

# DETERMINANTS PSYCHOLOGICAL DISTRESS OF INDONESIAN HEALTH CARE PROVIDERS DURING COVID-19 PANDEMIC

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## ABSTRACT

**Background:** The COVID-19 epidemic has caused serious threats to physical health and human life, including in Indonesia. After the announcement of Indonesia's emergency response to Covid-19 by the central government on March 16, 2020, the number of sufferers of Covid-19 is increase rapidly. Health Care Providers who are at the forefront of handling patients with Covid-19 could be experience psychological distress such as anxiety, stress and depression. Prolonged psychological distress can be contribute to their performance, decision making self-harm in advanced.

**Aim:** to identify determinant factors of psychological distress experienced by health care providers during the Covid-19 pandemic in Indonesia

**Method:** This study was a cross sectional survey. Respondents were taken using the snowball sampling technique. Data analysis used Pearson product moment to determine the influence of variables and multiple linear regression to determine the most dominant factor.

**Results:** Six hundred and eighty two healthcare providers were involved in this study. There was a relationship between sex ( $p = 0.001$ ), age ( $p = 0.028$ ), Health Care Providers ( $p = 0.014$ ) and workplace ( $p = 0.08$ ) with anxiety levels and there was no relationship between education ( $p = 0.063$ ) and marital status ( $p = 0.213$ ) with anxiety levels. There is a relationship between sex ( $p = 0.007$ ), Health Care Providers ( $p = 0.012$ ), and marital status ( $p = 0.011$ ) with stress levels, there is no relationship between age ( $p = 0.342$ ), Education ( $p = 0.096$ ) and workplace ( $p = 0.19$ ) with stress levels. hypertension ( $p = 0.731$ ) and alcohol consumption ( $p = 0.169$ ). there is a relationship between workplace and depression level ( $p = 0.011$ ) and there is no relationship between sex ( $p = 0.238$ ), age ( $p = 0.434$ ), education ( $p = 0.082$ ), Health Care Providers ( $p = 0.064$ ) and marital status ( $p = 0.458$ ) with the level of depression of Health Care Providers. Sex was a dominant factor on anxiety, stress, and depression level and has a Beta value of 0.124 for anxiety, stress level has a Beta value of 0.119.

**Conclusion:** Gender, Health Care Providers and marital status have a significant relationship with the level of stress of Health Care Providers in Indonesia during the Covid-19 pandemic. The workplace has a significant relationship with the level of depression in Indonesia Health Care Providers during the Covid-19 pandemic. Special attention needs to be paid to health care providers by providing free counseling at each health service venue. Improved facilities and tools to improve security for health care providers.

**Keywords:** Covid-19, health care providers, Indonesia, Psychological distress, pandemic

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## INTRODUCTION

The world was shocked by a statement from the *Wuhan Municipal Health Committee* that issued a notification about the immediate handling of pneumonia cases without an unknown cause in Wuhan, China (1). The disease is thought to be from a new virus called *Coronavirus Disease 2019 (COVID-19)*. Covid-19 or Sars-CoV-2 is part of a large family of viruses that have never been identified before in humans and this disease is transmitted from animals to humans. Symptoms of Covid-19 sufferers include coughing, fever, fatigue, shortness of breath, and no appetite. But in contrast to influenza, the corona virus can develop rapidly to result in more severe infections and organ failure. This emergency condition mainly occurs in patients who have comorbidities (2).

The spread of the corona virus was so rapid outside of China that on 11 March 2020, WHO established Covid-19 as a pandemic outbreak (1). As on March 29, 2020 COVID-19 cases were confirmed worldwide as many as 634813 cases with the death of 29891 cases. China confirms the number of Covid-19 sufferers with 82341 cases, South Korea with 9583 cases, Australia with 3966 cases and Malaysia with 2320 cases. This condition is very concerned for all countries in the world.

On March 2, 2020, Indonesia has reported 2 confirmed coronavirus case. Because the numbers continue to grow, the central government on March 16, 2020 announced Indonesia's emergency response policy towards Covid-19 followed by *social distancing* calls on the public. On March 29, 2020, this case increased to 1,285 cases in 30 provinces.

The five highest provinces in 19 cases are Jakarta (675), West Java (149), Banten (106), Indonesia (90), and Central Java (63). The increase in the number of cases took place quite quickly and there has been a spread (3).

