The Relationship Between Anxiety and Depression with Burnout Among Nurses in Covid-19 Ward at Aceh General Hospital

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Abstract:
Background: The 2019 coronavirus disease (COVID-19), which emerged in Wuhan, China in December 2019, spread rapidly around the world (Hu et al., 2020). The spread of COVID-19 has progressed more rapidly than expected, and the epidemiological information needed to control the disease and implement surveillance systems was not expected to flow. This Covid 19 disease causes acute respiratory syndrome, which causes fatal respiratory illness to death and economic disruption [1]. The purpose of this study is to examine the relationship between anxiety and depression and burn-out rates among nurses in the Infectious, Emerging and Re-emerging (Pinere) Unit.
Materials and Methods: The quantitative study used an analytical survey design with a cross sectional study design involving 204 respondents. Data collected in this study started from November 23 until December 1, 2021, at Aceh public hospitals, 204 nurses were in accordance with the sample criteria set by the researcher using a measuring instrument in the form of a google form questionnaire. Bivariate analysis using the Chi-square 3x2 test and multivariate analysis in this study was conducted using a logistic regression test using the Backward Stepwise model.
Results: The results showed that there was a relationship between anxiety and burnout levels among nurses in the Pinere ward of the Aceh Government Regional General Hospital, the P-value 0.004 <0.05. There is a relationship between depression and burn-out levels among nurses in the Pinere Ward at Aceh Government Regional General Hospital, the P-value is 0.002 <0.05. The most significant factor related to the level of burnout for nurses in the Pinere ward of the Government of Aceh Regional General Hospital is depressed with a p = 0.002.
Key Word: Anxiety, Depression, Burnout, Nurse, Covid-19

I.   Introduction

The 2019 coronavirus disease (COVID-19) that emerged in Wuhan, China in December 2019 quickly spread around the world [1] The COVID-19 has progressed faster than expected and there was no expectation that the epidemiological information required for disease control and surveillance systems would circulate. This disease, caused by COVID-19 causes acute respiratory syndrome, resulting in the death of life-threatening respiratory diseases and economic disruption [2]. According to WHO confirmed cases of COVID-19 worldwide, until May 2021 there were 173,331,478, with 3,735,571 deaths. As well, in Indonesia, the number of confirmed COVID-19 cases up to May 2021 was 1,869,325 and the number of deaths was 51,992 (COVID-19 Management Task Force, 2021). At the same time, the number of confirmed cases of COVID-19 in Aceh as of May 2021 was 16,352 and the number of deaths was 633.

As the number of patients and the workload in health facilities increases, many countries are confronted with the problem of a shortage of health workers[3]. Health care workers, both physicians and nurses, are at the forefront of the treatment of COVID-19 patients in hospitals. Health care providers often feel unsuitable and unprotected against COVID-19. Among the reasons for this sense of inadequacy and vulnerability is the lack of scientific information regarding COVID-19. belief that it is impossible to find a vaccine or medication that will cure the disease, issues related to the provision of protective equipment, health care risks. Infected professionals and the risk of disease transmission by health care providers[4].

To date, no effective treatment for COVID-19 has been implemented. Wearing personal protective equipment (PPE) is the most effective means of preventing infection, in particular for health care workers. However, according to a study by Hu, mention that healthcare workers feel uncomfortable wearing PPE,

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especially wearing PPE for a few hours, and nurses complain of skin lesions. That causes depression among nurses. In addition, many nurses do not know how to treat their skin injuries due to a lack of related knowledge or the lack of available drugs[1].

Nurses at the frontline of COVID-19 management experience various physical and psychological symptoms, such as sleep disturbances or insomnia, depressive and anxiety disorders [5]. Nurses will also face more serious psychiatric issues, family separation, abnormal situations, increased exposure, fear of transmissionCovid-19, lack of awareness of poor prognosis, inadequate technical facilities such as PPE, tools and equipment to help treat patients. Healthcare workers have difficulty maintaining physical and mental health problems that are at risk of psychological disorders such as depression, anxiety, severe stress and fatigue.

II. Material And Methods

This study uses an analytical survey research type with a cross sectional study design. Analytical research to determine whether there is a relationship between anxiety and depression and levels of burnout among nurses, who dealing with Covid-19 patients in the ward Infectious Diseases, Emerging And Re (PINERE) Aceh General Hospital. The population in this study was 204 nurses who served in the Pinere ward of the Aceh Government Hospital with the inclusion criteria: (a) Implementing nurse, (b) Nurses who have treated COVID-19 patients, (c) Nurses who are still active in the Infectious, Emerging and Reemerging Diseases ward, (d) Have worked in the Infectious, Emerging and Reemerging Diseases ward for more than 2 months. The sampling technique used was the total sampling technique.

