

Effect of Workload and Work Environment on the Anxiety of Health Workes in Dealing with with Tuberculosis Pasien

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Effect of Workload and Work Environment on the Anxiety of Health Workers in Dealing with Tuberculosis Patients

Efecto de la carga de trabajo y el ambiente de trabajo en la ansiedad de los trabajadores de la salud en el trato con pacientes con tuberculosis

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SUMMARY

The effect of workload and work environment on employee performance is very influential. Providing workload effectively is useful for knowing the extent to which employees can be given the maximum workload. Primarily, for healthcare workers, the workload should be properly distributed because it is not only about patient services, but they also need to pay attention to their own health from various kinds of infectious diseases in the healthcare facility. This study aims to determine the effect of workload and work environment on the health of workers' anxiety in dealing with tuberculosis patients at Batua Health Center, Makassar City. This study uses a quantitative research design using a cross-sectional study approach. The population and samples were taken using a total sampling technique, namely health workers at the

Batua Health Center, Makassar City, with a total of 58 respondents. The research was conducted in November-December 2022. The result shows that workload significantly affects the health of workers' anxiety, with a p-value = 0.021. The test results also obtained an Exp(B) value of 4,456. Statistical test with Chi-Square obtained p-value = 0.004 < α 0.05, so H_0 is rejected, meaning that statistically there is a relationship between the work environment and the health anxiety of workers at Batua Health Center with an OR value of 5.204, meaning that the work environment is less likely 5 times to cause anxiety in the health of workers.

Keywords: Influences, workloads, work environment, health center.

RESUMEN

El efecto de la carga de trabajo y el entorno de trabajo en el desempeño de los empleados es muy influyente, donde proporcionar la carga de trabajo de manera efectiva es útil para saber hasta qué punto se puede dar a los empleados la máxima carga de trabajo. En especial, para los trabajadores de la salud, la carga de trabajo debe distribuirse adecuadamente porque no solo se trata de los servicios al paciente, sino que también deben prestar atención a su propia salud frente a diversos tipos de enfermedades infecciosas en el centro de salud. Este estudio tiene como objetivo determinar el efecto de la carga de trabajo y el entorno laboral en la salud de la ansiedad de los trabajadores al tratar con pacientes con tuberculosis en el Centro de Salud de Batua, en la ciudad de Makassar. Este estudio empleó un diseño de investigación cuantitativa

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utilizando un enfoque de estudio transversal. La población y las muestras en este estudio se tomaron utilizando una técnica de muestreo total, a saber, trabajadores de la salud en el Centro de Salud de Batua, ciudad de Makassar, un total de 58 encuestados. La investigación se realizó en noviembre-diciembre de 2022. El resultado muestra que la carga de trabajo tiene un efecto significativo en la salud de la ansiedad de los trabajadores con un valor de $p = 0,021$. Los resultados de la prueba también obtuvieron un valor $\text{Exp}(B)$ de 4 456. La prueba estadística con Chi-Cuadrado obtuvo $p\text{-valor} = 0,004 < \alpha 0,05$, por lo que se rechaza H_0 , es decir que estadísticamente existe una relación entre el ambiente de trabajo y la ansiedad por la salud de los trabajadores del Centro de Salud de Batua con un valor de OR de 5 204, es decir, que el ambiente de trabajo tiene 5 veces menos probabilidades de causar ansiedad en la salud de los trabajadores.

Palabras llave: Influencias, cargas de trabajo, ambiente de trabajo, Centro de salud.

INTRODUCTION

Health workers, based on the Law of the Republic of Indonesia concerning Health No. 36 of 2014, are any person who is dedicated to the health sector and has knowledge and skills through education in the health sector for certain types that require the authority to carry out health efforts. Health workers also have an important role to play in improving the maximum quality of health service to the community so that the community can increase awareness, willingness, and ability to live healthily to be able to realize the highest degree of health as an investment for the development of socially and economically productive human resources (1).

Every day in carrying out their service, health workers do not only deal with patients, coworkers, nurses, and other fellow medical staff who deal with doctors and regulations in the workplace and workload, which are sometimes considered not in accordance with their physical, psychological, and mental conditions. Emotional issues that affect the workload of medical personnel are when the patient's condition is unstable, the average number of hours of care needed to provide direct service to patients exceeds the ability of medical staff, the desire to achieve work, and high work demands (2).

