



## THE RELANTIONSHIP BETWEEN WORKLOAD AND WORK FATIGUE OF HEALTH WORKERS

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### ABSTRACT

This study aims to explore the relationship between workload and work fatigue among health workers at Puskesmas Sei Balai, Batu Bara Regency. Data was collected from 46 respondents consisting of doctors, nurses, midwives, analysts, nutritionists, and public health workers. This study used a quantitative approach with a cross-sectional research design. The sample consisted of 46 health workers at the Sei Balai Health Center. Data was collected through questionnaires that measured workload levels and burnout. Statistical analysis was performed using the Chi-Square test and Fisher's exact test. The results showed that heavy workload was positively correlated with high work fatigue. This shows the importance of effective workload management to reduce the risk of burnout among health workers. The implications of this research can be used to devise better workload management strategies at Puskesmas Sei Balai and encourage further research in this domain. Based on the results of the study obtained  $p$  ( $p$ -value) = 0.00 ( $p < 0.05$ ) that there is a relationship between workload and work fatigue of health workers at the Sei Balai Health Center, Coal Regency.

Keywords: health workers; work fatigue; workload

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## INTRODUCTION

Work fatigue is one condition that can cause a decrease in a person's ability to work. Work fatigue can also cause a condition in the workforce that is weakened when carrying out activities, resulting in a decrease in efficiency and endurance. According to *The National Institute for Occupational Safety and Health*, high levels of burnout can also affect all workers in any workplace or industry, with serious implications for worker safety and health.(NIOSH, 2020). Worker fatigue in general can be influenced by several factors, namely monotonous work, long mental and physical work intensity, environmental conditions, unclear workloads and responsibilities, and health problems. Work fatigue can also cause a person to be unable to work, disrupt the smooth running of work and depression. (Tarwaka & Bakri, 2016).

Work fatigue contributes to more than 60% of occupational accidents. The National Safety Council reports that 13 percent of workplace accidents are caused by fatigue. Among the approximately 2,000 workers involved in accidents, it was seen that 97 percent of workers had at least one risk factor for burnout, while more than 80 percent had more than one risk factor. If several of these factors are combined, the possibility of work accidents will be even greater. (Ministry of Health, 2023). Fatigue at work must be treated so as not to become

chronic. Chronic fatigue can reduce work capacity and increase errors in work and open opportunities for work accidents (Tonapa et al., 2022).

*The World Health Organization* (WHO) has revealed the leading causes of death and disability worldwide in 2000-2019, it was found that heart disease is still the number 1 cause of death in the world, but mental disorders such as extreme fatigue and depression are included in the top 10 deadliest diseases (WHO, 2020). Data from the Indonesian Ministry of Manpower in 2013 showed that 414 workers who experienced work accidents occurred every day, 27.8% of which were caused by high fatigue, and of this number around 9.5% suffered from disability (KEMNAKER, 2021).

Nurses are one of the health worker professions at risk of experiencing burnout. According to the Health Workforce Development and Empowerment Agency, 49% of the 1,000,780 health workers in Indonesia are nurses (Ministry of Health, 2018), Psychosocial factors, musculoskeletal disorders, and occupational fatigue negatively impact individual caregivers and place a large financial burden on Health services (Abdul Rahman et al., 2017). Data from the Occupational Safety and Health of Bunda Anisah (K3) Hospital shows that the incidence of occupational fatigue of health workers, especially midwives, increased by 38% in 2016, 42% in 2017, 45% in 2018 and in all midwives. In 2019 there were 131 people. Fatigue at work, especially for midwives, can result in workplace injuries and decrease worker productivity in tasks such as handling and caring for patients and changing intravenous fluids. Midwives often feel weak, achy, sleepy, headache and sleepy while working and are said to be exhausted. Fatigue from the work of health workers can have an impact on the care of services provided will not be optimal. Some people from the health workforce at the Meureubo Health Center in West Aceh Regency complained of insomnia, could not concentrate and caused the workload of doctors, midwives and nurses to increase especially in the morning and afternoon because more patients arrived at that time so doctors, midwives and nurses complained of fatigue, (Mahlian et al., 2022).

