Relationship Between Managerial Support and Hospital Atmosphere With Burnout Among Nurses at COVID-19 unit

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Abstract

Introduction: Hospital atmosphere and managerial support during the COVID-19 pandemic are important factors in determining the quality of nursing care, however, support that is not provided properly can cause work stress, causing burnout syndrome which results in low quality of work. The purpose of this study was to explain the relationship between managerial support and hospital atmosphere with burnout syndrome of nurses at COVID-19 unit.

Methods: The research design was correlational descriptive with a cross-sectional approach. A total of 64 nurses at COVID-19 unit at the referral hospital for COVID-19 patients in Surabaya who handle COVID-19 patients directly for at least 2 months and treat COVID-19 patients at least 1-2 patients every day in the isolation room were selected through a simple random sampling method. The variables in this study were managerial support, hospital atmosphere, and burnout syndrome. Perceived managerial support was measured by the Managerial Support Questionnaire, the Hospital Atmosphere Questionnaire for perceived hospital atmosphere, and the Maslach Burnout Inventory to measure burnout syndrome. The results were analyzed by descriptive analysis and logistic regression test with a significance value of $p \leq 0.05$.

Results: The results showed that there was a significant relationship between managerial support ($p = 0.027$) and hospital atmosphere ($p = 0.026$) with burnout syndrome. The relationship between managerial support and hospital atmosphere is negative. The higher the managerial support and hospital atmosphere, the lower the burnout syndrome level.

Conclusion: High managerial support and a good hospital atmosphere can reduce burnout syndrome among nurses at COVID-19 unit. The results of this study are expected to be a reference for hospitals in preventing nurse burnout syndrome so that the quality of service increases.

Keywords

burnout; COVID-19; hospital atmosphere; managerial support

INTRODUCTION

The Coronavirus Disease 2019 (COVID-19) pandemic has now become a worldwide health emergency (Hu *et al.*, 2020). Nurses as the front line take an important role in handling COVID-19, but the increase in COVID-19 cases makes nurses increasingly depressed because their workload increases and worries about their health and that of their families (Q.

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Chen *et al.*, 2020). The increasingly heavy workload during the pandemic causes nurses to be at high risk of experiencing fatigue and stress that triggers burnout syndrome, which is a negative response to prolonged stress that can reduce the quality of nurses' work (Maslach *et al.*, 2001). Research by R. Chen *et al.* (2020) on 6,585 nurses at COVID-19 unit in Australia showed 15.2% of nurses experienced psychological disorders in the form of trauma and 23.5% had moderate to high levels of emotional exhaustion which is a dimension of burnout syndrome. The incidence of burnout syndrome cases in Indonesia is also often found in nurses. Research conducted by (Khotimah, 2010) at Pekalongan Hospital showed that the incidence of burnout in nurses was 65.9% which was determined by the hospital, psychological, while the rest was determined by other factors.

Hospitals are the places that make the biggest contribution during the COVID-19 pandemic. The workload that increases with the increasing number of COVID-19 cases has a high risk of causing fatigue and prolonged stress that have an impact on burnout syndrome. A preliminary study conducted on January 21, 2021, to 10 nurses at COVID-19 unit at the referral hospital for COVID-19 patients in Surabaya via google form showed that all respondents worked harder than before handling COVID-19. Seven nurses experienced physical and psychological exhaustion and felt too hard at work. Based on this phenomenon, it was found that most of the nurses at COVID-19 unit at the referral hospital for COVID-19 patients in Surabaya experienced fatigue while handling COVID-19 patients, which could cause burnout syndrome. Burnout syndrome that is not resolved can cause the nurse's work quality to be not optimal.

Research by Lia Dwi Jayanti (2021) showed that as many as 25.3% of nurses in Indonesia experienced burnout syndrome during the COVID-19 pandemic. This is because, many nurses are self-isolating during the pandemic so the number of nurses on duty is limited. The use of PPE in the long term, the age of the staff who are over 50 years old and the presence of comorbid diseases are also factors that cause burnout. Restauri (2020) explains the factors that cause nurse burnout related to the COVID-19 epidemic, including access to appropriate personal protective equipment, exposure to COVID-19 at work and bringing the infection home to family, lack of support for other personal and family needs as work demands increase. Research by Ahmad & Baharuddin, (2020) shows 51.7% of nurses in Indonesia are anxious during the COVID-19 pandemic caused by inadequate availability of personal protective equipment. The availability of personal protective equipment is the responsibility of the hospital in protecting nurses from exposure to COVID-19 where this is one of the determining factors for the quality of the hospital atmosphere (Q. Chen *et al.*, 2020).

