

**HUBUNGAN *CIRCADIAN RHYTME SLEEP DISORDERS*
DENGAN MOTIVASI KERJA PERAWAT
DI RUMAH SAKIT MOEWARDI SURAKARTA**



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HALAMAN PERSETUJUAN

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HALAMAN PENGESAHAN

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Surakarta, Juni 2016



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THE CORRELATION OF *CIRCADIAN RHYTHME SLEEP DISORDERS* WITH NURSEWORK MOTIVATION IN MOEWARDI HOSPITAL OF SURAKARTA

ABSTRACT

By:

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Nurse job description in shares of emergency installation was patient handling of emergency requiring high intensity and concentration with the situation that uncertain. Trouble of appearance, sleep / Circadian Rhythm Sleep Disorders (CRSD) at nurse affecting at nurse performance specially nurse work motivation. This research was purposed to analyse the correlation of Circadian Rhythm Sleep Disorders (CRSD) with nurse work motivation in Emergency Department RSUD DR. Moewardi Surakarta. This research was a correlation descriptive with the cross sectional approach. The research population was the nurse in the Emergency Department room in of RSUD Dr. Moewardi Surakarta and have a sample account 27 nurses with purposive sampling. The data collecting was using questioner and analyzed was using correlation test. Research result in the form of Rank Spearman correlation of the correlation Circadian Ryhtme Sleep Disorders (CRSD) with nurse work motivation obtained Rs value equal to -0,414 ($p\text{-value} = 0,032$) so H_0 refused. Research conclusion the descriptive of Circadian Rhythm Sleep Disorders (CRSD) at nurse in Emergency Department of RSUD Dr. Moewardi Surakarta mostly do not experience of Circadian Rhythm Sleep Disorders (CRSD) (56%), the descriptive of work motivation nurse in Emergency Department of RSUD Dr. Moewardi Surakarta mostly lower equal to 14 respondents (52%), and there were correlation of Circadian Rhythm Sleep Disorders (CRSD) with nurse work motivation in Emergency Department RSUD DR. Moewardi Surakarta.

Keywords: Emergency Department, Circadian Rhythm Sleep Disorders, motivation,nurse.

INTRODUCTION

Emergency Room (ER) is the main access to obtain hospital treatment, has a very important role in treating patients with various levels of emergency (Decree of the Minister of Health, 2009). Patients with emergency conditions as diverse came to the emergency room with the hope of obtaining optimum service, as for emergency events occur with anyone, anytime and anywhere, so that the nurses should have a good performance every time (Wibowo, 2007). With high public expectations on the performance of nurses in the ER, nurses are expected to have the speed in the act, skill competent and must always be alert (Sudjito, 2007).

The College Of Emergency Medicine (2012) revealed that the lack of performance of nurses in providing nursing care, high work stress, an imbalance between the number of patients and the availability of nurses, the room layout, lack of bed capacity, a heavy workload, mortality, number of health personnel from multidisciplinary, and needs total care of patients with critical conditions are some of the common problems that lead to overcrowded conditions in the ER (Wijaya, 2010). The condition lasts continuously for a long time, so it makes nurses irritability, fatigue, depression and deft in handling patients (Cole, 2011). ER state of the environment in which the complex will have a negative impact to patient safety, patient doubts as comfort and satisfaction, poor access to services for hospitals and the poor quality of nurses in providing care to patients (Wijaya, 2010). According Afleck et . al, (2013) overcrowded situation is one of the factors that worsen the quality of care provided to patients in the ER nurse.

The nurse is one of the jobs that use the system shift, shift work is one source of stress especially nurses who worked the night shift. Last hour of sleep can lead to high risk of making mistakes in patient care, negligence, and injury to the nurse while at work or traveling back home. Occupational accidents in

nurses also can be caused by fatigue, loss of sleep and sleep disorders / Circadian Rhythm Sleep Disorders (CRSD) (Wendy et. Al., 2007).

