

Nursing Management Implementation and Burnout Syndrome as Predictors of Nursing Care Quality

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ABSTRACT

The quality of nursing care in hospitals is influenced by multiple organizational and psychological factors, particularly the implementation of nursing management and the presence of burnout syndrome among nurses. Effective nursing management ensures coordinated care delivery, while burnout may reduce professional performance and service responsiveness. This study aimed to analyze the implementation of nursing management and the effect of burnout syndrome on the quality of nursing care. A cross-sectional design was employed involving 98 respondents. Data were collected using structured questionnaires, and hypotheses were tested using multiple linear regression analysis to examine the simultaneous and partial effects of nursing management and burnout syndrome on nursing service quality. The analysis demonstrated that nursing management had a significant effect on the quality of nursing care ($p = 0.027$; $t = 2.242$). Burnout syndrome also showed a significant effect on nursing service quality ($p = 0.005$; $t = 2.899$). These findings indicate that both organizational management practices and psychological conditions significantly influence service quality. As conclusion, nursing management implementation and burnout syndrome are the predictors of nursing care quality. Strengthening managerial practices and addressing nurse burnout are essential strategies to improve hospital service quality.

Keywords: nursing management; burnout syndrome; service quality; nurses

INTRODUCTION

Regional Public Hospital (RSUD) Tora Belo Sigi, as a public health service organization in Sigi Regency, Central Sulawesi Province, continuously strives to deliver comprehensive healthcare services encompassing promotive, preventive, curative, and rehabilitative aspects for the entire community. Inpatient services play a strategic role in reflecting both the quality and quantity of healthcare services provided by RSUD Tora Belo Sigi. With a capacity of 183 beds, inpatient care is expected to adequately respond to the increasing demand for high-quality and patient-centered health services. The performance of inpatient services often serves as a key indicator of hospital effectiveness, operational efficiency, and service responsiveness.

Data on inpatient visits at RSUD Tora Belo Sigi during the period 2020–2022 demonstrate a significant upward trend. In 2020, the number of inpatient visits was recorded at 5,563 and increased substantially to 8,623 visits in 2022. This increase was accompanied by a rise in the Bed Occupancy Ratio (BOR), from 41.11% in 2020 to 42.71% in 2022. Similarly, the Bed Turn Over (BTO), which reflects the frequency of bed utilization, increased from 38.83 times in 2020 to 44.47 times in 2022 [1]. These data indicate growing public trust and utilization of hospital services; however, they also imply increased workload and service pressure, particularly within inpatient units.

One critical aspect that requires attention in efforts to improve hospital service quality is the quality of nursing care. Nursing services constitute a form of professional healthcare service and represent an integral component of hospital healthcare delivery, significantly determining overall service quality [2]. As public expectations regarding healthcare quality continue to rise, nurses are required to adapt in a structured and strategic manner. Changes in nursing services involve two principal alternatives: proactively implementing innovation and transformation, or passively being compelled to change by evolving circumstances and situational demands [3]. Therefore, strategic planning and managerial support are essential to ensure that nursing practice evolves in alignment with quality standards.

Improving the quality of nursing care requires adherence to established standards and written guidelines in the implementation of professional duties. However, the successful implementation of these standards depends not only on institutional policies but also on individual nurse competence, collective teamwork, and active participation from all members of the nursing profession [4]. This highlights the importance of effective nursing management systems that can coordinate human resources, workflows, and professional standards to ensure consistent and high-quality patient care.

The quality of nursing services in hospitals is influenced by multiple interrelated factors that must be managed effectively and efficiently. One of the most influential factors is the implementation of nursing management. Nursing management refers to professional nursing services in which nursing teams are organized and directed to perform managerial functions—such as planning, organizing, actuating, and controlling—to achieve organizational goals optimally and efficiently. Consequently, nursing managers are required to effectively perform managerial functions to ensure that nursing services are delivered according to established standards and institutional objectives [5].

Preliminary observations conducted by the researcher at RSUD Tora Belo Sigi revealed several managerial issues in the implementation of nursing service management and nursing care management. Some managerial processes were not fully aligned with established management procedures, particularly in the implementation of pre- and post-conferences, handovers, and nursing rounds. Delays in shift handovers reduced the effectiveness of information transfer, while socialization of nursing rounds was limited primarily to team leaders rather than disseminated comprehensively to all nursing staff. Initial interviews with six nurses also revealed the presence of work pressure, occupational stress, and additional administrative tasks unrelated to direct nursing care. These factors contributed to fatigue and emotional strain among nurses, indicating potential risks for burnout.

