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Relationship of factors in determination of work fatigue in bengkalis district health service employees in the time of covid-19 pandemic

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ABSTRACT

Work fatigue is part of the common problems that are often encountered in the workforce, especially work fatigue during the Covid 19 period for employees of the Bengkalis District Health Office. The purpose of this study was to analyze internal factors related to work fatigue during the Covid 19 Period for Bengkalis District Health Office Employees in 2021. This study used an analytical quantitative research type with a Cross-Sectional Analytical design. The research respondents were employees of the Bengkalis District Health Office. All workers with a total of 113 people. This study uses a logistic regression test. The study was carried out from September to October 2021. It showed that the description of work fatigue in the Bengkalis District Health Office was 78 people (69%). These results are based on age P value 0.010 OR 3.370, gender P value 0.924 OR 1.160, working period P value 0.001 OR 4.140, body mass index P value 0.040 OR 2.534, marital status P value 0.029 OR 2.679, duration of work P value 0.142 OR 2,002. Age, years of service, Body Mass Index (BMI), and marital status affect work fatigue in Bengkalis District Health Office employees. It is recommended that the Bengkalis District Health Office implement WFH (Work From Home) during the Covid 19 period, limiting the working period of employees who work 3 years

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INTRODUCTION

The pandemic could have serious implications for the mental health of the population and workers. Experts warn that both people who already have mental problems and others who never experience symptoms may be at risk [1]. It is well known that the work environment, work organization, and work-related behaviors are factors that influence the mental health and well-being of workers [6]. The current COVID-19 crisis may have an impact on the mental health of frontline professionals, especially healthcare workers, due to increased psychosocial risks at work, such as emotional exhaustion and secondary traumatic stress (STS) [2]. Widespread outbreaks of infectious diseases

such as COVID-19 are associated with mental distress and symptoms of mental illness [3]. Psychiatrists around the world should be aware of these manifestations, their relevance, and treatment strategies to meet the needs of specific populations [4] and the preventive measures needed to contain the spread of COVID-19 [5]. Serious psychological and psychiatric problems can lead to burnout and subsequent loss of productivity, clinical setting errors, and poor concentration when treating patients [7], [8], [9]. One of the work problems that lead to work accidents is work fatigue. Work fatigue is a condition in which a person's stamina and ability to perform at work decrease. Many internal and external factors lead to work fatigue. The increasingly massive spread of COVID has reduced the resilience and ability of workers, especially in the health sector [10],[11],[12]. Work fatigue can generally cause a lack of concentration which results in work accidents. The rate of work accidents is still relatively high in developing countries, one of which is Indonesia. The number of work accidents that occur in Indonesia is still relatively high and tends to increase every year. Until 2017, 123,041 cases of work accidents were reported, and in 2018 there were 173,105 cases [13]. Based on data from the Indonesian Employment BPJS, The number of work accidents in Riau Province is said to be high. In 2016 there were 6,768 cases or equivalent to 30.28% and in 2017 there was an increase of 9,628 cases or equivalent to 36.78%, from work accident cases in 2016 there were cases of work fatigue in Bengkalis Regency which amounted to 2,426 cases of fatigue. At the Bengkalis District Health Office, the total number of employees was 113 employees, each employee was given different tasks and functions for each field. The fields in the Bengkalis District Health Office include the fields of P2P, General Affairs and Personnel, Finance and Equipment, Health Promotion and Community Empowerment, and so on. The Bengkalis District Health Office, located in Bengkalis City, has 113 employees consisting of 65 women and 48 men. Working hours from 08.00 am to 18.00 pm. From the results of the initial data survey in health government agencies, it was found that the Bengkalis District Health Office found 15 workers experiencing complaints such as feeling sleepy, 10 people experiencing back pain, feeling heavy in the head, tired all over, sore legs, and standing unstable. This is due to his daily work with a work duration of eight hours per day in a working position. Situations like this will certainly make each employee concerned increase his workload in order to achieve the work target based on the specified time. Based on complaints that indicate employee fatigue at the Bengkalis District Health Office, this study aims to determine the Internal Factors Associated with Work Fatigue during the Covid 19 Period on Bengkalis District Health Office employees

METHODS

This research is quantitative with a cross-sectional case design. This research was conducted in September-October 2021 at the Bengkalis District Health Office. The subjects of this study were all employees from the head of the Bengkalis district health office to 113 honorary status employees. The total population of employees at the Bengkalis District Health Office is 63 employees, while the temporary staff is 50 people. The sample size to be taken is 113 employees. Data processing is carried out starting from editing, coding, scoring, and tabulating. Data analysis was performed univariate, bivariate using the chi-square test, and multivariate using multiple logistic regression. This research has passed the ethical review No. 500/KEPK/STIKes-HTP/X2021

RESULTS AND DISCUSSIONS

Bivariate Analysis

Bivariate analysis is data analysis conducted to find a correlation or influence between 2 or more variables studied. The following are several independent variables related to Work Fatigue during the Covid 19 Period.