The impact of a workload that is too heavy will make medical personnel dissatisfied with their work, and less enthusiastic and trigger a psychological impact on medical personnel. Health workers who have a heavy workload tend to feel the need for counseling and psychotherapy, carried out individually, both online and face-to-face (2). In addition to workload, the work environment is another factor that affects employee performance. An un conducive work environment will make employees fall sick easily, get stressed easily, have difficulty concentrating and decrease work productivity. The effect of workload and work environment on employee performance is very influential (3).

In KwaZulu-Natal Province, South Africa, doctors, especially young doctors, can also experience burnout, anxiety, and depressive symptoms due to limited resources in the hospital. Younger doctors are more prone to burnout, while older doctors are more likely to experience anxiety and depressive symptoms. Therefore, individual- and organization-focused solutions should be considered wisely to reduce the negative impact of a high work environment and workload (4).

In general, anxiety is the psychological state of a person who is filled with fear and worries about something that is not certain to happen. Anxiety is described as a form of negative word and physiological stimulation. According to the American Psychological Association (APA), anxiety is an emotional state that arises when a person feels distressed, and tense and is accompanied by physical responses such as heart palpitations, increased blood pressure, and so on (5).

Diseases can be divided into 2, namely infectious diseases and non-infectious diseases, infection is an invasive process by microorganisms that proliferates in the body that causes pain. In general, the process of disease occurrence involves three interacting factors, namely: disease-causing factors (agents), human factors or hosts (hosts), and environmental factors (6). The Republic of Indonesia Ministry of Health 2014 stated that tuberculosis is an infectious disease caused by the bacterium *Mycobacterium tuberculosis* which is transmitted through sputum splashes. Tuberculosis bacteria usually attack the lungs, common people usually call them lung spots or hollow lungs.

Indonesia has a record of tuberculosis cases in terms of gender, the highest tuberculosis incidence rates are in several provinces in Indonesia. The first position was occupied by the province of West Java with a total of 23 774 cases of pulmonary tuberculosis. The province of North Sumatra occupied the top 4 positions with a total of 7 764 cases of pulmonary tuberculosis (7). Based on data from The Ministry of Health for 2020, tuberculosis cases can be influenced by several factors, including the physical and environmental conditions of residence. Unhealthy physical quality of residence is the biggest cause that causes the development of *Mycobacterium tuberculosis*. Poor ventilation can block sunlight from entering the room, creating a damp and dark atmosphere. Several risk factors for the home environment contribute to the incidence of pulmonary tuberculosis, namely residential density, type of floor, ventilation, humidity, and an environment that is far from healthy (7). One source of transmission of tuberculosis in Public Health Center (Puskesmas) is health workers who have a very large role in preventing tuberculosis because health workers often have direct contact with patients (8). According to WHO data as of July 14, 2020, the number of positive patients in Indonesia was 76 981 people with an average addition of 1 000 cases per day (9). The total deaths of 3 565 people were classified as community transmission.

Based on data from the official website of the South Sulawesi Provincial government, the number of positive patients in Makassar City is 4 430 people (10). Batua Health Center is a health center located in Makassar City, South Sulawesi. The number of health workers at the Batua Health Center is 58 people. It is also known that 119 patients with tuberculosis were registered at the Public Health Center (Puskesmas) in January-May 2022. Thus, this study aimed to assess the influence of workload and work environment on the anxiety of health workers in dealing with tuberculosis patients at the Batua Health Center, Makassar City.

METHOD

This study used a quantitative research design using a cross-sectional study approach. The

population and sample in this study were taken using a total sampling technique, namely the health workers of the Batua Health Center in Makassar City, totaling 58 respondents. The research was conducted in November-December 2022.

Data Analysis Method

Descriptive Analysis allows to know the distribution of the data, helps to detect outliers and typos, and enable to identify associations among variables.

Logistic Regression Analysis, will be carried out as model estimation and model fit testing:

Maximum Likelihood: Linear regression analysis uses an ordinary least square (OLS) estimator that minimizes the sum of the squares of the difference between the actual dependent variable value and its prediction. In contrast, the relationship between the dependent and independent variables in logistic regression is non-linear so it requires a different procedure, namely the maximum likelihood estimator with an iteration process that finds the estimated coefficients instead of minimizing the square deviation but maximizing the probability of an event occurring.

