






The Relationship between Job Satisfaction and Mental Workload Among Health Workers During the COVID-19 Pandemic in the Abiansemal District

Putu Dahlia Eka Patni¹^a, I Kadek Nuryanto³^b, I Nengah Adiana⁴^c,
Ni Luh Putu Inca Buntari Agustini⁴^d and Ni Made Dewi Wahyunadi⁵^e

¹ Student of Master of Nursing Program, Faculty of Health, Institute of Technology and Health Bali, Bali, Indonesia

¹ Puskesmas Petang, Badung, Bali, Indonesia

² Master of Nursing Program, Faculty of Health, Institute of Technology and Health Bali, Bali, Indonesia

^{3,4} Bachelor of Nursing Program, Faculty of Health, Institute of Technology and Health Bali, Bali, Indonesia

Keywords: Mental Workload, Job Satisfaction, Health Worker, Covid-19, Pandemic.


Abstract: Mental workload is workload due to the activity of using the human brain or mind. Job satisfaction is a person's emotional state after comparing their perceived performance and results with their expectations. Health workers are at the frontline in providing services during the COVID-19 pandemic. Mental workload is an important factor affecting the services provided by health workers. This study aimed to examine the relationship between the mental workload and job satisfaction of health workers during the COVID-19 pandemic in the Abiansemal district, Bali. This was a quantitative study using a correlation cross-sectional design. A total of 83 health workers were selected through stratified sampling. Data were collected using an online questionnaire. Data collection was conducted in May 2022. Data were analyzed using descriptive statistics to measure the job satisfaction and mental workload of health workers during the COVID-19 pandemic. A Chi-square test was conducted to analyze the relationship between job satisfaction and mental workload. The results showed that the majority of health workers had moderate (50.6%) and heavy (49.4%) mental workloads. It also showed a significant relationship between job satisfaction and mental workload ($p = 0.004$). Job satisfaction is a very important aspect that needs to be improved to reduce mental workload, which can be done by providing rewards and supporting facilities and infrastructure for health services.


1 INTRODUCTION


Coronavirus disease 2019 (COVID-19) is an infectious disease caused by a coronavirus. COVID-19 was the number one cause of death in the world from 2020 to May 2021, and has affected the socio-economic status of communities and areas affected by the virus (Kemenkes, 2021). COVID-19 spreads very quickly through small droplets from the nose or mouth that spread when someone coughs or exhales. The total distribution of COVID-19 cases in Bali has a cumulative number of 44,671 cases as of September


2021 (Indonesian Ministry of Health, 2021). Health workers are the front line in dealing with COVID-19. Data from the Badung District Health Office shows the number of health workers exposed to COVID-19 was 700 people.


The policy created by the government to counter the increasing number of health workers dying due to COVID-19 exposure was to reduce health workers' workload in three ways. First, reduce working hours to prevent fatigue in medical personnel. Second, increase the number of shifts for health workers for more frequent staff changes. Third, categorize patients to reduce workload (Candra, 2020).

^a <https://orcid.org/0000-0001-7629-594X>

^b <https://orcid.org/0000-0001-5617-792X>

^c <https://orcid.org/0000-0002-6451-9827>

^d <https://orcid.org/0000-0003-3327-3817>

^e <https://orcid.org/0000-0002-9697-3821>

The phenomenon that occurs in the field is that there are no additional health personnel, especially in the most basic health service centers such as primary healthcare centers. Ruiz-Frutos et al., (2022) found that there was an imbalance of health workers in big cities and remote areas during the COVID-19 pandemic. For 1.5 years, health workers had not been able to take leave, which caused their workload during the pandemic to be high. Nurses' workload during the COVID-19 pandemic consisted of caring for and serving infected (positive) patients. The study used the NASA-Task Load Index (NASA-TLX) and found that during the COVID-19 pandemic, the majority of health workers' mental workload was very high at 88.2% (Novira, *dkk.*, 2021)

Another study stated that the mental workload of male nurses was considered high (Susanti, S., *dkk.*, 2017). However, no study has specifically identified how the mental workload experienced by health workers at primary healthcare centers in terms of the age, gender, and length of work characteristics. Physical work environment factors around the workplace are some of the factors that affect a person's mental workload (Simanjuntak, R. A., & Situmorang, 2010). Furthermore, job satisfaction greatly affects health workers' workload, as seen from Christi's (2015) research showing job satisfaction is influenced by workload. Health workers' mental workload is relatively heavy. This is especially true during pandemic conditions like this, with the increasing number of COVID-19 cases adding to the workload; both physical and mental workloads can cause work stress (Wihardja, *dkk.*, 2021). At the time of this study, no research has been found on health workers' mental workload in Bali, though it is very important to systematically review health workers' mental workload during the COVID-19 pandemic.

