

Research article

Relationship Between Resilience and Anxiety in Healthcare Workers During the COVID-19 Pandemic at Padjadjaran University, Indonesia

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Abstract.

The COVID-19 pandemic is a disaster afflicting the entire world, presenting an unprecedented opportunity to study resilience. In this study, the relationship between resilience and anxiety was examined in healthcare workers at the Central Laboratory of Padjadjaran University in Indonesia. Two questionnaires were used, namely the Hamilton Anxiety Rating Scale (HAM-A) and the Connor-Davidson Resilience Scale (CD-RISC) questionnaires. The objective of the study was to determine the correlation between resilience and anxiety in healthcare workers during the Covid-19 pandemic. This was a cross sectional study with descriptive methods and data were collected in July 2021. Univariate analyses described the distribution and percentage of each variable, while bivariate analyses explained the correlation relationship using Pearson's correlation. 47 respondents filled out the questionnaire and 34% reported having severe anxiety. The mean score of the respondents' resilience was 68.32 ± 12.31 . The Pearson's correlation test showed a significant relationship between anxiety and resilience ($p < 0.013$). Resilience is associated with better mental health and can provide a protective effect against anxiety and depression. Resilience can be supported through experience, learning, and formal training.

Keywords: resilience, anxiety, healthcare workers, Covid-19 pandemic

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1. Introduction

The World Health Organization (WHO) states that Covid-19 has become a worldwide pandemic disease with a 13 times increase in the number of cases reported in China over a week. This disease has affected more than 2.3 million people from 185 countries around the world [1]. Covid-19 was first confirmed in Indonesia on March 2, 2020, The number of deaths is around 2.70% or as many as 40,449 people, and the recovery rate reaches 88.99% of all confirmed cases of Covid-19 and active cases reached 8.30% [2].

The COVID-19 pandemic has not only had an impact on physical health but also mentally. Covid-19 is a disease that has just been detected as a development of the previous SARS virus, so researchers are still looking for specifications of the symptoms of the disease, mechanisms of prevention, transmission, and treatment. Uncertainty about

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what is being faced during the Covid-19 pandemic is a concern for the community and healthcare workers as well [3].

Healthcare workers who directly handle Covid-19 patients have a high risk of being exposed to Covid-19. In addition, they also have a heavy workload so that it can affect their psychological condition. A study conducted in China showed that symptoms of depression, somatization, and higher levels of anxiety occurred in health workers who worked in referral hospitals for COVID-19 patients. The Self-Rating Anxiety Scale (SAS) (45.89 ± 1.117) scores in the experimental group were higher than the normal control group [4]. The factors that influence the psychological disorders of health workers include facing tremendous pressure, especially those related to confirmed cases, high risk of infection, inadequate personal protective equipment, lack of experience in handling disease, longer working hours, stigma emerging in the community, and the lack of social support from the environment [2].

Healthcare workers are a group that is very vulnerable to Covid-19 infection. They were in carrying out their duties must wear full personal protective equipment to avoid exposure to infection, this makes the service much more difficult and tiring than under normal conditions. In addition, the fear of contracting the disease triggers adverse psychological problems that have a negative effect on the quality of care. Mental health problems have also been reported to cause prolonged fatigue in health workers. [5].

Anxiety is a state of worry that is not clearly felt by someone with a state of uncertainty and helplessness. Feelings of panic and fear are an aspect of emotion. while the mental and cognitive aspects can cause disturbances to worry, irregular ways of thinking, and confusion [5]. The research conducted declared that as many as 13 respondents experienced anxiety due to inadequate support situations in the field to take an action to patients [6]. Meanwhile, research conducted [7] on healthcare workers expressed that 50.4% of respondents had symptoms towards depression and 44.6% showed anxiety due to feeling depressed [8].