Logistic Regression Equation Model: The mathematical model of logistic regression is:

$$\ln\left(\frac{\hat{p}}{1-\hat{p}}\right) = B_0 + B_1X$$

where P is the event of something happening (success) otherwise, (1- P) is the event of something not happening (failure) and β_i is the logistic regression coefficient. The following mathematical formula determines the predicted probability of the dependent variable:

$$\hat{p} = \frac{\exp(B_0 + B_1X)}{1 + \exp(B_0 + B_1X)} = \frac{e^{B_0 + B_1X}}{1 + e^{B_0 + B_1X}}$$

Overall Model Test: The overall model test is carried out with the G test or what is commonly called the log-likelihood ratio test (-2Log L), which is the comparison between the log-likelihood of the proposed model

(-2Log L_{Proposed}) and the log-likelihood of the base model / null model (2Log L_{Null}). The log-likelihood proposed model means a model that includes independent variables while the log-likelihood null model is a model that only includes constants. The log-likelihood ratio test is Chi-Square distributed with a free degree of p independent variables included in the model and a certain α , for example, $\alpha = 5\%$. The testing process is as follows:

Hypothesis H0: $\beta_1 = \beta_2 = \dots = \beta_p = 0$

H1 : At least one $\beta_i \neq 0, i=1,2,\dots,p$

Testing Statistics Log Likelihood Ratio Test or G test which follows the Chi-Square distribution with free degree p and $\alpha = 5\%$. The decision criterion is to reject H0 if the Chi-Square p-value is smaller than $\alpha = 5\%$. The testing process is as follows:

Hypothesis

H0: The proposed model fits the data

H1: The proposed model does not fit the data

The test statistic is the Hosmer and Lemeshow test which has a Chi-Square distribution with a degree of freedom of 8. The decision criterion is to reject H0 if the p-value of Chi-Square $\alpha = 5\%$. The H-L statistic test is a Pearson Chi-Square statistic test that assumes that the number of samples used must be sufficient (large sample) with the expected frequency of each cell more than 5. *Partial Test*: After checking the overall model test, the next step is to see the meaning of the regression coefficient of each independent variable and whether it has a significant effect on the dependent variable. This test uses Wald statistics.

Operational Definitions

Workload (X1): Workload is any form of work given to human resources to be completed within a certain period. The workload indicators in this study are targets that must be achieved, working conditions, and work standards. Workload measurement uses a Likert scale with a value interval of 1-4. The assessment category consists

of very suitable with a value of 4, suitable with a value of 3, less suitable with a value of 2, and not suitable with a value of 1. The number of questions is 6 numbers. The measurement criteria are based on a Likert scale, where each answer has a score. The highest score is 4 and the lowest score is 1.

The objective criteria are:

Good: if the respondent's answer score is $\geq 62.5\%$ of the most appropriate answer.

Less Good: if the scheduled score is $< 62.5\%$ of the most appropriate answer.

Work Environment (X2): Work environment indicators (used in this study are work atmosphere, availability of facilities for employees, and relationship with coworkers. Measurement of the work environment uses a Likert scale with a value interval of 1-4. The assessment category consists of very suitable with a value of 4, suitable with a value of 3, less suitable with a value of 2, and not suitable with a value of 1. The number of questions is 6 numbers. The measurement criteria are based on the Likert scale, where each answer has a score. The highest score is 4 and the lowest score is 1. The objective criteria are:

Good: if the respondent's answer score is $\geq 62.5\%$ of the most appropriate answer.

Less Good: if the scheduled score is $< 62.5\%$ of the most appropriate answer.

Anxiety (Y): The dependent variable or dependent variable used in the study is health worker anxiety (Y). Anxiety is a response to certain threatening situations and is a normal thing that occurs accompanied by development, change, new experiences, and in finding self-identity. Workload measurement uses a Likert scale with a value interval of 1-4. The assessment category consists of very suitable with a value of 4, suitable with a value of 3, less suitable with a value of 2, and not suitable with a value of 1. The number of questions is 14 numbers. The measurement criteria are based on the Likert scale, where each answer has a score. The highest score is 4 and the lowest score is 1. The objective criteria are:

Good: if the respondent's answer score is $\geq$ 62.5 % of the most appropriate answer.

Less Good: if the scheduled score is $<$ 62.5 % of the most appropriate answer.

