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Determinants of Burnout Among Nurses at Meuraxa Regional General Hospital, Banda Aceh

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Abstract

Burnout is a psychological condition commonly experienced by nurses due to high job demands and may negatively affect the quality of healthcare services and patient safety. This study aimed to analyze the determinants of burnout among nurses at Meuraxa Regional General Hospital, Banda Aceh, Indonesia. This study employed a quantitative research design with a cross-sectional approach. The study population consisted of 324 nurses, and a sample of 250 nurses was selected using a simple random sampling technique. Data were collected using structured questionnaires, including the Maslach Burnout Inventory (MBI), organizational support questionnaire, reward questionnaire, human resources questionnaire, and job satisfaction questionnaire. The data collection method was based on self-report. Data were analyzed using univariate

analysis, bivariate analysis with the Chi-square test, and multivariate analysis using multiple logistic regression. The results showed that organizational support, rewards, human resources, and job satisfaction were significantly associated with burnout ($p < 0.05$), whereas age, gender, educational level, and length of employment were not significantly associated with burnout ($p > 0.05$). Multivariate analysis revealed that human resources was the most dominant factor associated with burnout ($p = 0.001$; OR = 0.228; 95% CI = 0.094–0.554). Effective human resource management reduced the risk of burnout by 77.2%. Therefore, optimizing human resource management should become a priority for Meuraxa Regional General Hospital, Banda Aceh, in preventing burnout and improving the quality of nursing care.

Keywords: Burnout, Nurses, Human Resources, Organizational Support, Job Satisfaction, Rewards

1. Introduction

Burnout is a psychological condition commonly experienced by nurses as a result of prolonged exposure to work-related stress. It is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, all of which can adversely affect nurses' performance in delivering quality nursing care [1, 2]. In nursing practice, burnout may result from excessive workload, high job demands, continuous work-related pressure, and intensive interactions with patients. These conditions can lead to physical, emotional, and mental exhaustion among nurses, ultimately compromising their well-being and the quality of patient care [3, 4]. Burnout among nurses not only affects individual well-being but also has significant implications for the quality of healthcare services, patient safety, job satisfaction, and the overall stability of healthcare organizations [5, 6]. Therefore, burnout has become a critical issue in nursing management because it is directly associated with nurses' well-being and the quality of hospital care.

The prevalence of burnout among healthcare professionals varies considerably but remains a significant concern in nursing practice. Globally, approximately 10%–52% of nurses experience burnout [7]. More than 50% of healthcare professionals experience burnout. Factors such as job satisfaction, basic salary, motivation, age, incentives, competency, additional responsibilities, and knowledge of quality improvement have been identified as significant predictors of burnout [8]. Organizational support, reward systems, and human resource adequacy have also been shown to be directly associated with burnout among nurses [4].

Meuraxa Regional General Hospital (RSUD Meuraxa) in Banda Aceh is a public hospital that provides continuous healthcare services. The hospital operates 24 hours a day, serves patients covered by the National Health Insurance (BPJS), and receives

referrals from other healthcare facilities. These conditions require nurses to deliver high-quality care while simultaneously increasing their workload and the risk of occupational fatigue. As described in the thesis, the high daily patient volume and insufficient rest periods may expose nurses to physical and mental exhaustion, thereby increasing their risk of burnout.

Preliminary interviews with seven nurses at RSUD Meuraxa revealed complaints of drowsiness, fatigue, dizziness, and stiffness in certain parts of the body. These symptoms may indicate early manifestations of burnout and highlight the need to strengthen strategies for promoting nurses' well-being within the hospital.

Based on these considerations, this study aimed to analyze the determinants of burnout among nurses at RSUD Meuraxa, Banda Aceh. The factors examined included organizational support, rewards, human resources, job satisfaction, length of service, age, gender, and educational level.

