

Factors Influencing The Nurse Working Fatigue at The Inpatient Unit Idaman Regional Hospital Banjarbaru

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DOI: 10.29322/IJSRP.10.08.2020.p104127

<http://dx.doi.org/10.29322/IJSRP.10.08.2020.p104127>

Abstract- Bed Occupancy Rate (BOR) is a number that indicates the percentage of the level of use of the bed at a certain time unit in inpatient units. The high achievement of BOR shows that there is an increase in service usage. This condition also shows that the work activities of health workers in the room have also increased. Increased work activities can be the cause of nurses' work fatigue. Fatigue caused by several factors, among others shifts work, individual factors (health or illness, gender, age, education, workload, tenure, marital status and nutritional status). The research aims to analyze factors influencing working fatigue in nurses at the inpatient unit Idaman Regional Hospital Banjarbaru. This research was an observational analytic study using a cross-sectional design with a sample of 56. The research instrument used a questionnaire and the reaction timer application. Dependent variables were work fatigue and the independent variables were age, sex, work shift, work period, marital status and nutritional status. The test used is the Chi-Square test and the Logistic Regression test for multivariate analysis. The results showed that most work fatigues was the tired category by 75%. There was no significant influence between work fatigue and age ($p = 0.633$), sex ($p = 0.642$), work shift ($p = 0.741$) and nutritional status ($p = 0.484$). There was a significant influence between work fatigue and work period ($p = 0.046$, Exp B = 5.294) and marital status ($p = 0.003$, Exp B = 13.927). The most influential factor on work fatigue is marital status ($p = 0.003$, OR = 13.927). There is an influence between the working period and marital status on work fatigue. There is no influence between age, gender, work shift and nutritional status. The most dominant factor influencing work fatigue is marital status.

Index Terms- work fatigue, age, sex, work shift, work period, marital status and nutritional status

I. INTRODUCTION

The Idaman Banjarbaru Regional Hospital (RSD) is a state-owned hospital. Idaman Banjarbaru Hospital has complete facilities and services, including hemodialysis installation, VIP clinic polyclinic, Medical Checkup, PICU (Pediatric Intensive Care Unit), NICU (Neonatal Intensive Care Unit), Lapat Anak (Born to Get Child Deed) facilities and the availability of Children Deed a complete specialist doctor. Thus the Banjarbaru Idaman Hospital is used as a referral hospital for other hospitals that still

have limitations in health care facilities in the Banjarbaru City area and outside Banjarbaru City (Profile of Idaman Hospital, 2019).

Bed Occupancy Rate (BOR) is a number that shows the percentage of bed use at a specific time in the inpatient unit. The standard ideal value of BOR 70 –85% (Sudra, 2010). The 2019 data stated that BOR achievements in 8 inpatient rooms at the Idaman Banjarbaru Hospital were respectively as follows: BOR Murai room 70.78%, Kasuari room 48.07%, Camar room 80.39%, Nuri room 16.89%, Merak room 5.21%, Cendrawasih room 19.18%, Kenari room 61.89% and Merpati room 90%.

Merpati Room is an inpatient room which has the highest BOR achievement, reaching 90%. The achievement of the BOR was the highest among the rooms in the Idaman Banjarbaru Hospital. This shows the high utilization rate of the bed. The high achievements of the BOR indicate that there has been an increase in the use of Inpatient Installation services in the Merpati room at Idaman Banjarbaru Hospital (IRNA Recapitulation, 2019). This condition also shows that the work activities of health workers in the room have also increased. Increased work activity can be a cause of work fatigue in nurses (Maharja, 2015). The number of beds available in the Merpati Room is 30 beds, and there are 3 officers per shift with the staff ratio, and the number of beds is 1:10. So it can be said one nurse in the room to handle ten beds (recapitulation IRNA, 2019). Then the amount is not following the Decree of Minister of Health No. 262 of 1979 concerning the bed-nurse ratio for type C hospitals is 2: 3 (Ministry of Health Republic of Indonesia, 1979). The number of patients more in line with weather changes and disease epidemiology, it will further increase the workload of nurses, causing work fatigue that affects work performance (Pongantung, 2018).

