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Anxiety and Stress Levels of Health Workers at Health Centers During the COVID-19 Pandemic

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Abstract

Introduction; The COVID-19 outbreak has presented considerable obstacles for healthcare professionals, impacting their mental health with heightened levels of anxiety and stress. This research aims to comprehensively examine the anxiety and work-related stress encountered by healthcare workers at Puskesmas (Community Health Centers) amid the pandemic.
Menthod; Employing a descriptive survey approach, 200 respondents from diverse healthcare roles across 15 health centers in Semarang City were surveyed using the Depression Anxiety Stress Scale 42 (DASS-42) and The Workplace Stress Scale (WSS). Utilizing SPSS version 25, the collected data underwent descriptive analysis.
Result Innovation; Results indicated that a majority of respondents reported normal anxiety levels, with 17.1% experiencing varying degrees of anxiety, from mild to severe. Contributing factors included inadequate personal protective equipment, heightened workload, and insufficient social support.
Conclusion; Psychological frameworks such as Occupational Stress and Adaptation Theory provided valuable insights into understanding and addressing individual responses to workplace stressors. It is imperative to address healthcare workers' anxiety and stress during the COVID-19 crisis to ensure their well-being and service quality.
Implications and Theory: Effective interventions like support groups, counseling, and coping training are vital for mitigating adverse effects. This study underscores the necessity of tailored interventions informed by psychological theories, alongside emphasizing the importance of adequate protective gear, workload management, and social support in alleviating healthcare workers' anxiety and stress.

Introduction

The rising prevalence of COVID-19 infections has placed additional strain on healthcare professionals, potentially impacting their levels of work-related stress and anxiety (Giusti et al., 2020). Prior research on medical staff providing COVID-19 patient care in hospitals revealed signs of stress and anxiety at work (Mattila et al., 2021). The presence of work-related anxiety and stress can detrimentally affect performance by increasing the occurrence of errors, impairing physical and mental well-being, and diminishing the quality of service provided (Littlejohn, 2012). The objective of this study is to provide a comprehensive description of the anxiety and work-related stress experienced by healthcare

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professionals at Puskesmas (Community Health Centers) amidst the COVID-19 pandemic.

Occupational anxiety and stress are common complaints among healthcare workers during the COVID-19 pandemic (Mattila et al., 2021). A study in 34 hospitals in China found that out of 1,257 health workers caring for COVID-19 patients, 50% experienced symptoms of depression, 34% experienced insomnia, and 71.5% experienced psychological distress (Mulatu et al., 2021; H. Zhang et al., 2020). In comparison, a study on occupational stress during the COVID-19 pandemic in Egypt found that 75.2% of 210 nurses at Zagazig Fever Hospital and 60.5% of 210 nurses at Zagazig General Hospital experienced occupational stress (Micali, 2022; Monaser et al., 2022).

Evidence from several studies suggests that high levels of anxiety in healthcare workers can be influenced by a number of factors, including age, family status, patient honesty in providing information, availability of personal protective equipment, level of knowledge, long working hours, stigma, and concerns about exposure to COVID-19 (Billings et al., 2021; Fadli et al., 2020; Picakciefe et al., 2015; Sahin, 2022). Kuo et al. 2020, Sinclair et al. (2020) explains that work stress is caused by various work stressors, including anxiety arising from unpleasant experiences or events experienced during the pandemic, such as colleagues being infected or dying from COVID-19, increased workload due to a surge in the number of patients, and work environment conditions that are considered health threatening. Landsbergis (1988), Sarafis et al. (2016) the impact of occupational anxiety and stress includes decreased physical and mental condition, increased work errors, and decreased productivity of health workers. The impact on health institutions can be a decrease in service quality due to a lack of concern for patients on the part of health workers, which has the potential to cause errors in care that threaten patient safety (Domer et al., 2021; Kenagy, 2009).

(Hazfiarini et al., 2022) Initial studies on the COVID-19 task force team at Puskesmas showed that many were initially reluctant to become task force members due to anxiety and fear of contracting and transmitting the virus to families at home. In addition, the lack of availability of standardized personal protective equipment (PPE) was also a problem. Some members admitted to being confused about the handling of COVID-19 at Puskesmas, which resulted in concerns and increased stress levels, especially when making referrals using Puskesmas ambulances (Lina Alexandra, 2022).

