

Overview Of Burnout Levels in Nurses Working in the ICU

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Submission Date: 10 August 2026, Accepted: 18 September 2026

Abstract

Burnout is an occupational psychological syndrome associated with chronic work stress and characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment. Intensive care nurses face high clinical complexity, critical patient conditions, continuous monitoring, complex technology, and rapid decision-making, which may increase burnout risk. This study aimed to describe the level of burnout among nurses working in an adult intensive care unit at a tertiary referral hospital in Bali, Indonesia. A quantitative descriptive design was used. The population consisted of 57 nurses and all were included using total sampling. Data were collected from 31 May to 27 June 2026 using the Maslach Burnout Inventory (MBI) administered through Google Forms. Data were analyzed univariately and presented as frequencies and percentages. Most respondents were female (70.18%), aged >35 years (77.19%), had a bachelor's degree in nursing (59.65%), were married (92.98%), and had 5 to <10 years of ICU work experience (26.32%). Most nurses had low burnout (55; 96.49%), while 2 respondents (3.51%) had moderate burnout and none had high burnout. The findings indicate that burnout was generally low among the nurses studied. Maintaining a supportive work environment, adequate staffing, effective teamwork, and preventive monitoring is recommended to sustain nurses' well-being and reduce the risk of burnout escalation.

Keywords: Burnout, ICU, Nurses.

Introduction

Intensive Care Unit (ICU) services require continuous monitoring and rapid, accurate nursing interventions for critically ill patients. Nurses in this setting must manage unstable physiological conditions, complex treatment procedures, advanced medical technology, and frequent clinical decision-making. These demands may create sustained physical and psychological pressure. Burnout is an occupational phenomenon associated with chronic workplace stress and is commonly described through emotional exhaustion, depersonalization, and reduced personal accomplishment. In nursing, burnout is important because prolonged exhaustion may affect nurses' well-being, work performance, and quality of patient care.

Evidence indicates that burnout remains an important concern among nurses. A multicentre study of Indonesian nurses reported burnout as a relevant occupational problem across hospitals, while studies among intensive care nurses have documented substantial emotional exhaustion and depersonalization¹⁻³. The work environment, staffing, workload, communication, and organizational support are among the factors that can influence burnout⁴⁻⁶.

The ICU context may also be affected by high bed occupancy and pressure to transfer clinically stable patients to lower levels of care. An international survey involving 219 participants from 40 countries found that ICU capacity utilization around 90% may contribute to premature or delayed patient transfers when ward or intermediate-care beds are unavailable⁷. Such transfers require effective handover, coordination, documentation, and preparation while nurses continue caring for critically ill patients, potentially adding to workload and stress.

At the study site, preliminary data in the thesis indicated an average ICU bed occupancy rate of 87.24% during October–December 2025, with a nurse-to-patient ratio of approximately 1:2–3. The thesis also reported that the adult ICU consisted of three units with a total capacity of 28 beds and 57 nurses. These conditions illustrate the complexity of the work environment and the importance of assessing nurses' burnout. The present study therefore aimed to describe the level of burnout among nurses working in the adult ICU.

Method

1. Research design

This study used a quantitative descriptive design to describe burnout levels among nurses working in an adult ICU.

2. Setting and samples

The study was conducted in an adult ICU of a tertiary referral hospital in Bali, Indonesia. Data were collected from 31 May to 27 June 2026. The population consisted of 57 nurses. Because the population was relatively small, total sampling was used, and all 57 nurses who met the study criteria were included as respondents.

3. Measurement and data collection

Data were collected using a demographic form and the Maslach Burnout Inventory (MBI). The MBI used in the thesis consists of 22 items covering emotional exhaustion (9 items), depersonalization (5 items), and personal accomplishment (8 items). Each item was rated on a five-point frequency scale: never (1), sometimes (2), rarely (3), often (4), and always (5). The operational categories used in the study were high burnout (83–110), moderate burnout (66–82), and low burnout (<66). The questionnaire was administered through Google Forms. The thesis describes the MBI as a widely used self-report instrument for assessing burnout among health professionals. Recent psychometric research also supports the use of the MBI for healthcare burnout assessment, while noting differences in reliability among its dimensions ⁸.

4. Data analysis;

Data were analyzed using univariate analysis and presented as frequency distributions and percentages. The analysis described respondent characteristics and the overall burnout category.

Results

A total of 57 nurses participated in the study. Respondent characteristics are presented in Table 1.

Table 1. Distribution of respondent characteristics (N=57).

Characteristics	Category	n	%
Sex	Male	17	29.82
	Female	40	70.18
Age	<35 years	13	22.81
	>35 years	44	77.19
Education	Diploma in Nursing	23	40.35
	Bachelor's degree in Nursing	34	59.65
Marital status	Married	53	92.98
	Not married	4	7.02
ICU work experience	1-<5 years	8	14.04
	5-<10 years	15	26.32
	10-<15 years	13	22.81
	15-<20 years	10	17.54
	≥20 years	11	19.30

Most respondents were female (40; 70.18%), aged >35 years (44; 77.19%), had a bachelor's degree in nursing (34; 59.65%), were married (53; 92.98%), and had 5-<10 years of ICU work experience (15; 26.32%).

