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EFFECTIVENESS OF BURNOUT PREVENTION EDUCATION ON WORK PSYCHOSOCIAL FACTORS AND BURNOUT

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ABSTRACT

Burnout is the impact of chronic work stress that can reduce employee health, well-being, and performance. Employees at the Health Quarantine Center (BKK) face high work demands and are at risk of burnout. Burnout prevention education is expected to improve work psychosocial factors and reduce burnout. Objective to analyze the effectiveness of burnout prevention education on perceptions of workload, role conflict, perceptions of organizational support, and burnout among employees at the Class I Banten Health Quarantine Center. A quantitative study with a pre-experimental one-group pretest–posttest design involving 39 employees selected using total sampling. Data were collected using the Quantitative Workload Inventory (QWI), Role Conflict Scale (RCS), Survey of Perceived Organizational Support (SPOS), and Oldenburg Burnout Inventory (OLBI) which have been proven to be valid and reliable from previous studies. The instrument reliability showed Cronbach's alpha values of 0.90–0.91 for the QWI, 0.912 for the RCS, 0.92 and 0.84 for the SPOS, and 0.85 and 0.81 for the OLBI dimensions. Analysis was performed using the Wilcoxon Signed Rank Test with a significance level of 5% and effect size (r). Education provided significant changes in all variables ($p < 0.001$). Perceptions of workload and role conflict decreased, perceptions of organizational support increased, and burnout decreased after the intervention. All variables showed a large effect size ($r = 0.84–0.88$), indicating a strong practical impact. Burnout prevention education effectively improved psychosocial factors at work and reduced burnout among employees of the Class I Banten Health Quarantine Center. Educational programs can be considered as part of an occupational health promotion strategy to support employee well-being and improve service quality.

Keywords: burnout; education; organizational support; psychosocial factors at work; role conflict; workload

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INTRODUCTION

Burnout is a syndrome resulting from chronic, persistent, and poorly managed work stress. The World Health Organization (WHO) classifies burnout as an occupational phenomenon in the International Classification of Diseases 11th Revision (ICD-11). The three characteristics of burnout are exhaustion, psychological avoidance of work (mental distance/disengagement), and decreased work productivity (World Health Organization [WHO], 2019). This condition is related to the work environment and impacts workers' physical and mental health, increasing absenteeism, decreasing productivity, increasing the risk of work errors, and ultimately reducing the quality of healthcare services.

Healthcare workers are one group of workers at high risk for burnout due to high workloads, emotional stress, and professional responsibilities. Various existing studies indicate that the prevalence of burnout among healthcare workers has reached 37.4%, with nurses reaching around 30%, and even exceeding 70% in high-stress healthcare units such as intensive care units (ICUs), emergency departments, and oncology units. This condition can lead to increased medical errors, low job satisfaction, high turnover intentions, and a decline in the quality of healthcare services (Woo et al., 2020).

In Indonesia, burnout is a serious problem in the healthcare sector. Research by Juanamasta (2024) found a prevalence of burnout among healthcare workers ranging from 22% to 82%, depending on the profession and workplace. This study showed that 50% of healthcare workers experienced work stress, including 7.3% who experienced severe fatigue. These findings are consistent with research by Pinarsih (2023), which found a

burnout prevalence of 68.3%, and research by Syafira and Aprina (2024) that found 37.5% of healthcare workers had experienced burnout. Burnout remains a challenge due to its high prevalence, requiring healthcare workers to maintain the value and quality of healthcare services.

