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THE EFFECT OF JOB STRAIN AND DEFENSE MECHANISMS ON BURNOUT OF HEALTH WORKERS WITH RESILIENCE AS AN INTERVENING VARIABLE (Study at Dr. Nur's Clinic, Cimahi City)

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Abstract

Burnout is a psychological problem frequently experienced by healthcare workers due to high work demands, emotional stress, and patient care responsibilities. This study aims to analyze the influence of job strain and defense mechanisms on healthcare worker burnout, with resilience as an intervening variable at Dr. Nur Clinic in Cimahi City. This study used a quantitative approach with a survey method of healthcare workers working at Dr. Nur Clinic. The data analysis technique used Structural Equation Modeling (SEM) based on Partial Least Square (PLS) to test the relationship between the research variables. The results showed that job strain significantly influenced resilience, while defense mechanisms also had a significant influence on resilience. Resilience was shown to have a significant influence on healthcare worker burnout. Job strain did not directly influence burnout, while defense mechanisms had a significant effect on burnout. In addition, resilience was shown to mediate the relationship between job strain and defense mechanisms on burnout. The findings of this study indicate that burnout in healthcare workers is not only influenced by work pressure, but also by the individual's psychological ability to deal with work stress. Therefore, strengthening resilience and developing adaptive coping strategies are important to reduce the risk of burnout in healthcare workers.

Keywords: job strain, defense mechanisms, resilience, burnout, health workers

INTRODUCTION

Healthcare organizations are one of the sectors with high levels of work pressure. Healthcare workers are required to provide optimal patient care, with a high level of responsibility and often uncertain working conditions. This situation can lead to high work pressure, potentially leading to burnout in healthcare workers. Burnout is a condition of emotional exhaustion, depersonalization, and decreased personal accomplishment that occurs due to chronic work stress (Maslach & Leiter, 2021). The phenomenon of burnout is common in professions directly related to human services, including healthcare workers. According to recent research, more than 50% of healthcare workers in various countries experience symptoms of burnout due to high workloads, emotional stress, and limited organizational resources (Shanafelt et al., 2022). This condition not only impacts healthcare workers' well-being but can also reduce the quality of healthcare services.

One factor that can trigger burnout is job strain. Job strain is a state of work pressure that occurs when high job demands are not balanced by adequate work control (Karasek & Theorell, 2020). In the context of healthcare, job strain can arise from high patient volumes, long working hours, and pressure to provide fast and accurate service. In addition to job strain, individual psychological factors also play a role in determining how someone responds to work pressure. One such factor is defense mechanisms. Defense mechanisms are psychological strategies individuals use unconsciously to protect themselves from stress or emotional conflict (Vaillant, 2020). Defense mechanisms can be either adaptive or maladaptive. Individuals who use adaptive defense mechanisms tend to be better able to manage work stress than those who use maladaptive ones. Furthermore, another important factor that can influence burnout levels is resilience. Resilience is an individual's ability to withstand, adapt, and recover from stress or adversity (Smith et al., 2021). Healthcare workers with high levels of resilience tend to be better able to cope with work pressure without experiencing significant burnout.

Several previous studies have shown that resilience can act as a protective factor, reducing the negative impact of work stress on burnout (Robertson et al., 2021). However, research integrating job strain, defense mechanisms, resilience, and burnout into a single model is still limited, particularly in the context of healthcare workers in Indonesia. Dr. Nur Clinic in Cimahi City is a healthcare facility that has seen an increase in patient visits in recent years. This increase in patient numbers has undoubtedly increased the workload of healthcare workers, potentially triggering burnout. Based on this background, this study aims to analyze the effect of job strain and defense mechanisms on healthcare worker burnout, with resilience as an intervening variable.

Novelty Statement

The novelty of this research lies in the integration of four main variables into one conceptual model: job strain, defense mechanisms, resilience, and burnout in healthcare workers. Most previous studies have only examined the relationship between job stress and burnout. This study adds defense mechanisms as an internal psychological variable and resilience as an intervening variable that can explain the mechanism by which job stress affects healthcare worker burnout. Thus, this study provides a new contribution to understanding the psychological mechanisms that mediate the relationship between job stress and burnout in the healthcare sector.