Table 2. Distribution of burnout levels among ICU nurses (N=57).

Burnout level	n	%
Low	55	96.49
Moderate	2	3.51
High	0	0.00

Burnout was predominantly categorized as low. Fifty-five respondents (96.49%) had low burnout, two (3.51%) had moderate burnout, and none had high burnout.

Discussion

The main finding of this study was that nearly all respondents had low burnout, with only two nurses classified as having moderate burnout. This finding differs from several studies conducted in intensive care settings that have reported higher levels of emotional exhaustion and depersonalization. For example, a multicentre study of 460 intensive care nurses found high emotional exhaustion in 73.9% and high depersonalization in 52.2%⁹. Differences may be related to the timing of data collection, organizational context, staffing conditions, workload, professional experience, and the

specific criteria used to classify overall burnout.

The finding is also consistent with the thesis's comparison with previous Indonesian nursing research in which low burnout was observed among a substantial proportion of respondents. At the same time, another local study cited in the thesis reported predominantly moderate burnout among inpatient nurses. These differences suggest that burnout cannot be interpreted solely from the fact that nurses work in a high-acuity environment. Individual adaptation, work experience, social support, leadership, workload distribution, and organizational climate may provide protective effects.

The respondent profile may partly explain the low overall burnout. Most nurses were older than 35 years and had previous ICU experience. More experienced nurses may have developed clinical competence, confidence in decision-making, emotional regulation, and coping strategies that help them manage demanding situations. However, this interpretation should be treated cautiously because the present study was descriptive and did not test associations between age or work experience and burnout.

Two respondents experienced moderate burnout and both were female. The thesis analysis showed that the moderate-burnout respondents retained relatively good personal accomplishment but had higher emotional exhaustion. This pattern is clinically meaningful because a nurse may still perceive herself as competent and effective while experiencing increasing emotional depletion. Early monitoring of emotional exhaustion may therefore be useful even when overall burnout remains low.

Workload and the nursing work environment are important considerations. A recent cross-sectional study among intensive care nurses found that burnout risk was associated with objective nursing workload and the nursing work environment ⁵. In the present setting, the reported ICU bed occupancy and nurse-to-patient ratio indicate that workload pressure can occur even though the observed overall burnout level was low. This supports the need to maintain adequate staffing, effective teamwork, opportunities for rest, and supportive leadership rather than waiting for burnout to become severe.

Another consideration is the pressure created by ICU discharge and transfer processes. International evidence indicates that high ICU capacity utilization can influence the timing of transfers and create operational pressure ⁷. In practice, transfer activities require handover, documentation, coordination, and patient preparation while

ICU nurses continue caring for critically ill patients. Therefore, maintaining clear transfer procedures and adequate coordination between units may help prevent additional workload from becoming a persistent source of stress.

Overall, the low burnout level in this study should not be interpreted as an absence of risk. Burnout is dynamic and can change with workload, staffing, organizational conditions, and individual circumstances. Regular screening and preventive measures remain important, particularly for nurses who begin to show increasing emotional exhaustion.

Limitation

This study has several limitations. First, the design was descriptive and therefore could not determine causal relationships or identify which occupational, organizational, or individual factors significantly influenced burnout. Variables such as workload, number and acuity of patients, shift patterns, organizational support, job satisfaction, leadership style, coping strategies, and psychological conditions were not analyzed. Second, the study involved a relatively small population from one adult ICU setting, which limits generalization to other hospitals or ICU types. Third, data were collected through self-report questionnaires, so responses may have been influenced by respondents' perceptions at the time of completion.

Conclusion

Most nurses working in the adult ICU had low burnout (96.49%), while 3.51% had moderate burnout and none had high burnout. The respondents were predominantly female, aged >35 years, bachelor-prepared, married, and had 5–<10 years of ICU work experience. The findings support the importance of maintaining a supportive work environment and preventive burnout monitoring even when the overall burnout level is low. Future studies should examine workload, staffing, work environment, coping, and other organizational or individual factors using analytical designs.

Ethical Considerations

The study received ethical approval from the Health Research Ethics

Committee, Faculty of Medicine, Universitas Udayana, with ethical clearance number 2018/UN14.2.2.VII.14/LT/2026, issued on 5 May 2026. Research permission was subsequently obtained from the study hospital. Respondents received information about the study and provided informed consent before completing the questionnaire.

Acknowledgment

The authors thank the nursing staff who participated in the study and the supervisors and institutions that supported the completion of this research.

Conflict of Interest

The authors declare that there is no conflict of interest related to this study.

Author contribution

Ni Putu Wida Listiyani: conceptualization, methodology, data collection, data analysis, and manuscript preparation. Ni Komang Sukra Andini: supervision, methodological review, and critical revision. Ni Nyoman Ayuningsih: supervision, methodological review, and critical revision. All authors approved the final manuscript.

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