Theoretically, burnout can be explained by Job Demands–Resources (JD-R) Theory, which posits that burnout occurs due to an imbalance between high job demands and available job resources (Demerouti & Bakker, 2011). Based on JD-R theory, this study aims to examine the role of three psychosocial work factors: perceived workload, perceived role conflict, and perceived organizational support, in the development of burnout. Perceived high workload and role conflict can increase the risk of burnout (Jasiński et al., 2021; Danauskė et al., 2023), while organizational support acts as a protective factor for improving employee mental health (Eisenberger et al., 1986). The Health Quarantine Center (BKK) is a technical implementation unit of the Ministry of Health, tasked with implementing health quarantine at national entry points. It aims to prevent and control disease transmission through monitoring of means of transportation, travelers (people), cargo, and the environment through prevention, detection (epidemiological surveillance), and response to public emergencies of global concern (KKMMD). This type of work requires high levels of preparedness, quick and responsive decisions, cross-program and sector coordination, and 24-hour service at ports, airports, and national land borders (PLDBN) throughout Indonesia. This demanding task poses a risk factor for psychosocial factors at work.

Based on the 2025 Annual Report of the Banten Class I Health Quarantine Center, 113 employees were responsible for overseeing 71 ports, consisting of 2 public ports, 3 ferry ports, 3 fish landing sites, and 63 private terminals (TUKS). Throughout 2025, 56,748 incoming ships, 56,930 departing ships (including 943 high-risk vessels), 1,184,253 arriving crew members, 1,182,927 departing crew members, 15,734,727 passengers, and 9,785 ship cargoes were monitored. The high volume of health quarantine services provided demonstrates the high work demands on employees, which increases the risk of burnout. Numerous studies have examined the relationship between psychosocial factors at work and burnout, but most previous studies have used cross-sectional designs, which yield relationships between variables. In this study, the researcher aimed to conduct an intervention study to determine whether the effectiveness of education could simultaneously improve workload perceptions, role conflict perceptions, organizational support perceptions, and burnout incidence among employees at the Health Quarantine Center, a location where intervention research is still very limited. Therefore, the researcher hoped to find novel research by evaluating the effectiveness of burnout prevention education on workload perceptions, role conflict perceptions, and organizational support perceptions among employees at the Class I Banten Health Quarantine Center. This study aimed to analyze the effectiveness of burnout prevention education on workload perceptions, role conflict perceptions, organizational support perceptions, and burnout among employees at the Class I Banten Health Quarantine Center.

METHOD

This research employed a quantitative approach with a pre-experimental design using a one-group pretest–posttest design to evaluate the effectiveness of burnout prevention education on psychosocial factors at work and burnout among employees at the Banten Class I Health Quarantine Center. The study was conducted in July 2026 at the Banten Class I Health Quarantine Center. The study population consisted of 39 employees who participated in the burnout prevention education program. The sampling technique used total sampling, with the entire population being the study respondents. Inclusion criteria included employees who were willing to participate in the entire study, attended the educational program, and completed the pretest and posttest questionnaires. The intervention consisted of burnout prevention education modified from occupational health promotion theory and Job Demands–Resources (JD-R) Theory. The education program was conducted in one session lasting approximately 120 minutes, using interactive lectures, discussions, questions and answers, booklets, and presentation media. The material covered burnout, psychosocial factors at work, the impact of burnout, prevention strategies, stress management, relaxation techniques, strengthening adaptive coping, and organizational support in maintaining employee mental health. Measurements were conducted twice: before the intervention (pretest) and after the intervention (posttest).

Data collection used the Quantitative Workload Inventory (QWI) to measure perceived workload (5 items), the Role Conflict Scale (RCS) to measure role conflict (8 items), the Survey of Perceived Organizational Support (SPOS) to measure perceived organizational support (8 items), and the Oldenburg Burnout Inventory (OLBI) to measure burnout (16 items). All instruments have demonstrated good validity and

reliability. All instruments use a five-point Likert scale. Negative items on the OLBI were reverse scored before calculating the total score.