This research holds considerable importance in health management, especially regarding the mental well-being of health workers at Puskesmas amidst the COVID-19 pandemic. Understanding their anxiety levels and work-related stress allows for tailored strategies and interventions to enhance their psychological state and service quality. Psychological theories like Susan Folkman and Richard S. Lazarus (1980) Occupational Stress and Adaptation Theory offer valuable frameworks for comprehending individual responses to workplace stressors, aiding in the design of effective interventions for health workers in managing their anxiety and stress.

Method

This research is a descriptive study that uses a survey method (Khasawneh et al., 2020). The sample consisted of 200 respondents who were selected using cluster and quota sampling techniques. Respondents came from various professions of health workers in 15 health centers in Semarang City. Inclusion criteria included doctors, dentists, nurses, dental nurses, midwives, health analysts, nutritionists, sanitarians, community health workers, pharmacists, and pharmacist assistants who provide health services inside and outside the Puskesmas building, and have a minimum work experience of 2 years (Zargaran et al., 2023). Meanwhile, the exclusion criteria included health workers in charge of administration such as registration, finance, and administration, as well as those on leave during the data collection process (Gupta et al., 2021).

This study was based on the Ethical Approval of Health Research at RSUD 18/KEPK/2024. Data collection instruments used the Depression Anxiety Stress Scale 42 (DASS-42) and The Workplace Stress Scale (WSS) (Ibrahim et al., 2022). Data were collected through a Google Form shared by the Head of Puskesmas to team members through the WhatsApp group of each Puskesmas (Putri et al., 2020). Furthermore, the data were analyzed using descriptive statistical methods using the SPSS version 25 application (Dwianto et al., 2024). The research information approval was also submitted to prospective respondents through the Google Form Data Risearch (Ofori et al., 2021).

Research Innovation Results

An explanation of the results of the level of anxiety and work stress of health workers during the COVID-

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19 pandemic at the Puskesmas of Semarang City can be seen in Table 1, which is attached at the end of the report. Medical personnel often experience varying levels of anxiety during their work, especially in the midst of the COVID-19 pandemic. High or severe anxiety may arise when they are faced with highly stressful situations, such as caring for severe COVID-19 patients.

Moderate anxiety may arise due to constant work pressure, while normal anxiety may occur in everyday challenges. However, if moderate-high anxiety levels predominate, this suggests that medical personnel are widely experiencing significant stress in their work during the pandemic, highlighting the importance of psychological support and a healthy work environment to maintain their mental well-being.

The level of work stress of medical personnel can vary greatly, as seen in the results from Table 2:

High Level of Work Stress: A total of 19 respondents (9.5%) reported experiencing high levels of work stress. This may be due to the intense pressure of handling demanding medical tasks, such as emergency situations or handling critical cases. Moderate Job Stress: A total of 44 respondents (22%) experienced moderate levels of job stress. This is likely triggered by ongoing pressure in carrying out medical responsibilities, such as a high workload or uncertainty in working conditions. Mild Job Stress: There were 72 respondents (36%) who reported experiencing mild levels of job stress. While they may experience some level of pressure in their job, this level of stress can still be managed with appropriate stress management strategies. Low Job Stress: A total of 65 respondents (32.5%) reported low levels of job stress. This may indicate that they have a relatively stable work experience and are less affected by pressures or stressors in their work environment. This data emphasizes the importance of effective job stress management as well as the implementation of mental health strategies in the workplace to support the well-being of medical personnel.

Discussion

The findings from this study show that the majority of health workers experienced normal levels of anxiety during the COVID-19 pandemic. This result is in line with the findings of several previous studies. For example, a study in China found that around 90% of health workers did not experience anxiety (Shen et al., 2020). In Singapore and India, only about 15.7% of respondents reported experiencing anxiety (Deng et al., 2021). In addition, Sarafis et al. (2016) found that of the 155 health worker respondents studied, only a small number of them experienced anxiety. Our study shows a different view from that of Cag et al. (2021), who found that frontline health workers feel anxious when they feel unprotected, regardless of the level of COVID-19 transmission in their country. Our findings suggest that anxiety can be alleviated through efforts to ensure the availability of adequate personal protective equipment and improving the education and information provided to health workers.

