ORIGINAL ARTICLE

The Relationship between Effort-Reward and Work-Life Imbalances on Job Burnout among Emergency Ward Nurses in an Indonesian Public Hospital

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ABSTRACT

Background. Burnout is a pressing concern among Emergency Ward (EW) nurses, stemming from the intense demands of their profession, including long hours, exposure to traumatic events, and the need for quick decision-making. This issue not only affects nurses' well-being but also has repercussions for patient care and the healthcare system.

Objective. This study aimed to investigate the association between effort-reward and work-life imbalance on burnout among EW nurses in a public hospital.

Methods. The study was a cross-sectional analytical study conducted from February to May 2022 involving 32 EW nurses employed at Public Hospital I.A. Moeis Hospital in Samarinda City, Indonesia. The research employed several instruments for data collection through stratified random sampling. Chi square and logistic regression analysis were performed to assess the factors contributing to burnout among EW nurses, including effort-reward imbalance, work-life balance, namely monotonous work, self-efficacy, communication among healthcare professionals, and workload.

Result. There was positive correlation between effort-reward and work-life imbalance on burnout among EW nurses. The multivariate test results showed that workload, self-efficacy, communication, and monotonous work had higher risk of developing burnout in EW nurses.

Conclusion. In this study, we found that effort-reward and work-life imbalance were significantly associated with burnout in EW nurses in a public hospital. The development of comprehensive assessment of burnout among EW nurses and its early intervention should be warranted.

Keywords: burnout, emergency ward, effort-reward, nurse, public hospital, work-life imbalance

INTRODUCTION

Nurses, particularly those working in the demanding environment of public hospitals, face a myriad of challenges and stressors in their daily professional lives.[1] Among these challenges, burnout, characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, has emerged as a critical issue that not only affects the well-being of nurses but also has far-reaching implications for the quality of patient care and the healthcare system as a whole.[2]

The National Safety Council states that burnout is the most common work-related stress and workload burden affecting healthcare professionals.[3] Specific symptoms of burnout include boredom, depression, pessimism, reduced concentration, poor work quality, dissatisfaction, absenteeism,

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and physical illness or ailments.[4] Occupational burnout affects 32% of all workers worldwide.[5] Burnout can lead to psychological and physiological disorders that are more prevalent among healthcare service providers.[3] One of the disorders that emerges is emotional exhaustion in nurses.[1]

Burnout is a growing issue in the workplace, leading to various unhealthy and even life-threatening physical and psychological consequences.[6] Studies indicate that job-related stress is associated with over 120,000 deaths per year and approximately 5%–8% of annual healthcare costs in the United States, contributing to a total healthcare expenditure of up to 3 trillion dollars per year.[7] Healthcare professionals in Indonesia have experienced moderate to severe levels of burnout. Nurses and healthcare workers have the highest percentage of burnout, reaching 43%.[8]

This study aims to delve into the intricate relationship between burnout and two significant contributing factors: effort-reward imbalance and work-life imbalance, within the context of Emergency Ward (EW) nurses in public hospitals. Effort-reward imbalance reflects the perception of a lack of reciprocity between the effort expended at work and the rewards received in return, while work-life imbalance pertains to the challenges nurses face in achieving equilibrium between their professional responsibilities and personal lives.[9]

Burnout is a psychological syndrome marked by emotional exhaustion, depersonalization, and reduced personal accomplishment, commonly arising from work-related stress and affecting various professions.[7] In healthcare, burnout is particularly prevalent due to the demanding nature of the work, with nurses experiencing significant levels of stress that lead to psychological and physiological issues.[12] Specifically, nurses in public hospitals, such as those in emergency wards, face unique challenges like excessive workload, lack of self-control, effort-reward imbalance, and destructive communication relationships, contributing to higher burnout rates.[10-12] Addressing these factors through supportive interventions is crucial for enhancing job satisfaction, reducing errors, and ensuring patient safety, thereby maintaining a healthy and productive nursing workforce.

The burnout experienced by nurses working in the EW is a result of the job demands in handling critically ill patients as well as non-critical patients, as initial care is provided in the EW.[10] In clinical management, nurses must be able to prioritize patient care and make sound decisions, given the high patient volume from day to night, contributing to burnout.

The causes of burnout include excessive working hours, which can lead to increased errors due to heightened fatigue.[11] Self-control is related to low self-regulation, and there's an effort-reward imbalance where nurses may not receive sufficient appreciation for their work.[12] Destructive work-life balance can add stress and pressure, and the high workload in the EW further contributes to burnout.[13]

Understanding the factors contributing to burnout in this specific group of healthcare professionals is of paramount importance.[14] Public hospitals often serve as critical healthcare facilities, handling a substantial volume of patients, including emergencies and critical cases, making the well-being and performance of EW nurses essential for the provision of quality care.[15]

The aim of this study is to analyze the relationships between effort-reward imbalance work-life imbalance and burnout among Emergency Ward nurses in a public hospital in Indonesia, to provide valuable insights that will help formulate interventions, policies, and strategies to reduce burnout. Addressing these imbalances is critical to improving the overall quality of health care delivery, which will ultimately benefit nurses and the patients they serve.

