



COMPARISONAL ANALYSIS OF BURNOUT SYNDROME IN HEALTH PERSONNEL IN COVID-19 SERVICE AREA AND GENERAL SERVICES

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ABSTRACT

Burnout syndrome experienced by health workers has a long-term impact. During the Covid-19 period, the fact that as many as 83% of health workers in Indonesia had experienced moderate and severe burnout syndrome was psychologically at risk of disrupting the quality of life and work productivity in healthservices. service and impact on the performance of medical personnel. This study aims to analyze differencesin the level of burnout syndrome in health workers serving in the Covid-19 service area and the general service area of the Zainoel Abidininoel AbidinHospital based on internal and external factors. This research is analytical with cross sectional design. The population in this study were health workers at Zainoel Abidininoel Abidin Hospital. The sampling technique is proportional sampling, the sample of this study is 1: 2 where 88 health workers in the Covid-19 service (PINERE) and 176 health workers in public services. In this study using the standard questionnaire The Maslach Burnout Inventory-Human Service Survey (MBB-HSS) (validity test results 9.10 and reliability test 0.947). Data analysis usingmultiple logistic regression test and Mann Whitney because the data are not normally distributed. The results showed that workload was the dominant factor in the incidence of burnout both for officers in the covid-19 service area with P 0.0001 (OR: 119; CI: 11.9-1198) and in general service areas P 0.0001 (OR: 0.001). 0.0014; CI: 0.000771- 0.026). This study can be used as a policy brief in an effort to manage stress and work fatigue levels for health workers during the Covid19 pandemic and post-pandemic in the future.

Keywords: burnout; covid service area; health officer; public service area

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INTRODUCTION

Burnout syndrome has become an epidemic sweeping the workplace and can affect anyone regardless of occupation or age. Data from several countries indicate that work-related stress, including burnout, has risen sharply in recent decades (Bianchi et al., 2018). Research conducted by a team from the Occupational Medicine Master's Program at the Faculty of Medicine, University of Indonesia, regarding COVID-19 reveals that as many as 83% of healthcare workers in Indonesia have experienced moderate to severe burnout syndrome, which poses a psychological risk of impairing quality of life and work productivity in healthcare services (Rarastanti, 2021).

Burnout most commonly occurs among individuals working in the helping professions, such as healthcare workers, because they are on the front lines (Shepherd et al., 2020). The COVID-19 pandemic in Indonesia has led to an increased mental burden on healthcare workers, which can affect their quality of life and productivity in the healthcare sector (Rohmah et al., 2021). This heightens risks related to mental health, including the risk of burnout syndrome or mental exhaustion (Rarastanti, 2021). Currently, a large number of healthcare workers who directly care for patients in hospitals are facing difficulties, heavy workloads, and high levels of stress, making them vulnerable to burnout (Jalili et al., 2021). Burnout is known to be influenced by high job stress, long tenure, and heavy workloads, as well as a lack of support from the workplace (Dugani et al., 2018). Burnout is a cluster of work-related symptoms involving emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment. Burnout can lead to feelings of hopelessness, a sense of loss of control, and a decline in work motivation (Yulianto, 2020). According to the head

of the research team for the Master's Program in Occupational Medicine at the Faculty of Medicine, University of Indonesia, the burnout syndrome experienced by healthcare workers has long-term consequences (Rosyanti & Hadi, 2020). When a healthcare worker experiences emotional exhaustion, the result is a clear loss of motivation to work, which affects the quality of care and impacts the performance of medical staff (Rarastanti, 2021). Burnout syndrome has become an epidemic in the workplace and can affect anyone, especially individuals working in helping professions such as healthcare workers. Healthcare workers are at risk of burnout because they are on the front lines of service. Prolonged burnout can lead to emotional exhaustion. Researchers have noted differences in burnout rates among healthcare workers working in the COVID-19 care area and the general care area of Zainoel Abidin Regional Hospital, which warrant further investigation. This study aims to analyze differences in the level of burnout syndrome in health workers serving in the Covid-19 service area and the general service area of the Zainoel Hospital based on internal and external factors