2. Methods

This quantitative study employed a correlational design with a cross-sectional approach. The study was conducted at Meuraxa Regional General Hospital (RSUD Meuraxa), Banda Aceh, Indonesia, from April 12 to 20, 2026, to identify factors associated with burnout among nurses.

The study population comprised 324 nurses working in inpatient units. The required sample size was calculated using the Lemeshow formula with a 95% confidence level and a 5% margin of error, resulting in a minimum sample of 253 participants. A total of 250 complete questionnaires were included in the final analysis.

Data were collected using a structured questionnaire consisting of respondents' characteristics (age, gender, educational level, employment status, marital status, length of service, and clinical authority level), the Maslach Burnout Inventory (MBI) to assess burnout (22 items covering emotional exhaustion, depersonalization, and reduced personal accomplishment), an organizational support questionnaire (8 items), a reward questionnaire (5 items), a human resources (HR) questionnaire (5 items), and the Minnesota Satisfaction Questionnaire (MSQ) to measure job satisfaction. Burnout was categorized as low (score ≤ 66) or high (score > 66). Organizational support was classified as adequate for scores ≥ 17 , reward as available for scores ≥ 13 , human resources as adequate for scores ≥ 13 , and job satisfaction as satisfied for scores ≥ 61.9 .

The MBI and MSQ are standardized instruments with established validity and reliability. The organizational support, reward, and human resources questionnaires were developed by the researchers and underwent content validity assessment through expert judgment, including face validity and logical validity. A pilot study involving 30 respondents with characteristics similar to those of the study population was conducted. Reliability testing demonstrated acceptable internal consistency, with Cronbach's alpha coefficients of 0.776 for organizational support, 0.812 for reward, and 0.758 for human resources.

Data were analyzed using SPSS software. Descriptive (univariate) analysis was performed to summarize respondents' characteristics and study variables. Associations between independent variables and burnout

were examined using the Chi-square test. Variables with a p -value < 0.25 in the bivariate analysis were entered into a multivariable logistic regression model to identify independent determinants of burnout. Statistical significance was set at $p < 0.05$.

Ethical Considerations

This study received ethical approval from the Ethics Committee of the Faculty of Nursing, Universitas Syiah Kuala (Ethical Clearance No. 112005101025).

3. Results and Discussion

A total of 250 respondents participated in this study. Most respondents were female (198; 79.2%). The majority held a Diploma III in Nursing as their highest educational qualification (172; 68.8%), and the largest proportion were Government Employees with Work Agreements (PPPK) (117; 46.8%). Regarding marital status, most respondents were married (187; 74.8%), while the majority were classified as Clinical Nurse I (PK I) (215; 86.0%). The respondents had a mean age of 31.31 years and a mean length of service of 3.89 years. Detailed respondent characteristics are presented in Table 1.

Table 1: Respondent Characteristics (n=250)

Characteristic	Category	f (%)
Gender	Male	52 (20.8)
	Female	198 (79.2)
Age Group	Young Adult	143 (57.2)
	Middle Adult	95 (38.2)
	Older Adult	12 (4.8)
Educational Level	D III in Nursing	172 (68.8)
	Professional Nurse (Ners)	78 (31.2)
Employment Status	Civil Servant	89 (35.6)
	Government Employee with a Work Agreement (PPPK)	117 (46.8)
	Contract Employee	44 (17.6)
Length of Service	Shorter Tenure	209 (83.6)
	Longer Tenure	41 (16.4)
Marital Status	Married	187 (74.8)
	Single	53 (21.2)
	Divorced	4 (1.6)
	Widowed	6 (2.4)
Clinical Authority Level	Clinical Nurse I (PK I)	215 (86.0)
	Clinical Nurse II (PK II)	30 (12.0)
	Clinical Nurse III (PK III)	5 (2.0)
Age	Mean $\pm$ SD (min-max)	31.31 $\pm$ 5.10 (24-49)
Length of Service	Mean $\pm$ SD (min-max)	3.89 $\pm$ 2.55 (2-19)

