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Correlation Of Work Loads With Work Fatigue At Health Workers Team Who Carried Out A 24-Hour Shift In Ngantang Inpatient Health Center

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ABSTRACT
The high public interest in health services without being balanced with the quantity and quality of adequate human resources triggers an increase in workload resulting in physical fatigue which can reduce performance of health workers. The purpose of this study was to determine the correlation of work loads with work fatigue at health workers team that implements a 24-hour shift in Ngantang Inpatient Health Center. Research design of this study was observational with cross sectional approach. Population studied was all health workers team who carried out 24-hour shift in Ngantang Inpatient Health Center amount 38 people, with Simple Random Sampling technique obtained sample 35 respondents. Independent variable was workload with dependent variable work fatigue. Data collection using a questionnaire. Data analysis with Spearman rho test at $\alpha = 0.05$. The results showed almost half of respondents had workload in the high category, amount 16 respondents (45.7%) and most respondents had work fatigue in very tired category, amount 21 respondents (60.0%). The analysis results showed that there was correlation of work loads with work fatigue at health workers team that implements a 24-hour shift in Ngantang Inpatient Health Center. (p-value = 0.009 <a = 0.05). The high workload of health workers without being balanced by adequate rest periods triggers an increase in fatigue. High levels of fatigue can increase the risk of performance degradation due to reduced physical ability and concentration.

Keywords : Workload, Work fatigue, Health worker.

INTRODUCTION
As the community is increasingly concerned about its health, the higher the community's demand for quality health services is the Ministry of Health of the Republic of Indonesia, 2015). The high interest of the community towards health services without being matched by the quantity and quality of adequate human resources triggers another problem, namely the decline in the quality of health services itself due to the high workload borne by health workers (Manurung, 2011). According to Simamora (20120) an increase in workload can occur, if the number of nurses does not match the level of care needs of patients. Health workers who carry out excessive tasks will have a negative impact and affect the degree of their health, if not properly anticipated and can affect their health and safety, it will also have an impact on the quality of health services provided (MOH RI, 2015).

The research results of the Department of Health in collaboration with the University of Indonesia quoted from Prihatini, (2012) found that there were 78.8% of nurses performing cleaning tasks, 63.6% doing administrative tasks, and more than 90% doing non-nursing tasks and only 50% doing nursing care actions according to their function. According to a survey from the Indonesian National Nurses Association (PPNI) in 2017, around 50.9% of nurses working in 4 provinces in Indonesia experience work stress, often feel dizzy, tired, unable to rest because workload is too high, and take up time, salary low without adequate

incentives. Haryanti research results (2013), in Semarang district hospital, it was found that health workers perceive their workload as heavy (93.1%). In contrast to the results of the Seftriadinata study (2013) at the Saras Husada Purworejo Hospital, that health workers perceive themselves as having a moderate workload (53.95%).

Ngantang Inpatient Health Center as a Technical Service Unit in the field of Health in the Ngantang District community with the scope of duties serving the community in the health sector. There are so many activities, programs that must be done in every service, namely officers who make healthy and sick visits to the village, sweeping immunizations, environmental health surveys (clean water inspection, PSN) toddlers' posyandu, elderly posyandu, health services in general / outpatient Poly, and hospitalization and carry out work pickets / work shifts at the Puskesmas every day. These various tasks are considered burdensome to existing health workers. The results of a preliminary study conducted through interviews with 10 health workers found that complaints of fatigue in the staff such as the presence of symptoms of headaches after the night shift, often yawning, drowsiness and fatigue throughout the body. As a result of these fatigue makes them feel lazy to act so that their work is less than optimal and when doing care for patients officers sometimes confused and sometimes even angry with patients.

Workload is a number of activities that must be completed by an organizational unit or position holder within a certain period (Utomo, 2012). Workload given to workers needs to be adjusted to the psychological and physical abilities of the worker concerned, the state of travel, travel time from work place to work to a minimum and as safe as possible affect the health conditions of work in general and work fatigue in particular (Setyawati, 2010). According to Ilyas (2014), high workloads can cause fatigue and fatigue for health workers. Tiredness and fatigue of health workers can occur if they work more than 80% of work time.