METHOD

This study is a comparative study using a cross-sectional approach aimed at determining the comparison of burnout syndrome levels among healthcare workers assigned to the COVID-19 unit and the general care unit at Zainoel Abidin Regional General Hospital. The study population consisted of all 1,320 healthcare workers at Zainoel Abidin Regional General Hospital. Specifically, 88 work in the COVID-19 care unit and 1,232 in the general care unit. This study employed a 1:2 sampling ratio, with 88 healthcare workers from the COVID-19 care unit (PINERE) and 176 from the general care unit. The research instruments used to measure respondent identity and job satisfaction were brief questionnaires, while the assessment of burnout syndrome among healthcare workers utilized the Maslach Burnout Inventory - Human Services Survey (MBI-HSS), which was distributed to the respondents. The MBI-HSS consists of 22 statement items validity test was conducted by Wahyuni (2024) where the validity test results were 9.10 and reliability test results were 0.947. The questionnaire used to assess nurses' workload was a modified version of the questionnaire by Nursalam (2015) with the results of the validity test r table $0.381 < r$ count $0.459-0.812$, while the results of the reliability test were 0.923. Data collection was conducted by distributing questionnaires to healthcare workers. During the data collection process, the researcher employed two enumerators. Data analysis utilized multiple logistic regression with a stepwise method and the t-test. Prior to conducting the t-test, data normality was assessed; if the data were normally distributed, the t-test was used. However, if the data were not normally distributed, the Mann-Whitney U test was used.

RESULT

Univariate Analysis

Descriptive analysis of the independent and dependent variables was conducted using frequency distribution statistics. In this univariate analysis, which examined both COVID-19 service areas and general service areas, the variables considered were burnout, gender, age, marital status, workload, length of service, and recognition. The descriptive analysis for the above factors is presented in the following table 1.

Table 1
Distribution of Factors Associated with Burnout Syndrome among Healthcare Workers in the COVID-19 Care Unit (n=88)

Variable	Category	f	%
Age	>30 Years	63	71.59
	≤30 Years	25	28.41
Gender	Men	21	23.86
	Women	67	76.14
Marital Status	Married	67	76.14
	Unmarried	21	23.86
	New	47	53.41

Variable	Category	f	%
length of service	Currently	30	34.09
	Long Time	11	12.50
Award	Yes	1	1.14
	No	87	98.86
Workload	Light	45	51.14
	Currently	25	28.41
	Severe	18	20.45
Burnout	Light	72	81.82
	Currently	12	13.64
	Severe	4	4.55

Based on the table above, it is evident that 71.59% of respondents working in COVID-19 response services are over 30 years old, 76.14% are female, 76.14% are married, 53.41% are new to the job, 98.86% have never received an award, 51.14% reported having a light workload, and 81.82% experienced mild burnout.

Table 2

Distribution of Factors Associated with Burnout Syndrome among Healthcare Workers in the New Service Area (n=176)

Variable	Category	f	%
Age	>30 Years	38	21.59
	≤30 Years	138	78.41
Gender	Men	45	25.57
	Women	131	74.43
Marital Status	Married	162	92.05
	Unmarried	14	7.95
length of service	New	75	42.61
	Currently	45	25.57
	Long Time	56	31.82
Award	Yes	1	0.57
	No	175	99.43
Workload	Light	16	9.09
	Currently	154	87.50
	Severe	6	3.41
Burnout	Light	169	96.02
	Currently	7	3.98

Based on the table 2, it is evident that 78.41% of respondents in the new service are aged ≤30 years, 74.43% are female, 92.05% are married, 42.61% have a work tenure classified as “new,” 99.43% have never received an award, 87.50% have a moderate workload, and 96.02% have low-level burnout.

Bivariate Analysis

Table 3 shows that of the 6 variables studied in the COVID-19 care unit, 2 variables were found to be associated: workload with a p-value of 0.0001 (CI=0.008; 0.007–0.085) and length of service with a p-value of 0.0001 (CI=186; 16.5–2107), while the other variables did not have a significant association with the occurrence of burnout.