*World Health Organization*(WHO) estimates in its health model that by 2020, mental disorders, which manifest as severe fatigue and culminate in depression, will be the second killer after heart disease. A survey of 12,000 companies conducted by Japan's Ministry of Labor, which included about 16,000 workers randomly selected from the country, found that 65% of workers complained of physical fatigue due to normal work, 28% of mental fatigue, and about 7% of workers complained of severe stress and exclusion. (Innah et al., 2021). In research conducted by Nur Ani (Ani & Wartini, 2021), revealed that there is a relationship between workload and work fatigue obtained  $p(0.019) < \alpha(0.05)$  which means there is a workload relationship to work fatigue. . This is also in accordance with research conducted by Handry (Gumelar et al., 2021), that the number of uncompleted nursing tasks as an effect of nurses' perceived heavy workload and frequent interruptions is associated with emotional burnout ( $p < 0.01$ ) means that workload has a relationship with work burnout.

Workload is one of the risk factors that cause fatigue. The current pandemic situation can have a real impact, especially on the health sector. The WHO designated COVID-19 as a pandemic in 2020. The impact of the COVID-19 pandemic has caused health workers as resources in health care providers to be faced with different situations, one of which is the increase in job demands. The high demands of work received by health workers will be the cause of the workload to be high so that they are more at risk of experiencing work fatigue(Krisdiana et al., 2022). In a previous study, Syeva Apriliani's research "The relationship between working period, workload, and perception of the work environment with

work fatigue in health workers at the Sungai ulin Health Center in 2021" revealed that the results showed that of the 26 respondents who had a light workload, most experienced low work fatigue as many as 22 people (84.6%), while of the 21 respondents who had a heavy workload, most experienced work fatigue while as many as 14 people (66.7%). The results of the statistical test with the Chi Square test obtained  $p\text{-value} = 0.001 < \alpha 0.05$ , then  $H_0$  was rejected, meaning that there was a relationship between workload and work fatigue in health workers at the Sungai Ulin Health Center in 2021 (Apriliani et al., 2021). Workload is the burden borne by the workforce in accordance with the job description and type of work, the ability of the worker's body to accept a job, the workload received must be in accordance with the physical and psychological abilities of the worker (Suma"mur, 2009).

According to research (Qonitatin Nisak & Dewi Andriani, 2022), Employee workload is one of the factors that can need to be considered to determine performance. Because workload also has an important role in an organization. The provision of workload to medical personnel can be known that the provision of maximum workload will affect the performance of medical personnel. Giving excessive workload will cause physical and mental fatigue and unstable emotional reactions such as headaches, irritability and digestive disorders, otherwise if the workload is small it will cause a sense of boredom, laziness in daily work routines and will eventually delay work so that the performance results of medical personnel will decrease, A good work environment is a comfortable, peaceful, safe, clean environment, will have a direct impact on the comfort, pleasure, morale and productivity level of medical personnel, so that it will lead to performance results, if the work environment is not good it can also affect down performance.

On research (Megowati & Syarifah Has, 2022) Working environment conditions that do not meet the requirements above the threshold value can tend to make workers uncomfortable and can also increase the risk of unwanted events and increase the burden on workers. When the workload is not in accordance with the ability of workers, it will make workers experience fatigue and increase the risk of work fatigue which leads to increasing the possibility of work accidents. According to research (Krisdiana et al., 2022), Workload can be influenced by several factors in the form of external factors including work organization tasks and work environment, internal factors workload also includes pressure on working time, working hours, noise, excessive information and responsibility, high workload has an influence and negative impact on employee performance which subsequently causes a decrease in employee effectiveness in completing all work responsibilities.