Hospital atmosphere as a determinant of nurse safety at work is certainly an important factor in determining work stress (Q. Chen *et al.,* 2020). Hospitals during a pandemic must be able to create a safe and healthy working environment that supports the provision of PPE, increases the capacity of tracing tests, minimizes exposure to work stress, and ensures the welfare of nurses (Gab Allah, 2021). Meanwhile, the hospital atmosphere in Indonesia during the COVID-19 pandemic is still not optimal. Many hospitals inadvertently accept COVID-19 patients in non-isolation rooms (Daton, 2020). This is due to the lack of strict patient screening and the lack of adequate resources due to the large number of health workers who died during the COVID-19 pandemic. Non-isolation room nurses with level II PPE will be easily infected if there are COVID-19 patients who are accidentally treated in the room. Nogueira, *et al.,* (2018) stated that a bad hospital environment is at risk of causing burnout syndrome in nurses which according to Nursalam *et al.,* (2018), burnout can affect the Quality of Nursing Work Life (QNWL). This is supported by the opinion of experts who state that the work environment can be a cause of chronic stress that causes burnout syndrome (Galletta *et al.*, 2016).

Managerial support plays an important role in providing effective care to nurses. However, low managerial support causes high-level organizational failure in a hospital (Newham & Hewison, 2021). Especially in the COVID-19 pandemic, nurse managers must provide higher levels of support to nurses in their fight against the COVID-19 outbreak (Mo *et al.*, 2020). Taking care of the mental health of nursing staff is critical to controlling COVID-

19. Nurse managers should pay attention to work stress and nurse-related factors clinically. Nurse managers should strive to provide safe working conditions for nurses, offer financial subsidies and rewards, to mobilize the enthusiasm and awareness of nurses, nurse managers must also regulate the allocation and management of human resources, organize while working scientifically, reduce the work intensity of nurses and reduce work pressure (Gab Allah, 2021). Meanwhile, managerial support for hospitals in Indonesia in terms of identifying nurse burnout problems during the COVID-19 pandemic is still less than optimal at 62% (Lia Dwi Jayanti, 2021). Managerial support is needed, especially in protecting nurses from burnout due to fatigue during the COVID-19 pandemic, but burnout prevention in Indonesia is still not optimal due to the absence of standard operating procedures and special guidelines regarding nurse burnout management in the room (Lia Dwi Jayanti, 2021).

Previous research only explained hospital safety related to the provision of Personal Protective Equipment with anxiety levels and could not explain whether the hospital atmosphere caused burnout syndrome in nurses at COVID-19 unit. On the other hand, no research explains the relationship between managerial support with burnout of nurses at COVID-19 unit so that the relationship between managerial support and hospital atmosphere with burnout syndrome of nurses who handled COVID-19 still requires identification. Ignoring the risk factors that cause burnout will have an impact on high levels of burnout and result in low job satisfaction so that nurse services to patients are not optimal (Bektas & Peresadko, 2013; García-Campayo *et al.*, 2016). The results of this study can be considered by hospital management in making policies.

MATERIALS AND METHODS

Study Design

The research design used was descriptive correlational with a cross-sectional approach. The study was conducted from March - April 2021. The measurement of the relationship between managerial support and hospital atmosphere with burnout syndrome was only done at one time and without any follow-up.

Population, Samples, and Sampling

The population in this study were nurses at COVID-19 unit in the isolation room at the referral hospital for COVID-19 patients in Surabaya. The population of nurses at COVID-19 unit were 93 people consisting of four isolation rooms. The sampling technique used is simple random sampling by selecting respondents in a room that is actively handling COVID-19 patients and selected by lottery. The sample size used in this study was 64 nurses from 2 isolation rooms who actively receive COVID-19 patients every day with the following inclusion criteria: 1) Nurses who directly care of COVID-19 patients for at least 2 months 2) Nurses who care of COVID-19 patients -19 at least 1-2 patients every day in the isolation room. Demographic data of respondents consisted of age, gender, marital status, last education, duration of handling COVID-19. The independent variables in this study were the manager's support and hospital atmosphere, while the dependent variable was the level of burnout syndrome.