The urgency of this study lies in the importance of preventive measures to safeguard nurses' mental well-being, even in work environments that may appear relatively stable. The presence of nurses experiencing high levels of burnout indicates that the risk remains significant and should not be underestimated. Burnout can adversely affect job performance, professional commitment, and ultimately the quality of patient care. Therefore, understanding the relationship between nursing management implementation, burnout syndrome, and the quality of nursing services is essential. Such understanding provides a foundation for designing early prevention strategies, maintaining a positive work environment, preventing future escalation of burnout, and optimizing nursing management practices to enhance healthcare service quality at RSUD Tora Belo Sigi.

This study aims to analyze the effect of nursing management implementation and burnout syndrome on the quality of nursing services at RSUD Tora Belo Sigi, Central Sulawesi Province.

METHODS

This study was conducted at RSUD Tora Belo Sigi, Sigi Regency, Central Sulawesi Province, during January–February 2025. The research employed a quantitative approach using a cross-sectional design to examine the relationships between study variables at a single point in time. The population comprised all nurses working in the inpatient wards of RSUD Tora Belo Sigi, totaling 129 individuals. The sample was selected using probability sampling with a proportional random sampling technique, resulting in 98 respondents. This approach ensured that each nurse had an equal and proportionate opportunity to be included in the study, thereby enhancing the representativeness of the sample.

The independent variables in this study were nursing management implementation and burnout syndrome, while the dependent variable was the quality of nursing services. Nursing management referred to the implementation of managerial functions in nursing care delivery, whereas burnout syndrome reflected psychological conditions characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment. The quality of nursing services was conceptualized as the level of effectiveness and professionalism in delivering patient care in accordance with established standards.

Data were collected using a structured questionnaire consisting of 15 statements measured on a five-point Likert scale (score range 1–5). The instrument had previously undergone validity and reliability testing to ensure its adequacy for measuring the constructs under investigation. The data processing procedures included editing, coding, sorting, data entry, cleaning, and information extraction to ensure accuracy and completeness prior to analysis. Descriptive statistical analysis was first performed to summarize and classify the data, presenting the results in frequency distribution tables and percentages. Subsequently, multivariate analysis using multiple linear regression was conducted to test the proposed hypotheses and to examine the simultaneous and partial effects of nursing management and burnout syndrome on the quality of nursing services. Prior to regression analysis, classical assumption tests—including normality, multicollinearity, and heteroscedasticity tests—were performed to ensure that the regression model met statistical requirements and produced unbiased parameter estimates.

RESULTS

The frequency distribution of the variables—nursing management, burnout syndrome, and quality of nursing services—at RSUD Tora Belo Sigi, Central Sulawesi Province, in 2025 is presented in Table 1. The majority of respondents perceived nursing management as influential in supporting nurses' performance in delivering patient care. Similarly, most respondents acknowledged that burnout syndrome plays a role in nursing services. The findings further reveal that most respondents considered tangible evidence, reliability, responsiveness, assurance, and empathy as influential indicators of service quality delivered to patients. These conditions may also contribute to increased occupational stress among nurses.

The normality test was conducted to determine whether the residuals of the regression model were normally distributed. The plotted data points closely follow the diagonal line, indicating that the residuals are normally distributed. The multicollinearity test results indicate that the tolerance values for nursing management and burnout syndrome are greater than 0.100, and the Variance Inflation Factor (VIF) values are below 10.00. These findings confirm that no multicollinearity exists among the independent variables in the regression model. The results are presented in Table 3. The simultaneous test aims to determine whether nursing management and burnout syndrome collectively influence the quality of nursing services. Table 3 shows an F-value of 11.523, which exceeds the F-table value ($11.523 > 3.09$), with a significance level below $\alpha = 0.05$ ($0.000 < 0.05$). Thus, nursing management and burnout syndrome simultaneously exert a positive and significant effect on the quality of nursing services at RSUD Tora Belo Sigi. Based on Table 3, the multiple linear regression equation is formulated as follows:

$$Y = 2.036 + 0.227 X_1 + 0.332 X_2 + e$$

Where:

Y = Quality of nursing services

X_1 = Nursing management

X_2 = Burnout syndrome

e = Error term

Table 1. Distribution of nursing management, burnout syndrome, and quality of nursing services at RSUD Tora Belo Sigi in 2025

Variable	Frequency	Percentage
Nursing management		
Uncertain	7	7.1
Influential	71	72.5
Highly influential	20	20.4
Burnout syndrome		
Uncertain	8	8.2
Influential	78	79.6
Highly influential	12	12.2
Quality of nursing services		
Uncertain	2	2.0
Influential	63	64.3
Highly influential	33	33.7