III. Result

Table 1 shows that the majority of nurses who work at the Pinere ward at Aceh General Hospital are adults up to 193 respondents (94.6%). The majority of nurses are women up to 123 respondents (60.3%), and the majority of nurses' educational level is Diploma III Nurses up to 121 respondents (59.9%). The majority of nurses have the status of civil servant up to 149 respondents (73%). The majority of nurses are married until 160 (78.4%). most nurses work for a year or more up to 84 respondents (41.2%).

Table 1. *Demographic Characteristics*

Characteristics	n	%
Age (years)		
Teenagers (12-25 Years Old)	6	2.9
Adult (26-45 Years Old)	193	94.6
Elderly (46-65 Years)	5	2.5
(M= 32.59, SD = 5.81, min-max = 22-51)		
Gender		
Male	81	39.7
female	123	60.3
Level of education		
Diploma	121	59.3
Bachelor	77	37.7
Master	5	2.5
Nursing Specialist	1	0.5
Employment status		
Civil servant	149	73
Non civil servant	55	27
Marital status		
Not married yet	43	21.1
Marry	160	78.4
Widow	1	0.5
Years of service		
1-3 Months	48	23.5
4-5 Months	35	17.2
6-11 Months	37	18.1
1 Year	84	41.2

Table 2 shows the anxiety level of nurses showing that the majority of the anxiety levels of nurses who work in the Pinere ward of the Aceh General Hospital are at a mild to moderate level of anxiety as many as 151 respondents (74%). Table 3. Shows the majority of the depression levels of nurses who work in the Pinere ward at the Aceh Government Regional General Hospital are in the minor depression category as many as 111 respondents (54.4 %). Table 4 shows that the majority of the depression levels of nurses who work in the Pinere ward at the Aceh Government Regional General Hospital are in the Fatigue category as many as 196 respondents (96.1 %).

Table 2. Nurse Anxiety Level

Anxiety Level	n	%
Normal Range	45	22.1
Mild to Moderate Anxiety Levels	151	74
Severe Anxiety Level	8	3.9
Total	204	100

Table 3. Nurse Depression Level

Depression Level	n	%
No Depression	58	28.4
Minor depression	111	54.4
Major Depression	35	17.2
Total	204	100

Table 4. Nurse Burnout Rate

Burnout Rate	n	%
No Fatigue	8	3.9
Fatigue	196	96.1
Total	204	100

Table 5 shows that of 45 nurses whose anxiety levels were normal, all or 45 people (100%) experienced burnout in the fatigue category in caring for patients with Covid-19. Furthermore, of 151 nurses with mild to moderate anxiety levels, most or 145 (96%) nurses experienced burnout in the fatigue category in treating Covid-19 patients. Meanwhile, 6 people (4%) nurses experienced burnout in the fatigue category in treating Covid-19 patients. Furthermore, of the 8 nurses with severe anxiety levels, most or 6 people (75%) experienced burnout with fatigue in caring for Covid-19 patients. Statistical test results showed that p-value = $0.004 < = 0.05$. Thus it can be concluded that Ha is accepted, meaning that there is a relationship anxiety with burnout level in nurses who treats Covid-19 patients in the Pinere ward of the Aceh Government Regional General Hospital.

Table 5. The relationship between anxiety levels and burnout among nurses in the Pinere Ward at the Aceh General Hospital

Anxiety Level	Burnout				Total		P-Value
	No Fatigue		Fatigue				
	n	%	n	%	f	%	
Normal Range	0	0	45	100	45	100	
Mild to Moderate Anxiety	6	4	45	96	151	100	0.004
Severe Anxiety	2	25	6	75	8	100	
Total	8	3.9	96	96.1	204	100	

Table 6 shows that of the 59 nurses whose level of depression was in the non-depressed category, a total of 58 nurses (100%) experienced burnout who were exhausted in caring for patients who had Covid-19. Furthermore, of the 111 nurses with depression levels in the minor depression category, most of the 108 nurses (97.3%) experienced burnout who were exhausted in caring for Covid-19 patients. Meanwhile, of the 35 nurses with depression levels in the major depression category, most of them 18 people (85.7%) experienced burnout with fatigue in caring for Covid-19 patients. The results of statistical tests showed that p-value = $0.002 < = 0.05$. Thus it can be concluded that Ha is accepted, meaning that there is a relationshipdepression with burnout rate to nurses who treat Covid-19 patients in the Pinere ward of the Aceh General Hospital.

