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Original Research Article

A Study on Nutritional Awareness among Critical Care Nurses

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Abstract:

Background: Nutrition plays a vital role in the management and recovery of critically ill patients. Nurses in critical care settings are integral to delivering and monitoring nutritional support; however, their level of awareness and involvement remains variable. **Objectives:** To assess the knowledge, attitudes, and awareness of critical care nurses regarding nutritional management of critically ill patients. **Methods:** A descriptive, questionnaire-based study was conducted among 95 nurses working in critical care units. A structured questionnaire was used to collect data on participants' knowledge, perceptions, and practices related to nutrition in critically ill patients. **Results:** The study identified significant gaps in nutritional knowledge and practice. Only 13% of nurses were aware of the need to calculate energy requirements based on disease-specific conditions. A majority (78%) perceived nutritional management as the responsibility of dieticians rather than nurses. None of the participants had attended any educational or academic program related to critical care nutrition. Despite this, 93.5% of nurses agreed that nutrition plays a major role in influencing patient outcomes. Additionally, 78% expressed willingness to upgrade their knowledge regularly. **Conclusion:** Although most nurses recognize the importance of nutrition in patient outcomes, there is a considerable deficiency in knowledge and active involvement in nutritional care. The findings emphasize the need for structured educational interventions and training programs to improve awareness and competency in critical care nutrition among nurses, thereby enhancing overall patient care and outcomes.

Keywords: awareness, critical care, nurses, nutrition

Introduction:

Nutrition is an essential component of patient care in the intensive care unit (ICU), as critically ill patients are highly vulnerable to malnutrition due to increased metabolic stress, inflammation, and catabolic processes. Inadequate nutritional support in critically ill patients is associated with prolonged hospital stay, increased risk of infections, delayed wound healing, organ dysfunction, and higher mortality rates. Early and appropriate nutritional intervention has therefore become a fundamental aspect of critical care management. International guidelines from organizations such as the Society of Critical Care Medicine (SCCM) and the American Society for Parenteral and Enteral Nutrition (ASPEN) emphasize the importance of timely nutritional assessment and individualized nutrition therapy in critically ill patients.[1]

Critical care nurses play a significant role in the implementation and monitoring of nutritional therapy. Nurses are directly involved in assessing feeding tolerance, administering enteral

nutrition, preventing complications, monitoring intake and output, and ensuring adherence to feeding protocols. Because nurses spend the maximum amount of time with patients in ICU settings, their awareness and understanding of nutritional management directly influence the quality of patient care and outcomes. Evidence-based nutritional practices require nurses to possess adequate knowledge regarding calorie requirements, disease-specific nutritional needs, enteral feeding techniques, and nutritional monitoring.[2]

Despite advancements in critical care nutrition, several studies have reported deficiencies in nurses' knowledge and practices regarding nutritional assessment and support. A systematic review conducted on ICU nurses' knowledge regarding nutritional assessment found that many nurses demonstrated inadequate understanding of nutritional screening tools, energy calculations, and evidence-based feeding practices.[3] Similarly, studies evaluating nurses' knowledge and practice related to enteral nutrition have identified gaps in clinical competence and limited participation in nutrition-related decision-making.[4] These deficiencies may contribute to interruptions in feeding, underfeeding, and poor nutritional outcomes among critically ill patients.

Another important concern is the perception among nurses that nutritional care is primarily the responsibility of dieticians or physicians. Although dieticians play a specialized role in planning nutritional therapy, effective nutritional management in ICU settings requires a multidisciplinary approach in which nurses actively participate. Lack of training opportunities, insufficient continuing education programs, and limited exposure to nutrition-focused academic activities may further reduce nurses' confidence and involvement in nutritional care.[5]

In developing countries, including India, awareness and training regarding critical care nutrition remain limited. Variability in institutional protocols, shortage of specialized educational programs, and increasing workload in ICUs can affect the nurses' ability to deliver evidence-based nutritional care. Indian guidelines on enteral nutrition management have highlighted the need for improving healthcare professionals' knowledge and promoting standardized nutritional practices in critical care settings.[6]

Considering the growing importance of nutrition in improving clinical outcomes of critically ill patients, it is essential to evaluate the level of nutritional awareness among critical care nurses. Understanding the existing knowledge gaps and attitudes toward nutritional care can help in designing targeted educational interventions and training programs. Therefore, the present study was conducted to assess the nutritional awareness, perceptions, and educational exposure of nurses working in critical care units.

Materials and methodology:

The study was conducted in a tertiary healthcare unit for the critical care nurses. After informed consent both male and female critical care nurses were included in all types of ICU. The nurses who have joined the tertiary care unit recently (1 month before the start of the study) and non-willing to provide consent were excluded from the study. As described in table 1 and 2 the data were collected from all the participants. A total of 95 critical care nurses enrolled in this study and the questioner based survey was completed in a week.

