International Journal of Research Publication and Reviews

The Effect *of Burnout* on Health Worker Performance: A Structural Equation Modeling (SEM) Analysis in Primary Health Care in Kendari City Southeast Sulawesi Province, Indonesia 2025

Rahman

Department of Public Health, Faculty of Public Health, Halu Oleo University

ABSTRACT

Background: The lack of health human resources (HR) and the high demands of services at Primary health care are strategic problems in the primary service system in Indonesia, including in Kendari City. The increased workload due to the imbalance in the composition of health workers has the potential to trigger burnout and have an impact on the performance of health workers. However, the empirical evidence regarding the relationship between the two still varies.

Objective: This study aims to analyze the effect of burnout on the performance of health workers in Kendari City Health Centers, Southeast Sulawesi Province in 2025.

Methods: The study used a cross-sectional quantitative design with a total of 236 respondents who were selected through *proportionate stratified random sampling technique*. Data analysis was conducted using the Partial Least Square–Structural Equation Modeling (PLS-SEM) approach to test the direct relationship between burnout and performance.

Results: The results showed that the burnout rate of health workers was in the low category, while the performance of health workers was in the high category and relatively homogeneous across all indicators. The hypothesis test showed that burnout did not have a significant effect on the performance of health workers (t = 1.936 < 1.96; p = 0.053) with a very small effect size value (f^2 = 0.013). These findings indicate that despite the pressure and workload, health workers are still able to maintain optimal performance, allegedly due to professionalism, work commitment, and the support of the work system at the Health Center.

Conclusion: There is no effect *of burnout* on the performance of health workers, meaning that *burnout* is not the main determinant of the performance of health workers at the Kendari City Health Center. Therefore, efforts to improve performance should be focused on strengthening work resources, optimizing organizational systems, and promotive interventions that maintain the motivation and involvement of health workers.

Introduction

The national health service system places the Public Health Center (Primary health care) as the spearhead of primary services. Primary health care play a strategic role in providing comprehensive, affordable, and sustainable basic health services to the community [1]. However, in carrying out its vital functions, the Primary health care faces various challenges, especially related to the limited health human resources.

The phenomenon of a shortage of health workers does not only occur at the local level, but is a global issue that has long been a concern.At the global level, WHO projects a deficit of up to around 10 million health workers by 2030, with the greatest burden experienced by low- and middle-income countries [2]. This condition is further exacerbated by the unequal distribution of health workers, where only about a quarter of the world's total health workers are in low- and middle-income countries [3,4,5].

The phenomenon of inequality in health workers is also very obvious in Indonesia, especially in the distribution of doctors at the primary service level. Based on data from the Health Human Resources Information System (SISDMK), there are still 3.99% of health centers that do not have doctors [6]. This gap is also found in provinces such as Southeast Sulawesi, which is recorded to still have a number of health centers without doctors [7]. This condition illustrates a serious challenge in the equitable distribution of health human resources in Indonesia.

Likewise what happened in Southeast Sulawesi, out of the 307 existing health centers, there are still 166 or 54.25% of health centers that have not met the complete composition of health workers according to the provisions contained in the Minister of Health Regulation number 43 of 2019 where each health center ideally has 9 types of health workers including doctors, dentists, nurses, midwives, health workers, environmental sanitation, laboratory analysts, nutrition and pharmaceutical personnel [8].

Likewise what happened in Kendari City, there are still vacancies for several types of health workers in a number of health centers, such as dentists at the Wua-Wua Health Center, environmental health and medical laboratories at the Mokoau Health Center as well as medical technicians at the Benu-Benua, Puuwatu, Perumnas and Mokoau Health Center [9].

The limited number and type of health workers at the Health Center have led to an increase in workload for available officers. This condition has the potential to cause work fatigue because health workers have to handle tasks that exceed their ideal capacity. Research shows that human resource shortages and high job demands are directly related to an increased risk of burnout in primary health services [4; 10; 11].