Instruments

The data were collected using an instrument in the form of a questionnaire consisting of 4 questionnaires (the demographic data questionnaire, hospital atmosphere questionnaire, managerial support questionnaire, and burnout questionnaire). The questionnaire used was adopted from research conducted by Andarini *et al.* (2018)**.** The hospital atmosphere and managerial support questionnaires have been tested for validity and reliability by previous researchers. The validity test using the Pearson Product Moment correlation shows that the test results of the validity of the statement are valid because of the p-value <0.05. The value of the reliability test showed that Cronbach's alpha was 0.902. The results of this test are reliable because the value of Cronbach's alpha is > 0.60 (Andarini *et al.*, 2018). The burnout questionnaire has been tested for validity and reliability before using the Pearson Product Moment correlation and is declared valid because the p-value <0.05. The value of the reliability test showed that

Cronbach's alpha was 0.902. The results of this test are reliable because the value of Cronbach's alpha is > 0.60(Andarini *et al.*, 2018).

The burnout questionnaire consisted of 17 questions. Questions were measured using a 1-4 Likert scale with categories "Never" (1), "Rarely" (2), "Often" (3), "Always" (4) then the total score was interpreted as Low, Moderate, High. The Hospital atmosphere questionnaire consists of 4 questions measured by a Likert scale "Strongly Disagree" (1), "Disagree" (2), "Agree" (3), and "Strongly Agree" (4) the total score is interpreted to be Less, Moderate and Good. The managerial support questionnaire consists of 6 questions measured by a Likert scale "Strongly Disagree" (1), "Disagree" (2), "Agree" (3), and "Strongly Agree" (4) the total score is interpreted to be Low, Moderate and High.

Procedure

The research procedure was started by asking permission at the research site. Before the data collection procedure begins, it is necessary to conduct an ethical test with reviewers from the 2 rooms involved in the study. The ethical submission process starts from February 16 to March 25, 2021. After passing the revision stage and being declared ethically appropriate, then the permission letter for data collection for each room is submitted to the head of the inpatient unit I and the inpatient room II to be forwarded to the Head of the Room. Coordination was carried out between the researcher and the head of the room to ensure that the questionnaires were distributed to all nurses in the room properly. Data collection was carried out in two rooms assisted by the Head of each unit because researchers were not allowed to enter the research room, namely the isolation room for COVID-19 patients. The researcher coordinates with the Head of the Room regarding the technical distribution of the questionnaire, one of which is when the respondent does not understand the question, the questionnaire can be submitted to the Head of the Room and forwarded to the Researcher and then given an explanation. A total of 64 nurses in the COVID-19 isolation room filled out a questionnaire. Data collection and processing take place from March 25 to April 25, 2021. During data collection, researchers only coordinate with the head of each unit and cannot explain directly to respondents, this is done to reduce direct contact with nurses in the COVID-19 isolation room. The researcher was not able to directly clarify the answers to the questions to the respondents so that they could not find out the cause of several variables that were considered lacking.

Data Analysis

The data were analyzed using the SPSS (Statistical Package for the Social Sciences) application. The data analysis used is descriptive analysis and inferential analysis. In the descriptive analysis, data consists of age, gender, marital status, educational background, length of time handling COVID-19, level of hospital atmosphere, level of perceived managerial support, level of burnout syndrome (emotional exhaustion, depersonalization, and lack of accomplishment) are grouped by category and frequency. While the inferential analysis used a logistic regression test with a significance value of $p \leq 0.05$.

Ethical Clearance

This research has been declared ethically feasible by the Health Research Ethics Commission (KEPK) of RSU Haji Surabaya on March 23, 2021, with letter number 073/04/KOM.ETIK/2021.