The COVID-19 pandemic has posed a serious threat to physical health and human life in the world. In addition, this condition also triggers various psychological problems, such as panic disorder, anxiety and depression (4). COVID-19 associated with high psychological pressure is also experienced by health professionals both directly in contact with Covid-19 patients and those who are not (5). According to Liu et al. (2020) (6), the higher prevalence of psychological symptoms was found in medical Health Care Providers during COVID-19 than before the outbreak. Health Care Providers are in close contact with infected patients who can transmit the disease to them. They are also worried that they will infect their own family and friends. They must wear personal protective equipment throughout the body with negative pressure for more than 12 hours. To avoid infection when removing protective equipment, staff members cannot eat, drink, or use the bathroom during business hours. Many of them become dehydrated due to excessive sweating, and some experience cystitis and rashes. Medical staff working in quarantine areas must always maintain close contact with infected cases. In this dangerous condition, medical staff become mentally and physically exhausted, and therefore experience an increased risk of insomnia due to high stress (7).

Several studies have shown that the incidence of psychological distress occurs in Health Care Providers is quite high. Health Care Providers in Wuhan China had 34.4% mild disturbances, 22.4% had moderate disorders and 6.2% had severe disorders during the virus epidemic (8). Research in Singapore shows that medical personnel experience anxiety (32%), stress (19%) and depression (24%) (9). In Indonesia, there is no definite record of the incidence of psychological distress in Health Care Providers, but some mass media reported stress on doctors and nurses as the number of Covid-19 patients increased, lack of personal protective equipment and negative public stigma on health care providers.

Psychological distress in Health Care Providers can increase in women (8), poorly educated (10), and highly educated (11), works as a nurse and doctor (12), early adulthood (9), and late adulthood (8), married and divorced (8). Therefore, Health Care Providers need adequate health protection and working conditions, for example the provision of necessary and adequate medical protection equipment, adequate resting

arrangements, and recovery programs aimed at strengthening psychological resilience and well-being (13). This research is intended to determine the psychological distress of Health Care Providers in Indonesia during the Covid-19 period so that these findings are expected to be used to formulate psychological interventions to improve mental health and psychological resilience during the Covid-19 pandemic.

## METHODS

### Design of the study

This study used a cross sectional study, which was the cause and effect that occurred in the object of research, measured or collected simultaneously and at the same time.

### Research Samples

A sample of 682 respondents were taken with the *snowball sampling technique*. *Snowball sampling* is a data source sampling technique which at first the amount was not able to provide complete data, then had to find other people who could be used as data sources. The inclusion criteria in this study were respondents who worked in a service unit that handled co-19 patients directly or indirectly. The instrument used in this study was the Google form with questions about the respondent's general data and specific data on stress, anxiety and depression in health care providers who work in handling co-pandemic 19 patients. The instrument in this study had tested the validity of the data using the Pearson product moment and the reliability test using Cronbach's alpha. all question items are declared valid and reliable.

### Method of Data Collection

The data collection method used primary data obtained from filling out the Questionnaire DASS 21 through online starting on April 1st – 25th, 2020.

### Data Analysis

Demographic characteristics were analyzed using Descriptive Analysis (percentage, mean, SD, frequency). Bivariate analysis was performed to analyze the relationship between demographic characteristic (age, sex, professional background, workplace, marital status with PD). Determinan factors were analyzed using multivariate analysis. This study used univariate analysis which was presented by describing all variables as information material by using frequency distribution tables, bivariate analysis using *Pearson product Moment* test and multivariate analysis using multiple linear regression with Enter method.

## RESULT

### 1. Characteristics of Respondents

Table 1: Characteristics demography of Respondents (n = 682)

Variable	Frequency	Percentage (%)
<i>Gender</i>		
Male	192	28.2
Female	490	71.8
<i>Age</i>		
Late teens	112	16.4
Early adulthood	320	46.9
Late adulthood	169	24.8
Early Elderly	81	11.9
<i>Education</i>		
Diploma	361	52.9
Bachelor	174	25.5
Profession	116	17
Specialist	6	0.9
S2 (Master) / S3 (Doctoral)	25	3,7

<i>Health Care Providers</i>		
Nurse	485	71.1
Doctor	25	3.7
Analyst	34	5
Nutritionists	10	1.5
Medical checker	11	1.6
Radiographer	5	0.7
Midwife	95	13.9
Hospital Administration	4	0.6
Etc	13	1.9
<i>Workplace</i>		
State Hospital	119	17.4
Private Hospital	311	45.6
Clinic	51	7.5
Public health center	201	29.5
<i>Marital status</i>		
Married	527	77.3
Single	143	21.0
Widow/widower	12	1.7

Based on the table, it can be seen that the majority of respondents are female (71.8%), early adulthood (46.9%), have a diploma last education that is 52.9%, work as nurses

(71.1%), work in Private hospital (45.6%), and married (77.3%).