While the majority of respondents in the study did not experience anxiety or experienced normal levels of anxiety, another 17.1% of respondents experienced varying levels of anxiety, ranging from mild, moderate, severe, to very severe. In comparison, another study noted that only 2.5% of respondents experienced mild to moderate anxiety. The findings from our study show that there are variations in anxiety levels, including severe and very severe anxiety, albeit in small percentages of 2.5% and 1%. This difference may be due to the use of different research methods and tools (Korkmaz et al., 2020).

Penelitian ini juga mendapat dukungan dari penelitian Santabárbara et al. (2021), yang menunjukkan bahwa pandemi COVID-19 telah menyebabkan peningkatan prevalensi kecemasan dari tingkat ringan hingga berat. Temuan ini menggambarkan bahwa beberapa tenaga kesehatan masih mengalami tingkat kecemasan yang bervariasi meskipun pandemi telah berlangsung lebih dari satu tahun (Saddik et al., 2020). Kecemasan yang awalnya dirasakan pada tingkat ringan dapat berkembang menjadi lebih berat seiring waktu, karena sulitnya mengendalikan pikiran negatif terhadap situasi pandemi. Setiap tingkat kecemasan memiliki karakteristik dan manifestasi yang berbeda-beda, yang dipengaruhi oleh faktor-faktor seperti kematangan pribadi, pemahaman dalam menghadapi ketegangan, harga diri, dan mekanisme koping yang digunakan oleh individu (Wright, 2022).

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Locsin (2021) menjelaskan bahwa kecemasan ringan adalah respons alami yang sering dialami individu sebagai peningkatan kewaspadaan dan perhatian terhadap suatu hal. Gejala ringan seperti sedikit kegelisahan, ketegangan otot, dan sedikit ketidak sabaran biasanya dapat muncul. Namun, jika kecemasan ringan tidak dikelola dengan baik, dapat berkembang menjadi kecemasan sedang. Kondisi ini ditandai dengan gejala yang lebih mengganggu seperti mudah tersinggung, peningkatan tanda-tanda vital, berkeringat berlebihan, dan sakit kepala. Jika tidak diatasi, individu akan sulit berkonsentrasi dan memecahkan masalah, yang akhirnya dapat berujung pada kecemasan berat. Kecemasan berat ditandai dengan perasaan takut yang sangat kuat, kebingungan, isolasi diri, berkeringat berlebihan, bicara cepat, dan gemetar. Jika dibiarkan berlarut-larut, kecemasan dapat mencapai tingkat yang sangat berat atau bahkan mengarah pada serangan panik, di mana individu kehilangan kendali atas diri sendiri dan kesulitan berpikir rasional. Tingkat kecemasan yang tinggi dapat mengurangi motivasi kerja tenaga kesehatan, yang pada gilirannya dapat mempengaruhi kualitas pelayanan yang mereka berikan kepada masyarakat (Chersich et al., 2020). Bahkan sebagian tenaga kesehatan yang mengalami kecemasan dan depresi dapat memiliki pemikiran untuk mengakhiri hidupnya (Eftekhar Ardebili et al., 2021; Mcglinchey et al., 2021).

Anxiety is a natural reaction that often arises when a person faces a challenge or problem. If managed appropriately, feelings of anxiety can trigger positive emotional responses, such as increased alertness and focus on situations that require attention. However, if not managed properly, anxiety can have a negative impact on mental health, and can even endanger one's life (Esterwood & Saeed, 2020). Several mental health management methods that can help health workers cope with anxiety during the pandemic, including the formation of support groups or battle buddies, counseling services, and coping training (Lewis et al., 2022; Zaçe et al., 2021).

This study shows that most of the 200 health worker respondents working during the COVID-19 pandemic experienced significant levels of work stress. A total of 67.0% of them reported experiencing work stress, with levels varying from low to severe. This is significantly different from the finding of mild or normal levels of occupational stress, which only reached 32.5%.

The findings of Zhan et al. (2020) are in line with the findings in this study, which show that most nurses experience job stress, although only at a low level. Other findings also support this, Chew et al. (2020) who found that respondents experienced high stress symptoms. However, research by Korkmaz et al. (2020) found different results, with most nurses experiencing job stress but still in the normal category. This difference in findings may be due to the inadequate number of respondents and the timing of the study which was conducted before the COVID-19 pandemic.