The choice of instruments was supported by psychometric data from earlier studies. The Quantitative Workload Inventory (QWI) has strong internal reliability with a Cronbach's alpha of 0.90-0.91 (Jasiński, 2021), and the Role Conflict Scale (RCS) has a Cronbach's alpha of 0.912 (Kristina, 2020). The 8-item version of the Survey of Perceived Organizational Support (SPOS) had a Cronbach's alpha of 0.92 for the Sufficiency of Positive Aspects dimension and 0.84 for Minimality of Negative Aspects (Odagami, 2024). The Oldenburg Burnout Inventory (OLBI) showed strong reliability, with Cronbach's alpha values of 0.85 for tiredness and 0.81 for disengagement (Demerouti & Bakker, 2011) and 0.87 and 0.82, respectively, in the study by Xu et al. (2022). According to reports, the OLBI's Indonesian adaptation has strong validity and reliability (Moelyo, 2022; Pratama et al., 2025). The findings of psychometric tests from earlier development and adaptation studies were used as validity evidence, and all instruments were judged to have sufficient reliability and to be appropriate for use in this study.

Data analysis was conducted using statistical software. Descriptive analysis was used to describe respondent characteristics and the distribution of each variable. Normality was tested using the Shapiro–Wilk test because the number of respondents was less than 50. Differences in pretest and posttest scores were analyzed using the Wilcoxon Signed Rank Test with a significance level of $\alpha = 0.05$. The results of the analysis are presented as median, interquartile range (IQR), Z-score, p-value, effect size (r), and percentage change in scores to illustrate the magnitude of change after the intervention. This study has obtained ethical approval from the Research Ethics Committee of Faletehan University under the license number 005859/UNIVERSITAS FALETEHAN/2026. All respondents received an explanation of the research objectives, benefits, procedures, and rights prior to the study. Participation was voluntary, and all respondents signed a written informed consent form. Confidentiality of respondents' identities was maintained through the use of a respondent code, and all data was used solely for research purposes.

RESULT

Employee Characteristics

A total of 39 employees of the Banten Class I Health Quarantine Center participated in the entire research process, from the pretest to education and posttest, so all respondents were analyzed. The analysis involved four variables: perceived workload, perceived role conflict, perceived organizational support, and burnout.

Table 1.
Respondent Characteristics (n=39)

Characteristics	f	%
Gender		
Male	20	51,3
Female	19	48,7
Age Group (Years)		
< 30 Years	8	20,5
30 – 39 Years	11	28,2
40 – 49 Years	12	30,8
≥ 50 Tahun	8	20,5
Education		
High School/Equivalent	8	20,5
Diploma (D3/D4)	6	15,4
Bachelor’s Degree (S1)	19	48,7
Master’s Degree (S2)	6	15,4
Work Period		
< 5 Years	15	38,5
5 – 10 Years	4	10,3
11 – 20 Years	14	35,9
≥ 20 Years	6	15,4
Marital Status		
Single	7	17,9
Married	32	82,1

Table 1, respondents were predominantly male (51.3%), while females accounted for 48.7%. Most respondents were in the 40–49 age group (30.8%), followed by the 30–39 age group (28.2%). Based on

education level, the majority of respondents had a bachelor's degree (S1) (48.7%), while based on length of service, most had less than 5 years of service (38.5%), followed by 11–20 years of service (35.9%). Most respondents were married (82.1%).

Descriptive Analysis

Table 2.
Distribution of Pretest and Posttest Scores (n=39)

Variable	Pretest Mean±SD	Median (IQR)	Posttest Mean±SD	Median (IQR)
Perceived Workload	18,59 ± 3,37	19 (5)	14,97 ± 3,50	15 (4)
Perceived Role Conflict	23,67 ± 6,57	24 (12)	18,67 ± 6,30	19 (11)
Perceived Organizational Support	26,95 ± 7,34	28 (10)	32,64 ± 6,38	34 (11)
Burnout	53,85 ± 9,05	55 (12)	49,95 ± 8,56	51 (12)