2 METHOD

This was a correlative analytic study with a cross-sectional correlation approach. This study was conducted to examine the relationship between job satisfaction and health workers' mental workload in dealing with the COVID-19 pandemic in Abiansemal. The sample in this study were health workers at the Abiansemal District Health Center who met the inclusion criteria, totaling 83 people. The sampling method in this study was probability sampling with a stratified-simple random sampling technique where the determination of the sample used a random system (Hariyati & Safiril, 2018). The sample criteria

was split in two, namely inclusion criteria and exclusion criteria, where the two criteria determined whether the sample could be used. The inclusion criteria in this study were health workers who worked at the Abiansemal District Health Center, health workers who had active STR, were willing to be respondents, and had signed an informed consent. The exclusion criteria in this study were health workers who were in self-isolation and health workers who were on leave or study assignments. The instrument used in this study was a questionnaire. The questionnaire was filled out by respondents through a Google Form that met the inclusion criteria. Research was carried out at the Abiansemal District Health Center in May 2022. The data collection in this study was carried out through administrative procedures and implementation procedures. The data analysis technique used in this research was the bivariate analysis.

3 RESULT

The table below describes health workers' general characteristics, job satisfaction, and mental workload while facing the COVID-19 pandemic. Respondents' general characteristics consisted of age, gender, education, work unit, years of service, marital status, and place of residence. Table 1 shows the distribution of respondents' characteristics

Table 1: Respondents' Characteristics.

Variable	f	%
Age (years)		
Adults	70	84.3
Not adults	13	15.7
Gender		
Male	13	15.7
Female	70	84.3
Education		
Diploma 3 in Health	48	57.8
Bachelor/Master	35	42.2
Work Unit		
COVID	51	61.4
Non-COVID	32	38.6
Length of Work (years)		
≤ 10 years	50	60.2
> 10 years	33	39.8
Marital Status		
Married	73	88.0
Not married	10	10.0
Residence		
Rural	68	81.9
Urban	15	18.1

The majority of respondents were in the adult category, totaling 70 respondents (84.3%). The majority were female with a total of 70 respondents (84.3%). The majority of respondents had a Diploma 3, with as many as 48 respondents (57.8%). The majority of respondents' length of work was less than or equal to 10 years with as many as 50 respondents (60.2%). Judging from marital status, as many as 73 respondents were married (88%). Finally, as many as 68 respondents lived in rural areas (81.9%).

This study also looked at health workers' mental workload and job satisfaction in dealing with the COVID-19 pandemic. Figure 1 and Figure 2 below describe the details of the data obtained in this study

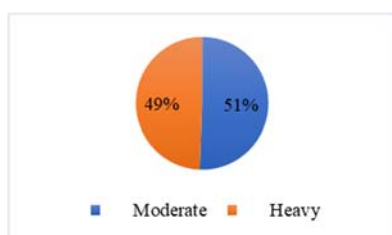


Figure 1: The Proportion of Health Workers' Mental Workload in Facing the COVID-19 Pandemic at the Abiansemal District Health Center (n = 83).

Figure 1 and Figure 2 show that most of the respondents, namely 42 respondents (50.6%), had moderate mental workloads. It is also evident that the majority of respondents, namely 44 respondents (53%), had good job satisfaction.

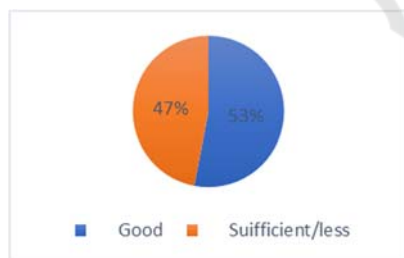


Figure 2: The Proportion of Health Workers' Job Satisfaction in Facing the COVID-19 Pandemic at the Abiansemal District Health Center (n = 83).

