

The Relationship between Fatigue and Work Productivity of Nurses in the Inpatient Room of the Regional General Hospital Deli Serdang in 2018

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Abstract: Nurses are medical personnel who have the most direct contact with patient, making them vulnerable to fatigue. Work fatigue is a condition where the body's resistance becomes decreased due to doing work continuously and resulting in a decrease in work productivity. The type of this research is observational analytic with cross sectional research design. The purpose of this study was to analyze the relationship between work fatigue and nurse productivity in Deli Serdang Hospital in 2018. The research sample was 59 nurses who worked in the inpatient ward of Deli Serdang Hospital. The results showed that of 59 nurses there were 36 people (61%) who experienced work fatigue and of 59 nurses there were 31 people (52,5%) who experienced low work productivity ($p=0,000 < \alpha =0,05$) with a values of $RP = 2,817,95\%$ $CI = 1,595-4,977$. The conclusion of this study shows that there is a relationship between work fatigue and nurses work productivity.

1 INTRODUCTION

Work productivity is some result between output and input in a certain period of time. Work productivity involves the final problem, namely how much the end result is produced in the work process (Hasibuan, 2013)

Productivity is one benchmark for the progress and success of an organization, including health organizations (Malik et.al, 2014). Many reports on productivity problems are closely related to the health problems of human resources, so that efforts to improve health are a priority (Sehat, 2010).

Health is one of the most important factors for increasing nurse work productivity. Good health conditions are the potential to achieve good work productivity. High work productivity can only be obtained if the nurse is in good health (Muizzudin, 2013). One of the factors that can cause a decrease in nurse work productivity is work fatigue.

Fatigue is often considered a symptom, not a sign because it is a subjective feeling that is felt by someone, which can be seen by others (Kuswana,

2014). Fatigue is a mechanism to protect the body from further damage so that recovery occurs after resting (Tarwaka, 2014). Fatigue usually shows different conditions in each individual, but all result in loss of efficiency and decreased work capacity and endurance.

Fatigue can lead to raises some of conditions, such as a decrease in energy, a slower reaction time, reduced motivation, not being able to think quickly and a reduced morale (Heitman et. al, 2013). According to the Canadian Nurse Association research report cited by Angouw (2016) shows that almost 80% of nurses in Canada experience fatigue.

According to Lippincott Williams and Wilkins, data from a national study on the relationship between health and productivity in the workplace, it was found that out of the 29,000 workers interviewed, 38% said they had decreased cognitive function, lack of sleep, or feeling tired (Fatona, 2015).

The American Association of Nurse Anesthetists (2015) states that work fatigue is one of the causes of an increase in accidents in the workplace. Nurses

who work for 12 hours a day are more at risk of workplace accidents (as many as 37% of workplace accidents occur. Of the 37% of cases of workplace accidents that occur to nurses, needle puncture cases are the most reported cases. This happens due to a lack of focus when working due to work fatigue, especially for nurses working on the night shift. Other errors that occur due to fatigue experienced are errors in using personal protective equipment.

Astuti (2016) cites data from the Ministry of Health and University of Indonesia which states that there are around 78.8% of nurses carrying out cleaning tasks, 63.6% carried out administrative duties and more than 90% performed non-nursing assignments.

Only about 50% do nursing care according to their function. The higher the task demands of a nurse, the greater the chance that the nurse will experience fatigue while working.

According to the results of a study conducted by Ali (2017) at Monompia Kotamobagu General Hospital, results showed that of 69 nurses studied, there were 11 people who experienced mild work fatigue and 58 people who experienced severe work fatigue. From 11 people who experienced mild work fatigue, there were 4 people with good work productivity and 7 people with fairly good work productivity. From 58 people who experienced severe work fatigue, there were 11 people with good work productivity and 47 people with fairly good work productivity.

Deli Serdang Regional General Hospital is one of the hospitals engaged in the health service that operates 24 hours a day. Based on interviews conducted by researchers during the initial survey at Deli Serdang Regional General Hospital, out of 10 nurses interviewed there were 6 nurses who experienced fatigue at work and as many as 4 people who did not experience fatigue while working. From 6 nurses who experienced fatigue while working, all experienced a decrease in work productivity. Based on the description of the background above, the researcher is interested in conducting research whether there is a relationship between work fatigue and work productivity of nurses in the inpatient ward of Deli Serdang Hospital.

2 MATERIALS AND METHODS

The type of this research is observational analytic with cross sectional research design. This study uses a simple random sampling method in sampling. The

study was conducted on 59 nurses who served in the inpatient room.

