

Mental Health Level: Stress, Anxiety and Depression in Health Workers During the COVID-19 Pandemic

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Abstract

The COVID-19 pandemic has resulted in changes in mental health worldwide, including health workers as the frontline in handling it. The mental health of health workers is a problem that needs to be measured and known as information to improve the quality of the COVID-19 response. Through this research, the level of mental health will be measured, which consists of stress, anxiety, and depression. A total of 76 research subjects were selected through purposive sampling with the characteristics of having worked for one year in handling Covid in areas with high Covid-19 rates. The measurement instrument used is DASS42 which is administered online. Based on the results of descriptive data analysis, it is known that 40.79% of health workers show low mental health problems. In detail, 9.2% and 1.5% of health workers had moderate and severe depression. 5.26% and 5.26% of health workers have severe and very severe anxiety. Moreover, there is 5.26% and 3.94% of health workers have moderate and severe stress categories. Based on the data, it is also known that the medical profession shows the most symptoms of mental health problems. This information is expected to provide policy information in managing the mental health of health workers while dealing with the COVID-19 pandemic.

Keywords: Mental Health, Stress, Anxiety, Depression, Health Workers

Introduction

The first confirmed case of COVID-19 in Indonesia was on March 2, 2020, which was announced by President Joko Widodo (Prasetyo, 2020). After the first case was confirmed, then case growth increased. Indonesia is recorded as being ranked 7th in cases of death due to COVID-19 (Kompas.com, 2021). Data until November 13, 2021, it is known that there have been 143,628 deaths from 4,250,157 confirmed cases (covid19.go.id). The spread of cases to all provinces in Indonesia. On November 8, 2021, it was stated that the Special Region of Yogyakarta had the highest national ranking in the addition of COVID-19 cases. This is because there was a case of COVID-19 in a school, namely one of the schools in Bantul Regency (Susanto, 2021).

Health workers are at high risk for exposure to COVID-19. This creates an increasing burden on health workers (Boccia et al., 2020). One of the Community health centre in the area of the Bantul Health Service, namely the Pleret Health Center, had its operations closed because there were officers who were positive for COVID-19 (liputan6.com, 2020). On Wednesday, November 10, 2021, the Indonesian Minister of Health also stated that Indonesia will still have considerable potential for the third wave of COVID-19 (Iqbal, 2021). This was stated because, based on data from other countries, such as in Europe to Asia, which have recorded high vaccination rates, they also experienced a high increase in COVID-19 cases and resulted in a re-lockdown in their countries (Iqbal, 2021). Based on information data from the online newspaper Tempo, the Director of the Center for Tropical Studies from a state university in Indonesia also predicts that Indonesia will definitely experience the third wave of COVID-19 due to the development of the Delta variant of the COVID-19 virus (Iqbal, 2021).

Community health centre is a more frontline in providing health services because it is a primary service for the community. This means that when individuals within the Community health centre area show symptoms of health problems, the health facility to be addressed is the Community health centre, including when symptoms of COVID-19 occur. Various studies have shown that front liners and people who are in direct contact with COVID-19 patients have a greater risk of developing symptoms of mental health problems (Guo et al., 2020; Lai et al., 2020).

The World Health Organization (WHO) describes mental health as not simply the absence of mental disorders. Mental health is a state of well-being in which individuals realize their abilities, cope with everyday stressors, work productively, and contribute to the community (WHO, 2018). Mental health is an individual who is free from psychiatric symptoms or mental illness, the realization of harmony between the functions of the soul and can deal with problems that occur and feel positively about his abilities, the ability he has to adapt between humans and himself and environment, based on faith and piety, and aims to achieve a meaningful and happy life in this world and the hereafter (Bukhori, 2012). According to Notoedirdjo & Latipun (2011), there are several definitions of mental health, namely: (a) because they are not sick, (b) do not fall ill due to stressors, (3) by their capacity and in harmony with their environment, and (4) grow and develop naturally. Nugroho (2021) suggests that mental health can be measured by looking at the level of stress anxiety and of a person.