A bivariate analysis was conducted to determine the relationship between the independent variable and the dependent variable. The Chi-square test was used in conducting the bivariate analysis in this study, with the total percentage being in each independent variable's row. Table 2 shows an analysis of one variable relationship, namely between job satisfaction and health workers' mental workload in the face of the COVID-19 pandemic.

The results showed that most health workers had a moderate mental workload (50.6%), with the rest having a heavy mental workload (49.4%). The results from testing the relationship between job satisfaction and mental workload showed a significant relationship ($p < 0.004$) where 65.9% of respondents with good job satisfaction had light/moderate mental workload.

Table 2: Bivariate results of the relationship between job satisfaction and mental workload.

Job Satisfaction * Mental Workload Crosstabulation					
		Mental Workload		Total	P-Value
		Moderate n (%)	Heavy n (%)		
Job Satisfaction	Good	29 (65.9)	15 (34.1)	44	0.004
	Sufficient/less	13 (33.3)	26 (66.7)	39	
Total		42 (50.6)	41 (49.4)	83	

4 DISCUSSION

The measurement results of health workers' mental workload at the Abiansemal District Health Center showed that the majority had a mental workload in the medium and heavy categories. These results indicate that the majority of health workers at the Abiansemal District Health Center had a good maximum capacity for individual mental loads. This is shown by health workers providing an assessment of their mental workload during the COVID-19 pandemic season as a mental burden in the moderate category. However, 49.4% of all respondents reported a heavy mental burden.

The research results presented by (Z. Fikri, 2020) show that the majority of nurses at the Labuan Baji Makassar Hospital during the COVID-19 pandemic season also reported a mental workload in the moderate category. A study was also done on nurses at the Kondosapata' Hospital in Balla District, where the majority of health workers reported a moderate mental workload during the COVID-19 pandemic (Nikeghbal, et al., 2021). Mental workload is defined as the difference between the demands of the workload and an individual's maximum mental load capacity in a motivated condition. An increase in workload can occur due to a lacking workforce and health workers' insufficient abilities to meet the job's demands. If mental workload arises due to a lack of energy, an additional amount of energy is needed to

overcome the problem. Meanwhile, if the mental workload occurs because of health workers' lack of ability, capacity building through education and training is the path to overcoming it.

Primary healthcare centers in Badung, especially in Abiansema, had met the minimum number of health workers on duty based on Indonesian Ministry of Health Regulation Number 75 of 2014 concerning the Public Health Centers. Health workers at the Badung District Health Center also had relatively extensive work experience, allowing health workers to better manage tasks during the COVID-19 pandemic. Based on the analysis results, 41% of the Badung District Health Center health workers had more than 10 years of work experience. These results show that these health workers already had a lot of experience. This will affect their ability or capacity to manage their mental workload. During the pandemic, there was a surge in patients accompanied by the submission of reports and personnel confinement due to COVID-19 infection. However, health workers who already have extensive work experience will be able to manage their work and tasks at the Badung District Health Centers, one of which is the Abiansema District Health Center. The majority of these experienced workers should have a mental workload in the medium category. Their ability to analyze situations and manage work stress should be much better than novice health workers who have less than two years of experience.

The results of the research analysis found as much as 53% of health workers at the Abiansema District Health Center expressed job satisfaction in the good category, and the remaining 47% in the sufficient/less category. These results indicate that the Abiansema District Health Center's health workers are satisfied with their work and their work needs have been met. These research results are supported by previous cognate research. (Hariyati & Safril, 2018) found that many nurses at a hospital expressed job satisfaction during the COVID-19 pandemic. In line with these results, nurses at the Idaman Hospital in Banjarbaru City were also reported to have job satisfaction in the good category (M. K. Fikri, Rizany, & Setiawan, 2022). Similar results were also conveyed by (Apriliani & Hidayah, 2020), who found that most nurses at PKU Muhammadiyah Gamping Hospital were satisfied in job satisfaction indicators (88.62%). This study's research results as well as previous studies' results show that during the COVID-19 pandemic, nurses generally had job satisfaction in the satisfied or good category. This is believed to be because support for health workers in providing services came from various parties and

sectors, both private and government. This resulted in a mismatch between expectations and the reality for health workers, especially those on duty at the Abiansema District Health Center.