The findings showed that the majority of nurses experienced high burnout, with 150 respondents (60.0%) classified in the high-burnout category. Regarding the determinants of burnout, most respondents perceived organizational support as inadequate (130; 52.0%). In terms of rewards, the majority reported that rewards were unavailable or insufficient (139; 55.6%). With respect to job satisfaction, most respondents were classified as dissatisfied (148; 59.2%). Furthermore, the majority of respondents perceived human resources (HR) as inadequate (130; 52.0%). The distribution of burnout levels and burnout determinants is presented in Table 2.

Table 2: Distribution of Burnout Levels and Burnout Determinants Among Nurses (n=250)

Variable	Category	f (%)
Burnout	High	150 (60.0)
	Low	100 (40.0)
Organizational Support	Support Available	120 (48.0)
	No Support	130 (52.0)
Reward	Reward Available	111 (44.4)
	No Reward	139 (55.6)
Human Resources	Adequate	120 (48.0)
	Inadequate	130 (52.0)
Job Satisfaction	Satisfied	102 (40.8)
	Dissatisfied	148 (59.2)

Bivariate analysis showed that organizational support, rewards, human resources (HR), and job satisfaction were significantly associated with burnout ($p < 0.001$). In contrast, length of service, age, gender, and educational level were not significantly associated with burnout. The results of the bivariate analysis are presented in Table 3.

Table 3: Bivariate Analysis of Factors Associated with Burnout Among Nurses (n=250)

Variable	Category	Low n (%)	High n (%)	χ^2	p
Organizational Support	Support Available	79 (65.8)	41 (34.2)	64.169	<0.001
	No Support	21 (16.2)	109 (83.8)		
Reward	Reward Available	80 (72.1)	31 (27.9)	85.564	<0.001
	No Reward	20 (14.4)	119 (85.6)		
Human Resources	Adequate	72 (60.0)	48 (40.0)	38.462	<0.001
	Inadequate	28 (21.5)	102 (78.5)		
Job Satisfaction	Satisfied	79 (77.5)	23 (22.5)	100.692	<0.001
	Dissatisfied	21 (14.2)	127 (85.8)		
Length of Service	Shorter Tenure	83 (39.7)	126 (60.3)	0.044	0.972
	Longer Tenure	17 (41.5)	24 (58.5)		
Age Group	Young Adult	59 (41.3)	84 (58.7)	0.284	0.868
	Middle Adult	36 (37.9)	59 (62.1)		
	Older Adult	5 (41.7)	7 (58.3)		
Gender	Male	21 (40.4)	31 (59.6)	0.004	1.000
	Female	79 (39.9)	119 (60.1)		
Educational Level	D III in Nursing	70 (40.7)	102 (59.3)	0.112	0.738
	Professional Nurse (Ners)	30 (38.5)	48 (61.5)		

Variables included in the multivariable analysis were organizational support, rewards, human resources (HR), and job satisfaction. Multiple logistic regression analysis demonstrated that all four variables remained significantly associated with burnout. Human resources (HR) was identified as the most influential determinant of burnout based on its practical relevance to workforce adequacy, workload distribution, task allocation, and staff competency development. The results of the multivariable logistic regression analysis are presented in Table 4.

Table 4: Selection of Candidate Variables for the Multivariable Logistic Regression Model of Burnout Determinants

Variable	B	p	OR	95% CI
Reward	-2.689	<0.001	0.068	0.027-0.168
Human Resources	-1.477	0.001	0.228	0.094-0.554
Organizational Support	-1.838	<0.001	0.159	0.066-0.383
Job Satisfaction	-2.705	<0.001	0.067	0.028-0.162

This study found that 60.0% of nurses experienced high levels of burnout, indicating that burnout is a significant occupational health concern among nurses at Meuraxa Regional General Hospital, Banda Aceh. The high prevalence of burnout may be attributed to prolonged exposure to work-related stressors, including excessive workload, emotional demands associated with patient care, limited opportunities for recovery, and continuous pressure to maintain patient safety and the quality of healthcare services. Burnout among nurses is generally characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, resulting from an imbalance between job demands and the resources available to cope with those demands [1, 9].