The heavier the workload, the more energy and nutrients are needed, so that the physical condition of workers decreases and the need for oxygen increases. When workers perform activities with heavy workloads, the heart is stimulated so that the pulse rate and pumping power increase. When oxygen demand exceeds the body's supply, anaerobic metabolism that produces lactic acid occurs (Soeharto, 2014). If there is a constant lack of oxygen, accumulation of lactic acid builds up which results in faster fatigue. In addition, the more awake a person, the hormone adenosine slowly accumulates in the brain which affects the slowing of brain activity and triggers drowsiness as the body's respondents need rest (Theresia, 2016).

The negative impact caused by the high workload can be in the form of physiological, psychological and behavioral symptoms (Robbins, 2014). Excessive workload (role overload) affects the increase in burnout, namely emotional exhaustion or reduced emotional resources in the self such as love, empathy, and attention so as to reduce overall work quality (Zagladi, 2014).

To overcome the emergence of work fatigue due to the high workload for health workers, there are several alternative policy options that can be taken by stakeholders to optimize the quality of workforce health, including conducting an analysis of workload calculations which can then be used to determine the duties and obligations assigned to the labor force and adding labor if the workload for each person is too heavy. Likewise, additional tasks undertaken must also be adjusted to the education he obtained, the working time used to do his work in accordance with the working hours that take place every day, as well as the completeness of facilities that can help health workers complete their work well (Irwady, 2013).

METHODS

Research design

The research design used in the study was observational research, that is, research whose data collection was carried out without providing treatment (Notoatmodjo, 2010). The approach used is a cross sectional study that is the independent variable and the dependent variable is measured simultaneously and carried out briefly or once (Nursalam, 2016).

Population, Samples and Sampling

The population in this study were all teams of health workers who carried out 24-hour pickets at Ngantang Public Health Center with a total of 38 people, with a Simple Random Sampling technique obtained a sample of 35 respondents**.**

Research variable

The independent variable in this study is workload, while the dependent variable in this study is work fatigue. The instrument used in this study was a questionnaire sheet.

Data analysis

The statistical test used in this study is the Spearman rho correlation test at the level of deviation ($\alpha = 0.05$).

RESULT

Table 1. Workload on the team of health workers who carry out 24-hour pickets at the Ngantang Inpatient Health Center

No	Workload	F	%
1	Low	6	17,1
2	Middle	13	37,1
3	High	16	45,7
	Total	35	100,0

Based on table 1, it is known that almost half of respondents have a workload in the high category, namely 16 respondents (45.7%).

Table 2. Work fatigue on the team of health workers who carry out 24-hour pickets at the Ngantan Inpatient Health Center

No	Work fatigue	F	%
1	Less	0	0,0
2	Tired	14	40,0
3	Very tired	21	60,0
	Total	35	100,0

Based on table 2 it is known that the majority of respondents have work fatigue in the very tired category, namely 21 respondents (60%).

Table 3. Test Results Statistical relationship of workload with work fatigue on the team of health workers who carry out 24-hour pickets at the Ngantang Inpatient Health Center

			Work fatique		
			Tired	Very tired	Total
workload Kerja	Low	F	6	0	6

	%	17.1%	.0%	17.1%
Middle	F	4	9	13
	%	11.4%	25.7%	37.1%
High	F	4	12	16
	%	11.4%	34.3%	45.7%
Total	F	14	21	35
	%	40.0%	60.0%	100.0%

p-value=0,009 < α=0,05

Based on table 3 it is known that respondents have a high workload with work fatigue in the very tired category, which is 12 respondents (34.3%). Based on the results of the analysis using the Spearman rank test obtained p-value = 0.009 <α = 0.05, then H0 is rejected and H1 is accepted, which means there is a relationship of workload with work fatigue on the team of health workers who carry out 24-hour pickets at the Ngantang Inpatient Health Center.

