

## Original Research Article

# Mental health situation during COVID-19 pandemic in Indonesia

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## ABSTRACT

**Background:** The coronavirus disease 2019 (COVID-19) pandemic caused concern in the community. This pandemic is an outbreak that can have an impact on the mental health and psychosocial conditions of everyone. This study aims to see an overview of the mental health condition of people in Indonesia during the Covid-19 pandemic.

**Methods:** This is a descriptive cross-sectional study with a retrospective approach. This study used an internet-based online questionnaire via Google form with questions from the Director-General of the Indonesian Ministry of Health. The questionnaire was distributed online. 127 participants responded to the questionnaire in this study.

**Results:** The study showed that most participants aged between 18-23 years old, female, worked as health workers and students, residing outside of Java, was anxious, and did not experience psychotic symptoms. In this study 106 people experienced anxiety and 21 people did not. Participants who did not experience psychotic symptoms (normal) tended to not anxious than anxious. Women tend to be more prone to anxiety than men. Both students and unemployed people experience anxiety more compared to civil servants.

**Conclusions:** Socialization about safe, comfortable, and healthy activities needs to be done to the community to reduce anxiety in the community during the COVID-19 pandemic accompanied by providing comprehensive knowledge about COVID-19.

**Keywords:** Mental health, Anxiety, Psychotic, COVID-19

## INTRODUCTION

In the beginning 2020, the world was shocked by the spread of a virus that has never been detected before, namely novel Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease is called Corona virus disease 2019 (Covid-19). Corona virus is a large family of viruses known to cause diseases ranging from the common cold to more severe illnesses such as Middle east respiratory syndrome (MERS) and Severe acute respiratory syndrome (SARS).<sup>1</sup>

Covid-19 pandemic is an outbreak that can have an impact on the mental health and psychosocial conditions of everyone. As of May 21, 2020, a total of 20,162 confirmed cases with 1,278 deaths (Case fatality rate (CFR) 6.3%)

were reported in Indonesia.<sup>2</sup> This pandemic causes concern and stress in the community and no systematic review of mental health is currently available.<sup>3</sup>

According to Pfefferbaum, in addition to give pressure of the disease itself, semi-lockdown / large-scale social restrictions (mass isolation at home) set by the government also have a significant influence and cause concern to interact. Even though human nature is a social creature, it is difficult to accept the social restrictions. Emotional forms that can be expressed are anxiety, stress, depression, irritability, insomnia, fear, confusion, anger, frustration, boredom and quarantine-related stigma.<sup>4</sup> Patients who have comorbid mental disorders will relapse more often, especially patients with psychotic disorders.

Stress originating from a pandemic can improve psychotic symptoms, mania, depression, anxiety, substance abuse and suicide risk.<sup>5</sup> Based on the above background, this study needs to be done to see an overview of the mental health condition of people in Indonesia during the Covid-19 pandemic.

## METHODS

This is a descriptive cross-sectional study with a retrospective approach that has been experienced and felt before. This study will describe the mental health conditions of people in Indonesia during the Covid-19 pandemic in general.

This study used an internet-based online questionnaire via Google form with questions from the Director General of Health Services of the Ministry of Health of the Republic of Indonesia. This study was distributed in the form of links and can be filled out using a smartphone or laptop / computer. Questionnaire links were shared during webinars on Baznas television channel themed "Managing stress due to the economic impacts of families in the Covid-19 pandemic period in April 2020 and the questionnaire remains open until May 2020. 127 participants filled out the questionnaire and all of them were sampled. Inclusion criteria are  $\geq 18$  years of age and can spend 10-15 minutes.

Questions asked include demographic status in the form of age, sex, occupation and province of residence. The next question is about the symptoms experienced in daily life on the Guttman scale. All participants' identities are kept confidential. The questionnaire consisted of 23 questions. 20 of them are about "self-reporting questionnaire" and 3 other questions are about psychotic symptoms. This study also included Post-traumatic stress disorder (PTSD) questions after Covid-19 but there were no participants who suffered from Covid-19 in this study so that the information could not be done.

Age variable category stratified into 5 subgroups so that we see a narrower level of anxiety that is 18-23 years, 24-28 years, 29-33 years, 34-38 years and 39-43 years. Furthermore, sex was divided into male and female. Occupation stratified become a lecturer, college student, health worker, student, private employee, civil servant, entrepreneur, housewife and unemployed. Residences were grouped into DKI Jakarta, non-DKI Java and outside Java.

This study scores the self-reporting questionnaire questions that make subgroups anxious and not anxious (normal). This study also makes subgroups of psychotic and normal symptoms on psychotic disorders variable. We add up all the score of questions to make a subgroup i.e. if the answer is yes, the score is 1 and if no, the score is 2. Based on the calculation from the Ministry of Health RI, if 3 questions are answered yes, then it is categorized as

anxious, while psychotics subgroup only needs 1 yes answer to be considered as psychotic symptoms.

