

## The Relationship between Workload and the Level of Occupational Health and Safety Awareness of Nurses at RSU Muhammadiyah Lumajang

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### Abstract

*Nurses require both physical and mental strength in carrying out their duties to address patients' health problems 24 hours a day continuously. These conditions lead to a decrease in nurses' vigilance in implementing health and safety at work. The research design used was correlational analytic, using a cross-sectional approach. The population in this study was all nurses working at Muhammadiyah Lumajang Hospital, which is 30 nurses, using a total sampling technique. To determine the relationship between the two variables. Spearman rank statistical test with a significance level of 0.05. The results obtained. Almost all respondents experienced a moderate workload (70%), and almost all respondents experienced a moderate level of awareness (86.6%). After the Spearman Rank statistical test was carried out, a significant level of  $0.004 < 0.05$ , so  $H_0$  was rejected and  $H_1$  was accepted, meaning there is a relationship between workload and the level of occupational safety and health awareness among nurses at Muhammadiyah Lumajang General Hospital with the level of closeness of the relationship showing the results of the value 0.508 strong category. It is hoped that Muhammadiyah Hospital will meet the ideal number of nurses, adequate facilities and infrastructure, and health insurance for healthcare workers in the future. the results of the Sig value were obtained. (2-tailed) the results of*

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## 1. INTRODUCTION

Health service providers in hospitals have the potential for work accidents. Ideally, hospitals must provide security for employees and the hospital itself (Bando, 2020). Nurses are medical personnel who often have direct contact with patients, so they have a high risk of work accidents and contracting or transmitting diseases, so nurses must show responsibility for protecting the safety of themselves, the environment and health service recipients who must be monitored 24 hours a day (Badri, 2020). Occupational safety and health are obligations that must be carried out correctly and responsibly by nurses (Fatma, 2022).

In Law Number 13 concerning Employment of 2003, article 86 paragraph 1 "Every worker/laborer has the right to receive protection for Occupational Safety and Health". As well as article 86 paragraph 2 to protect the safety of workers/laborers in order to achieve maximum work productivity, Occupational Safety and Health efforts are carried out (Rosento, 2021). The Ministry of Health through Ministerial Decree No.1087/ MENKES /SK/VIII/2010 concerning occupational health and safety standards in hospitals also states that every job definitely has a risk of danger, therefore it is necessary to implement risk management in hospitals. The existence of laws to protect workers reduces the risk of work

accidents and workplaces that have a high risk of occupational safety and health are hospitals (Najihah, 2023).

Globally, in 2021, it is estimated that cases of work accidents among health workers due to needle pricks in hospitals will be 32.4 – 44.5% each year and diseases caused by contaminated fluids and blood include hepatitis B, hepatitis C and HIV/AIDS (Hayat, 2023). Data from the International Labor Organization (ILO) USA in 2022 reports that every year there are 2.9 million deaths caused by work accidents, of which 80% of deaths are caused by work-related accidents and work-related diseases and 20% are work-related injuries, 402 million people suffer nonfatal injuries. In Indonesia in 2021 there were 234,270 work accident cases, an increase of 5.65% from the previous year (Ramli, 2023). Cases that often occur in hospitals include needle sticks, sprains, back pain, scratches/cuts, burns, and other infectious diseases. It is observed that every year there are 385 cases of work-related accidents such as injuries caused by sharp objects contaminated with blood among health workers in the United States. Based on the Social Security Administering Agency (BPJS), employment in 2020 there were 177,000 cases then from January to September 2021 there were 82,000 cases of work accidents and 179 cases of work-related illnesses, 65% of which were caused by Covid 19 cases. Data regarding work accidents in health service facilities in Indonesia in general has not been well recorded (Arifuddin, 2023). Data on work accidents that occurred in East Java in 2021 contained 345 cases, while for work-related illnesses there were 753 cases in 2022 (Adiratna, 2022). There were 5 work accidents at RSU Muhammadiyah that were reported, while around 8 cases were not reported, the majority of which were caused by being hit by broken glass ampoules and 5 nurses who experienced low back pain.

In carrying out their duties, nurses need physical and mental strength because nursing staff is one of the health workers needed to deal with patient health problems 24 hours continuously (Gumelar, 2021). Apart from that, nurses also have activities that must collaborate with other professions, such as sending prescriptions, sending them to radiology, laboratories, taking patient diets and many more (Ku'e, 2022). The heavy workload imposed on nurses causes the body to respond with inability or decreased ability to carry out tasks due to overwhelm and fatigue (Diana, 2019). This condition of overwhelm and fatigue results in reduced nurses' vigilance in implementing occupational health and safety. 80-85% of work accidents are caused by negligence (unsafe human acts) and human error. One of the precautions that often occurs is a lack of awareness regarding the implementation of occupational safety and health. The way to minimize the occurrence of work accidents is that management is responsible for developing and maintaining a program to prevent work accidents and improving work practices and safe conditions by paying attention to proportional workload and work capacity, providing facilities and infrastructure for work health and safety. supporting it in the workplace, training and education of workers, monitoring and controlling unsafe conditions and actions in the workplace. Meanwhile, nurses have the responsibility to protect the safety and health of themselves and other people who may suffer the consequences of their actions and negligence (Manalu, 2020). In interviews conducted with nurses who work in the operating room at RSU Muhammadiyah Lumajang, they said that the workload included heavy workload due to the lack of nursing staff in the room, the variety of types of work that had to be done so that they often lost focus and paid less attention to body position in the room. doing work. These things make it possible for work accidents to occur.

Based on the background above, the author is interested in conducting research with the title the relationship between workload and occupational health and safety awareness of nurses at RSU Muhammadiyah Lumajang.