Fatigue can be caused by several factors including rotation work shifts, individual factors (health or disease, sex, age, education, workload, years of work and nutritional status) (Pramitasari, 2016). Several factors are suspected to be related to fatigue of nurse apes in the Inpatient of Idaman Hospital Banjarbaru, including age, sex, work shifts, years of service, marital status and nutritional status.

II. RESEARCH METHOD

This type of research is analytic observational research with the cross-sectional approach. In this observational study, researchers

do not do or do not give treatment to research subjects, but the subjects themselves "choose" to do it. While the cross-sectional approach is a study that studies the correlation between risk factors, utilizing approach, observation or data collection on age, gender, work shifts, years of service, marital status and nutritional status with nurses working fatigue in the inpatient room at Idaman Hospital Banjarbaru at the same time. The research is using pieces of stuffing and Program Kosinski's Time Reaction Software as a tool for data collection. The population in this study were all nurses in the inpatient room of Idaman Banjarbaru Hospital, totalling 132 people. The sampling technique used in this study uses probability sampling with proportional random sampling.

III. FINDINGS

Table 1. Univariate Analysis of Research Variables

Variable	Category	Freq	%
Work fatigue	Not tired	14	25
	Tired	42	75
Age	Early adulthood	35	62.5
	Mid adult	21	37.5
Gender	Female	31	55.4
	Male	25	44.6
Shift work	Morning	16	28.57
	Afternoon	20	35.71
Protein Consumption Pattern	Night	20	35.71
Years of service	No risk	28	50
SEZ	Risky	28	50
Marital status	Not Married	15	26.79
	Married	41	73.21
Nutritional status	Less	12	21.43
	Normal	41	73.21
	More	3	5.36

Based on the table above, it is known that the majority (75 %) of nurses in the inpatient room at Idaman Hospital Banjarbaru, who were respondents of the study experienced work fatigue. From these results, it can be seen that the majority of respondents did experience fatigue when carrying out their work as nurses. Fatigue usually shows the different conditions of each individual, but all aim to lose efficiency and decrease work capacity and endurance (Siregar, 2019).

Based on the above table, it is known that the majority (62.5%) of nurses in the inpatient room at Idaman Hospital Banjarbaru, who was the study respondents were nurses with early adulthood. The results of this study indicate that the majority of nurses in the inpatient unit of regional hospital aged between 20-30 years. Age is related to maturity. Maturity is technical in carrying out tasks as well as psychological maturity. A person's age increases so the level of technical and psychological maturity and shows the maturity of the soul at work. However, the condition of nurses with ages between 20-30 years makes nurses less able to balance work with the psychological, environmental situation (Siregar, 2019).

Based on the above table, it is known that the majority (55.36%) of nurses in the inpatient room at Idaman Hospital Banjarbaru, who were the respondents of the study were women. In this

modern era, equal rights of women and men are the same. Women are entitled to a good socioeconomic position and how women can develop and progress over time without losing their identity, as well as men (Kondi, 2019). The condition of nurses is predominantly female, and many are married if entering work shifts, especially night shifts with long periods making nurses likely to become tired (Siregar, 2019).

Based on the above table, it is known that the nurses in the inpatient unit Idaman Hospital Banjarbaru study who were undergoing early morning work shifts of 28.57 %, who had as much as 35.71% afternoon shift and night shift workers who undergo as much as 35.71%. Every person has different body time settings known as the circadian rhythm, in the preparation or regulation of work shifts it is necessary to pay attention to the biological time or clock that is appropriate for our body (Siregar, 2019).

Based on the above table, it is known that 50% of nurses in the inpatient room at Idaman Hospital Banjarbaru who were respondents of the study had a risky working period of ≥ 5 years. The working period is closely related to physical abilities; the longer a person works, the more their physical abilities decrease. Physical ability will gradually decrease due to fatigue from work and can be aggravated when doing physical activities can vary in work. Indirectly, the work period will cause contraction of the strengthening muscles and abdominal buffer continuously for a long time. In all complaints that were felt by workers with a work period of less than 1 year, they experienced the most complaints. Then the complaint is reduced in the workforce after working for 1-5 years. However, complaints will increase in the workforce after working for more than 5 years (Tarwaka, 2014).

Based on the above table, it is known that the majority (73.21%) of nurses in the inpatient room at Idaman Hospital Banjarbaru, who were respondents in the study were married. Those who are already married may have the risk of experiencing burnout if the marriage is not harmonious or has a partner who cannot provide social encouragement, including support for work.