The condition of work fatigue at the Health Center will have an impact on performance. As happened to the Primary health care in Kendari City. Profile data of the Kendari City Health Office (2024) shows that only a small percentage of health worker performance indicators are approaching or reaching the national target of 80%. Services such as pregnant women's health, childbirth, newborns, toddlers, TB, diabetes, and school-age health are in the range of 75–80%. However, several other services are still lagging behind, especially the health of productive age, the elderly, hypertension, and HIV, whose performance achievement is below 70%. In addition, most of the quality indicators of basic services have not reached the minimum standards. This condition confirms that there is a considerable performance gap and shows that the optimization of services at the Kendari City Health Center still faces significant challenges [9]

The discrepancy between the national target and the realization of the performance of various health center services in Kendari City shows that there is a considerable workload on health workers. The condition of human resource shortages, high service demands, and pressure to achieve indicators is very likely to trigger the emergence of burnout. Therefore, examining the effect of burnout on the performance of healthcare workers becomes relevant, as work burnout can be an important factor that explains why service quality and productivity have not reached the expected standards.

Method

This type of research uses a quantitative approach with a cross-sectional design, where data collection is carried out at a single point in time to describe the relationship between variables simultaneously. All data obtained were analyzed using inferential statistical techniques, with the Partial Least Square–Structural Equation Modeling (PLS-SEM) method as the main tool to test the direct influence model.

The number of respondents in this study was 236 respondents, which were selected through the proportionate stratified random sampling technique. This technique is used so that the samples taken can represent all categories of health workers working in health centers. The sample size was determined using the Slovin formula, with **a 95%** confidence level and a margin of error of **5%,** so that the sample size is considered adequate to represent the population representatively.

RESULTS AND DISCUSSION

Table 1. Distribution of respondent characteristics at the Kendari City Health Center, 2025

Characteristic	Quantity (n)	Percent (%)
Gender		
- Man	19	7,6
- Woman	218	92,4
Total	236	100
Age		
- 20-24	3	1,3
- 25-29	38	16,1
- 30-34	69	29,2
- 35-39	57	24,2
- >40	69	29,2
Total	236	100
Marital status		
- Marry	170	72
- Unmarried	57	24,2
- Divorce life	6	2,5

Characteristic	Quantity (n)	Percent (%)
- Divorce	3	1,3
Total	236	100
Final education		
- D3	83	35
- D4/S1	93	39,4
- Profession	45	19,1
- S2	15	
Total	236	6,4
Work status		
- PNS	111	47
- P3K	125	53
Total	236	100
Length of work		
- < 1 year	6	2,5
- 1-5 years	96	40,7
- 6-10 years	35	14,8
- >10 years	99	41,9
Total	236	100
Treatment class health center		
- Hospitalization	70	29,7
- Non-inpatient	166	70,3
Total		
	236	100

Source: Primary Data, processed 2025

Based on Table 1, the composition of health workers in health centers is dominated by women, which is 92.4%, while men are only 7.6%. This dominance is in line with the characteristics of primary services which are filled by many professions such as nurses, midwives, nutritionists, and public health workers.

The age distribution shows that the majority of respondents are in the productive age range. The 30–34 years and >40 years old age groups accounted for 29.2% of respondents each, followed by the 35–39 year old group at 24.2%. The age group of 20-24 years is the least (1.3%). These findings indicate that most healthcare workers have adequate professional maturity and work experience.

In terms of marital status, most health workers are married (72%), while 24.2% are unmarried. Only a small percentage have the status of a living divorce (2.5%) and a dead divorce (1.3%). This condition illustrates that the majority of respondents have family responsibilities, which can have implications for the burden of roles and work adjustment patterns.

Judging from the level of education, the majority of respondents were D4/S1 (39.4%) and D3 (35%) graduates, while professional and S2 graduates were 19.1% and 6.4%, respectively. This composition reflects that most health workers have met the minimum competency standards for Primary health care services.

Based on the length of service, respondents with more than 10 years of experience (41.9%) and 1–5 years (40.7%) were the largest group, showing the dominance of health workers with considerable experience in the facility.

From the classification of workplaces, most of the respondents came from non-inpatient health centers (70.3%), while only 29.7% worked in inpatient health centers, indicating that the majority of health workers were assigned to units with more basic service coverage.