Table 2, all study variables showed changes in scores after the burnout prevention education program. The mean and median scores for perceived workload decreased from 18.59 ± 3.37 to 14.97 ± 3.50, with the median changing from 19 (IQR = 5) to 15 (IQR = 4). Similarly, perceived role conflict decreased from 23.67 ± 6.57 to 18.67 ± 6.30, with the median changing from 24 (IQR = 12) to 19 (IQR = 11). Conversely, perceived organizational support increased after the intervention, as indicated by a mean increase from 26.95 ± 7.34 to 32.64 ± 6.38, and a median increase from 28 (IQR = 10) to 34 (IQR = 11). Meanwhile, burnout scores showed a downward trend, with the mean changing from 53.85 ± 9.05 to 49.95 ± 8.56, and the median from 55 (IQR = 12) to 51 (IQR = 12).

Normality Test Results

The normality test was conducted using the Shapiro–Wilk test because the number of respondents was less than 50.

Table 3.
Normality Test Results

Variable	p-value	Description
Perceived Workload Pretest	0,398	Normal
Perceived Workload Posttest	0,731	Normal
Perceived Role Conflict Pretest	0,090	Normal
Perceived Role Conflict Posttest	0,079	Normal
Perceived Organizational Support Pretest	0,353	Normal
Perceived Organizational Support Posttest	0,005	Abnormal
Burnout Pretest	0,073	Normal
Burnout Posttest	0,157	Normal

Table 3, most variables have a normal distribution ($p > 0.05$), but the perceived organizational support score on the posttest is not normally distributed ($p = 0.005$). Therefore, analysis of differences in pretest and posttest scores was carried out using the Wilcoxon Signed Rank Test, which is suitable for paired data with non-normal distribution.

Wilcoxon Signed Rank Test Results

Table 4.
Effectiveness of Burnout Prevention Education

Variable	Median Pre (IQR)	Median Post (IQR)	Z	Exact p	Effect Size
Perceived Workload	19 (5)	15 (4)	-5,521	<0,001	0,88
Perceived Role Conflict	24 (12)	19 (11)	-5,476	<0,001	0,88
Perceived Organizational Support	28 (10)	34 (11)	-5,265	<0,001	0,84
Burnout	55 (12)	51 (12)	-5,401	<0,001	0,87

Table 4, the results of the Wilcoxon Signed Rank Test indicate that burnout prevention education resulted in significant changes in all study variables ($p < 0.001$). After the intervention, the median scores for perceived workload, role conflict, and burnout decreased, while perceived organizational support increased. All variables had a large effect size ($r = 0.84–0.88$), indicating that education had a strong practical impact on improving psychosocial work factors and reducing burnout among employees at the Class I Banten Health Quarantine Center.

Percentage Results of Score Change After Education

Table 5.
Percentage Change in Score After Education (n=39)

Variable	Mean Pretest	Mean Posttest	Change (%)	Direction of Change
Perceived Workload	18,59	14,97	-19,47	Decrease
Perceived Role Conflict	23,67	18,67	-21,12	Decrease
Perceived Organizational Support	29,95	32,64	+21,11	Increase
Burnout	53,85	49,95	-7,24	Decrease