Table 2. Multicollinearity test results

Variable	Tolerance	VIF
Nursing Management	0.821	1.218
Burnout Syndrome	0.821	1.218

Table 3. The results of multiple linear regression test

Model	Unstandardized coefficients beta	Std. error	Standardized coefficients beta	t	p	Description
(Constant)	2.036	0.477		4.266	0.000	Significant
Nursing management	0.227	0.101	0.228	2.242	0.027	Significant
Burnout syndrome	0.332	0.114	0.294	2.899	0.005	Significant
R square						0.195
Adjusted R square						0.178
F						11.523
p value (F test)						0.000

Nursing management demonstrated a t-value of 2.242, exceeding the t-table value ($2.242 > 1.985$), with a significance value of 0.027 (< 0.05). This indicates a positive and statistically significant effect of nursing management on the quality of nursing services. The regression coefficient ($\beta_1 = 0.227$) signifies that a 1% increase in nursing management implementation is associated with a 22.7% improvement in service quality, assuming burnout syndrome remains constant.

Burnout syndrome yielded a t-value of 2.899 ($2.899 > 1.985$) and a significance value of 0.005 (< 0.05), indicating a positive and statistically significant effect on service quality. The regression coefficient ($\beta_2 = 0.332$) implies that a 1% change in burnout syndrome corresponds to a 33.2% change in the quality of nursing services, assuming nursing management remains constant.

The coefficient of determination (Adjusted R^2) is 0.178, indicating that 17.8% of the variation in nursing service quality can be explained by nursing management and burnout syndrome, while the remaining 82.2% is influenced by other variables not included in the model. Among the independent variables, burnout syndrome is identified as the most dominant factor affecting nursing service quality, as evidenced by the highest standardized beta coefficient ($\beta = 0.294$). This finding suggests that psychological factors related to burnout exert a stronger relative influence on service quality compared to managerial factors within the study context.

DISCUSSION

Nursing management refers to a series of activities encompassing planning, organizing, staffing, leadership, and controlling various nursing functions, with the objective of improving the overall quality and quantity of healthcare services in accordance with established health standards [6]. As public expectations for high-quality healthcare services continue to increase, nursing management is required to continuously refine existing systems and procedures to meet patient expectations and maintain trust in the services provided.

The analysis of the influence of nursing management on the quality of nursing services at RSUD Tora Belo Sigi demonstrated a positive and significant effect of nursing management on service quality. These findings indicate that improvements in service quality at RSUD Tora Belo Sigi are strongly determined by the effective implementation of nursing management. This includes efforts to enhance patient satisfaction, ensure patient safety, and maintain service effectiveness through the application of professional nursing care models. These findings are supported by Sulaeman, who explains that nursing management involves the regulation of resources in implementing nursing activities through the nursing process to meet client needs, integrated with core management functions—planning, organizing, directing, and controlling. The benefits of implementing nursing management are reflected in increased patient satisfaction with nursing services [5].

Nursing management is a structured process that applies key managerial functions, including planning, organizing, human resource management, directing, and controlling [7]. These functions represent a managerial approach to nursing service administration, highlighting that service quality depends not only on medical technology or facilities but also on an efficient and well-coordinated nursing management system. Consequently, the quality of nursing services significantly influences patients' overall perceptions of the hospital.

The critical role of nursing management lies in ensuring that all nursing personnel perform in accordance with established service standards. This study is consistent with research conducted by Febrianti et al., which demonstrated that the implementation of management functions has a significant impact on improving nursing service quality in Indonesia [8]. Therefore, nursing management functions must play a central role in efforts to enhance hospital service quality.

The researchers assume that the implementation of nursing management functions must be structured and systematic rather than merely theoretical. Structured nursing management includes training, supervision, and system development aimed at improving healthcare service quality. Continuous training ensures that nursing staff possess up-to-date knowledge and skills to deliver high-quality care. Regular supervision by nurse managers enables performance monitoring, evaluation, and constructive feedback. The nursing management functions—planning, organizing, staffing, actuating, and controlling—represent the integration of nursing resources and coordination processes to achieve service objectives and ensure the objectivity of nursing care [9,10].

The development of an effective nursing management system also includes the systematic implementation of the nursing process: assessment, diagnosis, intervention, implementation, and evaluation. This process ensures that patient needs are adequately addressed in terms of safety and satisfaction. Compared to unstructured management practices, organized interventions facilitate better outcomes in patient satisfaction, patient safety, and service effectiveness [11].