Table 1. Several Independent Variables related to Work Fatigue during the Covid 19 Period for Bengkalis District Health Office Employees

Internal factors	fatigue				Total	P-value	OR (95% CI)
	Tired		Not tired				
	N	%	N	%	n(%)		
Age							2,917 (1,237-6,878)
35 years old	42	80.8	10	19.2	52(100)	0.022	
< 35 years old	36	59.0	25	41.0	61(100)		
Years of service							4,784 (2,027-11,290)
3 years	61	80.3	15	19.7	76(100)	0.000	
< 3 years	17	45.9	20	54.1	37(100)		
BMI							
Abnormal	49	77.8	14	22.2	63(100)	0.040	2,534 (1,119-5,740)
Normal	29	58.0	21	42.0	50(100)		
Marital status							
Married	50	78.1	14	21.9	64(100)	0.029	2,679 (1.180-6.078)
Not married yet	28	57.1	21	42.9	49(100)		

The results of statistical analysis show that there is a relationship between age, years of service, Body Mass Index (BMI), and marital status with work fatigue in the Covid 19 period, with a value (p <0.05). Working period of 3 years has 4.7 times the risk of experiencing work burnout compared to employees who work < 3 years (95% CI = 1.813-12,590). Age 35 years has a 5.2 times risk of experiencing work fatigue compared to employees < 35 years (CI 95% = 1.906-14,618). Abnormal Body Mass Index has 2.9 times the risk of experiencing work fatigue compared to employees who have a normal Body Mass Index (95% CI = 1.146-7.662). Married marital status has a 2.6 times risk of experiencing work burnout compared to employees who have unmarried marital status (95% CI = 1.025-6.866).

Multivariate Analysis

Based on the multivariate analysis, it can be concluded that the variables related to cause and effect with work fatigue are age, years of service, Body Mass Index (BMI), and marital status which can be seen in table 2.

Table 2. variables related to cause and effect with work fatigue

No	Variable	*P Value*	*Exp (B)*	*95% CI For EXP (B)*	
				Lower	*Upper*
1	Age	.001	5,279	1,906	14,618
2	Years of service	,002	4.777	1,813	12,590
3	Body mass index	0.025	2,964	1.146	7,662
4	Marital status	.044	2,653	1.025	6.866
	Omnibus test of model coefficient = 0.000		*Nagelkerke R Square*= 0.240		

The results of the Omnibus test of model coefficient = 0.000. This means that the resulting model is fit / feasible to use. The value of Nagelkerke R Square = 0.240 means that the variables of age, years of service, Body Mass Index (BMI), and marital status are 24%, the rest is explained by other variables.

Discussion

The results of this study found that there was a relationship between age, length of service, Body Mass Index (BMI), and marital status with work fatigue during the Covid 19 period in Bengkalis district health office employees, with a value (p <0.05). During the Covid-19 pandemic, workers are faced with many tasks and fast work by working from Monday to Friday starting in the morning at

08.00 until the afternoon at 17.00 WIB with a break time of about 1 hour per day at 12.00 - 13.00. The amount of workload is one of the factors that cause fatigue in workers experienced by workers at the Bengkalis District Health Office, namely physical fatigue. Heavy duty demands at the Bengkalis District Health Office such as submitting activity reports, data, and priority health problems at the Puskesmas during the COVID-19 pandemic are regularly available in districts/cities to the provincial health office. Situations like this will certainly make each employee concerned increase his workload in order to achieve the work target based on the specified time.

A prospective study of older workers found that constantly high physical work demands negatively affect physical and mental health [14]. Education level, marital status, number of children, and number of hours worked tend to change with age. A study conducted on a large group of Swedish working women aged 18 to 64 years showed the highest prevalence of fatigue symptoms in the youngest age group: 20-34,[15]. Research shows that higher levels of burnout among women can be observed in those who are younger, have less work experience, have lower education, are not in stable marriages or partnerships, and are in poorer health; that is, in women with lower financial, emotional, and somatic health resources have less work experience, lower education, are not in a stable marriage or partnership, and are in poorer health; that is, in women with lower financial, emotional, and somatic health resources have less work experience, lower education, are not in a stable marriage or partnership, and are in poorer health; that is, in women with lower financial, emotional, and somatic health resources[17],[13].

The results showed that there was a significant relationship between a decrease in nurses' energy and fatigue. The COVID-19 pandemic condition has experienced an increase in workload which causes nurses to have to spend more energy to complete each task and also psychological conditions due to changes in working conditions due to the COVID-19 pandemic. The decrease in energy experienced by workers results in a decrease in performance. Because performance is influenced by ability, motivation, opportunity, and work environment, if you experience fatigue it will also affect your ability in performance [15, 16]. The effect of physical fatigue can have an impact on service, due to a decrease in conditions. Solutions in preventing energy loss by compensating for work shift organization, providing balanced nutrition, and routine and periodic health checks.

CONCLUSION

Factors that affect work fatigue in Bengkalis District Health Office employees are age, years of service, Body Mass Index (BMI), and marital status. is recommended that the Bengkalis District Health Office implement WFH (Work From Home) during the Covid 19 period, limiting the working period of employees who work 3 years

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