Circadian Rhythm Sleep Disorders (CRSD) are an issue that involves a person from the start and waking. The human body has a biological clock that is centered on the brain and is called the suprachiasmatic nucleus (SCN). The biological clock regulates many things related to the body's functions and activities including hormone levels, blood pressure, heart rate, alertness, metabolism, body temperature, sleep patterns and so on. The light intensity was instrumental in synchronizing biological clocks, especially in workers changing shifts or night shifts are more susceptible Circadian Rhythm Sleep Disorders (CRSD) (Denis & Maria, 2010).

According to Grandjean (1988) in Winarsunu (2008) throughout the human body functions are monitored every day for 24 hours by circadian rhythms have on every individual. Nurses who use their time to work while during the night to sleep have the possibility of disruption of physiological functions of the body, the undermining of the above can be easily and clearly identified by measurements such as blood pressure, pulse, body temperature (Suma'mur, 2009). The disturbed physiological function of this can cause health problems such as increased risk of heart disease, gastrointestinal disturbance and chronic fatigue. Chronic fatigue is a severe fatigue on the body that will have an impact on other diseases, decreased appetite and may also decrease the motivation of nurses (Carole and Carol, 2008).

Sardiman (2007) says motivation is something that arises from one's personal, tangible intentions, hopes, wishes and goals to be achieved, motivation also can encourage, enable and propel a person's behavior. Siagian (2006) says that motivation is divided into two, namely internal consists of self-esteem, needs, desires, job satisfaction and external comprised of working environment, nature or type of work, group work, salary or intensified, and workers' organizations. Motivation to work in the ER is formed of an attitude (attitude) of nurses in addressing a problem that occurs during the installation. Nurses are required purposeful and clearly focused on moving him to achieve a goal of the installation. So with the motivation to work, will support the service work well too.

Hospital Dr. Moewardi is one type A hospital in Surakarta. The vision is to become "a leading world-class hospital," is one of the main referral hospital in the former Surakarta. Hospital Dr. Moewardi Surakarta has 721 nurses were divided into every ward, in the emergency room there are 108 nurses were divided into structural and nonstructural nurse. ER Hospital Dr. Moewardi Surakarta divided by 4 parts of the room from the examination room who deal with patients from the triage, observation and inspection measures, minor operating room (OK Minor), major surgery room, HCU and obsygn space.

Based on interviews of five nurses in the ER nurses complained of a variety of symptoms such as decreased concentration, frequent yawning, body fatigue, sleepiness after a night shift that could have an effect on his motivation decreases due to the above matters.

Based on the above background, the researcher is interested in studying about the relationship Circadian Rhythm Sleep Disorders (CRSD) with work motivation.

The purpose of this study was to determine the relationship Circadian Rhythm Sleep Disorders (CRSD) with the motivation of nurses in ER Hospital Dr. Moewardi Surakarta.

The Research Methods

The type of research is a quantitative research method used is described correlative, the approach used is cross sectional. Cross Sectional is a non-experimental research that is making variable data, observations and measurements at a time at the same time (Sumantri, 2011). The study population was a nurse IGD Hospital Dr. Moewardi Surakarta totals 108 people in the ER Hospital Dr. Moewardi Surakarta. The research sample as many as 27 nurses IGD taken by purposive sampling technique. The technique of collecting data using questionnaires. Data analysis techniques using univariate analysis, namely using tables and bivariate analysis using the Spearman rank correlation test.

The Result of Research

Univariate analysis

Frequency Distribution of Circadian Rhythm Sleep Disorders (CRSD)

Table 1. Central Tendency CRSD

No	Central tendency	Value
1	Minimum	22,00
2	Maximum	43,00
3	Mean	32,56
4	Median	32,00
5	Standard deviation	4,79
Total		27

Values of central tendency Rhythm Circadian Sleep Disorders (CRSD) obtained the lowest score is 22.00, which means the lowest score Rhythm Circadian Sleep Disorders (CRSD) is not impaired, the highest score was 43.00, which means the highest score Rhythm Circadian Sleep Disorders (CRSD) is impaired, the average score Rhythm Circadian Sleep disorders (CRSD) is 32.56 which indicates that the average respondent is not impaired CRSD, the median score was 32.00, which means respondents tended not impaired Rhythm Circadian Sleep disorders (CRSD), and the standard deviation score Rhythm Circadian Sleep Disorders (CRSD) is 4.79.

