

The Effect of Workload on Nurse's Work Stress during the COVID-19 Pandemic at Sondosia Bima Hospital

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Abstract: *The purpose of this study was to determine the effect of workload on nurses' work stress during the Covid-19 pandemic at Sondosia Hospital in Bima. This type of research is quantitative research. The population in this study were all nurses at the Sondosia District General Hospital. Bima as many as 87 people (data for October-November 2020), and the sampling technique used the total sampling technique. The instrument used is a questionnaire. Data analysis used simple linear regression analysis. Results of simple linear regression analysis showed that there was a positive influence terhadap stress variable workload of work, and the results of analysis of regression coefficient (R^2) shows the contribution of the effect of 52.5%. While the results of the hypothesis test of the workload variable obtained a value of $t_{count} > t_{table}$ ($9.689 > 1.671$) with a significant value of 0.000 ($p < 0.05$), so it was concluded that the workload variable had a significant effect on the work stress of nurses during the Covid-19 pandemic. At Sondosia Hospital, Kab. Bima. Nurses are expected to carry out stress management such as being able to manage time, do relaxation, build good therapeutic communication with fellow nurses or leaders.*

Keywords: Workload, Work Stress, Nurse, Covid-19 Pandemic

1. Introduction

A pandemic is a global transmission of infectious diseases *emerging* and re – *emerging* that affect large numbers of people, often causing multiple deaths and disrupting social and economic life. Respiratory disease pandemics are caused by spread via droplet and interpersonal contact (Jamison et al, 2017 in). Ni Putu Emy et al (2020). The experience of doing care in pandemic conditions has the potential to cause long-term and short-term consequences for nurses, the social environment and the nursing profession (Fernandes et al, 2020 in Ni Putu Emy et al 2020).

Coronavirus Disease 2019 (COVID-19) is a respiratory infection caused by the SARS-CoV-2 virus. COVID-19 is transmitted through close physical contact and respiratory droplets, and can be transmitted airborne during aerosol procedures (WHO, 2020). Nurses as the largest health professional are vital professions in care during the COVID-19 pandemic (WHO, 2020). Nurses treat patients directly at close range and are often directly exposed to the SARS-CoV-2 virus and have a high risk of experiencing COVID-19 disease (Hope et al, 2011). Initial reports suggest that the rate of COVID-19 infection among nurses is higher than during the SARS pandemic (Huang et al, 2020).

Despite having a professional obligation to care for patients during a pandemic, many nurses have concerns about their work and the impact on themselves. In particular, concerns about the risk of infection, transmission to family members, stigma about work and restrictions on personal freedom are the main problems (Hope et al, 2011; Koh, Hegney, & Drury, 2012). Situational conflict among nurses during a pandemic is a logistical issue related to the availability of personal protective equipment (PPE) (Xie et al, 2020).

COVID- 19 has become a global problem that must be addressed since it was discovered in Wuhan, China in December 2019. The increase in the number of cases of COVID- 19 patients took place quite quickly and spread outside the Wuhan area to other countries. Globally, there are confirmed cases in the United States, recorded around 6, 093, 061 cases, 185, 852 people died, and the total recovered was 3, 370, 539. While in Brazil, 3, 812, 605 cases, 119, 594 people died, the total recovered was 2, 976, 796, India 3, 461, 240 cases, 62, 713 people died, and the total recovered was 2, 647, 538. Russia 980, 405 cases, 16, 914 people died, recovered 798, 466. In Indonesia until now in October 2020 positive cases of COVID-19 291, 182. The cure rate is 218, 487 people. The patient died 10, 856 people (WHO, 2020).

Nurses are the largest health human resources who provide health services in the form of nursing care in hospitals. The nursing team is the frontline whose role cannot be ruled out from all forms of hospital services. This is because the nursing team provides nursing services for 24 hours continuously to patients. Nurses are required to be able to provide first aid to patients responsively without complaining regardless of the conditions and work conditions. Such demands make nurses become one of the hospital elements that really need behaviors from indicators of work commitment (Runtu and Widayarni, 2012). Nurses as the front line in health services, are not only required to show their abilities and professionalism in carrying out all nursing medical actions. A nurse is also expected to have emotional sensitivity in dealing with all patients.