Based on the above table, it is known that the majority (73.21%) of nurses in the inpatient room at Idaman Hospital Banjarbaru, who was the study respondents had normal nutritional status. Workers need the energy to be able to work. Fulfilment of nutrition to be able to work must not only be met quantitatively, but also in terms of the nutritional quality of the food consumed. Adequate and balanced eating during the day and before going to sleep significantly affects alertness and quality of sleep. Maintaining health and weight condition not only increases stamina but can also reduce the possibility of sleep disturbance. Proper nutrition and good physical condition have a significant influence on the effects of fatigue (Maghfiroh, 2015).

Table 2. Bivariate Analysis with Chi-Square and Fisher Exact

Variable	Work Fatigue		p-value	OR
	Not tired	Tired		
	n	%	n	%
Age				

Early adulthood	10	28.6	25	71.4	0.633	
Middle Adult	4	19	17	81		
Gender						
Female	9	29	22	71	0.642	
Male	5	20	20	80		
Shift work						
Morning	3	18.8	13	81.3	0.741	
Afternoon	6	30	14	70		
Night	5	25	15	75		
Years of service						
No risk	11	39.3	17	60.7	0.014	5.39
Risky	3	10.7	25	89.3		
Marital status						
Not Married	9	60	6	40	0.000	10.8
Married	5	12.2	36	8.8		
Nutritional status						
Less	4	33.3	8	66.7	0.484	
Normal	10	24.4	31	75.6		
More	14	25	42	75		

Based on the above table it can be seen that there are variables that influence work fatigue of nurses in the inpatient unit Idaman Banjarbaru Hospital, the work period (p-value = 0.014) with OR 5.392 and marital status (p-value = 0.000) with an OR value of 10.800. In contrast, the variables that have no effect on work fatigue are age (p-value = 0.633), gender (p-value = 0.642), work shift (p-value = 0.741), and nutritional status (p-value = 0.484).

Table 3. Multivariate Analysis

Variable	P-value	Exp (B)	95% CI	
			Lower	Upper
Years of service	0.046	5.294	1.031	27.178
Marital status	0.003	13.927	2.442	79.421

Based on the table above it can be seen that there are no variables with p-value > 0.05. So the results of multivariate analysis in this study indicate that marital status is a dominant factor affecting work fatigue with p-value = 0.003 and Odd Ratio = 13.927.

IV. DISCUSSION

Work fatigue in nurses is a condition experienced by nurses who work in other human jobs, where there is a change in negative behaviour in the form of incompleteness in filling nursing care (Bijani, 2016). Fatigue can be caused by several factors, including rotation work shifts, individual factors (health or disease, gender, age, education, workload, work period and nutritional status) (Prमितasari, 2016). Based on the results of bivariate statistics, it was concluded that there was no effect of age on nurses working fatigue in the inpatient room at Idaman Hospital Banjarbaru. The

absence of influence of age on work fatigue is caused by statistically the incidence of work fatigue occurs in both age categories with a not much different percentage of 71.4% occurring in early adulthood and 81% occurring in middle adulthood. In addition, there was no influence of the age of nurses with work fatigue in this study due to several factors including the composition of the age of nurses in each room more than 30 years old. Someone who is young is able to do heavy work and vice versa if someone is elderly then the ability to do heavy work will decrease because they feel tired and do not move nimbly when carrying out their duties so as to affect their performance (Mulfiyanti, 2019). But the results of this study contradict this theory. This may be because young nurses have unrealistic expectations when compared to older workers. As people age, they generally become more stable, more mature and more determined, so they have a more realistic outlook. In addition, it is likely because they have to serve patients with different characters and illnesses every day. They have to deal with a lot of patients so that boredom arises and are fed up with monotonous routines every day. They feel bored because the routine at work is very boring, so that makes them not enthusiastic about serving patients and become lazy to come to work because working hours are very crowded. Workers under the age of forty are most at risk of disorders related to work fatigue (Ramdan, 2016).