## 2. Overview of Psychological Distress

Table 2: Description of respondents' psychological distress (n = 682)

Level	Anxiety		Stress		Depression	
	n	%	n	%	n	%
Normal	454	66.6	466	68.3	565	82.8
Mild	107	15.7	110	16.2	66	9.7
Moderate	71	10.4	83	12.2	42	6.2
Severe	31	4.5	22	3.2	7	1
Chronic	19	2.8	1	0.1	2	0.3
Total	682	100	682	100	682	100

Table 2 shows that respondents with normal anxiety levels were higher (66.6%). Likewise with stress levels and

depression levels Most are at normal levels which is 68.3% for stress levels and 82.8% for depression levels.

## 3. Anxiety Level

Table 3: Relationship between characteristics and anxiety levels of health workers during the Covid-19 period (n = 682)

Variabel	Anxiety Level										Total		Nilai p
	Normal		Mild		Moderate		Severe		Chronic		n	%	
	n	%	n	%	n	%	n	%	n	%			
<i>Gender</i>													
Male	140	20.6	28	4.1	14	2.1	5	0.7	5	0.7	192	28.2	0.001
Female	314	46	79	11.6	57	8.4	26	3.8	14	2.1	490	71.8	
Total	454	66.6	107	15.7	71	10.5	31	4.5	19	2.8	682	100	
<i>Age</i>													
Late Teenager	79	11.6	21	3.1	6	0.9	2	0.3	4	0.6	112	16.4	0.028
Early Adulthood	206	30.2	47	6.9	36	5.3	22	3.2	9	1.3	320	46.9	
Late Adulthood	107	15.7	31	4.5	19	2.8	7	1.0	5	0.7	169	24.8	
Early Elderly	62	9.1	8	1.2	10	1.5	0	0	1	0.1	81	11.9	
Total	454	66.6	107	15.7	71	10.5	31	4.5	19	2.7	682	100	
<i>Education</i>													
Diploma	238	34.9	57	8.4	35	5.1	19	2.8	12	1.8	361	52.9	0.063
Bachelor	112	16.4	28	4.1	20	2.9	8	1.2	6	0.9	174	25.5	
Profession	83	12.2	16	2.3	12	1.8	4	0.6	1	0.1	116	17	
Spesialist	5	0.7	1	0.1	0	0	0	0	0	0	6	0.9	
Master/Doctoral	16	2.3	5	0.7	4	0.6	0	0	0	0	25	3.7	
Total	454	66.5	107	15.6	71	10.4	31	4.6	19	2.8	682	100	
<i>Health Care Provider</i>													
Nurse	317	46.5	71	10.4	56	8.2	24	3.5	17	2.5	485	71.1	0.014
Doctor	14	2.1	7	1.0	2	0.3	2	0.3	0	0	25	3.7	
Analist	21	3.1	8	1.2	4	0.6	0	0	1	0.1	34	5	
Nutritionist	8	1.2	2	0.3	0	0	0	0	0	0	10	1.5	
Medical checker	6	0.9	2	0.3	1	0.1	1	0.1	1	0.1	11	1.6	
Radiographer	4	0.6	0	0	0	0	1	0.1	0	0	5	0.7	

Midwife	72	10.6	13	1.9	7	1.0	3	0.4	0	0	95	13.9	
Hospital Administration	3	0.4	1	0.1	0	0	0	0	0	0	4	0.6	
Etc	9	1.3	3	0.4	1	0.1	0	0	0	0	13	1.9	
Total	454	66.7	107	15.6	71	10.3	31	4.4	19	2.7	682	100	
<i>Work Place</i>													
State Hospital	71	10.4	20	2.9	13	1.9	8	1.2	7	5.9	119	17.4	0.008
Private Hospital	208	30.5	46	6.7	34	5	13	1.9	10	1.5	311	45.6	
Clinic	39	5.7	5	0.7	4	0.6	3	0.4	0	0	51	7.5	
Public Health Center	136	19.9	36	5.3	20	2.9	7	1	2	0.3	201	29.5	
Total	454	66.5	107	15.6	71	10.4	31	4.5	19	7.7	682	100	
<i>Marital status</i>													
Married	347	50.9	80	11.7	57	8.4	27	4	16	2.3	527	77.3	0.213
Single	97	14.2	27	4	12	1.8	4	0.6	3	0.4	143	21.0	
Widow	10	1.5	0	0	2	0.3	0	0	0	0	12	1.7	
Total	454	66.6	107	15.7	71	10.5	31	4.6	19	2.7	682	100	