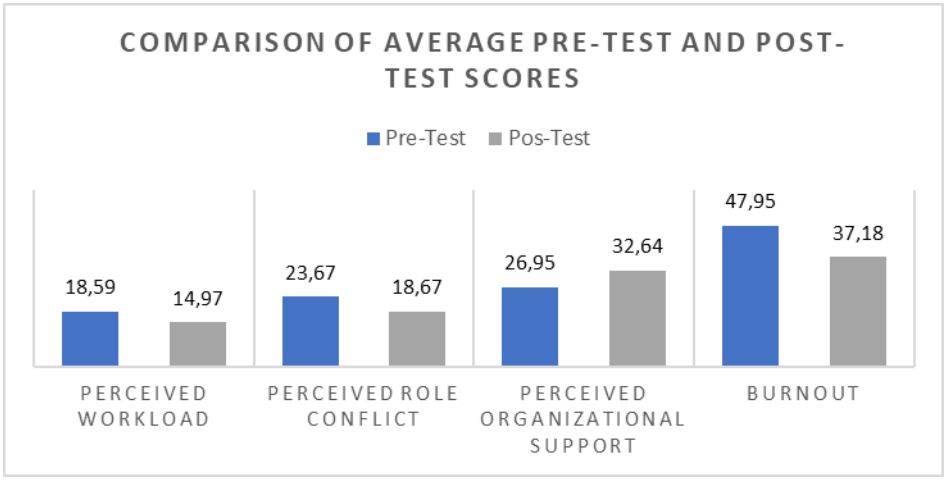

Figure 1. Change in average respondent scores before and after burnout prevention education

The diagram shows a decrease in the median scores for perceived workload, role conflict, and burnout after education, while perceived organizational support increased.

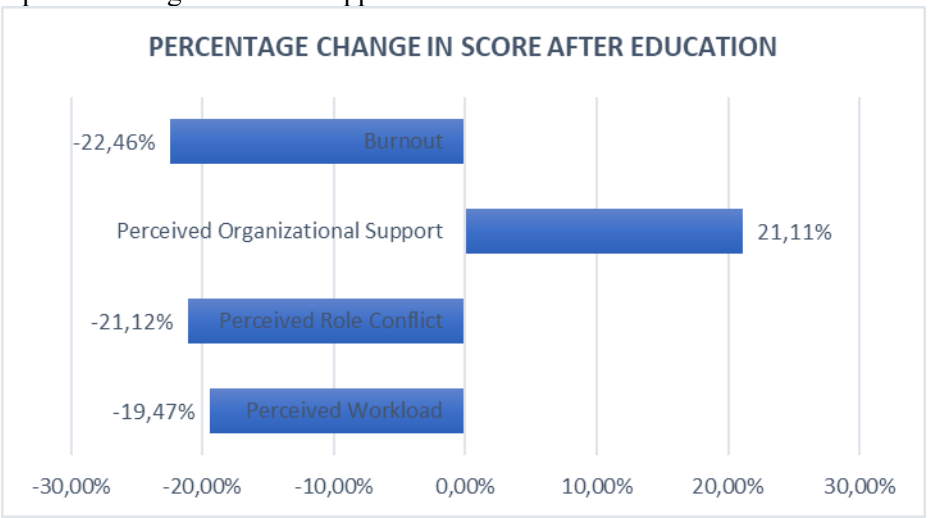

Figure 2. Percentage change in the average score for each variable after implementing burnout prevention education

Based on Table 5 and Figure 1, all variables showed positive changes after the burnout prevention education was provided. The largest decrease occurred in perceived role conflict at 21.12%, followed by perceived workload at 19.47%, and burnout at 7.24%. Conversely, perceived organizational support increased by 21.11%. Descriptively, these results indicate that education not only contributed to reducing negative psychosocial factors but also increased employee perceptions of organizational support.

DISCUSSION

Effectiveness of Education on Workload Perception

The results of this study indicate that burnout prevention education effectively reduced the workload perception of employees at the Banten Class I Health Quarantine Center. The Wilcoxon Signed Rank Test showed a decrease in the median workload perception score from 19 (IQR = 5) in the pretest to 15 (IQR = 4) in the posttest, with a Z-value of -5.521, $p < 0.001$, and an effect size (r) of 0.88. This large effect size

indicates that education not only produced a statistically significant difference but also had a strong influence on employees' perceptions of job demands. The decrease in workload perception is illustrated by the Job Demands–Resources (JD-R) Theory, which states that burnout occurs when job demands exceed the employee's job resources (Demerouti & Bakker, 2011). In this study, education serves as a personal resource, increasing employee knowledge, awareness, coping skills, and self-efficacy in dealing with work pressure. Ultimately, employees are able to balance, adapt, and be more realistic in facing existing work demands. The changes that have occurred reflect changes in employee perception rather than changes in objective workload.