Under normal conditions, working in the health sector is a stressor in itself as research proposed by Hanafi and Yuniasanti (2012) states that a nurse is often faced with an attempt to save someone's life which causes stress and even burnout in nurses. The study results found that as many as 73.3% of nurses experienced moderate levels of burnout which was the effect of prolonged work stress. Some mental health literature during the COVID-19 pandemic found that 39.1% of the mental health experienced by nurses experienced psychological disorders, namely stress, anxiety, and depression (Chew et al., 2020; Liu et al., 2019; Dai et al., 2020; Cai et al., 2020). The data further shows that the occurrence of COVID-19 has put increasing pressure on health workers. Research conducted during the pandemic shows that increased workload, fear of infection, frustration, physical exhaustion, and lack of equipment can substantially affect the mental health of health workers (Pablo et al., 2020).

In particular, as stated by Kusumawardani et al (2020), health workers have a high risk of experiencing mental health problems during the COVID-19 pandemic. Research in India shows that work environment stressors are associated with an increased risk of depression and anxiety by 46% (Suryavanshi et al., 2020). Symptoms of depression occurred in 92.47% of respondents, and anxiety symptoms occurred in 98.50% of respondents from 197 health workers.

Many Indonesian people experience anxiety disorders during the pandemic. Research data by Rinaldi and Yuniasanti (2020) shows that women have higher anxiety symptoms than men during the COVID-19 pandemic. Anxiety is a negative emotional state characterized by feelings of nervousness, worry, and fear about imagined dangers (Sperry, 2015). Anxiety can occur because health workers are faced with a significant risk of infection and are worried about spreading the virus to their closest people (Greenberg et al., 2020, Xiang et al., 2020).

Health workers are also at risk for emotional disturbances, sleep problems, isolation, lack of contact with family, increased work shifts, and physical exhaustion (King et al., 2020). Research in Serbia on 1678 respondents, consisting of 684 (40.8%) health workers and 994 (59.2%) from various professions, shows that media workers on the frontline have high levels of stress, anxiety, and depression. higher (Antonijevic et al., 2020). Stress is psychological, emotional, and physical tension resulting from a negative assessment of events, situations, and circumstances (Sperry, 2015). Health workers feel stress during the COVID-19 pandemic. Research conducted at the Sukoharjo Health Center, 88.9% (54 people) of health workers experienced moderate to high-stress levels (Supratman et al., 2020).

The increase in workload during the pandemic shows an increase in symptoms of depression in health workers in Wuhan (Du et al., 2020). The prevalence of depression among health workers in China also shows a large number, namely 23.2% (Pappa, 2020). The data and phenomena above become a solid basis to researching and measuring stress, anxiety, and depression levels in health workers to make the right policies for health workers in dealing with the COVID-19 pandemic in the Bantul Regency area.

Method

The questionnaire was compiled in goggle forms so that it can be accessed online and can be administered independently by the participants. Information regarding the study and informed consent was provided at the beginning of the form. Participants are health workers who work at the Health Center area of the Bantul District Health Office. The sampling technique in this study used a *purposive sampling technique*. *Purposive sampling* is sampling done by selecting subjects based on certain characteristics or traits (Hadi, 2016). The characteristics of the respondents in this study were health workers who worked in Bantul Regency and had a minimum of 1 year of service. The data collection process is carried out in coordination with the central office of health workers and providing information to the person in charge of each Community health centre to be conveyed to the health workers on duty in their respective areas. Dissemination of information via Whatsapp media by sending a link(*link*)to health workers in health centers Bantul Regency.

The measuring instrument used is DASS42. DASS42 which is administered online has a range of item discrimination for depression, namely 0.497 - 0.857, anxiety 0.423 - 0.716, and

stress 0.552 - 0.714. The reliability of the scale is 0.954 for the depression scale, 0.903 for the anxiety scale, and 0.917 for the Stress scale (Widyana, Sumiharso, Safitri, & 2020). This instrument is still very relevant and complex to measure a person's mental health problems even during the current pandemic conditions. This shows that the DASS questionnaire is still quite effective for use in all human groups and various research needs (Nugroho, 2021).