This study follows the score according to the guidelines and describe the results in the next paragraph. Complete questionnaire input in excels program.

Data obtained from the study will be treated with the help of computers and SPSS software. Data were analyzed by univariate to determine the frequency and proportion of each variable studied. Bivariate analysis was performed to see the association and cross tabulation between the independent and dependent variables.

## RESULTS

In total, 127 participants who responded to this study through Google form. Most participants in this study were between 18-23 years old, were female, as health workers, students, and private employees, lived outside of Java, were anxious, and did not have psychotic symptoms.

The participants of this study are mostly aged  $\leq 33$  years (81.1%). This is probably due to the filling out method that use the internet via Google form is more familiar to people at a young age. Of the type of occupation most participants in the study were health workers, students, and employees.

During this pandemic, health workers were the type of occupation that is the most. In addition, in general students have a high curiosity in a matter so that they have a high interest in participating. Same goes for students who have high attention in this study, the employees also have a high attention. Until now there are still a number of workplaces that have not laid off their employees so that it can trigger the worry of contacting Covid-19.

This study tries to link the main variable (the dependent variable) with several risk factors that can affect one's mental health which is divided into anxiety and not anxiety.

In this study, 106 people experience anxiety and 21 people did not. It can be seen that participants who did not experience psychotic symptoms (normal) are higher in the percentage of people who are not anxious than those who are anxious (85.7% versus 63.2%).

Meanwhile, based on the age group, the group of 24-28 years old has the most significant difference in the percentage of experiencing anxiety. 21.7% of them experienced anxiety. It can also be seen that the percentage of anxiety is higher in women than in men (71.7% versus 57.1%).

Anxiety is also different when viewed from the type of occupation, students are more likely to experience anxiety (8.5% versus 0%), as well as unemployed (16% versus 9.5%), while civil servants are more likely to be not anxious (14.3% versus 3.8%).

**Table 1: Characteristics of participants in this study.**

Variable	Total (n=127)	Percentage
<b>Age (years)</b>		
18-23	41	32.3
24-28	25	19.7
29-33	37	29.1
34-38	6	4.7
39-43	18	14.2
<b>Sex</b>		
Male	39	30.7
Female	88	69.3
<b>Occupation</b>		
Lecturer	8	6.3
College student	9	7.1
Health worker	25	19.7
Student	25	19.7
Private employees	22	17.3
Civil servants	7	5.6
Entrepreneur	2	1.6
Housewives	10	7.9
Unemployed	19	15.0
<b>Province</b>		
DKI Jakarta	16	12.6
Java-Non DKI	39	30.7
Outside Java	72	56.7
<b>Mental Health</b>		
Anxious	106	83.5
Not anxious	21	16.5
<b>Psychotic Disorders</b>		
Psychotic	42	33.1
Normal	85	66.9

## DISCUSSION

In this study it is found that the majority of participants were aged between 18-23 years (32.3%) and/or aged  $\leq 33$  years (81.1%). According to CNN Indonesia, young people in the age range of 20-24 years and 25-29 years have penetration rates of up to  $>80\%$  of internet users in Indonesia. This figure is relatively high compared to residents of other age groups according to the latest research released by the Indonesian internet service providers association. At the age of 20-24 years, 22.3 million people were found, equivalent to 82% of the total population in the group. This finding was supported by the knowledge of the student profession as the profession that uses the internet more than any other sectors.<sup>6</sup> A study from Barbosa et al also mentioned that young age groups dominated internet use and access more than older age.<sup>7</sup> Based on the results of MarkPlus insight study stated that half of the population in Indonesia, namely 35.5 million people, were young internet users under the age of 30 years.<sup>8</sup> Other studies also showed that most internet users were young.<sup>9-11</sup>

**Table 2: Association between participant characteristics and mental health.**

Variable	Mental Health			
	Anxious n=106		Not anxious n=21	
		%		%
<b>Psychotic Disorders</b>				
Psychotic	39	36.8	3	14.3
Normal	67	63.2	18	85.7
<b>Age (years)</b>				
18-23	34	32.1	7	33.3
24-28	23	21.7	2	9.5
29-33	31	29.2	6	28.6
34-38	4	3.8	2	9.5
39-43	14	13.2	4	19.0
<b>Sex</b>				
Male	30	28.3	9	42.9
Female	76	71.7	12	57.1
<b>Occupation</b>				
Lecturer	6	5.7	2	9.5
College student	9	8.5	0	0.0
Health worker	20	18.9	5	23.8
Student	22	20.8	3	14.3
Private employees	18	17.0	4	19.0
Civil servants	4	3.8	3	14.3
Entrepreneur	2	1.9	0	0.0
Housewives	8	7.5	2	9.5
Unemployed	17	16.0	2	9.5
<b>Province</b>				
DKI Jakarta	12	11.3	4	19.0
Java-Non DKI	32	30.2	7	33.3
Outside Java	62	58.5	10	46.6