RESULTS

Table 1. Distribution of Respondents by Gender, Age, Education, Profession, Anxiety, Workload, and Work Environment at the Batua Health Center in Makassar City

	Research Sample Amount (n)	Percentage (%)
Gender		
Man	25	43.1
Woman	33	56.9
Age		
<20 years	2	3.4
20-29 years	20	34.5
30-39 years	22	37.9
40-49 years	10	17.2
>50 years	4	6.9
Education		
D3/equivalent	26	44.8
Profession	19	32.8
S1	7	12.1
S2	3	5.2
Specialist	3	5.2
Profession		
Midwifery	14	24.1
Nursing	27	46.6
Medical	4	6.9
Non-Medical	13	22.4
Worry		
Not good	20	34.5
Good	38	65.5
Workload		
Not good	25	43.1
Good	33	56.9
Work environment		
Not good	19	32.8
Good	39	67.2

Source: Primary Data

EFFECT OF WORKLOAD AND WORK ENVIRONMENT ON THE ANXIETY

Table 2. The Relationship between Workload and Work Environment with Anxiety of Health Workers in Dealing with Tuberculosis Patients at the Batua Health Center in Makassar City

Variable	Health Worker Anxiety				Total		P-value
	Not good		Good		N	%	
	n	%	n	%			
Workload							0.006
Not good	14	56.0	11	44.0	25	100	
Good	6	18.2	27	81.8	33	100	
Work environment							0.004
Not good	12	63.2	7	36.8	19	100	
Good	8	20.5	31	79.5	33	100	

Source: Primary Data

Table 3. Correlation Matrix

		Correlation Matrix		
		Constant	Workload	Work environment
Step 1	Constant	1.000	-0.636	-0.714
	Workload	-0.636	1.000	-0.036
	Work environment	-0.714	-0.036	1.000

Table 4. Evaluation of Logistic Regression Model (Simultaneous Test)

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	step	15,730	2	0.0001
	blocks	15,730	2	0.0001
	Model	15,730	2	0.0001

Table 5. Hosmer and Lemeshow test

Hosmer and Lemeshow Test			
step	Chi-Square	df	Sig.
1	0.019	2	0.991

DISCUSSION

Effect of Workload on Anxiety of Health Workers

The workload is an aspect that must be considered by every health service agency because affects officers in increasing productivity and a sense of comfort at work. This is because a balanced workload can maximize or even worsen productivity in terms of quality or quality of products / real results from the resources deployed. The need for division or transfer of tasks among frontline health workers based on complexity and ability (11).

Workload represents the cost of accomplishing mission requirements for the human operator. The workload is physical and mental and both are always related to each other and when a person performs a specific task, they cannot be completely separated. The workload can occur due to various factors, such as the number of tasks that are physical and mental, anxiety, reduced rest time, gender, and age. The workload can appear with various types of severity, for example, light workload, moderate workload, and even heavy workload (12). The high workload felt by health workers at Batua Health Center is caused by the high demands of work that must be completed optimally in a quality service manner.

This can be seen from the statements of health workers that as many as 34.5 % feel they are not in accordance with the demands of their work to always provide quality services. Excessive workload and too little workload can affect the performance of health workers. Indicators of the dimensions of work demands are too much workload to complete in a certain time and excessive workload to be completed by health workers who are unable to carry out a task.

This research is in line with Dewi, from Wates Hospital, who indicated that most nurses have a moderate workload, namely 48 nurses (52.7 %). A heavy workload could cause nurse burnout. Burnout, or exhaustion, is a common cause of mental health problems in the workplace. It can be a major barrier to making meaningful contributions in the personal and professional life. Burnt out nurses cannot work efficiently. Nurse burnout occurs when nurses work over 80 % of their working hours. Nurses perform their duties for about 80 % of their productive time. The workload can also be affected by the type of work itself. One factor that affects workload is mental work assignments, such as the job's difficulty level, and responsibility for work (13).

Pulmonary Tuberculosis (Pulmonary TB) is a contagious infectious disease that is a public health problem in the world, this can generate anxiety on the workers mental health due to their knowledge of the possibility of TB transmission (14). The relationship between workload and work environment with anxiety of Health workers in dealing with Tuberculosis patients at the Batua Health Center in Makassar City, showed that as many as 56.0 % of officers who had a bad workload also experienced bad anxiety, while 81.8 % of health workers who had a good workload had good anxiety. This shows that the better the workload of health workers, the better the anxiety level of health workers at the Batua Health Center in Makassar City tends to be.

