



Original Article

## Holistic needs fulfillment and quality of life in critically ill patients in the intensive care unit: a quasi-experimental study

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### ABSTRACT

**Background:** Critically ill patients in intensive care units (ICUs) experience complex physical, psychological, social, and spiritual challenges that can substantially reduce their quality of life (QoL). Evidence indicates that 50–70% of Indonesian ICU patients develop post-intensive care syndrome (PICS), and up to 60% of ICU survivors report reduced QoL. However, empirical evidence on the effectiveness of holistic nursing care in improving QoL among critically ill patients remains limited.

**Purpose:** This study aimed to examine the association between holistic needs fulfillment and quality of life among critically ill patients in the ICU.

**Methods:** A quantitative quasi-experimental study with an intervention and control group design was conducted in the ICU of Sentra Medika Hospital, Cikarang, Indonesia, from June to July 2025. A total of 70 critically ill patients were recruited using consecutive sampling and allocated to an intervention group (n = 35) and a control group (n = 35). Holistic needs fulfillment was assessed using a validated holistic needs observation sheet, and quality of life was measured using the World Health Organization Quality of Life–BREF (WHOQOL-BREF). Data were analyzed using independent samples t-tests.

**Results:** Patients who received holistic nursing care demonstrated significantly higher post-intervention quality of life compared with those receiving routine ICU care (p < 0.001).

**Conclusion:** Fulfillment of holistic needs was associated with better quality of life outcomes among critically ill patients. These findings support the integration of structured holistic nursing care into ICU practice to enhance patient-centered care and overall well-being during critical illness.

### INTRODUCTION

Quality of life (QoL) is a core health outcome reflecting individuals' perceptions of their physical, psychological, social, and spiritual well-being. In critically ill patients, QoL is profoundly compromised due to severe physiological instability, restricted mobility, emotional distress, prolonged isolation, and uncertainty regarding prognosis.<sup>1,2</sup> Patients admitted to the intensive care unit (ICU) face complex and interrelated challenges that extend beyond biological dysfunction, underscoring the need for comprehensive care approaches that address multidimensional human needs.<sup>3</sup> Consequently, care strategies that focus solely on physiological stabilization are increasingly recognized as insufficient for optimizing recovery and long-term well-being.<sup>4</sup>

Holistic nursing care has emerged as a patient-centered approach that integrates biological, psychological, social, and spiritual dimensions to preserve and enhance QoL.<sup>5</sup> As ICU survival rates continue to improve globally, health-related quality of life (HRQoL) has become a critical indicator for evaluating the effectiveness of intensive care interventions and the quality of nursing practice.<sup>6,7</sup> Evidence suggests that up to 60% of ICU survivors experience persistent deterioration in QoL, including physical disability, emotional distress, and cognitive impairment.<sup>8</sup> In Indonesia, the prevalence of post-intensive care syndrome (PICS) ranges from 50% to 70%, leading to long-term physical, psychological, and social consequences among ICU survivors.<sup>9,10</sup> Local hospital-based studies further indicate that a substantial proportion of critically ill patients report poor QoL, emphasizing the importance of nursing interventions that target non-fatal patient-centered outcomes.<sup>11</sup>

Previous studies have shown that holistic nursing interventions can reduce anxiety, improve psychological resilience, and enhance post-ICU QoL.<sup>12-14</sup> However, most existing research has focused on isolated outcomes or specific intervention components rather than examining the fulfillment of holistic needs as an integrated construct. Moreover, empirical evidence directly linking holistic needs fulfillment to QoL outcomes in critically ill patients remains limited, particularly in low- and middle-income countries.<sup>15-17</sup> The lack of psychometrically validated instruments to comprehensively assess holistic needs fulfillment in ICU populations further constrains the strength of existing evidence.

Theoretical frameworks such as Dossey's Holistic Nursing Theory provide a robust foundation for addressing patients' comprehensive needs through systematic assessment, individualized care planning, evidence-based intervention, and holistic outcome evaluation.<sup>18,19</sup> Nevertheless, the implementation of holistic nursing care in ICU settings faces substantial barriers, including high workload, time constraints, and limited emphasis on psychosocial and spiritual dimensions within routine critical care practice.<sup>18,20,21</sup> This gap between theoretical ideals and clinical reality highlights the need for empirically grounded, feasible holistic care models in critical care environments.