Results

Based on data collection, respondents obtained as many as 76 health workers who have a minimum working period of 1 year and are spread over ten regions with variations in the types of professions, namely as many as 15 types of health professions. The data shows that 87% are female, and 13% of the respondents are male. 92% of respondents who filled out the questionnaire were married, and 8% had unmarried status. The age of respondents in this study who were aged 20-30 as many as 18%, aged 31-40 years as much as 42%, aged 40-50 years as much as 24%, and aged 50-60 years as much as 16%. The education level of the respondents is as much as 63% in D3, 37% has an undergraduate education level, and there are 3% who have a master's education level. The length of service of the respondents there is 38% who have a working period of 1-10 years, 39% who have a service period of 11-20 years, 16% who have a working period of 21-30 years, and 7% of the respondents who have a working period of 30-40 years. The demographic data of the respondents can be seen in Table 1.

Table 1
Demographic Data of Respondents

Demographics	Total	Percentage
Age		
20-30	14	18%
31-40	32	42%
40-50	18	24%
50-60	12	16%
Gender		
Man	10	13%
Female	66	87%
Level of education		
D3	46	61%
S1	28	37%
S2	2	3%
Marital status		
Marry	70	92%
Not Married	6	8%

Length of work		
1-10 years	29	38%
11- 20 years	30	39%
21- 30 years	12	16%
30- 40 years	5	7%
Profession		
Nutritionists	3	4%
Pharmacist Assistant	1	1%
Doctor	11	14%
Nurse	32	42%
Midwives	15	20%
Epidemiologist	1	1%
Physiotherapist	1	1%
Public Health Educator	1	1%
Medical recorder	2	3%
Health promotion worker	1	1%
Psychologist	1	1%
Sanitarian	2	3%
Surveillance	1	1%
Medical Laboratory Personnel	3	4%
Health Center Administration	1	1%
Region		
Pleret	10	13%
Sewon	10	13%
Wake up	11	29%
Poor	22	29%
Bantul	7	9%
Dlingo	2	3%
Kretek	1	1%
Pandak	2	3%
Piyungan	3	4%

Pundong	4	5%
Sedayu	4	5%

Data obtained from the mental health research scale using the DASS42 scale was used as the basis for testing the hypothesis using hypothetical and empirical scores. It determines the minimum value, maximum value, range, standard deviation, and average (mean). These results will be used as the basis for the categorization of research data. The following are tables 2 and 3 of the results of the statistical description of the research data, and the complete results can be seen in the attachments for calculating hypothetical and empirical data.

Table 2

Description of mental health statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Mental Health	76	0	76	21.08	17.292
Valid N (listwise)	76				

Table 3

Description of the statistics of depression, anxiety and stress

	N	Minimum	Maximum	Mean	Std. Deviation
Depression	76	0	22	5.24	5.130
Anxiety	76	0	25	7.04	5.976
Stress	76	0	30	8.80	6.926
Valid N (listwise)	76				

Table 3

Hypothetical mental health statistics

Category	Norm	Interval	Frequency	Percentage
Very Low	$X \leq M - 1,5SD$	$X \leq 31$	57	75 %
Low	$M - 1,5SD < X \leq M - 0,5SD$	$31 < X \leq 51$	14	18.42 %
Medium	$M - 0,5SD < X \leq M + 0,5SD$	$51 < X \leq 72$	4	5.26 %
High	$M + 0,5SD < X \leq M + 1,5SD$	$72 < X \leq 92$	1	1.32 %
Very High	$M + 1,5SD < X$	$92 < X$	0	0 %
Total			76	100

Based on the level of mental health, out of 76 respondents indicated that the average mental health was 61.5, with the lowest score of 0 and the highest score of 123. The average result of this study was at a moderate mental health level. However, 57 respondents (75%) showed very low mental health.