\*p-value <0,05

The table above explains that the largest percentage of respondents with normal anxiety is 46% experienced by women, early adulthood (30.2%), with diploma (34.9%), work as nurses (46.5%), working at home private hospital (30.5%), and married (50.9%). Statistical test results found that there is a relationship between sex (p = 0.001), age (p = 0.028), Health Care Providers (p = 0.014) and workplace (p = Table 4. Relationship between respondent characteristics and stress levels of Health Care Providers in Indonesia during the Covid-19 period (n = 682)

0.08) with the anxiety level of Health Care Providers in Indonesia in the Covid-19 pandemic period. Furthermore, the statistical test results state that there is no relationship between education (p = 0.063) and marital status (p = 0.213) with the level of anxiety of Health Care Providers in the Indonesia region during the Covid-19 pandemic.

#### 4. Stress Level

Variable	Stress Level										Total		Value of p
	Normal		Mild		Moderate		Severe		Chronic		n	%	
	n	%	n	%	n	%	n	%	n	%			
<i>Gender</i>													
Male	148	21.7	21	3.1	17	2.5	6	0.9	0	0	192	28.2	0.007
Female	318	46.6	89	13	66	9.7	16	2.3	1	0.1	490	71.8	
Total	466	68.3	110	16.1	83	12.2	22	3.2	1	0.1	682	100	
<i>Age</i>													
Late teenager	84	12.3	14	2.1	12	1.8	1	0.1	1	0.1	112	16.4	0.342
Early adulthood	212	31.1	58	8.5	36	5.3	14	2.1	0	0	320	46.9	
Late adulthood	113	16.6	23	3.4	28	4.1	5	0.7	0	0	169	24.8	
Early Elderly	57	8.4	15	2.2	7	1	2	0.3	0	0	81	11.9	
Total	466	68.4	110	16.2	83	12.2	22	3.2	1	0.1	682	100	
<i>Education</i>													
Diploma	242	35.5	61	8.9	41	6	16	2.3	1	0.1	361	52.9	0.096
Bachelor	118	17.3	30	4.4	24	3.5	2	0.3	0	0	174	25.5	
Profession	82	12	15	2.2	15	2.2	4	0.6	0	0	116	17	
Specialist	5	0.7	1	0.1	0	0	0	0	0	0	6	0.9	
Master/Doctoral	19	2.8	3	0.4	3	0.4	0	0	0	0	25	3.7	
Total	466	68.3	110	16	83	12.1	22	3.2	1	0.1	682	100	
<i>Health Care Providers</i>													
Nurse	326	47.8	75	11	65	9.5	18	2.6	1	0.1	485	71.1	0.012
Doctor	17	2.5	4	0.6	2	0.3	2	0.3	0	0	25	3.7	
Analyst	24	3.5	4	0.6	6	0.9	0	0	0	0	34	5	
Nutritionists	6	0.9	2	0.3	2	0.3	0	0	0	0	10	1.5	
Medical checker	5	0.7	5	0.7	1	0.1	0	0	0	0	11	1.6	
Radiographer	4	0.6	0	0	0	0	1	0.1	0	0	5	0.7	
Midwife	71	10.4	16	2.3	7	1	1	0.1	0	0	95	13.9	
Hospital Administration	3	0.4	1	0.1	0	0	0	0	0	0	4	0.6	
Etc	10	1.5	3	0.4	0	0	0	0	0	0	13	1.9	
Total	466	68.3	110	16	83	12.1	22	3.1	1	0.1	682	100	
<i>Workplace</i>													
State Hospital	78	11.4	16	2.3	20	2.9	4	0.6	1	0.1	119	17.4	0.109
Private Hospital	212	31.1	51	7.5	37	5.4	11	1.6	0	0	311	45.6	
Clinic	39	5.7	5	0.7	6	0.9	1	0.1	0	0	51	7.5	
Public health center	137	20.1	38	5.6	20	2.9	6	0.9	0	0	201	29.5	