The workload of each health worker must be in accordance with the mental and physical capacity of each health worker. And working time is also a consideration for each person in preparation for work and at work, this is based on maintaining safety and comfort so as not to affect health and the large number of patients also has an influence, thus impacting the fatigue of each worker and can. also affects work performance (Permana et al., 2020). Puskesmas Sei Balai is a central puskesmas, which provides inpatient and outpatient services, there is a relationship between workload and work fatigue due to health workers at Sei Balai Health Center, with additional duties or outside the main duties and functions (Tupoksi) of each health worker and excess time while working is very likely to occur excessive workload that triggers health workers to experience work fatigue. Based on data obtained from Puskesmas sei balai The workload of health workers is divided into three components, namely light, medium, and heavy workload. With this workload, each health worker has a different workload, but thus general practitioners, nurses, and midwives have a workload at the level of heavy workload, which affects the workload because general practitioners, nurses, and

midwives hold the most job descriptions and also have additional duties or outside their main duties and functions such as general practitioners who concurrently serve as heads of puskesmas, Village midwives who oversee the malaria program which is not their core work, and then male nurses who double as ambulance drivers, health workers, especially general practitioners, nurses, and midwives are found many who still complain of fatigue in work, weakness in activities, weakening motivation, and physical weakness, because the workload and responsibilities given are very heavy such as serving many patients with different conditions as well as the number of job descriptions held and also demands on other duties from superiors. Sei Balai Health Center is a health service facility owned by the Regional Government of Batu Bara Regency located in Sei Balai District. Overall, the number of health workers who provide 6 health services at the Sei Balai Health Center with a total of 46 health workers consisting of general practitioners, dentists, midwives, and nurses, nutritionists, Bachelor of Public Health and analysts. The formulation of the problem in this study is how the workload relationship with the work fatigue of health workers at the Puskesmas Kec. Sei Balai, Kab. Coal. The purpose of this study was to see the relationship between workload and work fatigue, and analyze the relationship between workload and work fatigue of health workers at the Kec.sei balai Health Center, Coal District. The benefit of this research is that it can be used as input material to increase knowledge about the relationship between workload and work fatigue of health workers at the sei balai puskesmas, it can be used as consideration or input for the sei balai puskesmas that workload with work fatigue is very influential for health workers.

## METHOD

This study is a quantitative study with a cross-sectional research design where researchers want to know the relationship between two variables, The relationship of workload with work burnout. In this study, the total population based on the number of Health Workers at Puskesmas Kec.sei balai, Kab. Batu Bara was 46 who were all health workers at Puskesmas Kec.sei balai, Kab. Coal. The samples used in this study were General Practitioners, Dentists, Nurses, Midwives, Nutritionists, SKM, and Analysts. The sampling technique in this study was carried out by the method *Total sampling* A total of 46, 46 samples were taken from the entire population. The independent variable in this study is workload while the dependent variable in this study is work fatigue. In collecting data in this study through several stages, the first stage is the preparation stage, where researchers ask for permission to distribute questionnaires using the IFRC method with inclusion criteria in this study are all health workers willing to be respondents, aged 28-53, exclusion criteria in this study Health workers who do not feel the burden and fatigue of work, and the job description of Tanaga Kesehatan at the Puskesmas Kec. Sei Balai, Kab. Coal, then the researcher distributed questionnaires related to workload and work fatigue in accordance with the questions that had been prepared on the IFRC questionnaire measuring fatigue and job description of health workers, and conducted a validity test of  $>0.05$  declared valid and Alpha reliability of 0.981 was quite reliable on the questionnaire. The third stage is data processing. In data processing, move the data results to SPSS 2020, Coding, and data entry. In this study, the instrument used was a questionnaire about measuring work fatigue based on the IFRC method and measuring workload based on job description objectives. Data were analyzed by univariate analysis using frequency distribution tables and bivariate analysis using chi-square test with ( $\alpha = 0.05$ ).

## RESULTS

Table 1. Distribution of Respondents by Age

Age	f	%
<35 Years	14	30.4
>35 Years	32	69.6

Based on the table above, it is known that of the 46 respondents of health workers at the Sei Balai Health Center, Batu Bara Regency, more were found in the age group of >35 years as many as 32 (69.6%). Based on (Tarwaka, 2010), at the age of 25-30 years a person has optimal physical ability, after that there will be a decrease in physical work capacity every 1% every year.