Therefore, further research is warranted to generate robust evidence on the effectiveness of holistic needs fulfillment in improving QoL among critically ill patients. This study addresses this gap by employing a newly developed and psychometrically validated instrument to measure holistic needs fulfillment and examining its effect on QoL using a quasi-experimental design in an ICU setting. The study aims to evaluate the effectiveness of holistic needs fulfillment on quality of life among critically ill patients, thereby strengthening evidence-based nursing practice and supporting the integration of holistic, humanistic care into critical care services in Indonesia.

## METHOD

### *Study Design*

This quantitative study employed a quasi-experimental design with intervention and control groups.<sup>22,23</sup> A pre-test and post-test approach was used to evaluate changes in QoL following the implementation of a holistic nursing intervention.

### *Setting and Respondents*

This study was conducted in the ICU of Sentra Medika Hospital, Cikarang, Indonesia, between June and July 2025. The study population comprised adult patients admitted to the ICU during the study period. A total of 70 patients were included in the study. Participants were recruited using a consecutive sampling technique, whereby all eligible patients meeting the inclusion criteria during the study period were approached for participation until the required sample size was achieved.

Eligible participants were patients aged 18–80 years who had been hospitalized in the ICU for at least 48 hours, were medically stable, conscious (Glasgow Coma Scale score > 9), able to communicate verbally, and willing to participate in the study. Patients were excluded if they had severe cognitive impairment, were receiving endotracheal intubation, had increased intracranial pressure, limb-related functional limitations, or spinal cord injuries.

Eligible patients were identified on a daily basis by the research team. After receiving a detailed explanation of the study and providing written informed consent, participants were allocated to either the intervention or control group based on existing ICU care allocation procedures to minimize disruption to routine clinical workflows.

### *Intervention Procedure*

The intervention protocol in this study was adapted from previously published nursing intervention studies conducted in ICU settings.<sup>7,24</sup> Participants in the intervention group received structured holistic nursing care once daily during the morning shift for approximately 20–30 minutes over three consecutive days. The intervention addressed four holistic care domains: biological, psychological, social, and spiritual needs. All interventions were delivered by trained ICU nurses using a standardized holistic needs assessment and intervention guide to ensure consistency and intervention fidelity. Participants in the control group received routine ICU nursing care according to hospital protocols, without structured holistic needs assessment or intervention. Post-test QoL assessment was conducted after completion of the intervention and prior to ICU discharge using the same validated instrument applied at baseline.

### *Variables, Instruments, and Measurement*

The study intervention was holistic needs fulfillment, assessed using the Holistic needs fulfillment observation sheet.<sup>7</sup> This instrument had previously demonstrated acceptable content validity and inter-rater reliability. Quality of life was measured using the world health organization quality of life–BREF (WHOQOL-BREF), a validated instrument assessing physical, psychological, social, and environmental domains of QoL.<sup>25</sup> Baseline QoL measurements were obtained prior to the intervention, and post-test assessments were conducted following completion of the intervention protocol. All data collection procedures were standardized to ensure accuracy and consistency.

### *Data Analysis*

Data were analyzed using SPSS version 25. Data were screened and met the assumptions for parametric testing. Independent samples t-tests were used to compare post-intervention QoL scores between the intervention and control groups. A p-value of < 0.05 was considered statistically significant.

**Ethical Consideration**

This study was approved by the Ethics Committee of Universitas Medika Suherman (Approval No. 001678/UNIVERSITAS MEDIKA SUHERMAN/2025). Written informed consent was obtained from all participants prior to data collection.

**RESULTS**

**Participant Characteristics**

A total of 70 critically ill patients were included in the study. Participants were allocated into the intervention group (n = 35) and the control group (n = 35). Most participants were male (60.0%), and the majority were aged between 43 and 68 years (67.1%). The most common primary diagnoses were sepsis (25.7%), post-operative conditions following major surgery (22.9%), and respiratory failure (20.0%). Overall, the demographic and clinical profile reflected a typical adult ICU population (Table 1).