DISCUSSION

A. Workload on the Team of Health Workers Who Carry Out 24-hour Pickets at Ngantang Inpatient Health Center

Workload on the team of health workers who carry out 24-hour pickets at the Ngantang Inpatient Health Center is known that almost half the respondents have workloads in the high category, namely 16 respondents (45.7%). Based on the cross tabulation, it is known that respondents are female with a high workload category, namely 13 respondents (37.1%). The results of the questionnaire analysis revealed that the workload indicator with the highest score was related to the respondents' feeling that they felt very busy at certain times.

Workload is something that arises from the interaction between the demands of tasks, the work environment which is used as a workplace, the skills, behaviors and perceptions of the workplace (Tarwaka, 2016). According to Ilyas (2014), high workloads can cause fatigue and fatigue for health workers. Tiredness and fatigue of health workers can occur if they work more than 80% of work time. The negative impact caused by the high workload can be in the form of physiological, psychological and behavioral symptoms (Robbins, 2014). Excessive workload (role overload) affects the increase in burnout, namely emotional exhaustion or reduced emotional resources in the self such as love, empathy, and attention so as to reduce overall work quality (Zagladi, 2014).

The results showed that almost half of respondents rated workload in the heavy category. As a health worker who works in a health care center, the tasks that must be carried out include receiving new patients in accordance with procedures, creating good cooperative relationships with patients and families, carrying out recording and reporting in appropriate nursing services, monitoring and maintaining patient conditions, then doing appropriate actions based on results, carrying out tasks in the morning, evening, night and holiday in rotation. However, health workers do not only work in buildings but also get community work, for example healthy and sick visits to villages, sweeping immunizations, environmental health surveys and posyandu. At the end of the month and at the end of each year, health will participate in reporting activities and activity plans for the following year.

The workload in the heavy category at the Ngantang Nursing Community Health Center is also due to the lack of available labor, so the amount of work to be done is not in accordance with the existing HR. The number of tasks that must be carried out by health

workers if not accompanied by adequate rest and recreation management will have a negative impact on the physical and psychological health workers themselves. During the work process that involves physical activity, the pulse will work increasing along with the higher physical workload being done. When the pulse rate increases for a long time then the possibility of fatigue will be higher so that the results of work involving physical activity will also decrease.

Judging from the results of the questionnaire analysis it appears that respondents experienced very high activity at certain times. Such activities include when the health workers besides being assigned to do 24-hour pickets, also have the task to go down to the community to make visits both during health screening and during counseling activities and Posyandu. Respondents rated the activity as a high workload because the opportunity he could use after returning from the duty picket at the Puskesmas was reduced and certainly quite burdensome for female health workers, as the results of a cross tabulation showed that the majority of women rated the workload he had in the high category . Aside from the large number of tasks, the high workload assessment is also influenced by women's physical abilities and endurance at work are indeed lower than men.

B. Work fatigue in the team of Health Workers who carry out 24-hour pickets at the Ngantang Inpatient Health Center

Work fatigue on the team of health workers who carry out 24-hour pickets at the Ngantang Inpatient Health Center is known that the majority of respondents have work fatigue in the very tired category, namely 21 respondents (60%). The results of the questionnaire analysis are known to be indicators of fatigue with the highest score related to feeling tired experienced by respondents even though they have not started working.

Work fatigue is often interpreted as a process of decreasing efficiency, work performance, and reduced strength or physical endurance of the body to continue the activities that must be carried out (Wignjosoebroto, 2016). According to Tarwaka (2016), one of the causes of work fatigue is work activities. The existence of work activities causes workload from the activities carried out. Workload is a burden or dependents obtained from work activities carried out. Workload can be in the form of physical workload and mental workload. At physical workloads involve muscle work or affect physiology functions of the human body. Fatigue can be influenced by factors that originate in a person's body such as; age, sex, years of service, nutritional status, and physical / health conditions (Suma'mur, 2014). According to Lerman et al (2012) states that sleep duration and sleep quality affect the occurrence of fatigue, alertness, safety including delayed reactions, complex disturbances at work and reduced awareness.

