

## ORIGINAL ARTICLE

# Factors Associated the Psychosocial Stress on Health Workers During the Covid-19 Pandemic

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### ABSTRACT

**Introduction:** COVID-19 pandemic has become a severe concern in various countries, including Indonesia; the number of sufferers continues to increase every day. All health services cannot accommodate sufferers to provide emergency health services to provide health services Covid-19 sufferers. These things make health workers at the health facilities at the frontline work tirelessly and continue to provide services until they are physically exhausted and may cause psychological stress, fear, stress, and depression. **Objectives:** This study aims to describe and analyze the factors that cause psychosocial stress on health workers during a pandemic. **Methods:** The design of this research is descriptive-analytic with a cross-sectional approach. The population taken is health workers in the southern part of Sidoarjo Regency. The sample obtained is 104 health taken by purposive sampling technique. The instrument used in this study was the GAD-7 (Generalized Anxiety Disorder) anxiety questionnaire with 7 question items. Furthermore, the data will be analyzed using the frequency distribution (percentage) and the chi-square test. **Results:** There was a relationship of age ( $p=0,013$ ), workload ( $p=0,014$ ), knowledge ( $p=0001$ ), and Availability of personal protective equipment ( $p=0,346$ ) with the anxiety of health workers. **Conclusions:** Age, knowledge, and workload influence health worker's anxiety, so that leaders and management at Health Service Facilities to continue to provide mental health and psychosocial support as an effort to prevent and overcome mental stress conditions for health workers at health facilities in carrying out their duties to treat Covid-19 sufferers.

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## Introduction

The Corona Virus (COVID-19) phenomenon has become a multidimensional disaster that has occurred in various countries, including Indonesia. The COVID-19 pandemic has become a severe concern in various countries, including Indonesia; sufferers continue to increase every day. All health services cannot accommodate sufferers until they open emergency health service facilities to provide health services to people with COVID-19. It makes health workers in health facilities work tirelessly and continue to provide services to the point of causing physical exhaustion and potentially causing psychological stress, both anxiety, fear, stress, and depression (Huang & Zhao, n.d.). Health workers at health facilities have worked tirelessly to provide services and deal with the COVID-19 pandemic in the country. They work 24 hours to serve patients with this deadly virus using Personal Protective Equipment (PPE) attached to their bodies, resisting the urge to drink, eat and defecate. Of course, this condition makes health workers at health facilities experience fatigue by sacrificing time, energy, thoughts, and sweating so that they are at risk of experiencing mental stress plus cannot meet their families in person to maintain the risk of transmitting the Covid-19 virus (Yi et al., 2011).

In a pandemic condition like this, Health Service Facilities are required to provide services and increase the limited ability of Health Officers to serve COVID-19 patients. Pandemic makes all Health Service Facilities at the management level obliged to ensure safety and security at work and provide accurate information (Lai, J. Ma, S, Wang, Y, 2020). Responding to these conditions, at the management level of Health Service Facilities, it is necessary to strengthen health workers in health facilities and management staff in a conducive and fair manner in carrying out their duties while maintaining a sense of security, social, physical, and emotional support, so that the uncertainty and mental pressure of health workers can prevent and do their job of caring for people with COVID-19 in health care facilities well and feeling able to help themselves and others (Allsopp et al., 2019).

Currently, program support is more focused on the community's mental health in dealing with the COVID-19 pandemic, even though the mental health condition of health workers in health facilities is no less critical. Health Service Facilities to continue to provide mental health and psychosocial support to prevent and overcome mental stress conditions for health workers in health facilities in carrying out their duties to treat Covid-19 sufferers. Previous studies have reported that outbreaks of infectious diseases, such as severe acute respiratory syndrome (SARS) similar to the Covid-19 pandemic, have placed a psychological burden on healthcare workers such as anxiety, depression, panic attacks, or psychotic symptoms (Lai, J. Ma, S, Wang, Y, 2020) Previous research has shown that mental illness resulting from a significant disaster has a broader and longer-lasting impact than physical injury, while far less attention is paid to mental health, both in terms of planning personnel and resources (Allsopp et al., 2019). The theoretical framework developed by the researcher is that sociodemographic conditions during a pandemic and the work regulation system made by health facility agencies can affect the level of anxiety and psychosocial disorders of health workers who work during a pandemic. Therefore, the search for factors that cause psychosocial stress is necessary to find the right solution so that health workers who function as spearheads in providing health services during the COVID-19 pandemic become physically and psychologically healthy. The researcher aims to analyze the actors that cause psychosocial stress while serving health workers during the Covid-19 pandemic.