RESULTS

The study was conducted on 64 nurses at COVID-19 unit in the isolation room at the referral hospital for COVID-19 patients in Surabaya which consisted of an Intensive Care Unit isolation room for COVID-19 patients and an isolation room for COVID-19 patients with intermediate to severe symptoms. After the data are recapitulated, the data on the characteristics of the respondents are obtained in the table 1. Table 1 shows that most of the respondents are between the ages of 21 – 30 years (62.5%). The majority of respondents are female, as many as 48 people (75%) with marital status the majority of respondents are

married (67.2%). In the last education taken by the respondents, it can be seen that of the 64 respondents, most of them have the latest education Diploma of Nursing, namely 45 people (70.3%). The majority of respondents have handled COVID-19 within a span of 9-12 months (48.4%) indicating that most nurses have treated COVID-19 patients since the start of the COVID-19 pandemic in March 2020.

Table 2 shows the distribution data of the research variables. Respondents who received support from managerial with a high level were 37 people (57.8%) while the majority of the hospital atmosphere was with a moderate level of 27 people (42.2%). The level of burnout syndrome is an interpretation of a combination of emotional exhaustion, depersonalization, and lack of accomplishment so that the results show that the burnout syndrome rate experienced by the majority of nurses at COVID-19 unit is at a low level (51.6%). Most of the respondents experienced low emotional exhaustion as many as 38 people (59.4%). The level of depersonalization of the majority of respondents is low, namely 34 (53.1%) and most respondents experienced a lack of accomplishment with 31 (48.4%) respondents.

Table 3 shows the results of the hypothesis testing the relationship between managerial support and hospital atmosphere with burnout syndrome. Based on the analysis, the managerial support ($p = 0.027$) and hospital atmosphere ($p = 0.026$) had significant value with burnout syndrome, which means that there is a relationship between managerial support and hospital atmosphere with burnout syndrome. The magnitude of the relationship and influence between the independent and dependent variables can be seen from the value of Exp (B). The most powerful independent variable influencing burnout is the hospital atmosphere by increasing the hospital atmosphere can reduce the risk of burnout by 6.3 times.

DISCUSSIONS

Managerial support and hospital atmosphere had a significant relationship with burnout syndrome. Support from the manager offers interpersonal resources that can help create a supportive work environment and meet resource regulations, especially for nurses who are prone to stress (Bektas & Peresadko, 2013). A good hospital atmosphere can also potentially reduce burnout syndrome. Especially during the COVID-19 pandemic, the hospital atmosphere greatly affects the stress level of nurses. Hospitals must be able to provide security and guarantee future safety for the work currently carried out by nurses in handling COVID-19 (Sasangohar *et al.*, 2020). Based on research, managerial support that has the biggest contribution is the leadership skill item in guiding and training. While the hospital atmosphere component that has the largest contribution is the hospital guarantee item for the safety of the nurse's job.

Most of the managerial support and hospital atmosphere felt by nurses during the COVID-19 pandemic was at a high level. This is influenced by the magnitude of the manager's responsibility in protecting and ensuring that his nurses are able to deal with COVID-19 competently and stay safe (OBrien, 2020). Based on research from OBrien (2020) The level of education and the amount of responsibility make managers more able to guide their nurses so that it can be concluded that managers with higher levels of education are considered more capable of guiding their nurses in dealing with COVID-19 so that this also reduces the burnout rate of nurses dealing with COVID-19. The hospital atmosphere for most nurses at COVID-19 unit is at a moderate level, which means that the hospital atmosphere felt by most nurses at COVID-19 unit is in a fairly good range, but it should be noted that some nurses felt that the hospital atmosphere was at a low level which could potentially increase burnout syndrome. This lack of hospital atmosphere was caused because most nurses who handle COVID-19 are volunteer nurses whose tenure is based on a certain time contract and there are no promotions.

