

Nurses' Burnout and Its Associated Factors and Impact on the Quality of Nursing Services

Agustina¹, Teuku Tahlil², Marlina²

¹Postgraduate Student, Faculty of Nursing, ²Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia

Abstract

Background: Nurses are at risk of experiencing burnout and it can impact the quality of their nursing services. The study aims to identify factors that influence nurses' burnout and its impact on the quality of nursing services at a public hospital in the Aceh Province, Indonesia.

Methods: The research used a correlational design with a cross-sectional approach. Self-reported questionnaires were used in data collection and distributed to 214 nurses. A proportional random sampling technique was used in the selection of the study participants.

Results: Results of data analysis using the Fisher's exact test showed that there was a significant correlation between workload, work-family conflict, and job control with burnout. The Correlation was not significant between burnout with social support and with the quality of nursing services. The work-family conflict was identified as the most dominant factors that affect nurses' burnout.

Conclusion: The study concludes that nurses' burnout is related to workload, work-family conflict, and job control and has no impact on the quality of nursing services.

Keywords: *burnout, job control, nursing services quality, workload, work-family conflict,*

Background

Burnout is known as the response experienced by a person to work stress that is experienced for a long time continuously¹. Differences in job characteristics classified into job demands and job resources are factors that can affect the incidence of burnout², assuming that burnout will occur when job demands are high and job resources are low³.

Burnout have a negative impact on institutions and the profession⁴ as well as the low quality of nursing services⁵. Nurses at risk of experiencing burnout are influenced by job characteristics such as high workload, low number of nurses, high working hours and low work control⁵. The incidences of burnout in nurses are related to high workload, low work control^{5,6}, work family conlict⁷ and social support⁸.

A study by Monsalve-Reyes et al⁹ on nurses in three countries showed that 28% of nurses experienced burnout. Another study stated that 11.23% of nurses in 49 countries experienced burnout¹⁰. Indonesian health workers during the covid-19 pandemic experienced

Corresponding Author:

Agustina

aa.tyna.85@gmail.com

moderate to severe burnout, reaching 83%¹¹. Research on burnout among nurses in Indonesia shows that 27.2% of nurses experience emotional exhaustion and 31.5% experience disengagement¹².

Research conducted at a government general hospital in Aceh showed 23.7% of nurses experienced burnout in the high category¹³. Meanwhile, Dianto's research¹⁴ stated that health workers working in Aceh government general hospitals experienced burnout, of which 45.03% experienced disengagement and 33.44% experienced fatigue. The Other research shows that nurses working in Aceh government public hospitals have experienced mild to severe work stress since 2014¹⁵⁻¹⁸. Work stress that is experienced for a long time continuously can cause burnout¹.

Burnout treatment is an urgent issue because it will have a positive impact on hospitals and patients. Cimiotti et al.¹⁹ stated that reducing 30% burnout would result in low patients infection rates and it save \$68 million in operating costs in a year. Therefore,

this study aims to identify the level of burnout in the Aceh general hospital, the influencing factors and its impact on the quality of nursing services.

Literature Review

Burnout is a condition of physical and psychological exhaustion experienced by a person which consists of personal burnout, work-related burnout and client-related burnout²⁰. Several factors including workload²¹, work family conflict²², social support²³, and job control²⁴ affect burnout.

Job Demand Resource (JDR) model developed by Demeuroti et al.² explains job characteristics consisting of job demands and job resources can affect the occurrence of burnout in the workplace. The JDR model assumes the combination of high job demands and low job resources contributes to burnout²⁵. Meanwhile, the balance between job demands and job resources will result in the health and well-being of employees²⁶. The process of burnout based on the JDR Model is shown in Figure 1.