According to Purwaningsih et al. (2017) workload in the room does not always cause anxiety among nurses and can cause anxiety if the workload is not proportional to the physical abilities, experience, and expertise of nurses, and the time available. Every nurse has a normal ability to complete the tasks assigned to her. Every nurse has a different way of managing anxiety,

depending on the duration, type, and frequency of anxiety she experiences (15).

Anxiety levels can be influenced by age, gender, family status, patient honesty, availability of personal protective equipment, and knowledge, significantly affecting how a person handles anxiety and copes while undergoing treatment. This is in line with research data that 46.8 % of people aged 26-30 years suffer from mild anxiety disorders. The workload is all the factors that determine the person who is working. Another definition of workload is a portion of the capacity of the worker's ability to do his job. Workload affects individual performance in carrying out the work performed. The workload is not only seen from the physical load alone, but the workload can also be a mental burden that can affect the anxiety of health workers.

The results of the logistic regression test in this study showed that workload had a significant effect on the anxiety of health workers with a p-value = 0.021. It was also obtained that the Exp(B) value was 4.456, which means that workload has an effect of 4 times on anxiety. The higher the workload of health workers, it will affect anxiety 4 times compared to a good workload. Workers who have excessive workloads will reduce productivity and quality of work, and the execution of work is not timely, unsatisfactory, and results in disappointment. Excessive workload and too little workload are stress generators. The workload can be further divided into workloads because the work is quantitatively overloaded, i.e. the large number of jobs that must be completed with a shorter time to complete. As for the workload due to quality overload, that is, individuals who feel unable to do or complete "a task" because their work requires higher abilities.

The above statement is supported by one study in South Africa, which states that hopelessness, helplessness, and lack of motivation are the result of a variety of issues, including health workers' time constraints and their heavy workload which can reduce focus on the needs and feelings of TB patients (16). Health workers were dissatisfied with organizational policies including limited opportunities for vacation, involvement in non-TB tasks, long working hours, and inflexible work schedules. Efforts to improve the motivation and

retention of healthcare workers need to address the quality of the work-life dimension, which focuses on the organization's requirements to achieve employee well-being, as this may contribute to their job satisfaction (17).

Research at Tikung Lamongan Health Center indicate that a high workload can create a low performance for health workers. The workload is still an obstacle due to limited adequate equipment and competent labor. In 2020 and 2021, the workload of health workers is increasing due to the increase in the number of patients received by the Public Health Center while the health workers are decreasing because some are exposed and must be isolate. Therefore, the human resources of the health center must be strengthened to provide better services in the health sector to prevent the occurrence of mental disorders, psychological anxiety, anxiety, and fatigue on the night shift. The workload feels heavy if it is not balanced with the appropriate number of human resources. A high workload can increase burnout and might force health workers to suffer psychological problems (18).

Work overload can be caused by uncertain consumer circumstances, patients who demand to be provided with fast service beyond the ability of normal work in general, the desire for performance, and the desire for a lot of work and must document nursing care (19). Health workers who work to care for TB patients need to be heard for their complaints regarding anxiety and fear of TB transmission from patients and managers of hospitals or health centers need to increase their resources because it is very important to ensure the successful implementation of the new policy and prevent the unintended negative consequences it could have hindered the quality of patient care (20). This indicates that it is necessary to pay attention to workloads that are appropriate or balanced with the ability of health workers to carry out their duties, especially for those who care for TB patients.

The Effect of the Work Environment on the Anxiety of Health Workers

The work environment in an institution, especially the community health center

(Puskesmas), is very important ¹for management to pay attention to. Even though the work environment does not carry out the production process within a company, the work environment directly influences the health workers who carry out the production process. The work environment is an atmosphere where health workers carry out daily activities. A conducive work environment provides a sense of security and allows health workers to work optimally. If the officer likes the work environment in which he works, then the person will feel at home at work, and carry out his activities so that work time is used effectively. Conversely, an inadequate work environment will reduce the performance of health workers at the Public Health Center (21).

Based on the results of interviews using a questionnaire, it was found that 41.4 % of health workers stated that they were not good at working at room temperature to support work activities. An increase in temperature can increase work performance, but on the other hand, it can also reduce work performance. An increase in temperature to a certain limit can generate enthusiasm which will stimulate work performance, but after passing a certain threshold this increase in temperature has begun to interfere with body temperature which can disrupt health workers' performance. All room occupants, in this case, employees, need air quality that meets human health and safety requirements. Therefore, they must always try to maintain the air quality in the room to remain within a comfortable range for employees to work (15). One effort that can be made to get a room that has comfortable air is to use an Air Conditioner (AC). The ideal range for air temperature is between 18°C to 28°C (22).