Table 2.  
Distribution of Respondents by Sex

Gender	f	%
Man	6	13.0
Woman	40	87.0

Based on the table 2, it is known that of the 46 respondents of health workers at the Sei Balai Health Center, the most respondents were women with a frequency of 40 and a percentage of 87.0%, while men were 6 respondents with a percentage of 13.0%. Based on (Tarwaka, 2010), the risk of sex with work burnout is 1,833 times greater in the female group compared to the male sex group. In general, women only have physical strength 2/3 of men's physical abilities or muscle strength, but in certain cases women are more careful than men, thus to get the appropriate work results, the division of duties between men and women must be adjusted to their respective abilities, abilities, and boundaries.

Table 3.  
Distribution of Respondents by Occupation

Work	f	%
Analyst	2	4.3
Midwife	17	36.9
Dentist	1	2.2
General practitioner	5	10.8
Nutritionist	2	4.3
Nurse	13	28.2
SKM	6	13.0

Based on the table 3, it is known that of the 46 respondents of health workers at the Sei Balai Health Center, the most respondents were midwives with a frequency of 17 and a percentage of 36.9%, and nurses with a frequency of 13 with a percentage of 28.2%. In health workers, midwives and nurses are needed in every health service, one of which is in puskesmas where midwives and nurses handle many patients every day whose main function is to provide health services so that their role becomes a determinant in improving the quality of health services in puskesmas.

Table 4.  
Distribution of Respondents by Length of Service

Length of service	f	%
<20 Years	42	91.3
>20 Years	4	8.7

Based on the table 4, the category of service life is more obtained at <20 years with a frequency of 42 and a percentage of 91.3%. based on research (Nurhidaya, 2023), if the longer a workforce works in a less comfortable and unpleasant work environment, fatigue in that person will accumulate continuously over time, The level of fatigue can be higher

experienced by workers with longer working periods, the longer they work, the feeling of boredom due to monotonous work will affect the level of fatigue they suffer.

Table 5.  
Workload Distribution of Health Workers

Workload	f	%
Nurse		
Heavy	13	28,3
Midwife		
Keep	8	17,4
Heavy	9	19,6
General practitioner		
Heavy	5	10,9
Analyst		
Heavy	2	4,3
SKM		
Keep	4	8,7
Heavy	2	4,3
Nutritionist		
Heavy	2	4,3
Dentist		
Heavy	1	2,2

From the table 5, it can be seen that nurses ranked first in the heavy workload category with a frequency of 13 (28.3%), because they fully hold the job description according to their tupoksinya. Midwives followed as second with a frequency of 9 (19.6%), also because they fully hold job descriptions and several health programs included in their tupoksinya. General practitioners ranked third with a frequency of 5 (10.9%), because in addition to holding full job descriptions and health programs, they also have additional responsibilities as heads of community health centers. Analysts and public health workers (SKM) experience heavy workloads due to lack of manpower, while nutritionists exhibit normal workloads due to the even distribution of job descriptions between them. Dentists, despite being in the category of heavy workload, are still relatively normal because of the lower intensity of their duties and the absence of additional tasks from superiors. Research emphasizes that giving maximum workload will affect the performance of medical personnel, while giving excessive workload can cause physical, mental, and unstable emotional reactions (Qonitatin Nisak & Dewi Andriani, 2022).

Table 6.  
Distribution of Burnout

Work fatigue	f	%
Low	6	13,0
Keep	12	26,1
Tall	26	56,5
Very High	2	4,3

Based on the table 6, it can be seen that respondents' work fatigue at the Sei Balai Health Center, Coal Regency, is more commonly found at the high level of work fatigue with a frequency of 26 and a percentage of 56.5%.