**2. RESEARCH METHOD**

In this research the researcher uses correlational analytics, namely research that compares a relationship, estimates, tests, based on existing theory and reveals the correlation between variables which aims to build relationships between variables using a cross-sectional approach, namely research of all independent and dependent variables taken simultaneously. at one time. The approach taken in this research is a cross-sectional study method, which is a type of research design that involves collecting data at a certain point in time to obtain an overview of certain characteristics, variables or phenomena in the research (Iskandar, 2023). This research design aims to determine the relationship between workload and occupational safety and health awareness of nurses at RSU Muhammadiyah Lumajang.

**3. RESEARCH RESULTS AND DISCUSSION**

**Table 1 Frequency Distribution of Respondents Based on Level of Awareness**

Emergency	Frequency (f)	Percentage (%)
Low alertness	2	6.7
Moderate Precautions	26	86.6
High alert	2	6.7
Total	30	100

Based on the table, almost all respondents experienced a moderate level of alertness, as many as 26 respondents (86.6%), low alertness, 2 respondents (6.7%), and those experiencing a high level of alertness, as many as 2 respondents (6.7%).

**Table 2 Frequency Distribution of Respondents Based on Nurse Workload**

Work load	Frequency (f)	Percentage (%)
Heavy	6	20
Currently	21	70
Light	3	10
Total	30	100

Based on the table, almost all respondents experienced moderate workload, 21 respondents (70%). Meanwhile, a small percentage of respondents experienced a heavy workload, 6 respondents (16.7%) and a light workload, 3 respondents (10%).

**Table 3 Analysis of the Relationship between Workload and the Level of Awareness of Nurses' Occupational Safety and Health**

Cross Tabulation (Cross Tabulation)	K3 Precautions			Total
	Low	Currently	High	

Work load	Light workload	0 (0%)	1 (3.3%)	2 (6.7%)	3 (10%)
	Moderate workload	0 (0%)	21 (70%)	0 (0%)	21 (70%)
	Heavy workload	2 (6.7%)	4 (13.3%)	0 (0%)	6 (20%)
Total		2 (6.7%)	26 (86,6%)	2 (6.7%)	30 (100%)
Correlation Coefficient				.508**	
Sig. (2-tailed)				0.004<0.05	
<i>Spearman Rank</i>					

### Analyzing the Relationship between Workload and the Level of Occupational Health and Safety Awareness of Nurses at RSU Muhammadiyah Lumajang

Based on table 3, the research results show that 3 respondents (10%) experienced a light workload, with 1 respondent having a moderate level of K3 alertness (3.3%) and 2 respondents (6.7%) with high K3 alertness. Medium workload was experienced by 21 respondents (70%) with a moderate level of K3 awareness by 21 respondents (70%). Heavy workload was experienced by 6 respondents (20%) with a low level of alertness of 2 respondents (6.7%) and a moderate level of K3 alertness of 4 respondents (13.3%). From the test results using Spearman rank in SPSS 16, it was found that the value of  $p < 0.05$ , namely  $p = 0.004$ , which means that there is a relationship between workload and the level of occupational health and safety awareness of nurses at RSU Muhammadiyah Lumajang. Correlation Coefficient value (0.508) which means a strong relationship.

Based on the results of this research, it is in line with research conducted by Handayani & Hotmaria (2021) which states that the more excessive the workload of nurses, the more risk they have of experiencing fatigue, the risk obtained is 1.7 times experiencing work fatigue compared to nurses with a normal workload. The results of this study also reveal that there are differences in the risk of work fatigue based on workload because each nurse has different work activities from each other. Nurses' activities at one time are sometimes different because the workload varies greatly and is also influenced by the number of patients visiting. Fatigue that occurs reduces work performance, work quality, many errors occur and even work injuries and accidents occur (Gumelar, 2021).

Research conducted by Pasha 2022 states that excessive workload has an impact on the level of fatigue experienced by employees which has consequences for employee concentration which has an impact on a person's level of alertness which causes memory function to decrease and slow down information processing, disrupting the process of problem solving, critical thinking and decision making. decision.

From the research results, data was obtained that nurses who experienced heavy and medium workloads experienced moderate K3 vigilance, there were also nurses who experienced light workloads who experienced high vigilance and moderate vigilance and heavy workloads who experienced moderate vigilance and low vigilance. Of the respondents who experienced moderate to heavy workload and experienced moderate alertness and only a few experienced low alertness, this was because in some rooms there were a high number of patients with each patient having a different number of

dependencies. Some patients are independent, but quite a few patients need help. Meanwhile, nurses also have to complete tasks such as writing reports, conveying the patient's condition, and preparing medication so that errors cannot occur. Insufficient nursing capacity results in high workloads which reduce awareness of the importance of K3.

Workloads that are not yet ideal, resulting in lowered vigilance, must be addressed immediately. The need for hospital policies that prioritize employee needs must be met immediately. The unmanageable workload of nurses affects the level of alertness of the nurses themselves. The availability of nurses in this case is able to reduce the workload that occurs, thereby increasing better service in providing services and reducing work accidents. Availability of personal protective equipment for health workers in providing services as well as a safe and comfortable environment as well as the need for motivation with appropriate compensation for services. Nurses themselves also need good communication and teamwork, creating a comfortable and cheerful atmosphere that can reduce the workload itself and the need to remind each other to protect colleagues in the work environment to avoid work accidents.

#### **4. CONCLUSION**

There is a relationship between workload and the level of occupational safety and health awareness of nurses at RSU Muhammadiyah Lumajang, which can be proven by using the Spearman rank statistical test with a p-value or significance value (2-tailed) of  $0.000 < 0.05$ , so it can be interpreted that  $H_0$  is rejected by  $H_1$  accepted with the level of closeness of the relationship showing a value of 0.952 in the strong category.

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