The results showed work fatigue in the very tired category. The high level of fatigue experienced by health workers in this study was due to the fact that health workers had many and varied work activities but were not accompanied by adequate rest periods. As it is known that one of the contributors to work fatigue is an increase in physical workload. This situation is associated with an increase in oxygen demand. When the physical workload exceeds the maximum oxygen intake, it causes a decrease in oxygen supply to the muscles resulting in an anaerobic process in breaking down muscle glycogen into energy and lactic acid. Lactic acid with water then builds up in the muscles which makes the muscles swell, this is what causes symptoms of fatigue and pain in the muscles, especially when the muscles are about to rest.
Fatigue experienced by a large number of respondents in this study was felt even before the respondent began his daily work. The situation is influenced by the accumulation of the level of physical fatigue in previous work activities so that when I have to start working the next day, the body still experiences inflammation that causes pain and a feeling of fatigue in the body. Another impact of the accumulation of fatigue is the emergence of drowsiness

throughout the day which can affect the decrease in the level of concentration and fitness of the body at work.

Based on cross tabulation, it is known that fatigue is more common among respondents aged 26-35 years. This condition occurs because the Puskesmas policy to reduce the tasks assigned to health workers with an older age, therefore respondents nearing retirement age are not too exhausted. The results also showed that the level of work fatigue was more experienced by health workers with long work periods (> 5 years). Length of work can affect a person both positive and negative influences. Positive influence occurs when the longer a worker works, the experience will be in doing his work. Conversely, a negative effect occurs when the longer a worker who has long worked will cause fatigue and boredom, especially with monotonous and repetitive work activities with limited rest opportunities.

C. The Relationship between Workload and Work Fatigue in the Health Workers Team who carry out 24-hour pickets at the Ngantang Inpatient Health Center

The results of the analysis using the Spearman rank test obtained p-value = 0.009 <α = 0.05 then H0 was rejected and H1 was accepted, which means there is a relationship of workload with work fatigue on the team of health workers who carry out 24-hour pickets at the Ngantang Inpatient Health Center.

Workload received by a person must be appropriate or balanced with both physical abilities, cognitive abilities and human limitations accepting these burdens (Tarwaka, 2016). According to Suma'mur (2014), muscles work by contracting (contracting) and relaxing. When the muscles contract, the blood between the muscle fibers and the outside of the blood vessels gets pinched. Pinched blood will inhibit blood circulation. This can disrupt the exchange of substances in the body and also cause oxygen to be carried by the blood to be reduced, so the body does not have enough oxygen. Reducing the amount of oxygen in the body, will cause increased production of lactic acid, causing fatigue at work. Accumulation of physical workload in terms of physical tasks, main workload, and additional workload can worsen the level of work fatigue. According to Setyawati (2010), that one of the efforts to prevent, overcome, and treat work fatigue is through work fatigue management. Work fatigue can be overcome through preventive, curative and rehabilitative measures.

There is a significant relationship between workload and work fatigue. High workload involves using the muscles and mind to do the work. Every time doing work activities, it results in changes in physiological functions in the body organs including oxygen consumption, increased heart rate, respiratory rhythm, body temperature, lactic acid concentration and the level of evaporation through sweating. Apart from causing physical changes, work that requires high concentration and thought as well as health workers can also have an impact on improving brain work. When the brain has reached its limit, in general there will be symptoms of dizziness and decreased levels of concentration. In health workers, a decrease in concentration can be fatal especially when being treated to patients because it is related to a person's health and safety status.

Health centers should carry out health checks on health workers routinely with the aim to determine work fatigue experienced through objective fatigue measurements such as measurement of oxygen consumption, measurement of lactic acid levels and measurement of reaction time. In addition it is necessary to evaluate the balance between workloads owned by the availability of available health workers so that there is no high level of fatigue that can have an impact on the decline in the quality of work of health workers.

CONCLUSION

1. Nearly half the respondents have workload in the high category, namely 16 respondents (45.7%)
2. Most respondents have work fatigue in the very tired category, namely 21 respondents (60%).
3. There is a relationship of workload with work fatigue on the team of health workers who carry out 24-hour pickets at the Ngantang Inpatient Health Center (p-value = 0.009 < α = 0.05)

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