In line with Bumolo et al., ward head supervision in nursing management plays a crucial role in improving the quality of nursing care documentation, thereby positively influencing overall healthcare service quality in hospitals [12]. Through appropriate implementation of nursing management, hospitals can more effectively apply patient safety standards and improve monitoring and evaluation systems for nursing services.

Management theory in nursing services emphasizes the application of management functions—planning, organizing, directing, supervising, and controlling—as a fundamental framework for ensuring sustainable service quality. The planning phase includes situational analysis, goal setting, and activity planning to achieve quality targets. Implementation involves training, needs identification, and team formation. Supervision is conducted through data collection, outcome evaluation, and impact analysis on service quality. Finally, the controlling phase focuses on follow-up actions, innovation, and documentation to address deficiencies and ensure continuous improvement [13]. Effective quality leadership, particularly by ward heads, plays a vital role in planning, controlling, and enhancing service quality through optimal organization. Strategic planning combined with team commitment enables the achievement of patient satisfaction, improved safety, and strengthened trust in nursing services. Thus, nursing management plays a central role in ensuring hospital service quality through the fulfillment of patient satisfaction, safety, and service effectiveness aspects [14].

Burnout is a set of psychological symptoms resulting from prolonged exposure to work-related stressors, characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment [15]. The regression analysis in this study demonstrated a positive and significant effect of burnout syndrome on the quality of nursing services provided at RSUD Tora Belo Sigi. The researchers assume that burnout experienced by nurses in this hospital is driven by high work-related stress, time pressure, and heavy workloads. This assumption is supported by Sholikah et al., who describe burnout as a condition in which individuals feel emotionally and physically depleted [16], and by findings indicating that quality of nursing work life (QNWL) influences burnout, with high workloads and monotonous job design increasing vulnerability [17].

Observations at RSUD Tora Belo Sigi indicated that burnout symptoms were reflected in physical, mental, and emotional changes among nurses. Physical exhaustion included fatigue, weakness, headaches, nausea, and sleep disturbances. Alam's findings further support these results, identifying mental exhaustion through negative attitudes, cynicism, prejudice, indifference, and emotional exhaustion manifested as anxiety, depression, pessimism, and helplessness [18].

Burnout is influenced not only by emotional and mental factors but also by individual and occupational factors. Individual factors include age, gender, length of employment, and marital status. Gokdemir et al. reported that gender and increasing age are associated with emotional and total burnout scores [19]. Occupational factors such as workload, job control, rewards, social support, workplace fairness, and work values are also associated with increased burnout [15].

The findings revealed that the majority of nurses at RSUD Tora Belo Sigi experienced burnout. This aligns with Gokdemir et al., who found that burnout increases with longer service duration and is associated with emotional exhaustion and depersonalization subscales [19]. Emotional exhaustion was closely linked to depersonalization; addressing emotional exhaustion may reduce depersonalization symptoms. Many nurses reported feeling fatigued after work and emotionally drained due to job demands. Emotional fatigue, often related to high stress levels, can be

mitigated through effective stress management. Hardi concluded that high levels of emotional exhaustion and depersonalization are significantly associated with burnout among healthcare workers [20].

Individuals employ different stress management strategies, such as engaging in hobbies, recreational activities, and positive coping mechanisms to reduce stress levels [21]. Maintaining positive relationships with colleagues and supervisors is also essential, as workplace conflicts may trigger emotional strain. Mutual support and respect can help prevent conflict and reduce emotional burden [22].

This study is limited to examining burnout as the primary psychological variable, while other factors, such as mental workload, may also influence nursing service quality. Future research is recommended to measure mental workload using the NASA-TLX method and assess burnout levels using the Maslach Burnout Inventory–Human Services Survey (MBI-HSS). Mental workload measurement involves three stages: paired comparison weighting, event scoring, and calculation of weighted workload (WWL). The MBI-HSS questionnaire may assist nurses in identifying their emotional experiences and work-related conditions more comprehensively.

CONCLUSION

Based on the findings and discussion, it can be concluded that nursing management and burnout syndrome significantly influence the quality of nursing services.

Ethical consideration, competing interest and source of funding

- This study received ethical approval from the Ethics Committee of RSUD Tora Belo Sigi. All research procedures adhered to ethical principles, including voluntary participation, informed consent, confidentiality of respondents' identities, and the use of data solely for academic and research purposes.
- There is no conflict of interest related to this publication.
- Source of funding is authors.

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