Table 7.  
The Relationship Between Workload and Work Fatigue of Health Workers

The Relationship Between Workload and Work Fatigue of Health Workers											
	Work Fatigue										p-value
	Low		Keep		Tall		Very High		Total		
	f	%	f	%	f	%	f	%	Ff	%	
Light	2	33.3	0	0.0	0	0.0	0	0.0	2		0.00
Keep	4	66.7	3	25.0	4	15.4	0	0.0	11	23.9	
Heavy	0	0.0	9	75.0	22	84.6	2	100	33	71.7	

Based on the table 7, it can be seen that workloads in the heavy category are more found at high fatigue levels of 22 (84.6%), light category workloads are found at low fatigue levels 2 (33.3%), and workloads in the medium category are high fatigue levels 4 (15.4%), the results of statistical analysis using the Chi-Square test show p values (p-value) = 0.00 ( $p < 0.05$ ). Based on the chi-square test, there is an expected count value of less than 5, so it does not meet the chi-square requirements, so that the alternative that can be done by the fisher exact test, a p-value of 0.00 ( $p < 0.05$ ) is obtained. This .ini shows that there is a relationship between Workload Relationship and Work Fatigue of Health workers at Sei Balai Health Center, Batu Bara Regency.

## DISCUSSION

The results of a study conducted by researchers at the Sei Balai Puskesmas Batu Bara Regency 2024 regarding the Relationship between Workload and Work Fatigue of Health Workers at the Sei Balai Puskesmas Batu Bara Regency are included in the category of heavy workload with a high level of fatigue where a heavy workload with a high fatigue level of 22 (84.6%) was found from these results, it can be said that there are several influencing factors, with additional tasks or outside the main duties and functions (Tupoksi) of each health worker and excess time while working is very likely to occur excessive workload that triggers health workers to experience work fatigue, health workers at the Sei Balai Health Center are found many who still complain of fatigue at work because the workload and responsibilities given are very heavy such as serving many patients with different conditions and other task demands from superiors, as well as the many job descriptions held by nurses, midwives and general practitioners, and it was found that nurses occupied the level of heavy workload with the first order because all nurses carried out street medicine services and also assisted doctors in carrying out activities at the puskesmas, Midwives hold the main duties and functions of midwives, especially those in charge of puskesmas where midwives carry out family health services, carry out family planning services, and other job descriptions held by midwives to report the results of program activities to the head of the puskesmas through daily, weekly, monthly, routine and special reports.

In this study, health workers felt burdened because all health workers at the Sei Balai Health Center also did work that was not their core task and activity because the Sei Balai Health Center had several programs that must be followed by every health worker. These programs include the Infectious Disease Program (NCD), Malaria Program, ST2TP Program and other programs such as Village Midwives who oversee the Malaria Program which involve work that is not their core performance. His responsibilities increased, so he experienced a workload, such as a general practitioner who doubled as the head of the puskesmas. The presence of excessive workload, and also male nurses who work concurrently as ambulance drivers can increase mental fatigue with excessive workload.

At the age of 25-30 years a person has optimal physical abilities, after that there will be a decrease in physical work capacity every 1% every year. (Tarwaka, 2010). Many studies also state that there is a relationship between age and the level of fatigue and there are also those that state there is no relationship between age and the level of fatigue. It was obtained from

the distribution of respondents based on age that of the 46 respondents of Health workers at the Sei Balai Health Center, Coal Regency, more were found in the age group of >35 years in the productive age group as much as 32 (69.6%).

The risk of sex with work burnout was 1,833 times greater in the female group compared to the male group. In general, women only have physical strength 2/3 of men's physical abilities or muscle strength, but in certain cases women are more careful than men, thus to get the appropriate work results, the division of duties between men and women must be adjusted to their respective abilities, abilities, and boundaries. (Tarwaka, 2010). And it was found that from 46 respondents of Health Workers at Sei Balai Puskesmas Batu Bara Regency, the most respondents were female with a frequency of 40 (87.0%).