Based on the type of occupation, mostly are health workers (19.7%), students (19.7%), and employees (17.3%). A qualitative study in China stated that intensive work drains health workers physically and emotionally. Health workers demonstrate the resilience and enthusiasm of their professional dedication to overcome the Covid-19 pandemic. This makes the attention of health workers will be very high related to Covid-19, including this study.<sup>12</sup> A meta-analysis study from Spoorthy showed that most current studies focus on assessing some aspects of mental health of health workers caused by Covid-19. Some socio-demographic variables such as gender, profession, age, workplace, occupation and psychological variables such as poor social support, self-efficacy was associated with increased stress, anxiety, depressive symptoms, and insomnia in health workers. There is increasing evidence that Covid-19 is an independent risk factor for stress in health workers.<sup>13</sup>

It was found that people without psychotic symptoms (normal) had more not anxious than anxious (85.7% versus 63.2%), whereas people who had more psychotic

symptoms experienced anxious rather than not anxious (36.8% versus 14.3%). A study from Wigman et al stated that psychotic symptoms in anxiety disorders and depression were etiologically very relevant. This reinforces the view that psychopathology was represented by tissue or overlapping and reciprocally influences.<sup>14</sup> This is also supported by the results of Varghese et al study which said that people with depression and anxiety were also more likely to report psychotic symptoms compared to healthy people. Psychotic experiences were associated with a variety of common mental disorders.<sup>15</sup>

This study shows young people between 24-28 years had more anxiety than not anxiety (21.7% versus 9.5%). Heredity and environmental factors along cognitive biases play a role in the etiology of anxiety. Anxiety in youth is temporary but some of them can be chronic and persistent.<sup>16</sup> Anxiety will decrease by itself with age and experience. But people who are depressed more than 8 times are more likely to occur in adolescents with anxiety disorders than in those without anxiety disorders.<sup>17</sup> In the study of Bhatia et al showed that a higher obsession at a young age is one of the causes of anxiety in a person so that early detection is needed to measure anxiety.<sup>18</sup>

Percentage of anxiety was higher in women than men (71.7% versus 57.1%). This is due to differences in brain chemistry and hormonal fluctuations. Reproductive events throughout a woman's life were associated with hormonal changes that have been linked to anxiety. The surge in estrogen and progesterone that occurs during pregnancy can increase the risk of obsessive-compulsive disorder, which is characterized by disturbing and repetitive thoughts, impulses and obsessions that were both troublesome and debilitating.<sup>19,20</sup>

In addition to biological mechanisms, women and men seem to experience and react to various events in their lives differently. Women tend to be more vulnerable to stress, which can increase their anxiety. When facing stress full situations, women and men tend to use different coping strategies. Women who are faced with life stressors are more likely to reflect on them, which can increase their anxiety, while men are more involved in coping that is active and focused on the problem.<sup>21-23</sup> If it is connected with the current Covid-19 pandemic situation, women will be easier to anxious about the health and safety of their lives and those around them from the Corona virus. those are the causes of anxiety in women tends to be higher than in men.

College students experienced more anxiety than not anxiety (8.5% versus 0%) in this study. The prevalence of anxiety is increasing among college students, and the negative effect of anxiety on student health and academic performance is an urgent issue for college counseling centers.<sup>24</sup> The American College Health Association, which provides the largest comprehensive dataset known

about student health, reports that 60.8% of students have experienced extreme anxiety in the past year, and 24.2% of students report that anxiety negatively affects their academic performance.<sup>25</sup> Anxiety in students during the Covid-19 pandemic is very likely to occur, there are large-scale social restrictions that cause schools, universities and other educational institutions to be closed or temporarily closed triggering anxiety on students. Students worried that they cannot received knowledge comprehensively, they cannot maximize their ability to get the best grades, and so on.

Similar to students, unemployed also tend to be more anxious (16% versus 9.5%). Unemployed causes loss of daily activities, feels incompetent, has no social support, and has no position or status. Many unemployed were seen to be more lethargic in their daily lives. Unemployed and low activity increases a person's likelihood to reflect frequently and increases the risk of anxiety and depression.<sup>26</sup> This study was conducted in one time, so it cannot be sure the causality relationship between the independent and dependent variables. More in-depth follow-up studies are needed to confirm the causal relationship, for example with cohort studies.

## CONCLUSION

There were 127 participants in this study. Most participants aged 18-23 years (32.3%) and or 81.1% participants aged ≤33 years, women (69.3%), work as health workers (19.7%), students (19.7%), and private employees (19.7%), residing outside of Java (56.7%), experiencing anxiety (83.5%), and did not experience psychotic symptoms (66.9%). Participants who did not experience psychotic symptoms (normal) more in people who were not anxious than people who were anxious (85.7% versus 63.2%). Meanwhile, based on age, the age group between 24-28 years were more anxious (21.7%). Anxiety was higher in women than men (71.7% versus 57.1%). Students experience anxious more than not anxious (8.5% versus 0%), likewise with people who unemployed (16% versus 9.5%), while civil servants were more not anxious (14.3% versus 3.8%).

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