Table 2. Descriptive statistics *of burnout*

Name	Mean	Median	Min	Max	Standard deviation
B1	2.600	3.000	1.000	5.000	1.157
B2	2.562	2.000	1.000	5.000	1.220
B3	2.209	2.000	1.000	5.000	1.176
B4	1.911	2.000	1.000	5.000	1.151
B5	1.706	1.000	1.000	5.000	1.073
B6	1.681	1.000	1.000	5.000	1.078
B7	1.949	2.000	1.000	5.000	1.121
B8	1.923	2.000	1.000	5.000	1.097
B9	1.860	1.000	1.000	5.000	1.096

Source: Data processed -Pls.4 (2025)

Table 2 shows that all the mean values are in the low range (1.68 – 2.60). This shows that respondents' burnout rates tend to be low, although there are certain indicators that lead to moderate levels.

The highest mean was found in the B1 indicator with a mean value of 2,600 indicating that respondents began to feel a tendency to be emotionally or mentally exhausted at work, a median value of 3 means that some respondents have felt moderate level of fatigue. Meanwhile, large variation (SD >1) means that some respondents experience *burnout* more severely compared to other groups. Meanwhile, the lowest mean value is in the B5 indicator with a mean value of 1,706 which means that this indicator includes a very low level of burnout, while Median 1 shows that most respondents do not feel extreme fatigue or cynicism**.**

Table 3. Descriptive statistics of Health Worker Performance

Indicators	Mean	Median	Min	Max	Standard deviation
K1	3.974	4.000	1.000	5.000	0.845
K2	3.991	4.000	1.000	5.000	0.855
K3	3.923	4.000	1.000	5.000	0.886
K4	4.243	4.000	1.000	5.000	0.770
K5	4.319	4.000	1.000	5.000	0.735
K6	4.264	4.000	1.000	5.000	0.714
K7	4.140	4.000	1.000	5.000	0.756
K8	4.021	4.000	1.000	5.000	0.791
K9	4.094	4.000	1.000	5.000	0.793
K10	4.068	4.000	1.000	5.000	0.785
K11	3.940	4.000	1.000	5.000	0.843
K12	4.021	4.000	1.000	5.000	0.801
K13	4.157	4.000	1.000	5.000	0.753
K14	4.336	4.000	1.000	5.000	0.800
K15	4.234	4.000	1.000	5.000	0.783
K16	4.264	4.000	1.000	5.000	0.782
K17	4.277	4.000	1.000	5.000	0.812
K18	4.251	4.000	1.000	5.000	0.783

Indicators	Mean	Median	Min	Max	Standard deviation
K19	4.089	4.000	1.000	5.000	0.780
K20	4.106	4.000	1.000	5.000	0.784
K21	3.966	4.000	1.000	5.000	0.865
K22	4.268	4.000	1.000	5.000	0.761
K23	4.226	4.000	1.000	5.000	0.764
K24	4.268	4.000	1.000	5.000	0.772
K25	4.328	4.000	1.000	5.000	0.793
K26	4.340	4.000	1.000	5.000	0.790
K27	4.362	4.000	1.000	5.000	0.783
K28	4.217	4.000	1.000	5.000	0.744
K29	4.196	4.000	1.000	5.000	0.769
K30	4.179	4.000	1.000	5.000	0.757
K31	4.272	4.000	1.000	5.000	0.757
K32	4.179	4.000	1.000	5.000	0.757
K33	4.277	4.000	1.000	5.000	0.764

Source: Data processed -Pls.4 (2025)

Table 3 In general, all performance indicators show a high mean value (3.9–4.36) and a consistent median at number 4, which indicates that the performance of health workers is at a good to very good level. The relatively low distribution of scores (SD 0.71–0.89) showed that the respondents' answers were homogeneous, so the perception of performance was relatively uniform.

The highest mean value above 4.30 is found in indicators K14, K25, K26 and K27 where these indicators show that respondents master their tasks well, consistently work high, discipline and optimal service quality. This means that health workers already have a strong core performance.

Meanwhile, the lowest values in the K1, K3, K11 and K21 indicators with a mean value of around 3.92-3.97 which indicates areas that need improvement, especially in the slightly lower (although still good) parts are in administrative order, work consistency, and complex case solving.