Table 3

Factors Associated with Burnout Syndrome Among Healthcare Workers in the COVID-19 Service Area (n=88)

Age	Burnout			Total f (%)	OR(95% CI)	p-value
	Light f (%)	Currently f (%)	Severe f (%)			
>30 Years	51(80,9%)	9(14,2%)	3(4,76%)	63(71,6%)	0,8 (0,2-2,8)	0,739
≤30 Years	21(84%)	3(12%)	1(4%)	25(28,4)		
Gender						
Men	20 (95,2%)	1(4,76)	0(0%)	21(23,9)	5,8 (0,7-47,2)	0,097
Women	52(77,6%)	11(16,4)	4(5,97)	67(76,1)		

Age	Burnout			Total f (%)	OR(95% CI)	<i>p-value</i>
	Light f (%)	Currently f (%)	Severe f (%)			
Marital Status						
Married	57(85,1%)	10(14,9%)	0(0%)	67(76,1%)	2,8 (0,87- 9,05)	0,083
Unmarried	15(71,4%)	2(9,5%)	4(19,05%)	21(23,8%)		
Length of service						
Light	45(100%)	0(0%)	0(0%)	45(100%)		
Currently	24(96%)	1(4%)	0(0%)	25(100%)	0,008 (0.007-0,085)	0,000
Severe	3(16,6%)	11(61,1%)	4(22,2%)	18(100%)	7-71	0,991
Workload						
Light	46(98,9%)	1(2,1%)	0(0%)	47(100%)		
Currently	23(76,7%)	7(23,3)	0(0%)	30(100%)	13 (1,56-116)	0,018
Severe	3(27,3)	4(36,3)	4(36,3)	11(100%)	186 (16,5-2107)	0,0001
Award						
Yes	1(100%)	0(0%)	0(0%)	1(100%)		
No	71(81,6%)	12(13,6%)	4(4,6%)	87(100)	1,69(0)	0,993

Table 4
Factors Associated with Burnout Syndrome among Healthcare Workers in
The General Care Area (n=176)

Age	Burnout			Total f (%)	OR(95% CI)	p-value
	Light f (%)	Currently f (%)	Severe f (%)			
>30 Years	37(97,3%)	1(2,6%)	-	38(100%)		
≤30 Years	132(95,6%)	6(4,3%)	-	138(100%)	1,6 (0,19-14,4)	0,635
Gender						
Men	43(95,5%)	2(4,4%)	-	45(100%)		
Women	126(96,2%)	5(3,8%)	-	131(100%)	0,85 (0,15-4,55)	0,853
Marital Status						
Married	156(96,3%)	6(3,7%)	-	162(100%)		
Unmarried	13(92,8%)	1(7,14%)	-	14(100%)	2 (0,22-17,8)	0,535
Length of service						
Light	16(100%)	0(0%)	-	16(100%)		
Currently	152(98,7%)	2(1,3%)	-	154(100%)	0,002 (0,002-0,3)	0,000
Severe	1(16,6%)	5(83,3%)	-	6(100%)		
Workload						
Light	74(98,6%)	1(1,3%)	-	75(100%)		
Currently	44(97,7%)	1(2,2%)	-	45(100%)	1,68 (0,10-27,5)	0,716
Severe	51(91%)	5(8,9%)	-	56(100%)	7,2 (0,082-63,9)	0,074
Award						
Yes	1(100%)	0(0%)	-	1(100%)		
No	168(96%)	7(4%)	-	175(100%)	1 (0,019-0,88)	0,000

Table 3 shows that of the 6 variables studied in the general healthcare sector, 2 variables were found to be associated: workload with a p-value of 0.0001 (CI=0.002; 0.002–0.3) and length of service with a p-value of 0.0001 (CI=1; 0.019–0.88), while the other variables did not have a significant association with the occurrence of burnout.

Multivariate Analysis

Table 5
Association of Predictor Factors Related to the Occurrence of Burnout in COVID-19 Services

Workload	OR	95% Confident Interval		P-value
		Lower	Upper	
Workload	119	11,9	1198	0,000

All variables were tested simultaneously, and the results indicated that workload is the primary factor contributing to burnout, with a p-value of 0.0001; specifically, the heavier a person's workload, the 119 times higher their likelihood of experiencing severe burnout. Table 6, All variables were tested simultaneously, and the results showed that workload is the primary factor

contributing to burnout, with a P-value of 0.0001; specifically, the heavier an individual's workload, the 0.001 times higher the likelihood of experiencing severe burnout

Table 6.

Relationship Between Predictor Factors and the Occurrence of Burnout in the General Services Department

Workload	OR	95% Confident Interval		<i>p-value</i>
		Lower	Upper	
Workload				
Light	1			
Currently	0,0014	0,00007	0,0260	0,000
Severe	1(0mmoted)			
Marital Status	12,8	0,74	219,1	0,078

Mann-Whitney Analysis

Table 7.