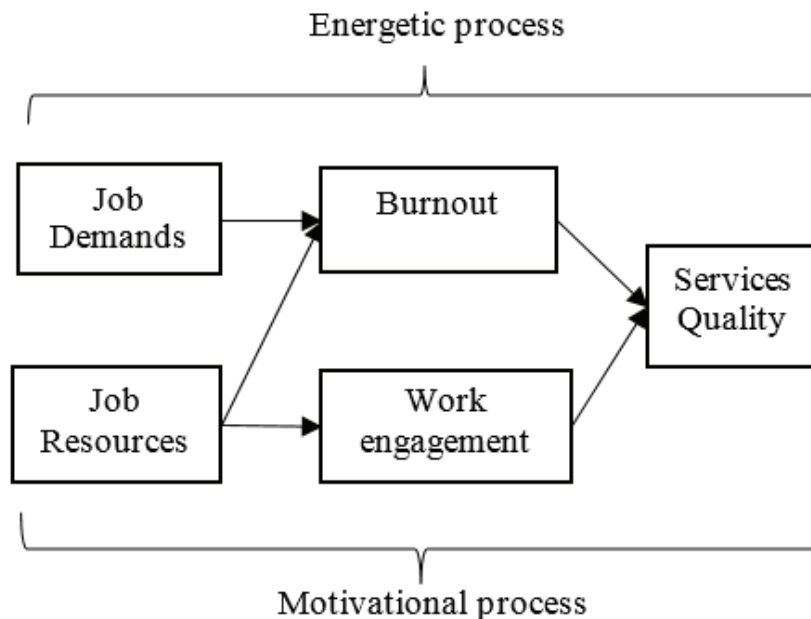


Figure 1: Job demand resource model 26,29,44

All job characteristics can be modeled using job demand and job resources and applied to all work environments or specific jobs²⁷. Several studies have proven that job demands and job resources can be applied to the nursing profession and are antecedents of burnout in nurses²⁸⁻³⁰. The Study by Cotel et al.³¹ concluded that work-family conflict (job demand), and control (job resource) as predictors of burnout in nurses. Dall’Ora et al.⁵ mentions workload and control related to nursing burnout.

Burnout experienced by nurses have an impact on patients, nurses, and hospitals³², where the impact on hospitals is affecting the quality of nursing services³³. Burnout causes the low quality of nursing services²⁹, so that it can trigger errors in providing nursing care⁵.

The quality of nursing services is a nursing

response to the physical, psychological, emotional, social, and spiritual of patient’s needs, which are given with full attention so that the health of patient recovers, the degree of health increases and returns to normal as well as the satisfaction felt by both nurses and patients³⁴. Lindgren and Anderson³⁵ stated that the quality of patient care can be seen from the perspective of patients and nurses.

Methods

This research is a cross-sectional study with a correlational approach, identifying factors related to burnout and its impact on the quality of nursing services. The study variables consisted of workload, work-family conflict, social support, job control, burnout, and quality of nursing services as presented in Figure 2.

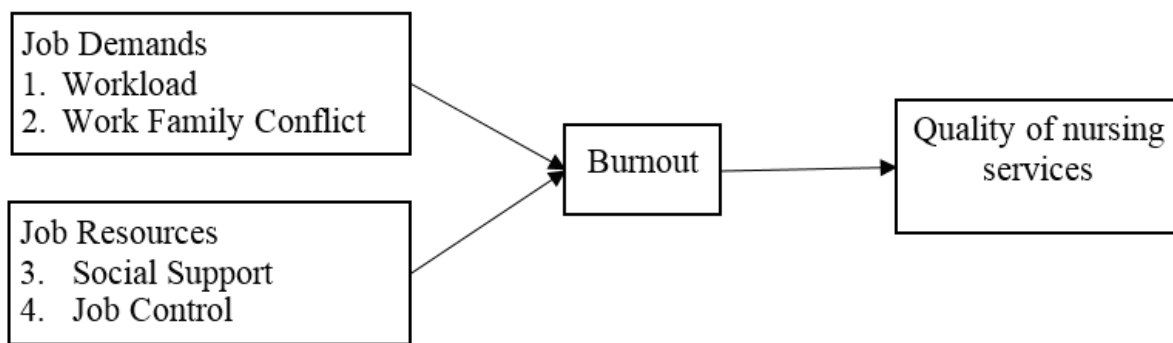


Figure 2: Study Framework

The study was conducted at one of public hospital in the capital of the Aceh Province. A total 214 of 459 nurses working in inpatient rooms especially in medical surgical nursing and paediatric nursing were selected for the study using a proportional random sampling techniques. Sample size determination is calculated by the Slovin formula.