## Methods

The design of this research is descriptive-analytic with a cross-sectional approach. The population taken is Health Workers (nurses, midwives, doctors, nutritionists, and health analysts) in the southern part of Sidoarjo Regency. The samples obtained were 104 health taken by purposive sampling technique. This research was conducted in June – August 2021. The independent variables in this study were workload, knowledge, and availability of PPE, while the dependent variable was the level of anxiety experienced by health workers during the COVID-19 pandemic.

The instrument used in this study was the GAD-7 (Generalized Anxiety Disorder) anxiety questionnaire with 7 question items. The GAD-7 score with a range of 0-21 will determine the severity of anxiety experienced by health workers. Data was collected by distributing questionnaires using a google form; then, the data will be processed and analyzed using frequency distribution (percentage) and chi-square test with a significance level of 0.05.

## Results and Discussion

### 3.1 Frequency Distribution of General and Specific Data

The subjects in this study were 104 health workers in the southern part of Sidoarjo Regency, consisting of 75% women and 25% men. The majority of respondents aged <45 years is 68%. The data can be seen in detail in table 1.

Table 1. Frequency Distribution of Respondents' Characteristics Based on Gender, Age, Workload, Knowledge of PPE Availability.

Variable	Frequency	Percentage (%)
Gender		
Male	26	25,0
Female	78	75,0
Age		
< 45 years	68	65,4
≥ 45 years	36	34,6
Knowledge		
Good	32	30,8
Medium	46	44,2
Lack	26	25,0
Workload		
Severe	42	40,4
Moderate	32	30,8
Mild	30	28,8
Availability of PPE		
Quite	44	42,3
Less	60	57,7

Based on table 1, it concluded that female respondents dominate with 75%. 65.4% Age respondents are in the range of <45 years because, during the pandemic, the productive age is better able to fight at the forefront. Meanwhile, most of the respondents were sufficiently knowledgeable for the level of knowledge, namely 44.2%. Knowledge or information about the COVID-19 virus, which is relatively new in Indonesia, causes a lot of invalid information and often news that is not necessarily true, causing a lot of inaccurate knowledge received by health workers or the public.

Based on the respondent's workload, most of the health workers (40.4%) had a heavy or excessive workload because, during the pandemic, patient visits to health facilities increased, resulting in an accumulation of patients in health facilities. In addition, the number of health workers who have contracted the COVID-19 virus has also caused the workload to increase because many health workers are self-isolating due to being confirmed positive for Covid-19 so that health workers are reduced, and patients are increasing, causing an imbalance in the number of patients and health workers. Finally, for the availability of PPE, most health workers felt insufficient during the pandemic, which was 57.7%; this was because the number of public requests was higher than the amount of production, causing the unavailability of PPE and increasing selling prices in the market.

### 3.1 Bivariate Analysis of Factors Causing Psychosocial Pressure on Health Workers During the Covid-19 Pandemic

Table 2. Bivariate Analysis of Factors Causing Psychosocial Pressure in Health Workers During the Covid-19 Pandemic

Variable	Health Workers Anxiety Level						p value
	Mild		Moderate		Severe		
	F	%	f	%	f	%	
Gender							
Male	12	11,5	4	3,8	10	9,6	0,052
Female	18	17,4	26	25,0	34	32,7	
Age							
< 45 years	18	17,4	26	25,0	24	23,1	0,013
≥ 45 years	12	11,5	4	3,8	20	19,2	
Knowledge							
Good	18	17,4	8	7,7	6	5,8	0,001
Medium	8	7,7	16	15,4	22	21,0	
Lack	4	3,8	6	5,8	16	15,4	
Workload							
Severe	10	9,6	16	15,4	16	15,4	0,014
Moderate	14	13,5	2	1,9	16	15,4	
Mild	6	5,8	12	11,5	12	11,5	
Availability of PPE							
Quite	18	17,4	20	19,2	22	21,1	0,346
Less	12	11,5	10	9,6	22	21,1	