Differences in Burnout Incidence Between the COVID-19 Care Unit and the General Care Unit

Burnout	N	Mean	SD (Min-max)	<i>p-value</i>
Pinere	88	44,4	2,26 (39,8-48,8)	
General	176	14,6	22,5 (12,2-16,9)	0,000

The table 7 shows that the mean burnout score in the COVID-19 service area was 44.4 with a standard deviation of 2.26 (39.8–48.8), while the general service area group had a mean score of 14.6 with a standard deviation of 2.26 (12.2–16.9). The p-value is 0.0001, indicating a significant difference in burnout incidence between the COVID-19 service area and the general service area.

DISCUSSION

Dominant Factors Causing Burnout in the COVID-19 Service Area and the General Service Area

Based on the results of the study on the six predictor variables in the COVID-19 service area, only one was suitable for inclusion in the model, namely workload (P: 0.001). Meanwhile, age (P: 0.383), gender (P: 0.887), marital status (P: 0.677), length of service (P: 0.269), and recognition (P: 0.000) were excluded because the data lacked variability, making them unsuitable for inclusion in the model due to significance values (P) > 0.20. All variables were tested simultaneously, and the results indicated that workload is the primary factor triggering burnout, with a P-value of 0.000; specifically, the heavier an individual's workload, the higher the likelihood—0.008 times greater—of experiencing severe burnout. This is consistent with the results in the general services area of RSUDZA, where there were six predictor variables, but only two were suitable for inclusion in the model: marital status (p: 0.079) and workload (p: 0.0001). Meanwhile, age (p: 0.542), gender (p: 0.766), recognition (p: 0.000), and length of service (p: 0.074) were excluded because the data lacked variability, making them unsuitable for inclusion in the model due to a significance level (P) > 0.20. All variables were tested simultaneously, and the results indicated that workload is the primary factor triggering burnout, with a P-value of 0.0001; specifically, the heavier an individual's workload, the higher the likelihood—by a factor of 0.001—of experiencing severe burnout.

Excessive workload is one of the factors in work that can lead to burnout (Rizky & Suhariadi, 2021). Furthermore, excessive workload encompasses both the quantitative amount of work and the qualitative level of difficulty of the work to be completed (Shah et al., 2020). Excessive workload can disrupt service delivery, leading to emotional tension during client service, and leading to withdrawal and avoidance of interaction with clients (Lasalvia, Amaddeo, et al., 2021). According to Hakman et al (2021), nurses experiencing severe stress with heavy workloads during the COVID-19 pandemic were caused by nurses wearing PPE for the duration of their shifts; during that time, they did not touch food or drinks until their designated work hours were over, and their rest periods were severely limited. Salcha and Juliani (2021) added that nurses treating COVID-19 patients were isolated for 14 days, preventing them from engaging in social activities and causing

healthcare workers to isolate themselves from family, friends, and neighbors. This phenomenon is because many people assumed that nurses treating COVID-19 patients would also be infected.

Nurses sometimes report feeling overwhelmed by their work, such as having to closely observe patients during shifts (Algunmeeyn et al., 2020). Meanwhile, the high number of patients visiting the hospital leaves nurses understaffed compared to the critically ill patients who require nursing care (Tan et al., 2020). Furthermore, nurses perform a variety of tasks to ensure patient safety (Badri, 2020). A perceived excessive workload will affect nurses' performance. The workload assigned to nurses should be distributed evenly so that no single nurse has too much or too little work—whether in COVID-19 wards or in general care settings during the COVID-19 pandemic (Ho et al., 2020). However, this equitable distribution does not imply that every nurse within the organization must have an identical workload (Hakman et al., 2021). Key factors related to workload include the number of patients requiring care, work capacity aligned with educational qualifications, and shift schedules designed to accommodate daily working hours (Barahama et al., 2019). The results of this study align with Tan et al (2020) research, indicating that the overall burnout level for the sample was moderate to high. Moderate to strong correlations were found between perceived workload and intention to leave ($r = 0.513$, $P < 0.0001$), fatigue and intention to leave ($r = -0.435$, $P < 0.0006$), and perceived workload and exhaustion ($r = -0.588$, $P < 0.0001$).