The work environment is not limited to the physical environment, such as temperature, noise, or workspace design. One that also influences a good work environment is the relationship between co-workers who are open to each other in communicating at the Public Health Center. A comfortable and safe atmosphere dramatically affects the performance and satisfaction of employees in an agency. Idham (23), on health workers at the Kertak Hanyar Health Center, concluded that the calculated P-value for the interpersonal/colleague relationship variable was 5.209, with a variable error rate probability

of 0.0001 (smaller than 0.05) which means that interpersonal relationships/co-workers have a significant effect on job satisfaction.

An unfavorable work environment can cause distractions and threats, in a work environment like this will cause employees to become forgetful, more errors in activities, and decreased their ability to make plans. Changes in working conditions cause employee reactions to be able to adapt to existing conditions. If workers are unable to adapt to existing working conditions, they will tend to experience work stress (24). The results of Chi-Square obtained a p-value = 0.004 < α 0.05, so H_0 was rejected, meaning that, there is a relationship between the work environment and the anxiety of health workers at the Batua Health Center with an OR value of 5.204 meaning that the work environment is less likely to cause 5 times anxiety for health workers.

In dealing with TB patients, many obstacles must be passed by health workers, especially regarding their health. It is well known that TB is an infectious disease that exposes officers to the disease. This can be seen from the results of interviews with health workers dealing with tuberculosis patients at the Public Health Center, it was found that 39.7 % had difficulty breathing (for example, often gasping for air or unable to breathe even though they had not done any physical activity before).

TB is a contagious disease, usually spread through the air by droplet nuclei. Transmission generally occurs indoors, so nurses sometimes feel anxious and afraid to contact or treat TB patients. Nurses or healthcare professionals believe that TB disease has a strong emotional impact on a patient's life since it evokes disability, impotence, and self-discrimination. One of the nurses at a hospital in the Limpopo province of South Africa said that the hospital where they work does not have enough resources for them to do a good job so it affects them emotionally, but they also cannot just stand by, so they feel it is better to risk their lives to save TB patients. Nurses or other health workers must receive specialized support from managers, psychologists, and staff appreciation to provide quality care and maintain good mental health. This study also reports that TB is the most dangerous job for health workers worldwide (25).

A similar study conducted in Southern Ethiopia also revealed that health workers were anxious about the low awareness of the community and the socioeconomic status of TB patients who might transmit the disease to vulnerable family members such as the elderly, pregnant women, and children. In addition, health workers were frustrated by unsuccessful treatment, layoffs, ignorance of care responsibilities, fatigue, shortage of health workers, and not following treatment guidelines properly affecting their actions in following up and treating TB patients, as the disease spreads easily (26).

Quality research in South Africa indicates that health workers have low levels of trust in the workplace. They strike and demand better pay or wages, a safe and comfortable working environment and conditions, and recognition for their work. They don't have the equipment to do their job safely, and some colleagues don't trust, or value their contributions (27). This proves that a conducive work environment is very important for health workers in carrying out their duties, especially for those caring for TB patients.

CONCLUSION

From the results of the study, it can be concluded that: 1) Based on the Chi-Square test, workload and work environment have a significant relationship with the anxiety of health workers in dealing with TB patients, 2) Anxiety of health workers in The Batua Health Center in Makassar City can increase if the overall workload felt by employees can be reduced or suppressed, 3) The work environment of health workers at the Batua Health Center in Makassar City has a significant influence on anxiety perceived by health workers.

SUGGESTION

Based on the results, the authors provide the following suggestions: 1) Health workers are advised to be able to manage their work time by dividing work time with friends to reduce the work environment caused by workload and be able to control emotions well, 2) The need to increase the number of health workers at the

Batua Health Center in Makassar City because there is an unbalanced relation between health workers and patients.

Declaration of Conflict of Interest. All authors declare no potential for conflict of interest in this research and article.