In health workers, midwives and nurses are needed in every health service, one of which is in puskesmas where midwives and nurses handle many patients every day whose main function is to provide health services so that their role becomes a determinant in improving the quality of health services in puskesmas. And the results of the distribution of respondents based on the type of work were obtained that from 46 respondents of Health Workers at the Sei Balai Health Center, Coal Regency, the most respondents were Midwives with a frequency of 17 (36.9%) and nurses 13 (28.2%).

Working period is the length of time starting from the first time the worker enters work, if the longer a worker works in a work environment that is less comfortable and unpleasant then fatigue in the person will accumulate continuously from time to time, The level of fatigue can be higher experienced by workers with a longer working period, the longer he works, the feeling of saturation due to monotonous work will affect the level of fatigue that Dialamin, working period can also affect workers both positively and negatively will provide positive if the longer someone works eating will be experienced in every doing his work and vice versa can also have a negative influence if the longer the work will cause a sense of fatigue which can reduce work productivity if health workers have a heavy workload is likely to trigger fatigue and accidents can occur work and declining levels of work productivity, (Nurhidayah, 2023). And the results of distribution based on working period were obtained that from 46 respondents of Health Workers at the Sei Balai Health Center, Coal Regency, more work periods were found to be >20 years with a frequency of 42 (91.3%).

Work fatigue is one of the conditions that can cause a decrease in a person's ability to work, and the results of respondents' work fatigue research at the Sei Balai Health Center of Coal Regency, more commonly found in the level of high work fatigue with a frequency of 26 and a percentage of 56.5%, moderate fatigue of 12 and a percentage of 26.1%, low-level fatigue 6 and a percentage of 13.0%, and fatigue is very high 2 and the percentage is 4.3 %.

According to research (Handayani et al., 2021), Excessive workload is 1.7 times the risk of experiencing work fatigue compared to normal work, there is a difference in the risk of work fatigue based on workload caused by a very varied task load and also influenced by the number of patients who visit each day. And the results of respondents' workload at the Sei Balai Health Center of Coal Regency, more were found at the Heavy Workload Level can be seen Nurses in the first order heavy workload category with a frequency of 13 and a percentage of 28.3%, midwives categoori of the second order heavy workload with a frequency of 9 and a percentage of 19.6%, General Practitioners in the third level of heavy workload category with a frequency of 5 and a percentage of 10.9%, Analysts of the fourth level of heavy workload category with frequency 2 and percentage of 4.3%, SKM of the fifth



level of heavy workload category with a frequency of 2 and a percentage of 4.3%, Nutritionists of the sixth category of normal workload with a frequency of 2 and a percentage of 4.3%, and dentists of the heavy workload category and classified as normal with a frequency of 1 and a percentage of 2.2%, According to research (Qonitatin Nisak & Dewi Andriani, 2022) The provision of workload to medical personnel can be known that the provision of maximum workload will affect the performance of medical personnel. Giving excessive workload will cause physical and mental fatigue and unstable emotional reactions.

The results of the study found that workloads in the heavy category were found more at high fatigue levels of 22 (84.6%), light category workloads were found at low fatigue levels 2 (33.3%), and workloads in the medium category of high fatigue levels 4 (15.4%), the results of statistical analysis using the *Chi-Square* test showed p values (p-value) = 0.00 ( $p < 0.05$ ). Based on the chi-square test, there is an *expected count* value of less than 5, so it does not meet the *chi-square* requirements, so that the alternative that can be done by the *fisher exact test*, obtained a p-value of 0.00 ( $p < 0.05$ ). This .ini shows that there is a relationship between Workload Relationship and Work Fatigue of Health workers at Sei Balai Health Center, Batu Bara Regency.