Individual may use coping strategies to find problem solving and maintain their mental health, then If someone can manage stress well, they may deal with challenges of their lives and find an amazing way to solve the problem [8]. In dealing with the Covid-19 outbreak or pandemic, it was important to be able to adapt and overcome a difficult condition, or resilience. Resilience is revealed an individual adaptation in dealing with stressful factors such medical and health problems, which can mediate the negative effects of stress [9]. Explained that the level of resilience can be a factor that affects the incidence of anxiety and depression. His research found the correlation between resilience and mental health was lower in the population of school and university

students ($r=0.36$), while the analysis based on geographical division exposed that the highest correlation between resilience and mental health ($r=0.83$) [9].

Coping is explained as a set of skills in focusing on the process of adaptation, and resilience is the successful outcome of employing these skills [8]. Sometimes coping skills are negative neither do they inevitably result in a good outcome; they fail as well, due to the fast and effective recovery of resilience, [10]

This current research purposed at answering the following questions: how to know an overview of the level of resilience, the level of anxiety and the correlation between resilience and anxiety in healthcare workers in the midst of a pandemic the Covid-19 at the central laboratory of Padjadjaran University?

2. Methods

The design of this research was descriptive correlation with cross sectional approach. This research was conducted at the Central Laboratory of Padjadjaran University. The population taken in this study were all healthcare workers working at the Central Laboratory of Padjadjaran University, number of population is 47 healthcare care workers. The total sample was 47 people consisting of doctors, nurses, nutritionists, and health laboratories analysts, Total sampling was used because the sampling is less than 100. This research instrument used Endurance Scale Connor – Davidson - 25 (CD RISC-25) and Hamilton Anxiety Rating Scale (HAM-A).

The data collection procedure starts from received ethical approval from the ethics committee of Stikes General Achmad Yani with number 06/KEPK/VIII/2021. Researchers apply for permission to the relevant institutions to conduct research, and determine research samples. Then, respondents signed the informed consent and were given an explanation of how to fill out the questionnaire. The next step, researchers and one research assistance distributed and collected questionnaires and made sure the questionnaire has been filled out correctly. Data has been collected was analysed using univariate and bivariate analysis. Bivariate analysis uses the frequency distribution of the respondent's characteristics in each variable, while bivariate analysis uses the Pearson Product Moment test.

This research process was carried out at the Central Laboratory of Padjadjaran University in July 2021.

3. Results

The results in this study are indicated by the frequency distribution. Distribution of the relationship between the level of resilience and the level of anxiety among healthcare workers at the Central Laboratory of the University of Padjadjaran during the Covid 19 pandemic.

TABLE 1: Demographic characteristics (n=47).

Characteristics	Frequency (f)	Percentage (%)
Age Range (year) 17–25 26–45 46–55 Total	38 8 1 47	80,9 17,0 2,1 100
Gender Male Female Total	23 24 47	48,9 51,1 100
Profession Medical laboratory analysis Nurse Pharmacist Midwife Sanitarian Total	11 30 2 3 1 47	23,4 63,8 4,3 6,4 2,1 100
Years of service (year) < 1 1-3 >3 Total	18 19 10 47	38,3 40,4 21,3 100

Table 1 represents the total respondents in this study was 47, consisting of 23 men (48.9%) and 24 women (51.1%), the age range of the respondents was the most of 17-25 years (80, 9 %). More than half of the respondents worked as nurses (63.8%), and 19 respondents (40.4%) had a working period of 1-3 years.

TABLE 2: Distribution of resilience and anxiety scores in Healthcare Workers at the Central Laboratory of Padjadjaran University.

Variables	N	Mean ± SD	Min-Max
Resilience	47	68,32 ± 12,31	43-99
Anxiety	47	19,13 ± 8,87	4-37

Table 2 shows that healthcare workers at the Central Laboratory of Padjadjaran University had a resilience score of 68.32 ± 12.31 with the lowest score of 43 and the highest 99, while anxiety had a score of 19.13 ± 8.87 with the lowest score of 4 and highest 37.

TABLE 3: Frequency of resilience levels and Anxiety Levels in Healthcare Workers at the Central Laboratory of Padjadjaran University.