Data collection was carried out using instruments in a Likert scale form consisting of a nursing service quality questions, burnout questions, workload questions, social support questions, work-family conflict questions, and job control questions. The Questionnaire for assessing the quality of nursing services used 48 questions of the Quality nursing care

scale (QNCS) ³⁶. The Questionnaire for assessing the Burnout used 19 questions of the Copenhagen burnout inventory (CBI) ²⁰. The Copenhagen psychosocial questionnaire (COPSOQ) version III ³⁷ was used to measure workload (4 questions), social support (6 questions), and work-family conflict (5 questions). The Questionnaire for assessing job control used 4 questions of a sub-scale of the Job resource in nursing scale (JRIN) ³⁰. Cronbach's alpha values of the instruments from a reliability test at one hospital in Banda Aceh were 0.90 for the quality of nursing services questions, 0.77 for burnout, 0.74 workload,

0.75 for work-family conflict, 0.84 for support social, and 0.72 for job control, respectively.

Result and Discussion

Characteristics of research respondents are shown in the Table 1. Of the 214 respondents surveyed, the majority were female nurses (81,8 %), aged between 31-40 years (59.3%), married (81.8%), had an associate degree in Nursing education (52.3%), and had worked as nurses for 5 – 10 years (57.5%). Characteristics of respondents in more detail are presented in Table 1.

Table 1: Characteristics of respondents

Characteristics	Frequency	Percentage
Gender		
a. Male	39	18.2
b. Female	175	81.8
Age		
a. < 29 years	37	17.3
b. 29 – 30 years	46	21.5
c. 31 – 40 years	127	59.3
d. 41 – 50 years	4	1.9
Marital status		
a. Single	37	17.3
b. Married	174	81.8
c. Widow/widower	3	1.4
Education		
a. Magister of nursing	1	0.5
b. Ners	89	41.6
c. Bachelor of Applied Sciences	1	0.5
d. Associate Degree	123	57.5
Working period		
a. < 5 years	72	33.6
b. 5-10 years	112	52.3
c. 11 – 20 years	29	13.6
d. > 20 years	1	0.5

The Tabel 2 show that the Correlation Analysis between workload, work-family conflict, social support, and work control with burnout was carried out using the Fisher's exact test. Results of the analysis show that there were significant correlations between workload ($p=0.000$), work-family conflict ($p=0.000$), and job control (0.003) with nurses' burnout. The

correlation was not statistically significant between social support and nurses' burnout ($p=1.000$). The Correlation coefficient shows that the workload has a weak correlation, the work-family conflict has a moderate correlation, and the job control has a weak correlation.

Table 2: Factors that influence burnout

Independent Variable	<i>p</i>-value
Workload	0.000
Work-Family Conflict	0.000
Social support	1.000
Job Control	0.003

A high workload can drain the energy of employees, including nurses so that it can cause burnout ²¹. Dewi and Riana ³⁸ stated that working conditions with excessive workloads cause work fatigue. The workload at Aceh Public Hospital indicated 89.7% of nurses have a low workload, and 10.3% have a high workload. This high workload is triggered by various factors. Alghamdi ³⁹ suggests the workload depends on the characteristics of nurses who have knowledge and skills.

Van Der Heijden et al. ²² state that nurses who experienced work-family conflict also experienced burnout. The level of work-family conflict will be different for each person, namely, those who have children will experience more severe work-family conflicts than those who do not have children. ⁴⁰.