MATERIALS AND METHODS

Research Design

The study used a cross-sectional analytical design involving 32 Emergency Ward (EW) nurses employed at Public Hospital I.A. Moeis Hospital in Samarinda City, Indonesia This study has received ethical approval from the Mutiara Mahakam School of Health, Indonesia. It has been declared ethically appropriate in accordance with the seven WHO 2011 standards, under the approval number No. 67/KEPK-STIKES-MM/X/2022.

Population and Sample

The participants in this study are nurses working in the Emergency Ward of Public Hospital Moeis in Samarinda. Slovin's formula for sample size determination and stratified sampling was performed. The researchers selected a sample size of 32 nurses to represent the larger population. This sample included 11 nurses from the morning shift, 11 from the afternoon shift, and 10 from the night shift, ensuring each nurse had an equal opportunity to be chosen for the study.

Inclusion criteria are 1) a registered nurse working in the Emergency Ward of Moeis Public Hospital, 2) has worked in the department for at least one year, 3) able to understand and respond to the questionnaire effectively, 4) has a Bachelor of Science in Nursing degree [or a Licensed Practical Nurse (LPN) or Licensed Vocational Nurse (LVN) from an accredited nursing program], and 5) voluntarily agreed to participate. Exclusion criteria include nurses who are on leave or absent during data collection, those with a history of severe mental health issues, newly employed nurses who have not completed a probation period, those unwilling to participate, and those unable to provide informed consent. These criteria ensure that participants meet specific requirements and can provide relevant data for the research objectives.

Data Collection

Data collection was conducted from February to May 2022 supported by the Samarinda government that was coordinating with the research site. Data was collected among respondents which filled once they finished work in

each shift. We randomized respondents into three work shifts (morning, afternoon, and night). For instance, we conducted randomization within each work shift, including the morning shift (n = 11), afternoon shift (n = 11), and night shift (n = 10), ensuring representative respondent distribution. The data were gathered through paper-and-pencil method. Despite involving official agencies, participation in the study remained entirely voluntary. The research team liaised with the Hospital to arrange a feasible schedule for in-person data collection. Additionally, an information sheet was provided to invited participants, detailing pertinent research information and addressing any related questions. After obtaining their consent, data collection proceeded at the research site. Data were gathered, collected, tabulated, and organized for statistical analysis. Throughout the data collection process, there was no undue influence on respondents that could have compromised their participation or compliance with the research.

Data Analysis

The Chi-square and logistic regression analyses were performed to assess the factors contributing to burnout among EW nurses such as effort-reward imbalance, work-life imbalance, monotonous work, self-efficacy, communication among healthcare professionals, and workload.

In this study, the Burnout Syndrome questionnaire was adapted from Kim et al.'s study, with a Cronbach's alpha value of 0.813.[16] Effort-reward imbalance refers to a situation where the effort exerted is substantial, yet the corresponding reward received is disproportionately low. The Guttman scale which contains 23 questions was used which was adapted from the study of Msaouel et al. with a Cronbach's alpha value of 0.846.[17] The work-life variable was assessed using a questionnaire adapted from the study of Shukla, with a Cronbach's alpha value of 0.76.[18] With an alpha >0.60, the questionnaire can be considered reliable.[19,20]

To classify participants into "Burnout" and "No Burnout" categories, a cutoff score was established based on the total score from the Burnout Syndrome subscale. Participants with scores of 17 or higher were classified as experiencing Burnout, while those with scores of 16 or lower were classified as not experiencing Burnout.[16] The instrument used in the study included subscales related to Burnout Syndrome and workload, each consisting of 12 items. Responses were evaluated using a Likert scale ranging from 1 to 4 to assess burnout conditions, where 1 indicates 'never,' 2 indicates 'a few times,' 3 indicates 'occasionally,' and 4 indicates 'every day'.

This study used three steps: univariate analysis, bivariate analysis using the Chi-square test, and multivariate analysis using multiple logistics regression. The multivariate analysis focused on Burnout Syndrome as the dependent variable, while the independent variables included effort-reward imbalance, work-life balance, working hours, self-control, and communication. To avoid missing data, all these statistical analysis steps were performed using the IBM Statistical Package for the Social Sciences (SPSS) version 23.

RESULTS

Table 1 presents the socio-demographic characteristics of the research participants, categorized based on their reported complaints of burnout syndrome.