The hospital is a service organization that has specifics in terms of human resources, infrastructure and equipment. Basically the hospital is a collection of various service units. In the health care system in hospitals, besides doctors,

nurses and nurses have a very important position. Nurses are the spearhead of whether or not health services are provided to patients, because for 24 hours nurses always interact with patients (Nursalam, 2014).

The core services of hospital activities are mostly carried out by nurses and are the largest number of professionals in hospitals. In providing nursing care, a nurse has a very big responsibility for the patient and for the organization where she works. Good service is inseparable from the commitment of nurses to provide good service to patients and also commitment to their organization (Inge, 2014).

Stress is a common problem today, including work-related stress. Work stress can be a risk to the health and safety of workers when the work carried out exceeds the capacity, resources and capabilities of the worker for a prolonged period (ILO, 2016).

Factors that can cause work stress are workload. Excessive workload can stimulate work-related stress. Signs of overload are irritability, physical and mental fatigue, indecisiveness, loss of objectivity, tendency to make mistakes, memory errors and tense interpersonal relationships (Munandar, 2004).

Nurse workload is the work volume of nurses in a hospital unit. While the work volume of nurses is the time needed to treat patients per day. It is important to know the workload as the basis for knowing the work capacity of nurses so that there is a balance between the nursing staff and the workload (Purba, Y. S 2015).

According to Losyk in Jojang (2015) that Northwestern National Life Insurance has conducted research on the impact of stress in the workplace, the conclusion is that one million absenteeism at work is related to stress problems, 27% said that aspects of work cause the highest stress in the lives of workers, 46 % consider the level of work stress as stress levels are very high, one-third of workers intend to immediately resign because of stress at work and 70% said workplace stress has damaged the physical and health psychiatric workers.

In a study conducted by Pontangan (2018) with the title The relationship between workload and work stress with work fatigue on nurses at the GMIM Kalooran Amurang Hospital showed a relationship between workload and work stress with the results of 78.9% nurses having a heavy workload and 90.8% of nurses who have heavy work stress. Research conducted by Andinny V. Melo et al (2019) The relationship between workload and work stress on nurses at the Bethesda Tomohon General Hospital shows that nurses experience extreme stress (48.9%). Nurses who feel the workload is moderate (48.9%). The results of this study indicate a relationship between workload and work stress on nurses at Bethesda Tomohon General Hospital.

In particular, there are several things that underlie this research carried out at the Sondosia District General Hospital, Kab. Bima is the Sondosia District Hospital. Bima is a new hospital that belongs to type D. Currently, the management of the Sondosis District General Hospital.

Bima continues to make improvements both to the physical appearance of the building and the quality of services, especially in Covid-19 patient services. Therefore, in this improvement process, it is necessary to continue to make improvements from the management side in providing quality and affordable health services to the community in order to improve the health status of the community.

In addition, better service quality must be supported by having nurses with a high level of discipline, nurses who have good work capabilities are needed in order to carry out plenary, professional services and uphold ethics and prioritize patient safety. The performance of nurses as a consequence of community demands for the need for excellent service or high-quality services creates a high workload and a complete target for completion of work. To be able to achieve its goals, the hospital will certainly expect its nurses to behave according to and even exceed the requirements in the hospital.

The purpose of this study was to determine the effect of workload on nurses' work stress during the Covid-19 pandemic at Sondosia Hospital Bima.

2. Research Design

This type of research is quantitative research. The population in this study were all nurses at the Sondosia District General Hospital. Bima as many as 87 people (data for October-November 2020), and the sampling technique used the total sampling technique. The instrument used is a questionnaire. Data analysis used simple linear regression analysis.