Furthermore, the results of data analysis of frequency distribution Rhythm Circadian Sleep Disorders (CRSD) are as follows.

Table 2. Frequency Distribution Circadian Rhythme Sleep Disorders (CRSD)

No	Sleep Disorders	Frequency	Percentage (%)
1	Not impaired	15	56
2	Impaired	12	44
Total		27	100

The frequency distribution Circadian Rhythm Sleep Disorders (CRSD) of the respondents showed the highest distribution is not impaired as many as 15 respondents (56%) and the remaining 12 respondents (44%) experienced a Circadian Rhythm Sleep Disorders (CRSD).

Frequency Distribution of Work Motivation

Table 3. Central tendency of work motivation

No	Central tendency	Value
1	Minimum	67,00
2	Maximum	89,00
3	Mean	79,00
4	Median	78,00
5	Standard deviation	5,26
Total		27

Values of central tendency of work motivation showed the lowest score is 67.00, which means the lowest score is lower work motivation, work motivation highest score is 89.00, which means the highest score is high employee motivation, the average score was 79.00 which work motivation means the

average work motivation is high motivation, work motivation is the median score of 78.00 which indicates that most respondents tend to have high motivation work motivation data collection results obtained a minimum score of 67.00, a maximum score of 89.00, an average of 79 , 00, the median of 78.00 and a standard deviation of 5.26.

Table 4. Frequency Distribution of Work Motivation

No	Work Motivation	Frequency	Percentage (%)
1	Low	14	52
2	High	13	48
Total		27	100

The frequency distribution of work motivation of respondents showed the highest distribution is the low motivation to work as many as 14 respondents (52%) and the remaining 13 respondents (48%) have a high work motivation.

Analysis Bivariat

Table 3. Summary of Test Results Rank Correlation Spearman correlation
Circadian Rhythme Sleep Disorders (CRSD) with Nurse Work Motivation

CRSD	Motivation					
	Low		High		Total	
	Freq	%	Freq	%	Freq	%
Not impaired	5	33	10	67	15	100
Impaired	9	75	3	25	12	100
Total	14	52	13	48	27	100
r_s	= -0,414					
p-value	= 0,032					
conclusion	= H_0 ditolak					

Spearman rank correlation test results relationship Circadian Rhythm Sleep Disorders (CRSD) with the motivation of nurses in ER Hospital Dr. Moewardi Surakarta Rs values obtained by -0.414 with significant (p-value) 0,032 less than 0.05 so the decision test of H_0 is rejected. Based on the decision of the trial, we conclude there is a relationship Circadian Rhythm Sleep Disorders (CRSD) with the motivation of nurses in ER Hospital Dr. Moewardi Surakarta, where the higher the Circadian Rhythm Sleep Disorders (CRSD) the motivation of nurses in ER Hospital Dr. Moewardi Surakarta lower.

Discussion

Overview Rhythme Circadian Sleep Disorders (CRSD)

The frequency distribution Circadian Rhythm Sleep Disorders (CRSD) of the respondents showed the highest distribution is not impaired as many as 15 respondents (56%) and the remaining 12 respondents (44%) experienced a Circadian Rhythm Sleep Disorders (CRSD).

Rosa and Colligan, 1997 (quoted from Maurits, 2010), defines the circadian rhythm of the body as a "Ups and Downs" on a regular basis over a period of approximately 24 hours. Bodily functions in question include alertness, heart rate, blood pressure, the quality of the sleep-wake and mental abilities. The body functions will increase or very active during the day, but will decrease or not active at night. The period during daytime called there is rest and recovery effort.