Table 1 shows that there were more females experiencing burnout (74.1%). Majority of the respondents who experience burnout belong to the 26-35 year age group (81%), and have an S1 or D4 education level (85.7%). In terms of marital status, 69.0% of the 20 married individuals experienced burnout. Additionally, nurses who have been working for more than 10 years have a burnout prevalence of 68.8%. Nurses who experienced an imbalance in the Effort-Reward Imbalance (ERI) are reported to have a burnout prevalence of 84%. Poor communication and high workload contribute to 90% and 95% of burnout occurrences, respectively.

Table 2 shows that the variables significantly associated with burnout are working hours (p-value 0.023 ≤ 0.05), self-control (p-value 0.038 ≤ 0.05), Effort-Reward Imbalance (p-value 0.010 ≤ 0.005), healthcare staff communication p-value of (0.006 ≤ 0.005), and workload (p-value 0.000 ≤ 0.005). .

According to Table 3, the R Square value is utilized to quantify the extent to which the independent variables explain and influence the dependent variable. The obtained R Square value of 56.9% indicates that the variables Working Hours, Self-Control, Effort-Reward Imbalance (ERI), and Workload collectively account for 56.9% of the variance in Burnout.

The Hosmer and Lemeshow test presented in Table 3, a significance value of 1.000 was obtained. The Hosmer and Lemeshow test is declared fit if the probability value is greater than 0.05. This result indicates that the logistic regression model employed is capable of adequately explaining factors that affect burnout.

According to Table 3, the variables associated with experiencing burnout are significant, with Exp (B) values for Monotonous Work (aOR = 6.222, 95% CI = 1.681 – 5.152), Self-Control (aOR = 6.222, 95% CI = 1.681 – 5.152), Effort-Reward Imbalance (ERI) (aOR = 6.501, 95% CI = 1.591 – 9.198), and Workload (aOR = 6.501, 95% CI = 1.564 – 7.198). However, the variable Healthcare Staff Communication was not included in the multivariate analysis. This finding is supported by the assertion that increased Working Hours, Self-Control, Effort-Reward Imbalance, and Workload are associated with a higher likelihood of experiencing burnout.

DISCUSSION

The results of this study highlight several factors that have a significant impact on burnout among EW nurses working in public hospitals. These findings are crucial for understanding

Table 1. Profile of the Respondents (N = 32)

		Burnout			
		Not experiencing burnout		Experiencing burnout	
		N	%	N	%
Gender	Female	7	25.9	20	74.1
	Male	2	40.0	3	60.0
Age (in years)	17-25	0	0.0	0	0.0
	26-35	4	19.0	17	81.0
	36-45	5	45.5	6	54.5
	46-55	0	0.0	0	0.0
	56-65	0	0.0	0	0.0
Education	Vocational	8	32.0	17	68.0
	Bachelor	1	14.3	6	85.7
Marital Status	Married	9	31.0	20	69.0
	Single	0	0.0	3	100.0
Length of Service (in years)	1-3	1	12.5	7	87.5
	4-6	3	50.0	3	50.0
	7-9	0	0.0	2	100.0
	>10	5	31.3	11	68.8
Monotonous Work	Variability in work	5	62.5	3	37.5
	Monotonous	4	16.7	20	83.3
Self-control	Self-control	4	66.7	2	33.3
	Lack of self-control	5	19.2	21	80.8
ERI	Balance	5	71.4	2	28.6
	Unbalance	4	16.0	21	84.0
Communication among Healthcare Professionals	Good	7	58.3	5	41.7
	Bad	2	10.0	18	90.0
Workload	Low	8	66.7	4	33.3
	High	1	5.0	19	95.0

ERI – Effort-Reward Imbalance

Table 2. Distribution of Participant's Burnout Experience Level Based on Variables

Variable		Burnout				*P*-Value
		Not experiencing burnout		Experiencing burnout		
		n	%	n	%	
Monotonous Work	Variability in work	5	(55.6)	3	(13.0)	0.023*
	Monotonous	4	(44.4)	20	(87.0)	
Self-control	Self-control	5	(55.6)	21	(91.3)	0.038*
	Lack of self-control	4	(44.4)	2	(8.7)	
ERI	Balance	4	(44.4)	21	(91.3)	0.010*
	Unbalance	5	(55.6)	2	(8.7)	
Communication among Healthcare Professionals	Good	2	(22.2)	18	(78.3)	0.006*
	Bad	7	(77.8)	5	(21.7)	
Workload	Low	8	(88.9)	4	(17.4)	0.000*
	High	1	(11.1)	19	(82.6)	

ERI – Effort-Reward Imbalance

Table 3. Multiple Logistic Regression Results Stratified by Burnout Experience

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
Monotonous Work	3.617	1.580	5.238	1	0.022	6.222	1.681	5.152
Self-control	3.617	1.580	5.238	1	0.022	6.222	1.681	5.152
ERI	3.597	1.598	5.065	1	0.024	7.501	1.591	9.198
Workload	3.597	1.588	5.775	1	0.024	6.501	1.564	7.198
R-Square	0.569							

ERI – Effort-Reward Imbalance

and addressing burnout in healthcare professionals, and they offer valuable insights for potential interventions and improvements in working conditions.