Job satisfaction is defined as an individual's positive feelings towards their job and the extent to which their needs can be met by the job. Satisfaction in general can also be defined as a match between an individual's expectations and reality. Nurses' job satisfaction can have a relationship with social support received at work, which can come from superiors, friends or work teams, and family (Novira et al., 2021). Based on research instrument results, it is believed there has been good team performance as well as communication between fellow nurses and other health workers in providing services during the COVID-19 pandemic. This is also supported by the discovery of good work environment data for health workers at the Abiansema District Health Center. In addition, good work motivation was also reported to form nurses' job satisfaction (Hariyati & Safril, 2018). Good work motivation will encourage health workers to be able to work optimally, enabling nurses to feel satisfied with the reality of their work. A relationship between work motivation and job satisfaction was also presented by (M. K. Fikri et al., 2022), wherein the results of the research conveyed that there was a statistically significant relationship between work motivation and job satisfaction for nurses at Idaman Hospital, Banjarbaru City.

During the COVID-19 pandemic, job satisfaction was also associated with the receipt of remuneration by health workers in charge of providing services. The Indonesian government, through Ministry of Health Decree Number 447 of 2020 concerning Provision of Death Incentives and Compensation for Health Workers Handling COVID-19, has regulated the mechanism and number of incentives for health workers during the pandemic. This study not conduct in-depth research on the number of incentives received by health workers, but it is believed that the incentives received in providing services during the pandemic season will be able to shape health workers' job satisfaction. Previous study results also discovered that remuneration for nurses had a direct effect on job satisfaction during the COVID-19 pandemic (Apriliani & Hidayah, 2020). This implies that the Abiansema District Health Center's health workers would have had job satisfaction in the good category.

Health worker job satisfaction was found to have a statistical relationship with mental workload ($p < 0.004$). Job satisfaction is conveyed as a match between health workers' expectations and reality in

providing services during the COVID-19 pandemic. Health workers at the Abiansemal District Health Center mostly had a job satisfaction score in the good category, indicating that their expectations fit their reality. High job satisfaction will help workers view work not as a burden, but as a task or obligation that must be done. This will shape their perception to be able to carry out their duties as well as possible without considering the pandemic condition as an additional mental workload in providing services.

In line with this study's results and analysis, (Inegbedion, et al., 2020) stated that there is a causal relationship between job satisfaction and workload. These two variables can influence each other. Workload can shape job satisfaction and vice versa. Rhythmic results were also presented by (Holland, et al., 2019), where it was conveyed that there was a relationship between workload and job satisfaction, where a significant increase in workload can be the reason someone leaves their job. In line with these results, (Goh, et al., 2020) also stated that there is a relationship between job satisfaction and workload. The results of previous studies found a causal relationship between workload and job satisfaction; in this study, it was found that nurses who had less job satisfaction tended to experience an increase in mental workload.

This study had its limits in that the questionnaire was filled out via Google Form and no assistance was provided during the process of filling out the questionnaire, thus allowing misunderstandings to occur presenting the risk of missed questions by the selected respondents, thus causing bias in data collection. Extreme values forced a change in each variable's categories from three to two categories to allow for a decrease in the quality of data differences that cause the analysis results to be less than optimal.

5 CONCLUSION

The majority of respondents experienced a light/moderate mental workload in the face of the COVID-19 pandemic at the Abiansemal District Health Center (50.6%). The majority of respondents also reported good job satisfaction (53%). There was a significant relationship between health workers' job satisfaction and mental workload. Job satisfaction was the most dominant factor influencing health workers' mental workload in the face of the COVID-19 pandemic. Job satisfaction has a very important role and needs to be improved to reduce mental workload by providing awards and supporting infrastructure for health services.