3. Research Result

General data

Table 1: Characteristics of Respondents

General Data	n	%
Gender:		
Male	33	37,9
Female	54	62,1
Total	87	(100)
Age:		
21-25 years	10	11,49
26-30 years	46	52,87
31-35 years	29	33,33
36-40 years	2	2,30
Total	87	(100)
Education:		
First diploma	45	51,7
Second diploma	7	8,0
undegraduate	35	40,2
Total	87	(100)

Source: Data processed, 2020

Based on Table 1, it shows that the large number of respondents in Sondosia Hospital Kab. Bima is female, as many as 54 people (62.1%), most of the respondents at Sondosia Hospital Kab. Bima aged between 26-30 years, as many as 46 people (52.87%), and most of the respondents at the Sondosia Hospital Kab. Bima has DIII education as many as 45 people (51.7%).

Validity test

Table 2: Validity test

No	r		r	
	X	Y		
1	0,656	0,507	0,213	Valid
2	0,345	0,703		Valid
3	0,564	0,587		Valid
4	0,509	0,750		Valid
5	0,496	0,631		Valid
6	0,663	0,573		Valid
7	0,511	0,639		Valid
8	0,411	0,544		Valid
9	0,301	0,550		Valid
10	0,267	0,758		Valid
11	0,722	0,601		Valid
12	0,371	0,323		Valid
13	0,589	0,584		Valid
14	0,5585	0,598		Valid
15	-	0,530		Valid

Source: Data processed, 2020

Based on Table 2, it shows that all statement items from the workload (X) and work stress (Y) variables have a value of $r_{count} > r_{table}$ where the value calculated of 87 respondents is 0.213 with a significant level of 5% ($p \text{ value} < 0,05$), so it can be said that all statement items are declared valid.

Reliability Test

Table 3: Reliability Test

No	Cronbach Alpha		Alpha	
	X	Y		
1	0,700	0,723	0,600	Reliabel
2	0,719	0,714		Reliabel
3	0,706	0,718		Reliabel
4	0,710	0,710		Reliabel
5	0,710	0,716		Reliabel
6	0,699	0,741		Reliabel
7	0,710	0,717		Reliabel
8	0,715	0,738		Reliabel
9	0,729	0,721		Reliabel
10	0,723	0,710		Reliabel
11	0,695	0,719		Reliabel
12	0,717	0,739		Reliabel
13	0,705	0,719		Reliabel
14	0,704	0,714		Reliabel
15	-	0,720		Reliabel

Source: Data processed, 2020

Based on table 3, it shows that all statement items from workload (X) and work stress (Y) variables have a coefficient value alpha greater than 0.600. Thus it means that the statement items for all variables are declared reliable.

Regression Analysis

Table 4: Multiple Linear Regression Analysis

Variable	Unstandardized Coefficients (B)	Information
Constant	7,874	Positive
X	0,880	Positive

Source: Data processed, 2020

Based on Table 4, it is known that the multiple regression equation model is as follows.

$$Y = a + b_1X_1 + e$$

$$Y = 7,874 + 0,880X_1$$

Based on the regression equation, it can be explained as follows:

- a) The constant of the dependent variable work stress (Y) is 7.874, meaning that if the value of the workload variable (X) is 0, then the work stress variable (Y) is 7.874.
- b) The regression coefficient of the workload variable (X) is 0.880, meaning that if the workload variable (X) has increased by 1%, then the work stress variable (Y) will have increased by 0.880%, meaning that there is a positive effect of the workload variable on work stress.

Determinant Coefficient Test (R_2)

Table 5: Determinant Coefficient Test (R^2)

Model	R Square
X → Y	0,525

Source: Data processed, 2020

Based on table 5, it shows that the value of *r square* (r^2) is 0.525, which means the contribution of the influence of the workload variable to the work stress of nurses during the Covid-19 pandemic at the Sondosia Hospital Kab. Bima by 52.5%.