These results align with research by Jasiński et al. (2021), which found that perceived workload has a positive relationship with burnout, where high work demands are associated with increased emotional exhaustion and decreased work engagement in healthcare workers. Another study by Doğan et al. (2024) found that perceived workload is a key predictor of burnout, while organizational support moderates the negative impact of workload on mental health in healthcare workers. Furthermore, a systematic review and meta-analysis by Kiratipaisarl et al. (2024) found that psychoeducation-based interventions, stress management training, and strengthening coping skills consistently reduce burnout and improve healthcare workers' ability to cope with work demands. The consistency of the results of this study with various previous studies strengthens that education is an effective approach to increasing individual capacity in dealing with psychosocial factors at work.

The scope of work at the Banten Class I Health Quarantine Center also supports the findings of this study. According to the 2025 Annual Report of the Banten Class I Health Quarantine Center, 113 employees conducted 24-hour surveillance at 71 ports. Throughout 2025, surveillance covered 56,748 incoming ships, 56,930 departing ships, over 1.18 million arriving crew members, 1.18 million departing crew members, and 15.7 million passengers. This high volume of services demonstrates the high work demands experienced by employees. The decrease in perceived workload was due to increased awareness, management, and response to job demands following education, although the objective workload remained high. The results of this study have significant implications for occupational health efforts at the Health Quarantine Center. The importance of health promotion through burnout prevention education activities can improve employee mental and psychological health when facing high work demands. Educational activities that have been carried out need to be supported by the organization, through intensive burnout awareness, analysis of employee workload, employee motivation, providing awards and adequate human resource needs.

Effectiveness of Education on Perceptions of Role Conflict

This study demonstrates that burnout prevention education effectively reduced perceptions of role conflict among employees at the Banten Class I Health Quarantine Center. The Wilcoxon Signed Rank Test results showed a median role conflict score decreasing from 24 (IQR = 12) in the pretest to 19 (IQR = 11) in the posttest, with a Z-value of -5.476, $p < 0.001$, and an effect size (r) of 0.88. The large effect size indicates that education not only produced statistically significant changes but also had a strong effect on reducing perceptions of role conflict. These results align with Job Demands–Resources (JD-R) Theory, where role conflict is one of the job demands. Employees who receive unclear and conflicting orders or work demands can develop role conflict, leading to psychological exhaustion in meeting these demands. If this condition persists and is not balanced by existing job resources (clear tasks, effective communication, organizational support, and coping skills), burnout will occur (Demerouti & Bakker, 2011). In this study, education plays a role as a personal resource, increasing knowledge levels, stress management skills, effective communication skills, prioritizing work, and the courage to say no when work demands are beyond their ability to handle, as well as adapting to them.

These results align with those of Danauskė et al. (2023), who found that role conflict is positively related to burnout in healthcare workers. The higher the role conflict, the higher the emotional exhaustion and lower the work engagement. Research by Doğan et al. (2024) showed that high job demands, including role conflict and work pressure, are the main determinants of burnout, while organizational support can mitigate the negative impact of job demands. Furthermore, Yılmaz (2024) found that role conflict influences the relationship between perceived organizational support and work engagement, making role conflict management a crucial factor in maintaining employee motivation and commitment. Kızılkaya's (2024) research also found that improving communication skills and conflict management in the workplace plays a role in reducing work stress through burnout. The consistency of this study's findings with previous research

confirms that role conflict management is a crucial component in burnout prevention efforts. This situation aligns with the characteristics of work at the Banten Class I Health Quarantine Center, which requires employees to simultaneously perform various functions, including vehicle inspection, traveler supervision, epidemiological surveillance, public health emergency response, and 24-hour cross-sector coordination. These demands have the potential to create role conflict, especially when employees must simultaneously perform multiple tasks. The education provided in this study helped employees improve their understanding of stress management, effective communication, work prioritization, and utilizing organizational support, thus reducing role conflict, even though objective work demands remained high.