Work stress experienced by health workers can be triggered by various factors, especially the pandemic situation being faced. Awareness of the risk of exposure to COVID-19 in the work environment is a significant source of stressors, in accordance with the opinion of Dabholkar et al. (2020) which states that exposure of health workers to infections and hazardous substances in the work environment can cause stress. The factor of increasing workload due to the pandemic situation is also a cause of perceived stress. M. Zhang et al. (2021) showed that the higher the workload, the higher the work stress experienced by health workers during the pandemic. High levels of work stress are also associated with increased workload during the COVID-19 pandemic (Li et al., 2022).

Other studies confirm that the lack of availability of personal protective equipment (PPE) can be a stress-inducing factor for health workers. Inadequate PPE can lead to feelings of anxiety and stress related to disease transmission when providing health services. This is also corroborated by other studies which state that maintaining the availability of PPE is one way to prevent and reduce the stress level of health workers (Xia et al., 2020).

Other studies confirm that the lack of availability of personal protective equipment (PPE) can be a stress-inducing factor for health workers. Insufficient PPE can cause feelings of anxiety and stress related to disease transmission when providing health services (Fadli et al., 2020). This is also corroborated by other studies which state that maintaining the availability of PPE is one way to prevent and reduce the stress level of health workers (Xia et al., 2020).

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Another contributing factor was the increase in working hours that occurred as some health workers had to go into self-isolation, leaving tasks to be handled by their colleagues. This created an additional burden for other health workers. In this context, it is important for health workers to be appropriately rewarded as a form of appreciation for their dedication and commitment (Colvin et al., 2021). Such rewards can be in the form of incentives or other forms of positive appreciation, such as the opportunity to attend certified training or workshops, additional leave, or promotion for ASN. Non-acceptance and lack of social support can also affect health workers' job stress levels. Lack of social support can trigger feelings of pessimism or lack of confidence, which in turn can affect interpersonal relationships and individual emotions (Colvin et al., 2021). The lower the level of social support, the higher the level of work stress experienced by health workers (Woon et al., 2021).

Prolonged and increasingly intense work stress due to the COVID-19 pandemic can potentially cause adverse impacts on mental and physical health, such as extreme fatigue, decreased performance, depression, and even burnout. The findings in this study suggest that health workers are at risk of experiencing mental health disorders as a result of the COVID-19 pandemic situation (Spoorthy et al., 2020). Therefore, it is important for relevant agencies to carry out appropriate stress management for health workers. Efforts that can be made include individual, organizational, and social support strategies. Individually, health workers can take breaks between work hours, meditate regularly, and maintain diet and fitness. Organizational stress management can be done by simplifying structural processes in the organizational climate, increasing staff motivation through rewards, and ensuring position placement in accordance with abilities and expertise to avoid role ambiguity. Finally, social support from family and coworkers can help build positive emotions and increase the confidence of health workers (Hou et al., 2020).

Conclusion

In this study, the majority of health workers working during the COVID-19 pandemic experienced significant levels of anxiety and stress. This finding is in line with previous studies showing that the pandemic has increased the prevalence of anxiety and stress among health workers. Factors such as inadequate availability of personal protective equipment, increased working hours, and lack of social support contribute to increased levels of anxiety and stress. Thus, effective stress management is necessary to address the mental well-being of health workers. Individual, organizational and social support strategies can help reduce anxiety and stress levels and improve the quality of care provided by health workers. With a better understanding of the factors that influence anxiety and stress in the workplace, measures can be more targeted and effective to improve the mental well-being of health workers during the pandemic and beyond.

Data Table

Table 1. Innovasion Anxiety Level

Anxiety Level	Frequency	Percentage
High Anxiety	2	1%
Severe Anxiety	5	2.5%
Moderate Anxiety	13	6.5%
Normal Anxiety	15	7.5%
Moderate Anxiety	28	14%
Severe Anxiety	30	15%
Moderate Anxiety	**107**	53.5%

Table 2. Innovasion Work Stress Level

Work Stress Level	Frequency	Percentage
Tin Work Stress	19	9.5%

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Moderate Job Stress	44	22%
Mild Job Stress	72	36%
Low Job Stress	65	32.5%
Total	**200**	**100%**

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