Hypothesis Test

(Partial t test)

Table 6: Test t (Partial)

Variable	T _{count}	t _{table}	Sig. t
X	9,689	1,671	0,000

Source: Data processed, 2020

Based on Table 5, show that the calculation results of the t test found that the variable workload (X) has a value of $t_{count} > t_{table}$ (9.689 > 1.671) with a significant value of 0.000 ($p \text{ value} < 0.05$), so it can be concluded that the variable workload had a significant effect on the work stress of nurses during the Covid-19 pandemic at the Sondosia Hospital, Kab. Bima.

4. Discussion

Based on the results of the analysis presented in this study, it is known that the workload variable has a $t_{count} > t_{table}$ (9.689 > 1.671) with a significant value of 0.000 ($p \text{ value} < 0.05$), which indicates that there is a significant effect of the workload variable on Nurse workstress during the Covid-19 pandemic at Sondosia Hospital Bima. The regression coefficient value of 0.525 indicates that the contribution of the workload variable to the workload is 52.5% and the rest (100%-52.5%) of 47.5% is influenced by other variables not examined. The results of this study indicate that the higher the workload received by nurses will trigger work stress. This research is in line with research conducted by Abdullah (2016) which proves that workload and work environment have a significant effect on employee work stress. Rizky and Afrianty (2018) in their research prove that workload has a significant effect on work stress. The results of another study

conducted by Zulmaidarleni et al (2019) have a positive and significant effect on the work stress of the employees of the East Padang District Office, which means that the higher the workload given to the employees, the higher the work stress of the employees of the East Padang District Office. Maharani and Budianto's research (2019) that workload has a direct effect on work stress.

The role of nurses in hospitals is very important in treating patients in hospitals, especially in the COVID-19 pandemic situation it takes time, energy and more thoughts to deal with many COVID-19 referral patients. The problem of increasing workloads in hospitals can cause boredom or boredom, even feeling pressured while doing work, this has an impact on nurse stress. Job stress is a condition of interaction between stressors and other factors that cause physiological and psychological balance disorders in a person.

Crossman and Neary (2015) explain the process of work stress, that the emotional center is in the brain, so that when there is stress on someone who is a hard worker and is under pressure, the emotional center in the brain will deliver nerve messages (impulses) to the hypothalamus, namely a part of the emotional center located at the base and middle of the cerebrum. Then, the hypothalamus will process these nerve impulses, produce and release a substance called *Corticotropin Releasing Hormone (CRH)* to other parts of the brain that are below it, namely the pituitary or pituitary. Furthermore, CRH will stimulate the pituitary to release *Adrenocorticotropin Hormone (ACTH)* into the blood circulation. ACTH that floods the blood circulation will one day reach the adrenal glands which are above the right and left kidneys of our body and instruct these glands to produce and secrete substances namely adrenaline, noradrenaline and cortisol. The entire signal chain above is often referred to as the Hypothalamus-Pituitary-Adrenal (HPA axis). Adrenaline and noradrenaline is what acts as a command in the body, then in commanding various organs to change the basic rhythm of physiological processes to be faster and stronger.

5. Conclusion

Based on the results of the research and discussion in the previous chapter, it can be concluded that the H1 hypothesis is accepted, namely that there is a significant effect of workload variables on nurses' work stress during the Covid-19 pandemic at Sondosia Hospital Kab. Bima. Job stress in this study was caused by an increase in the time and staff of nurses in serving patients, this was a trigger for nurses' work stress.

6. Suggestion

Sondosia District Hospital Management. Bima needs to improve the quality of an attractive work environment, such as: arrangement of rooms, air circulation, lighting, noise, cleanliness, safety and comfort, good relations between fellow nurses and with the head of the room or the leadership of the Sondosia District Hospital. Bima, with the aim of being a stress prevention stimulus.

Nurses need to do stress management such as being able to manage time, do relaxation, build good therapeutic communication with fellow nurses or leaders.

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