Based on the results of bivariate statistics, it was concluded that there was no influence of gender on nurses working fatigue in the inpatient room at Idaman Hospital Banjarbaru. The absence of gender influence on work fatigue is caused by statistically work fatigue occurring in female and male nurses with a percentage of work fatigue in female nurses at 71% and in male nurses at 80%. Biologically women experience menstrual cycles, pregnancy and menopause, and socially. Women have a position as a mother in the household and tradition as a reflection of culture, so women will get tired more quickly (Suma' mur P, 2009). Meanwhile, men experience a higher pressure rating than women, which can be caused by differences in roles, for example in terms of work, for men "working" is an absolute necessity to support their families, but this is not the case for a woman, women may work or not, so it is not a requirement. Men and women differ not only physically, but also socially and psychologically and have different ways of dealing with their problems.

Based on the results of bivariate statistics, it was concluded that there was no effect of work shifts on nurses' work fatigue in the inpatient room at Idaman Hospital Banjarbaru. Respondents in each shift have the same tendency to fatigue, so there is no influence between work shifts and nurses' work fatigue (Maghfiroh, 2015). This is due to the difference in the number of patients in each shift is not too significant. The shift time taken also does not have a significant difference, thus allowing the fatigue experienced is the same (Maghfiroh, 2015)

Based on the results of bivariate statistics, it was concluded that there was an influence of work tenure on nurses' work fatigue in the inpatient room at Idaman Hospital Banjarbaru. The influence of work tenure on work fatigue is caused statistically because work fatigue occurs because work fatigue is more common in nurses with tenure at risk. Whereas nurses with a non-risk work tenure

experience much less work fatigue than those who have a risky tenure. Although with a long work period a nurse gets a lot of work experience, but the monotonous and human service pattern of nurses' work causes physical, emotional and psychological fatigue that leads to heavy work fatigue (Sari, 2015).

Based on the results of bivariate statistics, it is concluded that there is an influence of marital status on nurses working fatigue in the inpatient room at Idaman Hospital Banjarbaru. The influence of marital status on work fatigue is caused statistically due to work fatigue due to more work fatigue in nurses with married status whereas nurses with unmarried status who experience work fatigue are far less than those who are married. Marriage causes increased responsibilities which can make work more valuable and important. So someone who is married will experience work fatigue due to work and when he gets home, he must take care of family needs which time should be used for rest (Huriahni, 2017).

Based on the results of the bivariate statistics, it was concluded that there was no effect of nutritional status on nurses working fatigue in the inpatient room at Idaman Hospital Banjarbaru. This can be caused by work fatigue, especially heavy work fatigue both experienced by nurses who have more or normal nutritional status. Lack of nutritional value of food consumed by daily workers will bring bad effects on the body, such as the body's defence against disease decreases, physical ability decreases, body weight decreases, lack of enthusiasm and lack of motivation, reacts slowly and apathy. In such circumstances, it cannot be expected to achieve efficiency and optimal work productivity. In carrying out the work process, a worker needs adequate sleep and balanced nutrition to be able to maintain work capacity. If the work capacity of a worker is well preserved due to enough sleep and sufficient nutrition, work fatigue that occurs can be minimized (Maghfiroh, 2015).

Based on the results of multivariate statistics, it was concluded that the variable of tenure and marital status influenced work fatigue. The longer a person works, the experience also increases, but the monotony of work so that symptoms arise from work fatigue. Nurses with tenure who are not at risk can experience work fatigue because they are able to adapt to work and their environment so that symptoms of work fatigue arise (Suma'mur, 2014).

Based on the results of the study, nurses who have been married 13,927 times will be more likely to experience work fatigue. Nurses who are married are more likely to experience depersonalization. This happens because the situation is also influenced by external factors, namely in the family environment, such as conflicts within the family, and the conflict is brought to the workplace so that it affects others. When individuals experience depersonalization, it will be difficult for them to be interested again in the activities they have been engaged in. They will start to get bored, uncomfortable and cynical about what is around them to make work fatigue possible (Awalia, 2013).

V. CONCLUSION

1. There was no significant influence between age, gender, work shift, and nutritional status with work fatigue in nurses in the inpatient unit at Idaman Hospital Banjarbaru.

2. There is a significant influence between a work period and marital status with work fatigue in nurses in the inpatient unit at Idaman Hospital Banjarbaru.
3. Marital status is the most dominant factor influencing work fatigue in nurses in the inpatient unit at Idaman Hospital Banjarbaru

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