Burnout is an emerging issue in the workplace that leads to various unhealthy physical and psychological consequences, even posing life-threatening risks.[21] Previous studies indicate that job-related stress is associated with over 120,000 deaths per year and approximately 5%–8% of annual healthcare expenditure in the United States, with the total healthcare costs reaching up to 3 trillion dollars per year. [3,22]

Based on the research findings, burnout experienced by nurses while working in the EW is a result of job demands in handling critically ill patients as well as non-critically ill patients due to the initial assessment being conducted in the EW. In clinical management, nurses must be capable of prioritizing patient care and making appropriate decisions, given the high volume of patient visits during both day and night shifts.[8,13]

The factors contributing to burnout include excessive working hours, which can lead to increased errors due to heightened fatigue, a lack of self-control, which is related to low self-regulation.[11,23,24] Additionally, an effort-reward imbalance, where there is a lack of appreciation for the work performed by nurses, can also contribute to burnout.[9,25] Destructive communication relationships can further add to the burden and stress, and the high workload in EW department also leads to burnout among nurses.[9]

Several studies have explored burnout among healthcare professionals, especially nurses. A study conducted on nurses in mental health hospitals found that the prevalence of burnout in the low category was 82.2%, while in the moderate category, it was 17.2%. It is worth noting that this study differs in setting, as it focused on public hospitals with a significantly higher workload compared to mental health hospitals.[26,27]

The positive impact of monotonous work on burnout suggests that performing repetitive and routine tasks can lead to increased burnout among EW nurses.[24,28] This finding underscores the importance of introducing variety and challenges in the work environment.[28,29] Hospital management could consider rotating assignments, providing opportunities for skill development, or creating more stimulating work tasks to reduce the monotony and subsequently decrease burnout.[30,31]

The study suggests that low self-control is associated with higher burnout levels among EW nurses. This emphasizes the significance of emotional regulation and coping strategies.[28] Hospitals and healthcare organizations should invest in training programs that enhance nurses' self-control and stress management skills.[30] Additionally, creating a supportive work culture where nurses feel comfortable seeking help and discussing their emotional well-being is essential.[23]

The findings indicate that an effort-reward imbalance contributes to burnout among EW nurses. This emphasizes the importance of recognizing and rewarding the hard work and dedication of nurses.[9] Hospitals should strive to provide fair compensation, acknowledgment, and opportunities for career advancement.[5,26] When nurses perceive that their efforts are adequately rewarded, they are less likely to experience burnout.[9]

The study confirms that high workload is a significant contributor to burnout among EW nurses in public hospitals. To address this issue, hospitals may need to reconsider nurse-to-patient ratios, optimize staffing levels, and implement workload management strategies.[26] It is important to strike a balance between patient care demands and the capacity of the nursing staff to meet these demands without becoming overwhelmed.[1]

This study has several limitations, including its limited generalizability to public hospitals and EW nurses, a cross-sectional design that hinders the establishment of causal relationships, reliance on self-reported data susceptible to response bias, a potential single geographic location, the possibility of not accounting for all relevant variables influencing burnout, a lack of consideration for temporal changes in the healthcare environment, and potential non-response bias if the response rate was low. These limitations should be considered when interpreting the findings, and future research should aim for more diverse samples, a longitudinal approach, and a broader scope of contributing factors.

In summary, the study highlights the multifaceted nature of burnout among EW nurses in public hospitals. It underscores the need for interventions that address not only the workload but also factors like self-control, monotonous work, and the effort-reward balance. Hospitals and healthcare organizations should consider implementing policies and

programs that promote a more supportive and balanced work environment for nurses. By doing so, they can reduce the risk of burnout, ultimately benefiting the well-being of healthcare professionals and the quality of patient care.

CONCLUSION

Burnout among Emergency Ward (EW) nurses in public hospitals is influenced by monotonous work, self-control, Effort-Reward Imbalance (ERI), and workload. The study's findings have practical implications for public hospitals, including the need to implement measures that reduce monotonous work, manage workload, and provide stress management programs. Hospitals should also promote fair compensation and recognition to address Effort-Reward Imbalance. Additionally, it is crucial to create a supportive work environment and provide training programs for nurses to develop stress management skills and improve their decision-making abilities, and should prioritize strategies to manage and optimize workloads effectively. Regular assessments of nurse burnout levels can help monitor the effectiveness of implemented measures and ensure a healthier, more productive nursing workforce in public hospitals.

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Statement of Authorship

All authors certified fulfillment of ICMJE authorship criteria.

Author Disclosure

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