The results of this study illustrate that providing burnout prevention education can be a promotional strategy for improving the mental health of Health Quarantine Center employees. This requires organizational support to optimize this, including developing clear job descriptions, analyzing workloads, dividing tasks among employees, providing clear instructions, and providing effective communication between employees and the organization. An approach that combines employee capacity building with organizational improvement will be far more effective in reducing role conflict.

Effectiveness of Education on Perceived Organizational Support

This study demonstrates that burnout prevention education effectively increased perceived organizational support among employees at the Banten Class I Health Quarantine Center. Results of the Wilcoxon Signed Rank Test showed a median score for perceived organizational support increasing from 28 (IQR = 10) in the pretest to 34 (IQR = 11) in the posttest, with a Z-value of -5.265, $p < 0.001$, and an effect size (r) of 0.84. This study's large effect size indicates that the education not only produced statistically significant changes but also provided strong benefits in improving employee perceptions of organizational support.

The increase in perceived organizational support in this study demonstrates that after employees participated in the education, they perceived the organization as more concerned with mental health, well-being, and burnout prevention. Therefore, the changes observed indicate an increased understanding of the organization's focus on occupational health after receiving the education. Education serves as a means to reinforce awareness that burnout prevention efforts are part of the organization's commitment to creating a healthy work environment. The results of this study align with the Organizational Support Theory (OST) proposed by Eisenberger et al. (1986) in Nabilah. (2023). This theory explains that perceived organizational support (POS) is employees' belief that the organization values their contributions and cares about their well-being. Employees who perceive high levels of organizational support generally demonstrate greater commitment to the organization, job satisfaction, motivation, and psychological well-being. These results align with Job Demands–Resources (JD-R) Theory, which positions organizational support as a job resource capable of mitigating the negative impacts of job demands, such as workload and role conflict, thereby reducing the risk of burnout (Demerouti & Bakker, 2011).

These results align with research by Doğan et al. (2024), which demonstrates that perceived organizational support acts as a protective factor, reducing the influence of workload on burnout in healthcare workers. A longitudinal study by Larsman et al. (2024) showed that a supportive organizational climate increases job satisfaction and contributes to burnout reduction. Research by Zhang et al. (2024) also found that organizational emotional support and supervisor support were negatively associated with burnout, while Zhou et al. (2024) explained that the effect of organizational support on burnout was mediated by psychological capital and work engagement. These findings, along with those of various other studies, support the belief that perceived organizational support is an important factor in maintaining the mental health of healthcare workers.

Unlike most previous studies that employ cross-sectional designs, this study employed a one-group pretest-posttest design, allowing for changes in perceived organizational support after an educational intervention. The results demonstrate that education not only increases knowledge about burnout but also strengthens employees' perceptions of organizational concern. Therefore, education has the potential to be a promotional strategy that can increase job resources by strengthening perceptions of organizational support.

At the Banten Class I Health Quarantine Center, these results are highly relevant for employees who provide 24-hour service with complex tasks, such as monitoring transportation, travelers, epidemiological surveillance, and responding to public health emergencies. This type of work requires strong organizational

support, with effective communication, supervision, resource provision, and attention to employee mental health. The education implemented in this study can be seen as a tangible manifestation of the organization's commitment to improving employee psychological well-being, thereby strengthening the perception that the organization values their contributions.

The results of this study suggest that burnout prevention education programs need to be integrated with ongoing organizational policies, such as strengthening two-way communication between leaders and employees, improving supervision, developing competencies, rewarding performance, and periodically evaluating psychosocial factors at work. Integrating individual and organizational interventions will strengthen job resources, making them more effective in preventing burnout and supporting the quality of health quarantine services.

