementation of certain motives.

4. Relationship between Behavior and Mother's Anxiety

Mother's behavior in preventing covid-19, mostly included in the good category and with mild anxiety. Mothers with poor behavior tend to experience severe anxiety. The results showed that there was a relationship between maternal behavior and anxiety in the face of the COVID-19 pandemic. The better the behavior, the less anxiety.

Health behavior cannot be separated from a person's knowledge and attitude variables. The formation of behavior is based on the knowledge and attitudes of the person himself. The results showed that knowledge and attitudes have a negative relationship to anxiety, as well as health behavior. The better a person's health behavior, the less anxiety will be, and vice versa. When a person experiences anxiety, his behavior becomes less good when compared to individuals who do not experience anxiety. Health behaviors have been shown to affect anxiety. One of the health indicators that is carried out is doing exercise regularly [21].

As well as attitudes, it turns out that the results of research at Senja Cerah Paniki, Center for Elderly Support in Mapanget District, Manado City. The results showed that there was no relationship between anxiety and clean and healthy living behavior in the elderly. A sense of comfort that affects anxiety in the elderly more than their behavior. Good health behavior will support the absence of anxiety in the mother, and if the mother does not experience anxiety, her clean and healthy living behavior is also included in the good category. As with previous research, it is proven that there is a behavioral relationship with Covid-19 with anxiety levels . [14].

The research was conducted online, so that respondents who did not meet the sample criteria could fill out the questionnaire. The respondents involved are only respondents who have a smartphone, so they cannot reach respondents who do not have a smartphone.

V. Conclusion

There are some conclusions based on the data analysis. Most of the research respondents are mothers aged 20-40 years, still have a partner or married status, have a high school education level, have no job, and have health insurance. There is a relationship between the source of information and maternal anxiety, the more comprehensive the information obtained, the lighter the anxiety felt. There is a relationship between knowledge and maternal anxiety, the better the knowledge, the lighter the anxiety felt. There is a relationship between the mother's attitude and the anxiety felt, the more supportive attitude, the lighter the anxiety felt, and here is a relationship between behavior and maternal anxiety. The better the behavior of the mother, the anxiety felt will be lighter.

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