Based on the table above, the female gender is more prone to stress when compared to males, with a p-value = 0.052. [Kaplan and Sadock \(2015\)](#) state that anxiety is more common in women. Women have high anxiety levels due to autonomic nervous overreaction with an increase in the sympathetic system, an increase in norepinephrine, an increase in the release of catecholamine, and an abnormal disturbance of serotonergic regulation ([Kaplan & Saddock, 2017](#)). [Trismiati \(2016\)](#) says that women feel anxious more quickly than men because men are more active exploratory, while women are more sensitive ([Trismiati, 2016](#)). The researcher concludes that this study shows that most respondents who experience the most anxiety when facing work are female. The anxiety that arises in women due to excessive autonomic reactions is caused by overthinking results, worrying about not graduating, and being too sensitive. As with the Covid-19 pandemic, adverse events and situations as stress-inducing factors will be very vulnerable, causing women to become more stressed.

Research conducted by [Habibi & Jefri \(2018\)](#) from the results of the analysis shows that female respondents experience more moderate work stress (41.25%) compared to male respondents (32.25%) ([Habibi & Jefri., 2018](#)). The value of p = 0.000 indicates that the research hypothesis is accepted, meaning that there is an influence of gender on work stress. The value of OR = 0.039 explains that female respondents can experience work stress of 0.039 times compared to male respondents. A similar study conducted by [Amalia, Wahyuni, & Ekawati \(2017\)](#) showed that the most common type was Female at 92.3%. Based on the statistical analysis results using the chi-square test, a p-value of 0.004 was obtained, which means that there is a relationship between gender and work stress ([Amalia, n.d.](#)).

The results showed a significant relationship between age and stress levels experienced by health workers with p = 0.013. Health workers who are more than 45 years of age are more likely to experience stress due to the lack of information obtained by older health workers. More information is conveyed through social media obtained from gadgets that are sometimes inaccessible to health workers over 45 years of age in the digital era. This study is not in line with research conducted by [Ibrahim, Amansyah, & Yahya \(2016\)](#), which showed that the respondents

who experienced the most stress were under 40 years of age (Ibrahim et al., 2016). This shows that workers under 40 years' experience more work stress than those under 40 years. Workers in the age group of the old category or above 40 years can be said to have more ability to control stress.

Research results in Variable knowledge of health workers about the COVID-19 pandemic mostly had sufficient knowledge (44.2%). The level of knowledge had a significant relationship with the stress level of health workers during the pandemic,  $p$ -value = 0.001. The higher a person's knowledge, the shallow possibility of experiencing stress. However, it is possible that people who have good knowledge can also experience severe stress. This can be caused by various factors, such as an unpleasant work environment. This could be affected by higher job demands, including long working hours, an increasing number of patients and best practices that are constantly changing as information about COVID-19 evolves (Inter-Agency Standing Committee (IASC), 2020). Therefore, outstanding support from the government is needed to provide personal protective equipment, training for health workers, and additional health benefits for both themselves and their families.

The study results of workload variables, the majority of respondents (40.4%) had a heavy workload during the pandemic. In this study, the workload has a significant relationship with the stress level of health workers with  $p$  = 0.014. This is in line with research conducted by Elvinawati (2019), which states a significant relationship between nurse workload and nurse work stress. The results show that almost half of respondents feel moderate workload and moderate work stress. Almost every condition in a job can cause stress significantly workload. The nursing profession encounters and handles various health problems faced by clients being treated can cause work stress. Bad environmental conditions can significantly affect work stress and health problems (Erdius & Fatwasari, n.d.)

Health workers are at high risk of experiencing mental disorders in the form of mild to severe stress due to various increased pressures that they have to face (Kang, L. et al., 2020). Anxiety also creates its burden, particularly at the increased risk of being exposed, infected, and possibly infecting their loved ones. Many health care workers have to isolate themselves from their families and loved ones even if they don't have Covid-19; this makes decisions difficult and can place a significant psychological burden on them (Kang, L. et al., 2020; Tsamakidis et al., 2020).

## Conclusion

Gender, Age, Knowledge, and Workload affect the Anxiety Levels experienced by Health Workers who are actively working during a pandemic, while the Availability of PPE does not affect the Anxiety Levels of Health Workers during the Covid-19 Pandemic. Suggestions for Leaders and Management at Health Service Facilities to continue to provide mental health and psychosocial support as an effort to prevent and overcome mental stress conditions for health workers in health facilities in carrying out their duties to treat Covid-19 sufferers so that Health Workers can survive and can carry out their duties as guard at the forefront of the pandemic.

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