Worker fatigue in general can be influenced by several factors, namely monotonous work, long mental and physical work intensity, environmental conditions, unclear workloads and responsibilities, and health problems. Work fatigue can also cause a person to be unable to work, disrupt the smooth running of work and depression. (Tarwaka & Bakri, 2016). According to research (Qonitatin Nisak & Dewi Andriani, 2022), Workload is one of the factors that can need to be considered to determine performance. Because workload also has an important role in an organization. The provision of workload to medical personnel can be known that the provision of maximum workload will affect the performance of medical personnel. Giving excessive workload will cause physical and mental fatigue and unstable emotional reactions such as headaches, irritability and digestive disorders, otherwise if the workload is small it will cause a sense of boredom,

This research is also in line with that conducted on research (Handayani et al., 2021) reveals that there is a relationship between workload and work burnout. The results of statistical tests with the *Chi-Square* test obtained p-value = 0.03  $< 0.05$  which means that there is a relationship between workload and work fatigue in nurses. This research is also in line with what was done in the study (Sinaga & Vestabilvy, 2022), revealed that there is a relationship between workload and work fatigue obtained  $p (0.002) < \alpha (0.05)$  which means there is a workload relationship to work fatigue of health workers. This research is also in line with that conducted on research (Tonapa et al., 2022), revealing that there is a relationship between workload and work fatigue. The results of statistical tests with the *Chi Square* test were obtained p-value = 0.001  $< \alpha 0.05$ , then  $H_0$  was rejected meaning that there was a relationship between workload and work fatigue in health workers at the Sungai Ulin Health Center.

According to research (Krisdiana et al., 2022), Workload can be influenced by several factors in the form of external factors including tasks, work organization and work environment, internal factors workload also includes pressure on working time, working hours, noise, excessive information and responsibility, high workload has a negative influence and impact on employee performance which subsequently causes a decrease in employee effectiveness in completing all work responsibilities. This study shows about the relationship between workload and work fatigue that from what we see during the study, the workload of health workers or Puskesmas workers in the hall looks dense, where these workers hold many job

descriptions and outside their respective duties and functions, then each carries out programs that are outside their duties and functions so that health workers make it their workload. that the workload and level of fatigue in health workers have different levels of workload and fatigue, health workers at puskesmas sei balai nurses, midwives, and general practitioners occupy heavy workloads in the order of one, two, and three where nurses, midwives and doctors provide health services in health service facilities which include promotive, preventive, curative, and rehabilitative where to improve a degree of Public Health and can foster community participation in the context of independence in the field of Health to the Community which means nurses, midwives and doctors have a very big responsibility, As for nurses, midwives and doctors also have additional duties that are beyond their tupoksi such as village midwives who participate in holding malaria programs involving which is not their core work, then nurses who are still found to have additional duties, male nurses concurrently as ambulance drivers, and general practitioners also concurrently as heads of puskesmas, thus with the many job descriptions held and the additional duties that are outside this tupoksi, it can trigger fatigue at work and get results for health workers experiencing weakening activities, weakening of motivation, and also of physical relonging.

## CONCLUSION

There is a relationship between workload and work fatigue of health workers at the Sei Balai Health Center, Batu Bara Regency. With the results of data analysis using the Chi-Square test,  $p$  value ( $p$ -value) = 0.001 ( $p < 0.05$ ) was obtained, which means there is a significant relationship between workload and work fatigue of health workers at the Sei Health Center, Coal Regency Hall. Which is caused by additional tasks or outside the main duties and functions (Tupoksi) of each health worker and excess time while working is very likely to occur excessive workload, triggering health workers to experience work fatigue.