amount	466	68.3	110	16.1	83	12.1	22	3.2	1	0.1	682	100	
<i>Marital status</i>													
Married	350	51.3	87	12.8	69	10.1	20	2.9	1	0.1	527	77.3	0.011
Single	107	15.7	21	3.1	13	1.9	2	0.3	0	0	143	21.0	
Widow widower	9	1.3	2	0.3	1	0.1	0	0	0	0	12	1.7	
Total	466	68.3	110	16.2	83	12.1	22	3.2	1	0.1	682	100	

The results of research on the level of stress on Health Care Providers during the covid -19 pandemic in Indonesia was the highest normal stress where most respondents experienced by women (46.6%), were in the range of early adulthood (31.1%), with diploma ( 35.5%), worked as nurses (47.8%), worked in private hospitals (31.1%), and were married (51.3%). Statistical tests show that there is a significant relationship between gender (p = 0.007), Health

Care Providers (p = 0.012) and marital status (p = 0.011) with stress levels in Health Care Providers in Indonesia during the Covid-19 pandemic. Meanwhile, statistical tests showed that there was no significant relationship between age (p = 0.342), education (p = 0.096) and workplace (p = 0.109) with stress levels in Health Care Providers in Indonesia during the Covid-19 pandemic.

### 5. Depression Level

Depression level of Health Care Providers in Indonesia during the Covid- period (n = 682)

Variable	Depression Level										Total		value
	Normal		Mild		Moderate		Severe		Chronic		n	%	
	n	%	n	%	n	%	n	%	n	%			
<i>Gender</i>													
Male	161	23.6	20	2.9	8	1.2	3	0.4	0	0	192	28.2	0.238
Female	404	59.2	46	6.7	34	5	4	0.6	2	0.3	490	71.8	
Total	565	82.8	66	9.6	42	6.2	7	1	2	0.3	682	100	
<i>Age</i>													
Late teenager	97	14.2	7	1	4	0.6	3	0.4	1	0.1	112	16.4	0.434
Early adulthood	261	38.3	36	5.3	18	2.6	4	0.6	1	0.1	320	46.9	
Late adulthood	140	20.5	15	2.2	14	2.1	0	0	0	0	169	24.8	
Early Elderly	67	9.8	8	1.2	6	0.9	0	0	0	0	81	11.9	
amount	565	82.8	66	9.7	42	6.2	7	1	2	0.2	682	100	
<i>Education</i>													
Diploma	294	43.1	39	5.7	22	3.2	6	0.9	0	0	361	52.9	0.082
Bachelor	141	20.7	16	2.3	15	2.2	1	0.1	1	0.1	174	25.5	
Profession	103	15.1	9	1.3	3	0.4	0	0	1	0.1	116	17	
Specialist	5	0.7	1	0.1	0	0	0	0	0	0	6	0.9	
Master/Doctoral	22	3.2	1	0.1	2	0.3	0	0	0	0	25	3.7	
Total	565	82.8	66	9.5	42	6.1	7	1	2	0.2	682	100	
<i>Health Care Providers</i>													
Nurse	394	57.8	50	7.3	37	5.4	4	0.6	0	0	485	71.1	0.064
Doctor	20	2.9	2	0.3	2	0.3	0	0	1	0.1	25	3.7	
Analyst	30	4.4	3	0.4	0	0	1	0.1	0	0	34	5	
Nutritionists	9	1.3	0	0	1	0.1	0	0	0	0	10	1.5	
Medical checker	8	1.2	1	0.1	0	0	1	0.1	1	0.1	11	1.6	
Radiographer	5	0.7	0	0	0	0	0	0	0	0	5	0.7	
Midwife	85	12.5	9		1	0.1	0	0	0	0	95	13.9	
Hospital Administration	4	0.6	0	0	0	0	0	0	0	0	4	0.6	
Etc	10	1.5	1	0.1	1	0.1	1	0.1	0	0	13	1.9	
Total	565	82.9	66	0.1	42	6	7	0.9	2	0.2	682	100	
<i>Workplace</i>													
State Hospital	92	13.5	17	2.5	9	1.3	1	0.1	0	0	119	17.4	0.011
Private Hospital	252	37	32	4.7	23	3.4	2	0.3	2	0.3	311	45.6	
Clinic	44	6.5	2	0.3	3	0.4	2	0.3	0	0	51	7.5	
Public health center	177	26	15	2.2	7	1	2	0.3	0	0	201	29.5	
Total	565	83	66	9.7	42	6.1	7	1	2	0.3	682	100	
<i>Marital status</i>													
Married	434	63.6	52	7.6	35	5.1	5	0.7	1	0.1	527	77.3	0.458
Single	122	17.9	13	1.9	5	0.7	2	0.3	1	0.1	143	21.0	
Widow widower	9	1.3	1	0.1	2	0.3	0	0	0	0	12	1.7	
Total	565	82.8	66	9.6	42	6.1	7	1	2	0.2	682	100	