Sec. 2. **Statistical Analysis with SmartPLS approach**

Statistical analysis at the hypothesis testing stage using SmartPLS software was carried out to comprehensively evaluate the causal relationships between variables in the structural model.
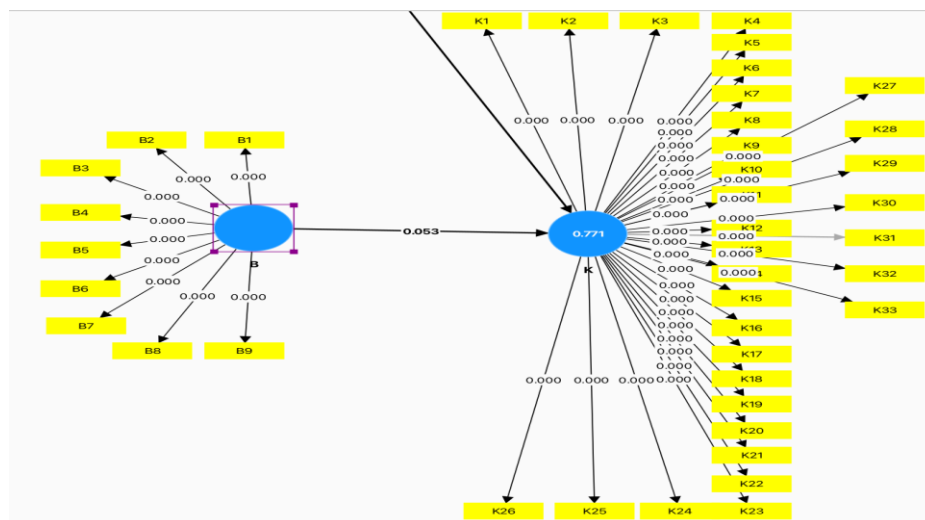

Figure 1. Hypothesis test result model, SMART PLS 4, 2025

Table 4. Results of Direct Effect Hypothesis Testing

Path Coeficient	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	ρ Values
B -> K	-0.060	-0.062	0.031	1.936	0.053

Source: Data processed -Pls.4 (2025)

Based on the results of the hypothesis test, it shows that *burnout* (B) of work fatigue obtained a statistical t-value of 1.936 < 1.96 or a p value of 0.053 >0.053, then H1 is rejected which means burnout or work fatigue has no effect on the performance of health workers. The results of *the effect size* test also showed an f² value of 0.013 for the effect of *burnout* on performance, indicating that the presence of burnout variables only contributed very small to changes in the performance of health workers. In other words, when burnout is included or excluded from the model, its effect on performance variants does not change much. This indicates that work fatigue is not the dominant factor that determines the high or low performance of health workers**.**

Some of the reasons that may occur when burnout does not have a significant effect on performance, include health workers have an internal drive to continue to provide the best service even though they are tired or saturated. This is in line with the view of Maslach and Leiter (2016) that individuals with a high level of professional commitment can withstand the negative effects of burnout on work performance [10]. In Primary health care, a teamwork system and clear division of tasks allow health workers to support each other, so that the effects of fatigue can be minimized on performance output [12]. Burnout will only have a real impact on performance decline if it has occurred continuously and caused high disengagement [13]. If the level of burnout in respondents is still relatively low, then the effect on performance has not been seen significantly.

The results of this study are inline with the findings of research by Utami and Nisa (2021) which found that burnout does not have a significant effect on the performance of nurses at Sleman Hospital, due to the encouragement of professionalism and high moral responsibility towards patients [14]. Research by Sari et al. (2020) also showed similar results that burnout does not necessarily reduce performance if individuals have a good level of *work engagement* and motivation [15].

However, these results are different from the research of Suwandi and Prabowo (2019) which found a significant negative influence between burnout and nurse performance in private hospitals in Surabaya [16]. The difference in results can be caused by variations in the work environment, workload, and reward system implemented in each health institution.

Theoretically, this result can be explained using the Job Demands–Resources (JD-R) Model proposed by Bakker and Demerouti (2017). This model states that the negative effects of *job demands* (work demands such as workload and emotional stress) on performance will arise if they are not balanced by *job resources* (work resources such as social support, work autonomy, or rewards). In the context of this study, it is likely that the work resources owned by health workers are quite adequate, so that even though they experience burnout, the impact on performance can be suppressed [17].