Table 7 can be concluded that the results of logistic regression modeling, the variable that was significantly related was depression (p-value = $0.002 < 0.05$). The results show that depression is the most dominant factor associated with burnout rate of nurses in the ward Pinere Aceh General Hospital with p-value = 0.002. So it can be concluded that nurses who have high depression have 2,084 times the chance of nurse burnoutin Pinere ward, Aceh General Hospital.

Table 6. The Relationship between Depression Levels and Burnout in Nurses in the Pinere Ward at the Aceh General Hospital

Depression Level	Burnout				Total		P-Value
	No Fatigue		Fatigue				
	f	%	f	%	f	%	
No Depression	0	0	8	100	59	100	0.002
Minor depression	3	2.7	108	97.3	111	100	
Major Depression	5	14.3	30	85.7	35	100	

Total	8	3.9	196	96.1	204	100	

Table 7. First Stage Logistic Regression Modeling

Variable	B	Sig.	Exp(B)
Worry	-0.067	0.017	
Depression	-0.061	0.002	2,084

IV. Discussion

The anxiety level of nurses who work in the Pinere ward at the Aceh General Hospital is at a mild to moderate level of anxiety as many as 179 respondents (87.7%). This is in accordance with research conducted by Zang which states that during the Covid-19 pandemic, health workers, especially nurses, have a high risk because they are always near patients[6]. This creates significant psychological pressure for nurses as they work to treat COVID-19 patients. The psychological pressure felt was social isolation, fear, role conflict and anxiety.

Research conducted by Ruilin Li which examined the anxiety of nurses in Wuhan showed that the anxiety of nurses caring for Covid-19 patients was in the category of mild to moderate anxiety as much as 27.3% and severe anxiety as much as 25%[7]. As well as factors that affect the anxiety of nurses, including gender, age, marital status, years of service and clinical work time for COVID-19.

Depression often occurs among nurses during the COVID-19 pandemic, the negative impact of depression on patient care and quality of life for nurses[7]. Nurses working in hospitals are more likely to suffer from depression than nurses working in primary care and community settings. Nurses working in hospitals have more frequent contact with patients suffering from COVID-19 because they are responsible for treating patients. This can lead to increased stress and fear, which in turn can lead to depression in nurses [8].

Research by Chen, found that the average burn-out score for each of the three subscales was in the low to moderate range. The average emotional exhaustion score was 19.1 ± 10.0, indicating a moderate level of emotional exhaustion. Women and staff working in intensive care units or services related to COVID-19 had significantly higher levels of emotional burn-out ($P < 0.001$). In addition, the proportion of nurses with high levels of emotional burnout was significantly higher among those working in critical care units and COVID-19 services[9].

Another study conducted by Muhammad Jailil stated that 326 people (53.0%) experienced high levels of burnout. Mean scores related to emotional exhaustion, depersonalization and lack of personal achievement were 26.6, 10.2 and 27.3, respectively. Fatigue levels in the three sub-scales varied according to personal and work-related factors and gender were the only variables associated with the high levels in the three domains[10]. Additional research indicates that nurses caring for COVID-19 patients in this study experienced significant stress and that the most frequently reported and serious stressors were family-related. Most front-line nurses have positive strategies for dealing with stress. Nurses who work longer in quarantine areas are more likely to be fatigued [6].

Stress and anxiety are responses to threats and unexpected situations, such as the outbreak of the coronavirus pandemic. Healthcare workers are the most vulnerable. Stress-related responses include changes in concentration, irritability, anxiety, sleeplessness, reduced productivity, and interpersonal conflict. In later cases, they will experience more severe psychiatric conditions, separation from family, abnormal situations, increased exposure, fear of COVID-19 transmission, feelings of failure to handle a poor prognosis, inadequate technical facilities, PPE, tools and equipment, to help treat patients [11].

A study conducted by Celmece shows that there is a strong link between the stress, anxiety and fatigue of healthcare workers working during the COVID-19 pandemic and their quality of life. In addition, research by Hacimusalar et al. found that nurses were more anxious than other agents[12]. This is due to the fact that nurses interact with patients longer than other health care workers[13]. A further study led by Barello et al. Of the 376 health care workers, nurses' levels of fatigue were found to be higher than those of other health care workers[14].

V. Conclusion

The finding from this study is a relationship anxiety with burnout level on nurses in the ward Infectious Diseases, Emerging and Reemerging Aceh General Hospital A, p-value 0.004 < 0.05. There is an association between depression and burnout levels in nurses in ward Infectious Diseases, Emerging and Reemerging Regional General Hospital Aceh Government, P-value 0.002 <0.05. The most significant factor was related to the burn-out rate of nurses in Infectious Diseases, Emerging and Re-emerging Regional General Hospitals of the Government of Aceh with p-value = 0.002.

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