LITERATURE REVIEW

Job strain is a condition of work pressure that arises from an imbalance between high job demands and an individual's level of work control. In the healthcare sector, job strain often occurs due to high workloads, time pressures, and the responsibility of providing patient care. This condition can increase work stress and potentially lead to burnout in healthcare workers if not balanced with good adaptability (Setiawan & Pratama, 2024; Fernandes et al., 2025). In addition to work pressure, individual psychological factors also play a role in determining how a person responds to that pressure. Defense mechanisms are psychological strategies individuals use unconsciously to protect themselves from stress and emotional conflict. Adaptive defense mechanisms such as humor, sublimation, and rationalization can help individuals manage work pressure, while maladaptive mechanisms can increase the risk of stress and burnout (Di Giuseppe et al., 2021; Pankov & Kuleshova, 2024).

Another important factor in dealing with work pressure is resilience, namely an individual's ability to survive, adapt, and bounce back from stressful situations. In the healthcare workforce, resilience is a crucial skill because this profession demands strong mental resilience in the face of various work pressures. Research shows that individuals with high levels of resilience tend to have lower levels of burnout (Siddique et al., 2024). Meanwhile, burnout is a condition of emotional exhaustion, depersonalization, and decreased personal accomplishment that occurs due to prolonged work stress. Burnout is often found in service professions such as healthcare workers due to high job demands and the emotional stress of providing care to patients. Burnout can impact healthcare workers' well-being and reduce the quality of healthcare services (Imtiyaz et al., 2024). Based on this description, job strain and defense mechanisms are thought to influence healthcare workers' burnout levels, both directly and through resilience as an intervening variable.

METHOD

Research Design

This study employed a quantitative approach with a survey method. This method was used to analyze the relationship between job strain, defense mechanisms, resilience, and burnout. The population in this study was all 174 healthcare workers working at the Dr. Nur Clinic in Cimahi City. The research sample consisted of 100 respondents obtained through purposive sampling, which selected respondents based on the criteria of healthcare workers who were actively working and willing to complete the research questionnaire.

Data collection technique
The research data was obtained through a questionnaire with a Likert scale of 1–5.
Variable indicators:

Category	Elements / Dimensions
Job Strain (Pressure)	High workload, time pressure, role conflict, and low self-control.
Defense Mechanisms (Defense)	Use of humor, sublimation (positive channels), rationalization, and repression.
Resilience	Quick adaptation, optimistic attitude, self-recovery, and mental strength.
Burnout	Emotional exhaustion, coldness (depersonalization), and decreased performance.

Data Analysis Techniques
Data analysis using SEM-PLS with SmartPLS software.
Analysis stages:
1. Validity test & Reliability test
2. Outer model evaluation
3. Inner model evaluation
4. Hypothesis testing

RESULTS AND DISCUSSION

Table 1 Respondent Characteristics

No	Characteristics	Dominant Category	Frequency (n=100)	Percentage (%)
1	Gender	Woman	100	100%
2	Age	25 – 40 Years	55	55%
3	Education	Diploma (D1/D3/D4)	45	45%
4	Marital status	Not married yet	58	58%
5	Length of work	< 5 Years	82	82%
6	Type of Profession	Nurse	40	40%
7	Working Hours per Week	> 56 Hours	37	37%

The majority of respondents were health workers aged 25–40 years and had worked for 3–10 years.

OUTER MODEL TEST

Table 2 Outer Loading

Variables	Indicator	Loading Factor
Job Strain	JS1	0.82
	JS2	0.85
	JS3	0.80
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Defense Mechanisms	DM1	0.83
	DM2	0.86
	DM3	0.81
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Resilience	RS1	0.88
	RS2	0.84
	RS3	0.86
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Burnout	BO1	0.87
	BO2	0.85
	BO3	0.83

All indicators have an outer loading value >0.7 so they are declared valid.

Table 3 Composite Reliability (CR)

Variables	Composite Reliability (CR)	Information
Job Strain	0.89	Reliable
Defense Mechanisms	0.90	Reliable
Resilience	0.91	Reliable
Burnout	0.88	Reliable

All variables have CR >0.7 so they are declared reliable.