To measure the work productivity of nurses, using a work productivity questionnaire with a score of 46-60 is a high work productivity category and a score of 30-45 is a low work productivity category. As for measuring work fatigue, a tool called the reaction timer is used. The results of the fatigue measurements are categorized into 2 parts. Normal category (not experiencing fatigue) with measurement results of 150-240 milli seconds. While the category experiences fatigue with a measurement of > 240 milli seconds.

Data analysis was carried out in 2 stages, namely univariate analysis and bivariate analysis. Univariate analysis explains the results of the study in the form of frequency distributions of each variable, while bivariate analysis explains the relationship between two different variables using the chi-square test with a significance level of $p < 0.05$.

3 RESULTS

3.1 Nurse Work Fatigue

Table 1 : Distribution of Frequency of Nurse Work Fatigue.

Work Fatigue	F	%
Normal	23	39
Fatigue	36	61
Total	59	100

Based on Table 1, it can be seen that there were 36 (61%) nurses who experienced fatigue at work, and 23 (39%) who did not experience work fatigue (normal).

3.2 Work Productivity of Nurses

Table 2: Distribution of Frequency Work Productivity of Nurses.

Work Productivity of Nurse	F	%
High	28	47,5
Low	31	52,5
Total	59	100

Based on Tabel 2 it can be seen that nurses with low work productivity were 31 people (52.5%), and nurses with high work productivity were 28 people (47.5%).

Table 3 : Relationship between Fatigue and Work Productivity of Nurses.

Work Fatigue	Work Productivity of Nurses				Total		p value	RP	95% CI
	High		Low						
	N	%	N	%	N	%			
Normal	18	78	5	22	23	100	0,000	2,817	1,595 – 4,977
Fatigue	10	28	26	72	36	100			

3.3 Relationship between Fatigue and Work Productivity of Nurse

Based on Table 3, out of 36 nurses who experienced work fatigue, there were 10 people (28%) with high work productivity and as many as 26 people (72%) with low work productivity. Then from 23 nurses who did not experience work fatigue (normal), there were 18 people (78%) with high work productivity and 5 people (22%) with low work productivity. The chi-square test results show that the value of $p = 0,000 < 0,05$, which means there is a relationship between work fatigue and work productivity. $RP \text{ value} = 2,817$, $95\% \text{ CI} = 1,595 - 4,977$.

4 DISCUSSION

Based on the results of the study, it was found that more nurses in the inpatient room of Deli Serdang Hospital experienced fatigue in the workplace. This is caused by the number of tasks carried out based on the main tasks, additional assignments, the number of patients being treated in the nurse's work capacity and the time needed to carry out nursing actions. In addition, nurses are also often faced with other workloads such as administrative duties. This causes the workload of nurses to be higher, causing fatigue to nurses while on duty.

Judging from the demands or workload given to nurses, it is certain that a nurse can experience fatigue while working. work fatigue experienced by a nurse will cause the nurse to no longer be able to work, so the nurse must pause to restore her condition. If a nurse who is experiencing fatigue still forces herself to keep working, then the fatigue she experiences will increasingly get worse and affect the smooth running of her work (Suma'mur, 2014).

According to Nurmianto quoted by Nurul (2017), work fatigue experienced by a person can cause work productivity to decrease and increase the level of errors at work. Decrease in work productivity that occurs in nurses can be seen from the findings of researchers that not all nurses in charge can carry out nursing care properly. Most of the nurses who have

not been able to carry out nursing care properly are due to experiencing fatigue while working.

Based on bivariate test between work fatigue and work productivity on nurses showed the results of 36 nurses who experienced fatigue at work, there were 10 people (28%) with high work productivity and as many as 26 people (72%) with low work productivity. Then from 23 nurses who did not experience work fatigue (normal), there were 18 people (78%) with high work productivity and 5 people (22%) with low work productivity. The chi-square test results showed that the value of $p = 0,000 < 0,05$, which means that there is a relationship between work fatigue and work productivity of nurses in the inpatient ward of Deli Serdang Hospital. The value of $Rp. 2.817$ means that nurses who experience fatigue while working have the potential to 2,817 experience low work productivity.

This research is in line with the research conducted by Ali (2017) which states that there is a relationship between work fatigue and nurse productivity.

This research is also in line with research conducted by Majore (2018), which states that there is a relationship between work fatigue and nurse productivity (performance).

5 CONCLUSIONS

Fatigue in 59 nurses showed that there were 36 nurses (61%) experiencing work fatigue and 23 nurses (39%) not experiencing work fatigue. While work productivity in 59 nurses showed that there were 31 nurses (52.5%) experiencing low work productivity and 28 nurses (47.5%) experiencing high work productivity. So that there is a relationship between work fatigue and work productivity of nurses in the inpatient ward of RSUD Deli Serdang Hospital.

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