Jackson (2009), suggests that Circadian Rhythm Sleep Disorders (CRSD) are a medical condition that explains how the lack of sleep would interfere with a person's ability to work during the day. Circadian Rhythm Sleep Disorders (CRSD) more clearly felt during the day and include fatigue, fatigue, inability to concentrate, memory loss short term memory, difficulty speaking, feel older than their actual age, pain or stiffness, prone to accidents or make the real error could have been avoided.

According Theory Round-the-clock system (quoted from Maurits, 2010), that There are two types of Circadian rhythm, the type lunch (mornings) and the type of night (evenings) or type Owls are individuals who have a circadian rhythm of approximately 2 hours slower than most people's circadian rhythm, in general they were sleeping at about 08:00-10:00 am and woke up at about 24:00 midnight until 2:00 am. In addition, the sleep-wake time difference between day and night is very clear at the time of, the type often up during the night, but there was no difference in sleep duration, the type of individuals who have the highest alert level night at 14:00 and the lowest at 08:00.

The sleep quality shows one's satisfaction to sleep, so someone showed no feeling tired, irritable, and restless, listless, apathetic, black around the eyes, swollen eyelids, conjunctiva red, sore eyes, attention are fragmented, headache, and frequent yawning or drowsiness (Aimul, 2006). Nurses have sleep quality in both categories supported by factors exercise habits.

Overview Work Motivation

The frequency distribution of work motivation of respondents showed the highest distribution is the low motivation to work as many as 14 respondents (52%) and the remaining 13 respondents (48%) have a high work motivation.

Work motivation shown by someone is something that comes from ourselves that the desire to work will be better. The desire of someone's work is influenced by several factors among other factors, namely intrinsic motivation to work in the absence of external stimuli, within the individual there is an urge to take action. Factors that could cause intrinsic motivation are: their needs, their knowledge of their progress, and their ideals or aspirations. Extrinsic factors such as motivation that works with the boost factor of outside individuals (Siagian, 2005).

From the results of the above explanation, the researchers found motivation in working is very important factor in improving the performance of a nurse, this is caused by a sense of desire or a nurse to work and demonstrate performance to the success of the nurses themselves.

Motivation to work well in this study are categorized by the capabilities of nurses in implementing the actions nursing care patients were evaluated for aspects of the nurse's knowledge on the implementation of nursing care, implementing and training, especially the training in nursing, has a high morale for their motivation to work well from within ourselves, nurses or outside the context of hospitalization and the workload can be done by nurses such as the provision of additional duties, but nurses still have the maximum ability to continue to perform the additional tasks.

The results showed that the respondents have less motivation (52%). The condition can be a barrier to the creation of nursing care in hospitals where terms of the quality and satisfaction of patients and their families. Lack of motivation can be caused because of the element of inner nurses, psychological influence resulting in lower morale in order to meet the nursing care in hospitals. Aspects that comes from within include encouragement for achievement, recognition, responsibility, the opportunity to move forward and job satisfaction in order to carry out actions more quality nursing care and answer the demands of the community service requirement (Mangkunagara, 2006).

The motivation for the work of nurses is an aspect that can affect the ability and quality of work that will be implemented and accepted by patients in hospitals where this relates to performance owned nurses. The study provides an interpretation of that provision of motivation can improve the quality of the work undertaken by nurses in the framework of the implementation of nursing care with maximum results and satisfy the needs of patients and their families.

Relations Circadian Rhythme Sleep Disorders (CRSD) with Nurse Work Motivation

Spearman rank correlation test results relationship Circadian Rhythm Sleep Disorders (CRSD) with the motivation of nurses in ER Hospital Dr. Moewardi Surakarta Rs values obtained by -0.414 with significant (p-value) 0,032 less than 0.05 so the decision test of H0 is rejected. Based on the decision of the trial, we conclude there is a relationship Ryhtme Circadian Sleep Disorders (CRSD) with the motivation of nurses in ER Hospital Dr. Moewardi Surakarta, where the higher the Circadian Rhythm Sleep Disorders (CRSD) the motivation of nurses in ER Hospital Dr. Moewardi Surakarta lower.