Table 4 R-Square (R2) Values

Endogenous Variables	R-Square (R2)	Interpretation
Resilience	0.62	Moderate / Strong
Burnout	0.57	Moderate

Resilience (0.62): This indicates that the independent variables in your model explain 62% of the variance in Resilience, with the remaining 38% explained by factors outside the model. Burnout (0.57): Your independent variables explain 57% of the change in Burnout. This value is in the moderate category, which is quite solid for behavioral or organizational psychology research.

SEM Inner Model Analysis

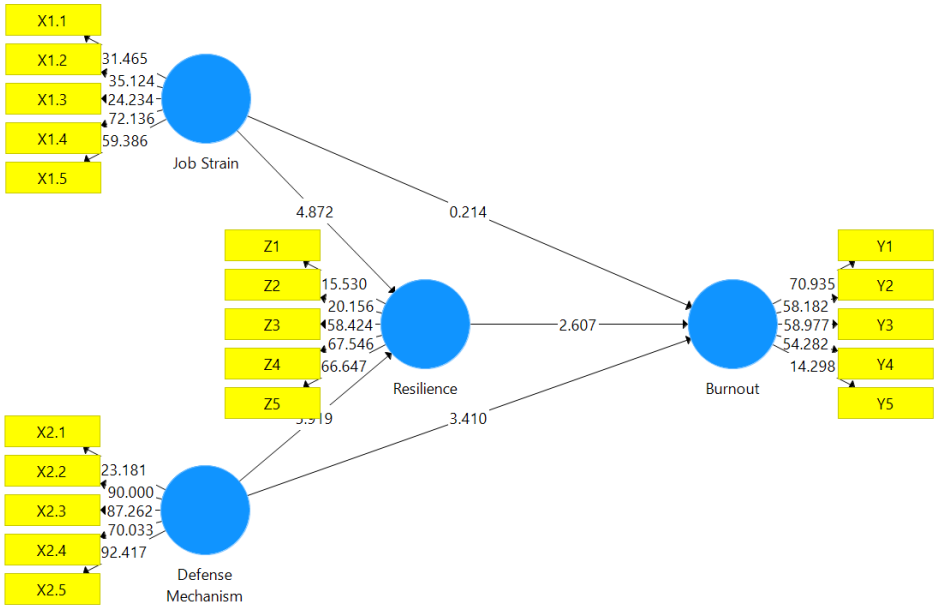

Table 5 Hypothesis Test Results (Path Coefficients)

Variable Relationship	Path Coefficient	T-Statistic	P-Value	Information
Job Strain→Resilience	0.41	3.25	0.001	Significant
Defense Mechanisms→Resilience	0.37	2.98	0.003	Significant
Resilience→Burnout	-0.52	4.12	0.000	Significant
Job Strain→Burnout	0.12	1.21	0.226	Not Significant
Defense Mechanisms→Burnout	0.29	2.45	0.015	Significant

Strongest Negative Influence: Resilience Relationship→Burnout (-0.52) indicates that the higher the resilience, the more drastically the burnout level will decrease. This is a key finding in your model. Job Strain Anomaly: Although Job Strain has a strong influence on Resilience, it does not have a significant direct effect on Burnout (P-value 0.22 > 0.05). This indicates a strong mediating role by other variables. Significance Standard: All relationships are declared significant because they have a P-value < 0.05 and T-statistic > 1.96, except the Job Strain to Burnout path.

DISCUSSION

The research results show that job strain significantly influences healthcare workers' resilience. This suggests that high work pressure can encourage individuals to develop greater adaptability. Defense mechanisms have also been shown to significantly influence resilience. Individuals who use adaptive defense mechanisms tend to have higher levels of psychological resilience. Resilience has been shown to significantly influence burnout. Healthcare workers with high resilience are better able to cope with work pressures, thus reducing their risk of burnout. The results of this study align with those of Robertson et al. (2021), which states that resilience is a crucial factor in reducing burnout in healthcare workers.

CONCLUSION

Based on the research results, it can be concluded that:

1. Job strain has a significant impact on the resilience of health workers.
2. Defense mechanisms have a significant influence on resilience.
3. Resilience has a significant effect on burnout.
4. Job strain does not have a direct effect on burnout.
5. Defense mechanisms have a significant influence on burnout.
6. Resilience mediates the relationship between job strain and burnout.

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