From the aspect of policy and human resource management of the Primary health care, this result has several important implications, especially in terms of coaching that not only reduces burnout but focuses more on increasing positive driving factors such as work engagement, recognition and organizational support, preventive psychological interventions such as *employee assistance programs (EAP), mindfulness training*, or *peer support groups* It needs to be focused not only on overcoming burnout, but also on strengthening work commitments and emotional engagement and performance monitoring must be accompanied by a humanistic approach — that is, understanding that performance does not always decline due to work stress, but can be maintained through a supportive work environment.

Conclusion

The results of the study showed that the burnout rate in health workers in health centers was in the low category, although several indicators pointed to a moderate level, especially those related to emotional fatigue. On the other hand, the performance of health workers is in the high category and relatively evenly distributed across all indicators. Hypothesis tests using PLS-SEM showed that burnout or work fatigue did not have a significant effect on the performance of health workers (t = 1.936 < 1.96; p = 0.053). A very small effect size value (f² = 0.013) confirms that work fatigue is not the main determinant that affects performance variation. These findings indicate that health workers are still able to maintain good performance standards despite experiencing certain pressures or work demands, allegedly due to factors of professionalism, service commitment, a supportive work system, or strong intrinsic motivation. Therefore, Primary health care need to ensure continuous support through stress management, proportionate workload management, and access to counseling services. The focus on improving performance should be directed to aspects that have proven to be more decisive, such as strengthening professional capacity, optimizing the work system, improving the quality of supervision, and strengthening organizational support.

Reference

1. Ministry of Health of the Republic of Indonesia. *Indonesia Health Profile 2021*. Jakarta: Ministry of Health of the Republic of Indonesia; 2021.

2. World Health Organization (WHO), 2020. *Global Health Workforce Statistics: Projections to 2030*. Geneva: World Health Organization.

3. Liu, J.X., Goryakin, Y., Maeda, A., Bruckner, T. & Scheffler, R., 2017. *Global health workforce labor market projections for 2030*. Human Resources for Health, 15(1), p.11.

4. World Health Organization (WHO), 2019. *Global Health Observatory (GHO) data: Health workforce distribution*. Geneva: World Health Organization.

5. Scheffler RM, Liu JX, Kinfu Y, Dal Poz MR. Forecasting the global shortage of physicians: An economic- and needs-based approach. *Bull World Health Organ*. 2008; 86(7):516–23B.

6. Ministry of Health, 2024. *Ministry of Health Launches Primary Service Integration to Strengthen the Fulfillment and Competency of Health Human Resources in Health Facilities*. [online]

7. Ministry of Health, 2023. *Performance Report of Dit. Provision of Health Workers*. Jakarta: Ministry of Health.

8. Southeast Sulawesi Provincial Health Office. *Health Profile of Southeast Sulawesi Province in 2023*. Kendari: South Sulawesi Health Office; 2023.

9. Kendari City Health Office. *Health Profile of Kendari City in 2024*. Kendari: Kendari City Health Office; 2024

10. Maslach C, Leiter MP. *Burnout: A brief history and how to prevent it*. New York: Psychology Press; 2016.

11. Dewa, C.S., Loong, D., Bonato, S. and Joosen, M.C. (2017) 'The relationship between physician burnout and quality of healthcare in terms of safety and acceptability: a systematic review', *BMJ Open*, 7(6), p. e015141.

12. Schaufeli WB, Bakker AB. Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *J Organ Behav*. 2004; 25(3):293–315.

13. Leiter MP, Maslach C. Burnout and engagement: Contributions to a new vision. In: Leiter MP, Bakker AB, Maslach C, editors. *Burnout at Work: A Psychological Perspective*. New York: Psychology Press; 2017. pp. 15–32.

14. Utami RD, Nisa K. Burnout and its effect on the performance of nurses at Sleman Hospital. *J Indonesian Health Management*. 2021; 9(2):101–9.

15. Sari NP, Widodo A, Lestari R. Burnout and nurse performance: The role of work engagement and work motivation. *J Indonesian Nursing*. 2020; 23(1):45–54.

16. Suwandi A, Prabowo A. The effect of burnout on the performance of nurses in Surabaya private hospitals. *J Apl Manaj*. 2019; 17(3):456–64.

17. Bakker AB, Demerouti E. Job Demands–Resources theory: Taking stock and looking forward. *J Occup Health Psychol*. 2017; 22(3):273–85.