The findings demonstrated that organizational support was significantly associated with burnout. Nurses who perceived inadequate organizational support were more likely to experience high levels of burnout than those who perceived adequate support. Organizational support, including supportive supervision, effective communication, clear role expectations, and fair organizational policies, may serve as a protective factor by reducing psychological stress among nurses. Conversely, insufficient support from hospital management may increase work-related stress and diminish nurses' ability to cope effectively with workplace demands [10]. The reward variable was also significantly associated with burnout. Nurses who reported receiving inadequate or no rewards had a high burnout prevalence of 85.6%. Rewards encompass not only financial incentives but also professional recognition, appreciation, opportunities for career development, and acknowledgment of nurses' contributions. An inadequate reward system may reduce work motivation, increase emotional exhaustion, and ultimately elevate the risk of burnout among nurses [8]. In this study, human resources (HR) emerged as the most influential determinant of burnout. Multivariable logistic regression analysis showed that HR was significantly associated with burnout ($p = 0.001$; $OR = 0.228$; $95\% CI = 0.094-0.554$). Inadequate human resource conditions, including insufficient staffing, uneven workload distribution, suboptimal shift scheduling, and limited training opportunities, may increase job demands while reducing nurses' capacity to recover from work-related stress. These findings are consistent with previous studies demonstrating that adequate staffing, effective workload management, and continuous competency development are essential components in preventing burnout among nurses [1, 10]. Previous studies have also reported that suboptimal human resource management contributes to the accumulation of work-related stress and increases the risk of burnout among nurses [11]. Inappropriate staff allocation based on experience and competency may also increase the risk of burnout among nurses [12]. In addition, job satisfaction was significantly associated with burnout. Nurses who were dissatisfied with their jobs exhibited a high burnout prevalence of 85.8%. Low job satisfaction may be related to excessive workload, inadequate rewards, limited opportunities for professional development, and an unsupportive work environment. Improving job satisfaction through supportive leadership, fair reward systems, and a positive work environment may help reduce the risk of burnout among nurses [8].

In contrast, this study found that age, gender, educational

level, and length of service were not significantly associated with burnout. These findings suggest that, within the context of this study, burnout was more strongly influenced by organizational and work environment factors than by individual characteristics. Nurses of different ages, genders, educational backgrounds, and levels of work experience remained at risk of experiencing burnout when exposed to high job demands, limited resources, unbalanced workloads, and inadequate organizational support. These findings are consistent with previous studies reporting that work environment factors, organizational support, workload, and resource availability exert a greater influence on burnout than individual demographic characteristics [1, 10]. Similar findings have been reported in other studies, indicating that variables such as age, gender, educational level, and job position do not significantly influence burnout among nurses. These results suggest that individual characteristics are not always the primary determinants of occupational burnout [13]. However, several previous studies have reported that individual characteristics, such as age and length of service, may influence burnout levels through differences in professional experience, coping strategies, and the ability to adapt to work-related stress [5].

4. Recommendations

Hospitals should optimize human resource management by implementing proportional nursing workforce planning based on workload analysis, ensuring equitable staff distribution, assigning nurses according to their competencies, and providing continuous professional training. Nursing managers should strengthen supportive supervision, improve communication, provide psychological support services, and implement fair reward systems to help prevent burnout among nurses. Nursing education institutions are encouraged to strengthen curricula on stress management and burnout prevention to better prepare future nurses for the demands of clinical practice. Future research should employ longitudinal or mixed-methods designs and include additional variables, such as workload, shift systems, leadership, social support, and the work environment, to provide a more comprehensive understanding of burnout among nurses.

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