Variable	Frequency (f)	Percentage (%)
Resilience Low Middle High Total	9 30 8 47	19,1 63,8 17,0 100
Anxiety Low Middle Heavy Total	19 12 16 47	40,4 25,5 34,0 100

Table 3 exemplifies more than half of healthcare workers at the Central Laboratory of Padjadjaran University had a moderate level of resilience around 30 (63.8%) of 47 respondents, while 16 respondents (34.0%) experience severe anxiety.

TABLE 4: Distribution of resilience and anxiety levels in Healthcare Workers at the Central Laboratory of Padjadjaran University.

Variable	N	Mean \pm SD	P-value
Resilience	47	68,32 \pm 12,31	0,013
Anxiety	47	19,13 \pm 8,87	

Table 4 signifies the score between resilience and anxiety of healthcare workers at the Central Laboratory of Padjadjaran University. There showed an average resilience score was 68.32 ± 12.31 . while anxiety score was 19.13 ± 8.87 . Correlation test using Pearson product moment pointed p value 0.013 (p value <0.05).

4. Discussion

This research shows a strong relationship between resilience and anxiety during the COVID 19 pandemic in healthcare workers at the Central Laboratory of Padjadjaran University who obtained a p-value of 0.013. A meta-analysis conducted exhibited that high resilience is associated with better mental health. Resilience represents a protective effect against anxiety and depression on a person. This indicate that resilience is related to the level of anxiety in healthcare workers, which means that the higher a person's resilience, the better his mental health [11].

In their research states that resilience is a process of good adaptation in situations of trauma, tragedy, or other stressful events. Resilience is not a personality trait but something that involves behavior, thoughts, or actions that can be learned by each individual. Resilience is a person's ability to face an event that has the potential to disrupt physically and mentally. Resilience is one of the right ways to deal with an adverse event and is an ability to maintain a stable mental balance [12].

The effects of the Covid-19 pandemic had a different effect on each individual. Each individual may experience different levels of anxiety and resilience during a pandemic. stated that the effects of the Covid-19 pandemic had a different effect on each individual. Healthcare workers during the Covid 19 pandemic have different levels of anxiety and resilience in each person [13].

In her research on the relationship of resilience to anxiety in health workers at Dr. Hospital. Soetomo Surabaya indicated that the level of resilience affects the incidence of temporary anxiety experienced by health workers during the Covid-19 pandemic.

Several studies say that resilience is an aspect that can be developed and owned by individuals. How to overcome by providing support resilience are through experience, learning, and formal training. In addition, several mature mental defense mechanisms can increase resilience during a Covid 19 pandemic such as humor, altruism, conscientiousness, and self-observation. Resilience development needs to be prioritized to prepare healthcare workers to face crises and reduce mental health problems in the future [11].

Health facilities during the COVID-19 pandemic are challenging workplaces, so resilience is an important aspect needed by healthcare workers. Resilience is an individual's ability to adapt to conditions that cause stress. Individuals who have good resilience will show the nature of optimism and confidence to be able to control conditions even in unfavorable circumstances. Resilience is indicated by the presence of several characteristics in individuals, such as optimism, adaptability, self-confidence, a positive self-image, empathy, and tolerance that lead to the ability to adapt positively [14].

5. Limitation of the Study

This study aims to determine the relationship between resilience and anxiety levels in health workers in the midst of the Covid-19 pandemic. The target population in this case is healthcare workers who work in the Central Laboratory of Padjadjaran University Indonesia, consisting of doctors, nurses, medical technology laboratory and others. In this study used total sampling 47 people (the total sample was less than 100). Therefore, the results of the study cannot be generalized in the context of a larger population, but rather are suggested.

6. Conclusions

Resilience is associated with better mental health. Resilience represents a protective effect against anxiety and depression on a person. Many ways can support resilience are through experience, learning, and formal training. The results of this study can be used as input in controlling the level of anxiety in health workers during the Covid-19 pandemic. Even though in midst of pandemic may threaten their mental health, resilience may help healthcare worker to use their ability in difficult situations in better way. This research can be used as a practice reference by healthcare workers and basic data for further research references

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