## REFERENCES

- Abdul Rahman, H., Abdul-Mumin, K., & Naing, L. (2017). Psychosocial factors, musculoskeletal disorders and work-related fatigue amongst nurses in Brunei: structural equation model approach. *International Emergency Nursing*, 34, 17–22. <https://doi.org/10.1016/j.ienj.2017.04.001>
- Alam, P. F., Suarni, W., & Sunarjo, I. S. (2021). Workload and Work Stress of Nurses. *Journal of Sublimation*, 2(1), 10. <https://doi.org/10.36709/sublimapsi.v2i1.14937>
- Ani, N., & Wartini. (2021). The Relationship Between Workload and Work Fatigue in Production Division Workers in CV. X Garment in Sukoharjo Regency, Year 2019. *IAKMI Indonesian Journal of Public Health*, 2(1), 17–28. <http://eprints.mercubuana-yogya.ac.id/12384/>
- Apriliani, S., Indah, M. F., & Agustina, N. (2021). The relationship between working period, workload and perception of the work environment with work fatigue in health workers at the Sungai Ulin Health Center in 2021. *An-Nadaa: Journal of Public Health (e-Journal)*. [http://eprints.uniska-bjm.ac.id/8590/1/ARTIKEL SYEVA APRILIANI ACC 1.pdf](http://eprints.uniska-bjm.ac.id/8590/1/ARTIKEL%20SYEVA%20APRILIANI%20ACC%201.pdf)
- Gumelar, H., Kusmiran, E., & Haryanto, M. S. (2021). The relationship of workload with work fatigue in the executing nurse in the inpatient installation. *Journal of the Indonesian National Nurses Association (JPPNI)*, 6(2), 89. <https://doi.org/10.32419/jppni.v6i2.264>
- Innah, M., Muhammad Khidri Alwi, Fatmah Afrianty Gobel, & Abbas, H. H. (2021). Factors Associated with Work Fatigue in Tailors of Bulukumba Central Market. *Window of*

- Public Health Journal*, 01(05), 471–481. <https://doi.org/10.33096/woph.v1i5.160>
- Journal, I., Health, N., Vol, S., Handayani, P., & Hotmaria, N. (2021). *Introduction Fatigue is defined as feeling tired or lack of energy that can be*. 6(1), 1–5.
- Ministry of Health of the Republic of Indonesia. (2018). *Indonesia Health Profile 2015* (Vol. 1227, Issue July). <https://doi.org/10.1002/qj>
- Krisdiana, H., Ayuningtyas, D., Iljas, J., & Juliati, E. (2022). The Relationship between the Workload of Health Workers and Work Fatigue at the Puskesmas Sukmajaya District, Depok City During the Pandemic. *Journal of Biostatistics, Population, and Health Informatics*, 2(3), 136. <https://doi.org/10.51181/bikfokes.v2i3.6248>
- Mahlian, D., Iqbal Fahlevi, and M., & Public Health UTU West Aceh Regency, F. (2022). The relationship between workload and work fatigue of health workers at the Meureubo Health Center, West Aceh Regency. *Journal of Public Health Students*, 2(1), 2022.
- Megowati, K. W., & Syarifah Has, D. F. (2022). The relationship between fatigue and workload on the performance of health workers at Medika Mulia Hospital Tuban. *Journal of Public Health Science Research*, 2(2), 20. <https://doi.org/10.30587/jphsr.v2i2.4439>
- Oldham, B. E. (1971). Some characteristics of teachers submitting syllabuses under mode 3 of the certificate of secondary education in the north-west. *Educational Review*, 23(2), 135–142. <https://doi.org/10.1080/0013191710230205>
- Qonitatin Nisak, & Dewi Andriani. (2022). The Effect of Work Environment, Workload and Work Stress on the Performance of Medical Personnel in Pukesmas Tarik. *Scientific Journal of Management and Entrepreneurship*, 1(2), 304–313. <https://doi.org/10.55606/jimak.v1i2.432>
- Sinaga, T. S. B., & Vestabilvy, E. (2022). Factors Related to Work Fatigue of Health Workers during the Covid-19 Pandemic at Jatiluhur Health Center. *Journal of Persada Husada Indonesia*, 9(35), 9–16. <https://doi.org/10.56014/jphi.v9i35.352>
- Tarwaka, & Bakri, S. H. A. (2016). *Ergonomics for Safety, Occupational Health and Productivity*. <http://shadibakri.uniba.ac.id/wp-content/uploads/2016/03/Buku-Ergonomi.pdf>
- Tonapa, E. P., Kawatu, P. A. T., & Kapantow, N. H. (2022). The Relationship Between Workload and Work Fatigue with Work Stress of Health Workers during the Covid-19 Pandemic at the Bandar Khalipah Health Center, Deli Serdang Regency. *Public Health*, 11(5), 150–157. <https://ejournal.unsrat.ac.id/index.php/kesmas/article/view/41677>