Based on the table above, it can be proven that the highest level of depression in respondents with normal levels of depression is the highest number, namely respondents who

are female (59.2%), early adulthood (38.3%), with diploma (43.1 %), work as nurses (57.8%), work in private hospitals (37%), and get married (63.6%). Statistical test results prove

that there is no relationship between sex ( $p = 0.238$ ), age ( $p = 0.434$ ), education ( $p = 0.082$ ), Health Care Providers ( $p = 0.064$ ) and marital status ( $p = 0.458$ ) with the level of labor depression Health, but there is a relationship between the workplace and the level of depression of Health Care

Table 6: Dominant Characteristics related to Psychological Distress of Health Care Providers in Indonesia during the Covid-19 period (n = 682)

Variable	Anxiety		Stress		Depression	
	Beta	Value of p	Beta	Value of p	Beta	Value of p
Gender	0.124	0.002	.119	0.003	0.024	0.05
Age	-0.074	0.083	0.004	0.929	0.015	0.721
Education	-0.031	0.431	-0.046	0.248	-0.054	0.173
Health Care Providers	-0.107	0.007	-0.113	0.005	-0.058	0.147
Workplace	-0.053	0.176	-0.016	.673	-0.075	0.056
Marital status	-0.068	0.103	-0.092	0.028	-0.003	0.941

Based on the table above, it can be concluded that the most dominant characteristic of anxiety levels is gender, because it has a value of  $p < 0.05$  ( $p = 0.002$ ) and has a Beta value of 0.124, where the beta value is the most away from zero than other variables. Furthermore, the most dominant characteristic toward stress level is gender, because it has a value of  $p < 0.05$  ( $p = 0.003$ ) and has a Beta value of 0.119, where the beta value is the most away from zero than other variables. Likewise with the level of depression, it can be concluded that the most dominant characteristic of the level of depression is gender, because it has a value of  $p < 0.05$  ( $p = 0.05$ ) and has a Beta value of 0.124, where the beta value is the most away from zero than other variables. Furthermore, the most dominant characteristic toward stress level is gender, because it has a value of  $p < 0.05$  ( $p = 0.003$ ) and has a Beta value of 0.119, where the beta value is the most away from zero than other variables.

## DISCUSSION

### 1. Anxiety Level

The results of the study explained that the largest percentage of respondents with normal anxiety was 46% experienced by women. The statistical test results obtained  $p = 0.001$ , so it can be concluded that there is a relationship between gender and anxiety levels of Health Care Providers in Indonesia during the Covid-19 pandemic. According to Wang et al. (2020) (13), this is in line with the results of previous studies which concluded that women are far more susceptible to stress and more likely to develop post-traumatic stress disorder (14) prove that about one fifth of people have experienced extreme anxiety, and women feel more anxiety than men.

In the age factor of respondents, the majority of respondents felt anxiety with the most age groups in early adulthood (30.2%), the statistical test at age obtained  $p$  value = 0.028, which means that there is a relationship between age and the anxiety level of Health Care Providers in Indonesia during the Covid-19 pandemic. The results of this study are in line with Nobles et al. (2020) (15) in medical professionals with adult age have twice the risk of suffering from anxiety and depression. Huang & Zhao (2020) (16) states that the symptoms of anxiety are more likely to occur in people younger than 35 years and those who spend too much time focusing on the plague. Compared to other professions, Health Care Providers are associated with a higher risk for poor sleep quality.

Educational factors and types of health professionals are also examined. The results showed that the highest anxiety level was diploma-educated (34.9%) and was a nurse (46.5%).

Providers during the covid-19 pandemic in Indonesia ( $p = 0.011$ ).