The burnout syndrome rate in nurses at COVID-19 unit is low, one of which is because the majority of nurses who are respondents have handled COVID-19 in a span of 9-12 months. This illustrates that most nurses have handled COVID-19 since the beginning of the COVID-19 pandemic in March 2020 so that during that time the majority of respondents had adapted to any changes due to the pandemic and formed coping mechanisms in dealing with stress (Zendrato *et al.*, 2020). Of

Table 1. Characteristic of Respondents (n=64)

Demographic Characteristic	Category	n	%
Gender	Male	16	25.0
	Female	48	75.0
Age	21-30 years	40	62.5
	31-40 years	22	34.4
	41-50 years	2	3.1
Educational Background	Diploma	45	70.3
	Bachelor	19	29.7
Marital Status	Married	43	67.2
	Single	21	32.8
Length of time handling COVID-19	2-4 months	28	43.8
	5-8 months	5	7.8
	9-12 months	31	48.4
	Total	**64**	**100.0**

Table 2. Variable Distribution of Respondents, March 2021

Variable	Category	n	%
Perceived Managerial Support	High	37	57.8
	Moderate	19	29.7
	Low	8	12.5
Hospital Atmosphere	Good	23	35.9
	Moderate	27	42.2
	Less	14	21.9
Burnout Syndrome	High	11	17.1
	Moderate	20	31.3
	Low	33	51.6
Emotional Exhaustion	High	9	14.1
	Moderate	17	26.6
	Low	38	59.4
Depersonalization	High	9	14.1
	Moderate	21	32.8
	Low	34	53.1
Lack of Accomplishment	High	6	9.4
	Moderate	27	42.2
	Low	31	48.4
	Total	**64**	**100.0**

Table 3. Relationship of variable

Variable	Logistic Regression							
	Estimate	Std. Error	Wald	Sig.	Exp(B)	95% Confidence Interval		
						Lower	Upper	
Hospital Atmosphere	1.841	0.828	4.948	0.026	6.3	0.219	3.463	**Significant**
Perceived Managerial Support	1.725	0.780	4.889	0.027	5.6	0.196	3.254	**Significant**

course, within a span of 9-12 months, respondents have received a lot of evaluation and treatment from hospitals and managers that are better than the beginning of the COVID-19 pandemic. Although the majority of respondents have a low burnout rate, it does not mean that it cannot potentially cause burnout syndrome if it is not handled properly.

Based on the sociodemographic characteristics of the respondents, the majority of the nurses who were respondents in this study were women and the most marital statuses were married. Women are more prone to experience burnout syndrome, especially married women because of heavier work and household workloads and having to undergo

multiple roles (Zhang *et al.,* 2020). This is something to watch out for, especially when the COVID-19 pandemic makes the nurse's burden heavier and the anxiety level high will infect their families at home. Of course, this heavier workload and demands can cause burnout syndrome.

It is worth mentioning as a limitation of this investigation that the researcher was not able to clarify the answers to the questions directly to the respondents so that they could not find out the causes of several variables that were considered lacking. On the other hand, to reduce the risk of being exposed to COVID-19, all filling out the questionnaire is only coordinated by the head of each unit so that researchers do not know the conditions of the working room, the characteristics, and conditions of each respondent. This study may not yet be complete as expected by many parties, however, this would hopefully be initial research for many other researchers in the future.

CONCLUSION

From the discussion above, it can be concluded that a good hospital atmosphere and high managerial support can potentially reduce burnout syndrome for nurses at COVID-19 unit at the COVID-19 referral hospital. The results of this study are expected to be used as a consideration for hospitals in making policies during the COVID-19 pandemic to reduce the level of burnout syndrome in their nurses, especially nurses at COVID-19 unit. With good hospital support and high managerial support, nurses will certainly have high work morale, not worrying about their safety when working, especially during the COVID-19 pandemic and nurses can feel that their contribution and efforts are always supported by the institution where they work. Nurses at COVID-19 unit are expected to be able to find coping mechanisms that are good and appropriate for each individual and can adapt to any developments that occur during the COVID-19 pandemic so that they can avoid burnout syndrome.

Future studies should address other variables potentially associated with burnout syndrome. More intense research is needed, such as interviews regarding the relationship between hospital atmosphere and managerial support with burnout syndrome in nurses at COVID-19 unit. It is necessary to develop research using a wider scope of research locations. Studies that discuss the burnout nursing score pattern will be very useful for identifying the syndrome and the need for early intervention, especially in nurses at COVID-19 unit.

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Conflict of Interest

The Author(s) declared that there are no potential conflicts of interest conserning the research, authorship, and/or publication of this article.

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