REFERENCES

- Apriliani, E., & Hidayah, N. (2020). Hubungan Remunerasi dan Motivasi Kerja dengan Kepuasan Kerja Perawat di RS PKU Muhammadiyah Gamping. *Jurnal Ilmiah Universitas Batanghari Jambi*, 20(1), 137. <https://doi.org/10.33087/jiubj.v20i1.777>
- Candra, S. A. (2020). Tiga Langkah Pemerintah Kurangi Beban Kerja Tenaga Medis. intention to leave the occupation. *Applied Nursing Research*, (MARCH), 70–76. <https://doi.org/https://doi.org/10.1016/j.apnr.2019.06.001>
- Fikri, M. K., Rizany, I., & Setiawan, H. (2022). Hubungan Motivasi Kerja dengan Kepuasan Kerja Perawat pada Masa Pandemi COVID-19 di Rawat Inap. *Jurnal Kepemimpinan Dan Manajemen Keperawatan*, 5(1), 38–46. <https://doi.org/10.32584/jkmk.v5i1.1362>
- Fikri, Z. (2020). Hubungan Beban Kerja Mental Perawat Dengan Kepatuhan Dokumentasi Keperawatan. *Journals of Ners Community*, 11(November), 236–245. Retrieved from <http://journal.unigres.ac.id/index.php/JNC/article/download/1089/899>
- Goh, P. Q. L., Ser, T. F., Cooper, S., Cheng, L. J., & Liaw, S. Y. (2020). Nursing teamwork in general ward settings: A mixed-methods exploratory study among enrolled and registered nurses. *Journal of Clinical Nursing*, 29(19–20), 3802–3811. <https://doi.org/10.1111/jocn.15410>
- Hariyati, R. T. S., & Safiril, S. (2018). The relationship between nurses' job satisfaction and continuing professional development. *Enfermeria Clinica*, 28, 144–148. [https://doi.org/10.1016/S1130-8621\(18\)30055-X](https://doi.org/10.1016/S1130-8621(18)30055-X)
- Holland, P., Tham, T. L., Sheehan, C., & Cooper, B. (2019). The impact of perceived workload on nurse satisfaction with work-life balance and intention to leave the occupation. *Applied Nursing Research*, 49, 70–76. <https://doi.org/10.1016/j.apnr.2019.06.001>
- Inegbedion, H., Inegbedion, E., Peter, A., & Harry, L. (2020). Perception of workload balance and employee job satisfaction in work organisations. *Heliyon*, 6(1), e03160. <https://doi.org/10.1016/j.heliyon.2020.e03160>
- Kemenkes. (2021). Situasi Terkini Perkembangan Coronavirus Disease (COVID-19).
- Nikeghbal, K., Kouhnavard, B., Shabani, A., & Zamanian, Z. (2021). COVID-19 effects on the mental workload and quality of work life in Iranian nurses. *Annals of Global Health*, 87(1), 1–10.
- Novira, A., Patima, & Syisnawati. (2021). Analisis Motivasi Kerja Perawat Pada Masa Pandemi Covid-19. *Alauddin Scientific Journal of Nursing*, 2(1), 19–31. Retrieved from <http://journal.uin-alauddin.ac.id/index.php/asjn/article/view/23645>
- Ruiz-Frutos, C., Adanaqué-Bravo, I., Ortega-Moreno, M., Fagundo-Rivera, J., Escobar-Segovia, K., Arias-Ulloa, C. A., & Gómez-Salgado, J. (2022). Work Engagement, Work Environment, and Psychological Distress during the COVID-19 Pandemic: A Cross-Sectional Study in

- Ecuador. *Healthcare (Switzerland)*, 10(7).
<https://doi.org/10.3390/healthcare10071330>
- Simanjuntak, R. A., & Situmorang, A. D. (2010). Analisis Pengaruh Shift Kerja Terhadap Beban Kerja Mental. *Jurnal Teknologi*, (1), 53–60.
- Susanti, S., Pawennari, A., Afiah, I. N., Dahlan, M., & Rauf, N. (2017). Analisis Pengukuran Beban Kerja Mental Perawat Unit Gawat Darurat dengan Metode NASA-Task Load Index. *Prosiding SNTI Dan Satelit*, 4–6.
- Wihardja, H., Arif, Y. K., & Lina, R. N. (2021). Faktor - Faktor Yang Mempengaruhi Motivasi Kerja Perawat Pelaksana Dalam Merawat Pasien Covid-19 Di Rs X, Banten. *Jurnal Sehat Mandiri*, 16(1), 131–142.
<https://doi.org/10.33761/jsm.v16i1.350>