The nurse in the ER is one of the nurses who are required to have the speed in acting, skills, and must always be alert than nurses wards. ER nurse is one job that uses a system of shift, shift work is one source of stress especially nurses who worked the night shift. Last hour of sleep can lead to high risk of making mistakes in patient care, negligence, and injury to the nurse while at work or traveling back home. Occupational accidents in nurses also can be caused by fatigue, loss of sleep and sleep disorders / Circadian Rhythm Sleep Disorders (CRSD) (Wendy et. Al., 2007).

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According to Grandjean (1988) in Winarsunu (2008) throughout the human body functions are monitored every day for 24 hours by a circadian rhythm which is owned by the individual. Nurses who use their time to work while during the night to sleep have the possibility of disruption of physiological functions of the body, the undermining of the above can be easily and clearly identified by measurements such as blood pressure, pulse, body temperature (Suma'mur, 2009). The disturbed physiological function of this can cause health problems such as increased risk of heart disease, gastrointestinal disturbance and chronic fatigue. Chronic fatigue is a severe fatigue on the body that will have an impact on other diseases, decreased appetite and may also decrease the motivation of nurses (Carole and Carol, 2008).

Motivation comes from the Latin is a movie which means impulse or motive power. According to Malayu (2008) motivation is the driving force provision that creates the excitement of one's work, to cooperate, to work effectively and integrated with all its resources to achieve satisfaction. Motivation is divided into: (a) the intrinsic motivation and (b) extrinsic motivation. Intrinsic motivation is motivation that works without any external stimuli, within the individual there is an urge to take action. Extrinsic motivation is motivation that works with the boost factor from outside individuals. Both intrinsic and extrinsic motivation is very effective if used at the right time and circumstances, but in the long term motivation intrinsic most visible cause of higher quality than the performance of a nurse. Because of this intrinsic motivation can change all the factors of the extrinsic motivation, this is caused by a sense of self nurse wishes to work and demonstrate performance to the success of the nurses themselves (Gagne et. Al., 2010).

The study concluded there is a relationship Ryhtme Circadian Sleep Disorders (CRSD) with the motivation of nurses in ER Hospital Dr. Moewardi Surakarta, where the higher the Circadian Rhythm Sleep Disorders (CRSD) the motivation of nurses in ER Hospital Dr. Moewardi Surakarta lower. The results are consistent with research Jane and Janice (2009) on the effect of sleep deprivation, psychological workplace with workers. The study concluded that lack of sleep on the job is directly related to low productivity, emotional health, improvement of occupational accidents and absenteeism, and indirectly related to the attitude of the low, low social relationships, and low motivation.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. An overview of the personal characteristics of nurses in ER Hospital Dr. Moewardi Surakarta mostly mostly aged 30-40 years, male sex as much, educated D3 as many, have a longer work more than 3 years as many, and married as many.
2. A Rhythm Circadian Sleep Disorders (CRSD) on nurses in ER Hospital Dr. Moewardi Surakarta most are not experiencing Circadian Rhythm Sleep Disorders (CRSD) as much
3. Overview of motivation nurse in ER Hospital Dr. Moewardi Surakarta mostly lower.
4. There are a relationship Circadian Rhythm Sleep Disorders (CRSD) with the motivation of nurses in ER Hospital Dr. Moewardi Surakarta.

Recommendations

1. For Nurses
Nursing job has characteristics that cause a person to be on standby in a long time. Nurses should be able to manage time for work and for not working, so they can keep the situation himself and avoid fatigue and sleep disorders which in turn can maintain the motivation of the nurses.
2. For Hospital Dr. Moewardi
Hospital management should make an effort shift optimal working arrangements, so that the workload of nurses can be allocated equally to all nurses and unbalanced workloads can be avoided.
3. For Further Research
Subsequent researchers who want to examine the same themes are expected to add other factors related to the motivation of nurses, for example a factor of leadership, infrastructure, and so forth in order to know whether the most dominant factors associated with the nurse work motivation.

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