Table 4

Empirical statistics on mental health

Category	Norm	Interval	Frequency	Percentage
Very Low	$X \leq M - 1,5SD$	$X \leq -5$	0	0
Low	$M - 1,5SD < X \leq M - 0,5SD$	$-5 < X \leq 12$	31	40.79 %
Medium	$M - 0,5SD < X \leq M + 0,5SD$	$12 < X \leq 30$	26	34.22 %
High	$M + 0,5SD < X \leq M + 1,5SD$	$30 < X \leq 47$	13	17.12 %
Very High	$M + 1,5SD < X$	$47 < X$	6	7.87%
Total			76	100

Based on the level of mental health, out of 76 respondents indicated that the average mental health was 21.08, with the lowest score of 0 and the highest score of 76. The average result of this study was at a moderate mental health level. However, 31 respondents (40.79%) showed a low level of mental health.

Empirical statistics are based on the standard curve of the distribution of scores of a group, so that categorization using empirical statistics will always result in a pattern of appropriate categories such as the normal curve, i.e., those in the medium category are always more than those in the high and low categories. At the same time, the use of hypothetical statistics does not always follow the normal curve of group scores. So, in general, empirical statistics are appropriate for interpretation at the individual level, while hypothetical statistics are suitable for group interpretation.

Table 5

Details of mental health levels

_Level	Depression		Anxiety		Stress	
	Total	Percentage	Total	Percentage	Total	Percentage
Normal	61	80.2%	50	65.7%	62	81.58%
Mild	7	9.2%	5	6.57%	7	9.2%
Medium	7	9.2%	13	17.1%	4	5.26%
Severe	1	1.3%	4	5.26%	3	3.94%
Very Severe	0	0	4	5.26%	0	0
Total	76	100%	76	100%	76	100%

Table 6

Details of mental health levels in nurses

_Level	Depression		Anxiety		Stress	
	Total	Percentage	Total	Percentage	Total	Percentage
Normal	24	75%	20	62.5%	25	81.58%
Mild	5	15.6%	3	9.4%	5	9.2%
Moderate	3	9.4%	7	21.9%	2	5, 26%
Severe	0	0%	2	6.2%	0	3.94%
Very Severe	0	0	0	0%	0	0
Total	32	100%	32	100%	32	100%

Table 7

Details of mental health levels in doctors

Level	Depression		Anxiety		Stress	
	Total	Percentage	Total	Percentage	Total	Percentage
Normal	6	54.5%	5	45.4%	8	72.7%
Mild	1	9.1%	1	9.1%	0	0%
Moderate	3	27.3%	2	18.2%	0	0%
Severe	1	9.1%	0	0%	3	27.3%
Very Severe	0	0%	3	27.3%	0	0
Total	11	100%	11	100%	11	100%

Table 8

Details of mental health levels in midwives

Level	Depression		Anxiety		Stress	
	Total	Percentage	Total	Percentage	Total	Percentage
Normal	13	86.7%	12	80%	13	86.7%
Mild	1	6.7%	0	0%	1	6.7%
Moderate	1	6.7%	1	6.7%	1	6.7%
Severe	0	0%	1	6.7%	0	0%
Very Severe	0	0%	1	6.7%	0	0%
Total	15	100%	15	100%	15	100%

This study on health workers in the Bantul Regency area showed normal depression in 80.2% of respondents, mild in 9.2% of respondents, moderate in 9.2% of respondents, and severe in 1.3% of respondents. Normal anxiety in 65.7% of respondents, mild 6.57%, moderate 17.1%, severe 5.26%, and very severe 5.26%. On the other hand, the stress in the normal category was experienced by 81.58% of respondents, 9.2% mild, 5.26% moderate, and 3.94% severe.

Discussion

In general, the research data shows that the mental health of individual health workers is in a low category, as much as 40.79%. The DASS42 scale shows that as many as 40.79 health workers have low stress, anxiety, and depression symptoms. The data shows that most health workers who have worked for one year or more and even 30-40 years can maintain their mental health. Work stress in nurses is related to workload (Budiyanto, Rattu, & Umboh, 2019). The risk of stress is greater in health workers with heavier workloads (Hikmawati, Maulana, & Amalia, 2020). In this study, 18.42% of respondents perceived stress, with 81.58% indicating everyday stress. The increase in workload due to COVID-19 has been going on for more than a year. This allows some health workers to have adapted to the existing workload.