**Table 1.** Baseline characteristics of participants

Characteristic	Result
<b>Sex</b>	
Male	42 (60.0%)
Female	28 (40.0%)
<b>Age group (years)</b>	
18–42	16 (22.9%)
43–68	47 (67.1%)
>68	7 (10.0%)
<b>Primary diagnosis</b>	
Sepsis	18 (25.7%)
Post-operative major surgery	16 (22.9%)
Respiratory failure	14 (20.0%)
Others	22 (31.4%)

**Effect of Holistic Nursing Intervention on Quality of Life**

Table 2 presents the comparison of post-intervention QoL scores between the intervention and control groups. Patients in the intervention group demonstrated significantly higher QoL scores compared with those in the control group. Independent samples t-test analysis revealed a statistically significant difference in QoL between groups (p < 0.001). These findings indicate that patients who received structured holistic nursing care maintained better quality of life outcomes compared with those receiving routine ICU care alone.

**Table 2.** Comparison of post-intervention quality of life between groups

Group	Mean QoL ± SD	p-value
Intervention (n = 35)	72.0 ± 7.8	<0.001
Control (n = 35)	44.1 ± 8.9	

**DISCUSSION**

This study found that fulfillment of holistic needs was associated with better quality of life outcomes among critically ill patients in the ICU. Patients who received structured holistic nursing care demonstrated higher quality of life compared with those receiving routine ICU care alone, highlighting the importance of comprehensive care approaches that extend beyond physiological stabilization. These findings support the growing recognition that bio-psycho-socio-spiritual care is integral to promoting well-being and adaptation to illness in critically ill populations.

The observed association between holistic nursing care and improved quality of life is consistent with the principles of the Dossey Holistic Nursing Model, which emphasizes the integration of body, mind, and spirit in nursing practice. Unlike conventional ICU management that predominantly focuses on physiological parameters, holistic nursing incorporates emotional support, social connectedness, family involvement, and spiritual care as essential components of recovery. Through these mechanisms, patients may experience reduced psychological distress, enhanced coping capacity, and greater perceived support, which together contribute to better quality of life perceptions during critical illness.<sup>15</sup>

The findings of this study align with previous research demonstrating the benefits of holistic nursing interventions in critical care settings. Prior studies have reported that holistic approaches reduce anxiety, improve emotional well-being, and enhance patient satisfaction following major surgical and critical care interventions.<sup>26,27</sup> Psychosocial and spiritual support have also been shown to strengthen trust between patients and healthcare providers, improve treatment adherence, and promote resilience during and after ICU stays.<sup>16,28</sup> Collectively, these studies reinforce the present findings and underscore the relevance of holistic nursing care in improving patient-centered outcomes in intensive care environments.

A notable contribution of this study is the use of a psychometrically validated instrument specifically designed to measure holistic needs fulfillment and examine its relationship with quality of life. Unlike many previous studies that focused on isolated dimensions of care, this study assessed holistic needs as an integrated construct encompassing physical, psychological, social, and spiritual domains.<sup>29-33</sup> This comprehensive approach provides stronger empirical support for understanding how multidimensional care contributes to quality of life outcomes, particularly within the Indonesian ICU context, where evidence on holistic nursing interventions remains limited.

From a clinical perspective, systematically identifying and addressing unmet bio-psycho-socio-spiritual needs enables nurses to deliver more comprehensive and person-centered care. Integrating structured holistic assessments into routine ICU practice may help shift the focus of critical

care from survival alone toward optimizing patients' overall well-being and adaptive capacity.<sup>4,30</sup> Such an approach supports a more humanistic model of critical care that prioritizes quality of life alongside traditional clinical outcomes.

Several limitations should be acknowledged. The quasi-experimental design and non-randomized group allocation may limit causal inference, and baseline differences between groups warrant cautious interpretation of the findings. Additionally, the study was conducted in a single ICU setting, which may affect generalizability. Nevertheless, the study provides valuable preliminary evidence supporting the integration of holistic nursing care into ICU practice and offers a foundation for future randomized or multicenter studies to further evaluate its effectiveness.

## CONCLUSIONS AND RECOMMENDATION

This study indicates that critically ill patients who received holistic nursing care demonstrated better quality of life outcomes during ICU hospitalization compared with those receiving standard care alone. Addressing patients' biological, psychological, social, and spiritual needs alongside routine medical treatment underscores the importance of comprehensive and patient-centered nursing approaches in critical care settings.

Despite these findings, this study has several limitations, including its single-center design, relatively small sample size, and the absence of long-term follow-up after ICU discharge. Future research involving larger, multi-center samples and longitudinal designs is warranted to further evaluate the sustained effects of holistic nursing care on quality of life and recovery outcomes. Nevertheless, the findings provide preliminary evidence supporting the integration of holistic nursing care into routine ICU practice to enhance patient-centered outcomes.

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