REFERENCES

1. Law-Health Law. Law of the Republic of Indonesia Number 36 of 2014 concerning Health Workers. Minister of Law and Human Rights of the Republic of Indonesia. 2014:4-37.
2. Munandar. Industrial and Organizational Psychology. 2016.
3. Hasibuan M. Human Resource Management. Bumi Aksara; 2012.
4. Naidoo T, Tomita A, Paruk S. Burnout, anxiety, and depression risk in medical doctors working in KwaZulu-Natal Province, South Africa: Evidence from a multisite study of resource-constrained government hospitals in a generalised HIV epidemic setting. *PLoS One*. 2020;15(10 October):1-14.
5. Annisa DF. Basic Concepts of Anxiety. 2016;12-34.
6. Potter P, Perry A. Fundamental Nursing Textbook: Concepts, Processes, and Practices. EGC; 2005.
7. The Ministry of Health. Indonesia Health Profile. Information Technology. 2020;(48):6-11.
8. The Ministry of Health. Indonesia Health Profile. 2015.
9. WHO. Coronavirus disease [Internet]. 2020. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>
10. PPS S. Inter-district data. 2020.
11. Manjunath U, Sarala R, Rajendra D, Deepashree MR, Chokshi M, Mokashi T, et al. Assessment of Workload of ASHAs: A Multi-stakeholder Perspective Study for Task-sharing and Task-shifting. *J Health Manag*. 2022;24(1).
12. Solon M, Madu YG, Tolidunde M, Megawati M. The Impact of Workload on Stress Levels in Health Workers During the COVID-19 Pandemic. *Florence Nightingale J Nurs*. 2021;4(2):94-101.
13. Hutabarat. Basic Concepts of Workload. 2017;
14. Yori SA. Nurses' Experience in Caring for MDR-TB Patients at the Padang City Health Center. 2019.
15. Purwaningsih P, Nursalam N, Nihayati HE, Dewi YS, Sudarsono S. Analisis Beban Kerja Perawat Berdasar Time and Motion Study. *Jurnal Ners*. 2017;2(1):114307.
16. Kallon II, Colvin CJ, Trafford Z. A qualitative study of patients and healthcare workers' experiences and perceptions to inform a better understanding of gaps in care for pre-discharged tuberculosis patients in Cape Town, South Africa. *BMC Health Serv Res*. 2022;22(1):1-14.
17. Ogbuabor DC, Okoronkwo IL. The influence of quality of work life on motivation and retention of local government tuberculosis control programme supervisors in South-eastern Nigeria. *PLoS One*. 2019;14(7):1-15.
18. Purwanti I, Suyanto UY, Dzikri Abadi M, Dariantio D, Liliana D. The Role of Burnout between Workload, Work Stress, and Employee Performance: Mediation Model. *KnE Social Sciences*. 2022;2022:70-85.
19. Korkmaz S, Kazgan A, Cekic S, Tartar AS, Balci HN, Atmaca M. The anxiety levels, quality of sleep and life and problem-solving skills in healthcare workers employed in COVID-19 services. *Journal of Clinical Neuroscience*. 2020;131-136.
20. Vanleeuw L, Atkins S, Zembe-Mkabile W, Loveday M. Provider perspectives of the introduction and implementation of care for drug-resistant tuberculosis patients in district-level facilities in South Africa: A qualitative study. *BMJ Open*. 2020;10(2):1-8.
21. Hidayat R. Basic Concepts of Work Environment. Ibi Dharmajaya. 2017;53.
22. Rustiyanto E, Rahayu WA. Documentation Filing Management Medical Records and Health Information. 2011.
23. Idham. The Effect of Salary, Co-Employee Relationship and Job Characteristics on Job Satisfaction (Study of Health Workers at Puskesmas Kertak Hanyar, Banjar District). Kalimantan; 2021.
24. Badri M, Aziz A. The Influence of Locus of Control and Self-Esteem on the Work Motivation of Medan City Education Office Employees. *Analytics: J Master of Psychology UMA*. 2011;3(1):29-36.
25. Matakanye H, Ramathuba DU, Tugli AK. Caring for tuberculosis patients: Understanding the plight of nurses at a regional hospital in Limpopo Province, South Africa. *Int J Environ Res Public Health*. 2019;16(24).
26. Abebe A, Nuriye S, Baza D, Gelgelu TB, Markos M, Woldeyohanes S. Experience and Perception of Healthcare Workers on the Challenges of Follow-Up and Treatment of Tuberculosis Patients in Southern Ethiopia: An Exploratory-Descriptive Qualitative Study. *Risk Manag Healthc Policy*. 2022;15:1931-1945.
27. Anstey Watkins J, Griffiths F, Goudge J. Community health workers' efforts to build health system trust in marginalised communities: a qualitative study from South Africa. *BMJ Open*. 2021;11(5):e044065.

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