In addition, it is also possible that most of the health workers are over the age of 30. We're at that age an individual has enough emotional maturity. The data is almost the same as research and Hanafi and Yuniasanti (2012) that nurses' emotional maturity is also associated with high burnout or stress experienced. The education level of the respondents, most of whom have academic degrees from D3 as many as 63%, undergraduates 37%, and some even masters as much as 2% is one of the factors that allow symptoms of stress, depression, and low anxiety. A good level of education will make an individual able to manage the problems and work stress he experiences. This is following Suci's research (2018) which shows that the lower the level of education, the higher the work stress of a person.

The research data also shows that 7.12% of health workers have high mental health symptoms, meaning that 7.12% or 13 health workers during the COVID-19 pandemic experienced stress, anxiety, and depression symptoms. There are also 7.87% of respondents

with very high symptoms of stress, anxiety, and depression. This study indicates that anxiety is the most common thing experienced by medical personnel in Bantul Regency, namely 44.3% of respondents experience mild to very severe anxiety.

Most of these respondents are female, as many as 87% and most of the respondents are married as many as 92%, so this may also be a factor that causes health workers to still have high and very high symptoms of stress and anxiety and depression. This is in line with the results of research from Nurfadilah (2021) in his literature review on mental health research on nurses who found that personal factors such as age, female gender, and married status also influenced the emergence of mental health problems. This result is different from the research of Titisari and Fani (2020) in the Banjarnegara area. Research on medical record officers in Banjarnegara showed that most respondents were in the normal category when measured using DASS21; all of the anxiety and stress respondents were normal, for depression 91% normal and mild depression 9% (Titasari & Fani, 2020). Specifically, research on health workers, namely emergency room nurses at a hospital in Surakarta, showed that out of 20 nurses, 15 people (75%) experienced severe stress, and five people (25%) experienced stress in the moderate category (Musu et al., 2021). Research in Surabaya on 101 health workers showed that 17.9% of respondents showed depression and stress in the high category, 67.3% moderate, and 17.8% low (Pratitis et al., 2021). This condition is possible because each work location has unique characteristics, so that the level of mental health of health workers varies. Work stress in health workers is related to facilities/infrastructure (Budiyanto et al., 2019).

When viewed from the type of work of medical personnel, researchers analyzed doctors, midwives, and nurses. This study indicates that most depression, anxiety, and stress conditions are in the normal category, namely midwives. On the other hand, the lowest profession in the normal category is a doctor. This shows that in Bantul Regency, doctors show more stress and symptoms of psychological problems. This result follows Supratman et al (2020) research, which shows that doctors are more stressed than other health workers.

In this study, the medical profession was the profession that showed the highest symptoms of anxiety. It is known that 45.4% of anxiety is normal, 9.1% is mild, 18.2% is moderate, and 27.3% is very severe. These results are consistent with Saeed et al (2021) research, which significantly increased anxiety among doctors during the COVID-19 pandemic. Increased anxiety in doctors is associated with high workloads and fatigue for doctors (Mahmood et al., 2021).

Conclusions and Suggestions

Based on the results of this study, it can be concluded that some of the health workers at the Bantul District Health Center showed mental health problems, namely depression, anxiety, and stress. Anxiety is the most common problem. Therefore, related parties can provide handling of anxiety to health workers so that mental health conditions can be achieved in health workers. Steps that can be taken are holding regular sharing with health workers and training on anxiety management. The medical profession is the profession that shows the most symptoms of mental health problems. This needs to be followed up immediately so that doctors can work optimally in providing treatment to patients. Evaluation of the causes of depression, anxiety, and stress needs to be done first to determine the proper treatment. This

research is expected to provide very useful information on the mental condition of health workers in the face of a disease pandemic, especially the COVID-19 pandemic. The researcher would like to say thank you to the health department for helping in providing access to health workers and helping to distribute the research questionnaire.

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