The researchers' assumption regarding the findings of this study is that the majority of female respondents who are married—and most of whom have young children—harbor concerns about the potential spread of COVID-19. These feelings are shared by healthcare workers in both COVID-19 care and at RSUDZA. Fluctuations in workload are another cause of work-related stress. The negative consequence is that nurses' emotions become less controlled, failing to meet patients' expectations. A high workload affects healthcare staff and, of course, results in a shortage of nursing staff relative to the volume of work that must be completed. This situation triggers work-related stress because patients universally demand effective and efficient care to resolve their issues, regardless of the specific department. This is believed to be the primary reason why workload serves as the main predictor of burnout, both in the COVID-19 care units and in the general wards of RSUDZA.

Differences in Burnout Incidence Between the COVID-19 Care Unit and the General Care Unit at RSUDZA

The table above shows that the burnout score in the COVID-19 service area yielded a mean value of 44.4 with a standard deviation of 2.26 (39.8–48.8), while the general service area group had a mean value of 14.6 with a standard deviation of 22.5 (12.2–16.9). The p-value is 0.0001, indicating a significant difference in burnout incidence between the COVID-19 care unit and the general care unit. The COVID-19 care unit exhibits a higher burnout rate compared to the general care unit. During this pandemic, the burnout rate among healthcare workers working in COVID-19 services continues to increase (Lasalvia, Amadeo, et al., 2021). Currently, healthcare workers' working hours exceed the legal limits, which impacts the quality of care. This occurs because healthcare workers are beginning to experience both physical and psychological exhaustion (Ma'mari et al., 2020). In fact, healthcare workers' current weekly working hours exceed 40 hours. This accumulation of working hours violates labor regulations (Kaushik, 2021).

Healthcare workers at every level are vulnerable to burnout during this pandemic. Workplace factors, extended shifts (8 hours), and fostering a safe work environment (Lasalvia, Bodini, et al., 2021). Mitigation strategies must target all levels of healthcare workers, including frontline and non-frontline staff, as frontline healthcare workers experience higher burnout rates compared to non-frontline staff. Addressing and alleviating burnout among healthcare workers must be a top priority to ensure the sustainability of patient care efforts in the face of a prolonged pandemic (Chew et al., 2020).

The findings of this study align with research conducted by researchers from the Master's Program in Occupational Medicine at the Faculty of Medicine, University of Indonesia (MKK FKUI) and are consistent with the statements of the head of the COVID-19 Task Force, revealing that 83% of nurses in Indonesia have experienced moderate to severe burnout—a condition that poses a psychological risk of impairing their quality of life and work productivity in healthcare services. The work-related exhaustion experienced by nurses has long-term effects on the quality of medical care, as these nurses experience extreme fatigue, depression, and a sense of incompetence or lack of competence in performing their duties. Additionally, 41% of healthcare workers experience moderate to severe emotional exhaustion, 22% experience moderate to severe loss of empathy, and 52% experience moderate to severe lack of self-confidence; this certainly has a negative impact on our efforts to combat COVID-19, and these figures are higher compared to non-COVID healthcare settings (Indryan, 2022). Similarly, the research by Benjamin et al. showed that among the 11,286 healthcare workers invited, 3,075 valid responses were received, resulting in an overall response rate of 27.2%. The mean OLB score was 2.38 and 2.50 for disengagement and exhaustion, respectively. The burnout threshold for disengagement and exhaustion was met by 79.7% and 75.3% of respondents, respectively. In multivariate regression analysis, Chinese or Malay ethnicity, HADS anxiety or depression score 8, shift duration of 8 hours, and being transferred were significantly associated with higher mean OLB scores, while high SAQ scores were significantly associated with lower scores. Healthcare workers transferred to high-risk areas in COVID-19 facilities had higher burnout scores than those redeployed within their own work facilities (non-COVID-19 services) (Tan et al., 2020). The researchers' hypothesis for this study is that the global crisis caused by the COVID-19 pandemic has forced healthcare workers to confront this public health emergency under inadequate workplace conditions. Healthcare workers assigned to COVID-19 care settings experience fatigue and burnout while on the job. If this occurs, it may result in suboptimal healthcare services.

CONCLUSION

Burnout is common among healthcare workers, particularly those in COVID-19 care settings. This is evidenced by the results of this study, where the burnout score in the COVID-19 care setting yielded a mean value of 44.4 with a standard deviation of 2.26 (39.8–48.8), whereas the general care setting group had a mean value of 14.6 with a standard deviation of 22.5 (12.2–16.9). The primary factor causing burnout in both the COVID-19 service area and the general service area was work load ($P = 0.0001$); the heavier an individual's workload, the greater the likelihood of experiencing burnout.

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