### 6. Dominant Characteristics Related to Psychological Distress

Statistical test results obtained  $p$  value = 0.063 ( $p > 0.05$ ) for Education, and  $p$  value = 0.014 ( $p < 0.05$ ) on the Health Care Providers factor, it can be concluded that there is no relationship between Education with the anxiety level of Health Care Providers in the pandemic covid period but has a significant relationship between the types of professions of Health Care Providers with the anxiety level of Health Care Providers in the pandemic covid. This research is in line with Nemati et al. (2020) (17). Different educational backgrounds do not show a significant effect on the level of education related to anxiety levels. In this case, the general outbreak and high level of COVID-19 transmission in the world may have increased nurses' attention and knowledge about this pandemic disease.

Associated with a higher level of education and higher work experience from older staff in a hospital environment having high stress, which can lead to a higher understanding of Covid-19 (18). Roy et al. (2020) (19) said that at the education level professional nurses often have better awareness, positive attitudes towards epidemics / pandemics and they often experience low levels of anxiety.

Health Care Providers such as nurses and doctors experience psychological distress because they provide direct care to patients with COVID-19, knowing that someone who has contracted or died from an illness, or are required to undergo quarantine or isolation. 1-3 Mitigation strategies for all scenarios are very important. to ensure psychological health and in turn ensure a healthy and strong clinical workforce (20).

The level of anxiety of respondents associated with workplace and marital status was highest at the highest level of anxiety in private hospitals (30.5%), then most were experienced by respondents with married status (50.9%). Statistical test on workplace factors obtained  $p$  value = 0.08 and on marital status factor  $p$  value is 0.213, thus it can be concluded that there is a relationship between workplace with the level of anxiety of Health Care Providers in the pandemic covid, but there is no relationship between marital status Health Care Providers with anxiety levels in Health during the pandemic covid. This research is in line with Cheung et al. (2020) (21) based on previous experience from SARS and very limited recent evidence and the direct impact of COVID-19 epidemic on mental health the population and users of health services and nurses in mental conditions are expected to be a big problem in Hong Kong hospitals.

Medical staff who work in hospitals with coronavirus patients, such as the respiratory department, emergency department, intensive care unit, and infectious disease department, reveal more psychological disorders, and have

twice the risk of suffering from anxiety and depression, compared with previous (22). As a result, the COVID-19 pandemic is a global phenomenon that raises high levels of anxiety for Health Care Providers working in government hospitals. To overcome it great pandemic, actions that need to be taken to protect Health Care Providers and their families for professional support and must be provided to deal with problems in themselves (23).

Lee (2020) (24) stated adults who were married to Health Care Providers who reported significant anxiety in the early stages of the corona virus pandemic included a significant sample of people infected with covid-19 disease. The results showed that, healthcare workers who were married face to face in relation to the epidemic of the COVID-19 epidemic, especially in Wuhan, were worried about the risk of infection and protective measures, resulting in psychological distress, so that further action had to be taken (25).

## 2. Stress Level

Health Officers are the frontline in handling covid-19 pandemic events including in Indonesia. Internal and external demands experienced by medical personnel can be a source of pressure that exceeds the limits of ability to cause distress in the form of physical or mental fatigue, decreased endurance, and emotional instability. Prolonged stress experienced by individuals can result in decreased ability to adapt to stress. Huang & Zhao (2020) (16) found that among 230 medical staff, 63 medical staff had stress disorders, the incidence rate was 27.39%. Several previous studies have reported that most medical personnel have high stress levels (7). In this study the level of stress on Health Care Providers is still quite normal. According to Tan et al. (2020) (9) individuals are said to be still in the normal stress range if they have criteria such as stress that does not interfere with fast recovery due to the support of family or coworkers, then stress with pressure that is still considered proportional where the duration of stress is in the short and medium term. However, if a pandemic lasts long with the absence of certainty will end, it is necessary to worry that there will be an increase in stress to a pathology that can even lead to Post Trauma Syndrome Disease (PTSD) on medical personnel.

The results showed that there was a relationship between gender, type of health professional profession and marital status with stress levels in medical personnel in East Java. Women are the ones with higher stress level. This is in line with research by Huang & Zhao (2020) (16); Zhang et al. (2020) (4) which says that most respondents who experience stress are women. This is because men are more able to prioritize reason than their feelings while women use their feelings more in dealing with problems. The survey found that nurses' stress levels are higher compared to other professions. This study is the same as previous studies. According to nurses longer contact with patients exposed to Covid-19 than the doctor. Marital status also triggers stress. Married nurses have a higher stress level than unmarried nurses because of fears they will potentially spread to the husband or wife and their children (26).