Effectiveness of Education on Burnout

This study demonstrates that burnout prevention education effectively reduces burnout among employees at the Banten Class I Health Quarantine Center. The Wilcoxon Signed Rank Test results showed a median burnout score decreasing from 55 (IQR = 12) in the pretest to 51 (IQR = 12) in the posttest, with a Z-value of -5.401, $p < 0.001$, and an effect size (r) of 0.87. The large effect size indicates that education not only produced statistically significant changes but also had a strong effect on reducing burnout. These findings indicate that education is an effective promotive intervention for improving the psychological health of employees at the Health Quarantine Center.

The study's results align with the Job Demands–Resources (JD-R) Theory, which states that burnout occurs when job demands exceed the employee's resources (job resources and personal resources) (Demerouti & Bakker, 2011). In this study, education served as a personal resource, increasing knowledge, awareness, self-efficacy, the ability to recognize burnout symptoms, and skills in managing stress and implementing adaptive coping strategies. Furthermore, education also contributed to increased perceptions of organizational support, a job resource. Increasing these two resources helps employees cope with work demands more adaptively, thereby reducing the risk of burnout.

The results of this study confirmed a decrease in perceived workload and role conflict, as well as an increase in perceived organizational support after the intervention. These findings illustrate that the reduction in burnout is not a standalone change, but rather occurs in conjunction with improvements in psychosocial work factors that play a role in determinants of burnout. Therefore, education has a comprehensive effect, increasing individual capacity while strengthening perceptions of organizational resources.

The results of this study align with those of Kiratipaisarl et al. (2024), who, through a systematic review and meta-analysis, demonstrated that psychoeducation-based interventions, stress management training, mindfulness, and coping skills development effectively reduce burnout in healthcare workers. These findings align with those of West et al. (2023), who demonstrated that programs combining education, resilience training, and organizational support can reduce burnout while increasing work engagement. Furthermore, Doğan et al. (2024) demonstrated that high job demands increase the risk of burnout, while perceived organizational support acts as a protective factor (buffer), mitigating the negative impact of these demands. The similarity between these findings and previous research reinforces the belief that education is an effective strategy for preventing burnout, especially when supported by a conducive organizational environment.

These results align with those of Zhou et al. (2024) and Zhang et al. (2024), which demonstrated that organizational support improves psychological capital, work engagement, and the psychological well-being of healthcare workers, thus reducing burnout. These results reinforce that the increase in perceptions of organizational support found in this study may be one of the mechanisms contributing to the decrease in burnout after the implementation of education. At the Banten Class I Health Quarantine Center, the results of this study demonstrated a strong correlation. BKK employees work in a 24-hour service system with complex responsibilities, including monitoring transportation, travelers, goods, and the environment, epidemiological surveillance, and responding to public health emergencies. This type of work requires high levels of preparedness, quick decision-making, and cross-sector coordination, potentially increasing psychological stress. The educational activities provided help employees recognize burnout symptoms,

manage work stress, implement adaptive coping strategies, and utilize organizational support to more effectively face work demands.

The results of this study suggest that burnout prevention education is appropriate for inclusion as part of the occupational health promotion program at the Health Quarantine Center. However, its sustainable impact requires organizational support through proportional workload management, clear task allocation, strengthened supervision, provision of psychological support services, regular burnout screening, and the development of an organizational culture that supports employee well-being. Methods that integrate interventions at the individual and organizational levels will be more effective in maintaining a balance between job demands and job resources, thereby preventing burnout in a sustainable manner and supporting the quality of health quarantine services.

CONCLUSION

Burnout prevention education successfully restructured psychosocial factors at work and reduced burnout among employees at the Banten Class I Health Quarantine Center. Education significantly reduced perceived workload, decreased perceived role conflict, and decreased burnout ($p < 0.001$). Education also increased perceived organizational support.

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