Based on characteristic data, 81.3% of nurses in the Aceh public hospitals were married, so it is suspected that this factor contributes to the incidence of work-family conflict in the hospital.

Social support is a job resource that can affect burnout ³. The research of Ye et al. ²³ concluded that social support is negatively related to burnout. However, the results of this study indicate that there is no relationship between social support and burnout. This condition is thought to be related to the characteristics of the Aceh hospital nurses, namely the majority of whom are married (81.3%) which means that nurses can still receive social support from their families when social support at work is not optimal. In addition, the factors of gender and personality type can determine the effect of social support on burnout

⁴¹, In addition, gender and personality type factors can determine the effect of social support on burnout, so in this case, the gender difference of nurses in Aceh public hospitals can be a confounding variable on the correlation between social support and burnout.

Based on the results of the analysis of the correlation between job control and burnout, it is concluded that nurses who have high job control will experience low burnout. The results of the descriptive analysis showed that nurses in the Aceh public hospitals experienced low burnout, 84.3% has high job control and 56.5% has low job control.

Control of work involves individuals in managing and controlling their work and taking initiative in work ⁴². In nursing practice, it is defined as the freedom of nurses in solving problems that affect nursing care ²⁴. Low of job control, which is an aspect of job resources, when interacting with high job demands will cause workers to withdraw and burnout will occur ⁴³.

The impact of nurse burnout on the quality of nursing services was identified through testing the relationship between burnout variables and the quality of nursing services with the Fisher's exact test. The results of data analysis is presented in Table 3 as follows.

Table 3: The correlation between burnout and the quality of nursing services

Independent Variable	p-value
Burnout	0.090

Table 3 shows that there was no relationship between nurse burnout and the quality of nursing

services. In other words, nurse burnout at the Aceh public hospital does not have an impact on the quality of nursing services at the hospital.

Based on the JDR model, burnout can predict organizational outcomes such as service quality ⁴⁴. However, the results of this study contradict the JDR model, which is thought to be due to the characteristics of nurses and the characteristics of the hospital where this research was conducted. As a referral center hospital for the province of Aceh which continuously gets monitoring from the public, it demands nurses to demonstrate the quality of nursing services according to standards. In addition, hospital accreditation efforts also require nurses to always carry out nursing activities according to standard operating procedures (SOP) so that under any condition nurses must demonstrate service quality that meets expected standard.

The most dominant factor influencing burnout was identified by logistic regression analysis using the backward stepwise method. The final model of the backward stepwise method obtained two significant variables affecting burnout, namely workload and work-family conflict. The job control variable was excluded from the model because it had a p-value greater than 0.05. Table 4 presents the results of logistic regression analysis.

Table 4 shows that the workload and work-family conflict variables significantly affect burnout simultaneously. Based on the Odd Ratio (OR) value, it shows that work-family conflict is a more dominant factor that affects burnout compared to workload.

Table 4: The results of logistic regression analysis

Variable	B	p-value	Exp (B)	95% Exp (B)	
				Lower	Upper
Workload	1.202	0.023	3.328	1.179	9.394
Work-Family Conflict	1.645	0.001	5.182	1.979	13.572
Job Control	-1.063	0.041	0.345	0.125	0.955

Conclusion

Factors related to burnout for nurses who work in the inpatient wards of Aceh general hospitals are workload, work-family conflict, and job control. While social support is not related to burnout and burnout does not have an impact on the quality of nursing services at the hospital.

This study has limitations, including data collection using a questionnaire method distributed online which allows the collected data to be less objective. Further research using observation collection methods is needed to obtain more objective data, and it involves a population of nurses in wider hospital scope to produce more representative conclusions. In addition, future research by controlling the variables of gender and personality type is proper to identify the effect of social support on burnout.

Ethical Clearance: This research has been declared ethically feasible under the Seven 2011 WHO ethical standards by the Health Research Ethics Committee of RSUDZA-FK USK.

Conflict on Interest: None

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