Based on the results of the study, the characteristics of age, education and workplace have nothing to do with the incidence of stress on Health Care Providers in Indonesia during the Covid-19 period. The results of this study are in line with research (16) where the stress level of medical staff is not related to age, workplace and education. Cai et al. (2020) (26) suggested that Health Care Providers in the age group 31-40 years were more worried about infecting their families compared to other groups ( $2.46 \pm 0.72$ ).

Furthermore, Health Care Providers aged 41-50 years are more concerned with their safety, while those aged > 50 years experience greater stress when they see their patients die. Previous research has linked lower levels of education to increased stress events (4), but Liu et al. (2020) (6) in his research stated that highly educated Health Care Providers are more prone to stress because it is associated with self-awareness towards higher health.

## 3. Depression Level

This study proves that the most depressive rates were female respondents (59.2%), early adulthood (38.3%), last diploma education (43.1%), nurses (57.8%), worked in a private hospital (37%), and married (63.6%). The majority of depression sufferers is female and the results are the same as Lai research (2020) where 76.7% of depression are women. According to Huang & Zhao (2020) (16) women pay more attention to inner experiences and feelings of self, which are related to biological, psychological and social factors of women compared to men. The age of the highest respondent who is depressed is age in the early adult group. Previous studies have also shown that the range of early adulthood is prone to depression (12). Young adults are considered to be more understanding about the use of social media than the previous generation, thereby reducing exercise time and rest that trigger depression. The incidence of depression is more experienced by nurses, this is in accordance with research (5) where about > 40% of depression is experienced by nurses. Nurses in the co-19 period had a higher weight than usual. Nurses must face a greater risk of exposure to covid-19 patients because they spend more time on the ward, provide direct care to patients and are responsible for sputum collection for virus detection (6). Depression also occurs more frequently in married medical personnel. Research in Wuhan, China confirms that most married medical personnel experience depression (27).

The statistical test results of this study indicate that there is no relationship between sex ( $p = 0.238$ ), age ( $p = 0.434$ ), education ( $p = 0.082$ ), Health Care Providers ( $p = 0.064$ ) and marital status ( $p = 0.458$ ) with the level depressed health personnel. This research is in line with Lai et al. (2020) (5) where gender, age, education, marital status and type of nursing profession have no relationship with the incidence of depression in medical staff in China. However, this study found that there was a relationship between the workplace and the level of depression of Health Care Providers during the co-19 pandemic in Indonesia ( $p = 0.011$ ). Health Care Providers who work in hospitals with red zones and referral hospitals tend to experience burnout in a pandemic, leading to depression (6).

## 4. Dominant Factors of Psychological Distress

The dominant factor related to psychological distress was gender with a value of  $p = 0.002$  at anxiety level,  $p = 0.003$  at stress level and  $p = 0.005$  at depression level. Women have the hormone oxytocin, estrogen, and sex hormones as supporting factors that increase stress. according to, one of the triggers of psychological disorders is conflicting dual roles in women. Ntella et al. (2020) stated that dual role conflict is a form of incompatibility or differences in the role of a person in the family with his role in work (12). Nugraha & Kustanti (2018) define dual role conflict as a form of role conflict where mutual demands for work and family roles cannot be paralleled in several respects (28). So, Health Care Providers will experience distress if they are not able to align the demands of the role of work with the role at

home. Female medics during the covid period had to undergo quarantine or isolation in a special place so they had to be separated for a long time with family so they could not spend time with their family.

## CONCLUSION

Gender, age, Health Care Providers and workplaces have a significant relationship with the level of anxiety of Health Care Providers in Indonesia during the Covid-19 pandemic. Gender, Health Care Providers and marital status have a significant relationship with the level of stress of Health Care Providers in Indonesia during the Covid-19 pandemic. The workplace has a significant relationship with the level of depression in Indonesia Health Care Providers during the Covid-19 pandemic.

## Suggestion

### 1. Hospital and Government

Special attention needs to be paid to health care providers by providing free counseling at each health service venue. Improved facilities and tools to improve security for health care providers.

### 2. For the Community

Social and moral support for medical staff is more needed by accepting them in the community and eliminating negative stigma from medical workers.

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