Table 1: Demographic Details

Variable	Response
Age	
Gender	Male / Female
Highest Nursing Qualification	GNM / B.Sc Nursing / P.B.B.Sc / M.Sc Nursing / Other
Years of Experience in Critical Care Nursing	
Current Area of Work	ICU / CCU / NICU / PICU / Other
Have you attended any educational program related to critical care nutrition?	Yes / No

Table 2: Nutritional Awareness Questionnaire

S.N	Question	Response Options
1	Do you think nutrition plays a major role in the outcome of critically ill patients?	Yes / No
2	Are you aware that energy requirements in critically ill patients should be calculated based on disease-specific conditions?	Yes / No
3	Do you routinely monitor nutritional intake in critically ill patients?	Always / Sometimes / Never
4	Who do you think is primarily responsible for nutritional management in ICU patients?	Nurse / Dietician / Doctor / Team Approach
5	Are you familiar with enteral and parenteral nutrition methods?	Yes / No
6	Do you believe nurses should actively participate in nutritional management of critically ill patients?	Yes / No
7	Have you received formal training regarding critical care nutrition?	Yes / No
8	Do you feel confident in identifying signs of malnutrition in critically ill patients?	Yes / No
9	Do you think inadequate nutrition can prolong ICU stay and increase complications?	Yes / No
10	Would you be willing to attend regular educational programs on critical care nutrition?	Yes / No
11	Should nutrition assessment be included as a routine nursing responsibility in ICU care?	Yes / No
12	Do you think multidisciplinary collaboration improves nutritional management in critically ill patients?	Yes / No

Results:

A total of 95 critical care nurses participated in the study. As shown in Table 1, most participants were aged between 25–50 years, with a nearly equal gender distribution. The majority were GNM-qualified nurses with less than five years of critical care experience. Participants were predominantly working in ICU and NICU settings. Most nurses had not attended any educational program related to critical care nutrition.

As shown in Table 2, awareness regarding the importance of nutrition in critically ill patients was high, with the majority acknowledging its role in improving patient outcomes and reducing complications. However, knowledge related to disease-specific energy requirement calculations was found to be inadequate among most participants. Routine nutritional monitoring practices were inconsistent, with only a small proportion reporting regular monitoring.

A considerable number of nurses perceived nutritional management as primarily the responsibility of dieticians rather than nurses. Although many participants were familiar with enteral and parenteral nutrition methods and believed nurses should actively participate in nutritional management, none had received formal training in critical care nutrition. Confidence in identifying signs of malnutrition was also limited among participants.

Despite the existing knowledge gaps, most nurses expressed willingness to attend regular educational programs and supported the inclusion of nutrition assessment as a routine nursing responsibility. The majority also agreed that multidisciplinary collaboration plays an important role in improving nutritional management in critically ill patients.

Table 1: Demographic Characteristics of Participants (N = 95)

Variable	Category	Number (%)
Age Category	25–50 years	74 (77.9%)
	50–75 years	21 (22.1%)
Gender	Female	49 (51.6%)
	Male	46 (48.4%)
Qualification	GNM	52 (54.7%)
	B.Sc Nursing	10 (10.5%)
	P.B.B.Sc	33 (34.7%)
Experience in Critical Care Nursing	0–5 years	44 (46.3%)
	6–10 years	33 (34.7%)
	>10 years	18 (18.9%)
Current Area of Work	ICU	33 (34.7%)
	CCU	21 (22.1%)
	NICU	28 (29.5%)
	PICU	13 (13.7%)
Attended Educational Program Related to Critical Care Nutrition	No	81 (85.3%)
	Yes	14 (14.7%)

Table 2: Responses to Nutritional Awareness Questionnaire Among Critical Care Nurses

S.N	Question	Response	No (%)
1	Do you think nutrition plays a major role in the outcome of critically ill patients?	Yes	89 (93.7%)
		No	6 (6.3%)
2	Are you aware that energy requirements in critically ill patients should be calculated based on disease-specific conditions?	Yes	12 (12.6%)
		No	83 (87.4%)
3	Do you routinely monitor nutritional intake in critically ill patients?	Always	27 (28.4%)
		Sometimes	52 (54.7%)
		Never	16 (16.9%)
4	Who do you think is primarily responsible for nutritional management in ICU patients?	Nurse	7 (7.4%)
		Dietician	74 (77.9%)
		Doctor	8 (8.4%)
		Team Approach	6 (6.3%)
5	Are you familiar with enteral and parenteral nutrition methods?	Yes	63 (66.3%)
		No	32 (33.7%)
6	Do you believe nurses should actively participate in nutritional management of critically ill patients?	Yes	69 (72.6%)
		No	26 (27.4%)
7	Have you received formal training regarding critical care nutrition?	Yes	0 (0%)
		No	95 (100%)
8	Do you feel confident in identifying signs of malnutrition in critically ill patients?	Yes	38 (40.0%)
		No	57 (60.0%)
9	Do you think inadequate nutrition can prolong ICU stay and increase complications?	Yes	87 (91.6%)
		No	8 (8.4%)
10	Would you be willing to attend regular educational programs on critical care nutrition?	Yes	74 (77.9%)
		No	21 (22.1%)
11	Should nutrition assessment be included as a routine nursing responsibility in ICU care?	Yes	67 (70.5%)
		No	28 (29.5%)
12	Do you think multidisciplinary collaboration improves nutritional management in critically ill patients?	Yes	84 (88.4%)
		No	11 (11.6%)

Discussion:

The present study evaluated the awareness, knowledge, and perceptions of critical care nurses regarding nutritional management in critically ill patients. The findings demonstrated that although nurses possessed positive attitudes toward the importance of nutrition in patient recovery, considerable deficiencies existed in nutritional knowledge, formal training, and practical involvement in nutritional care.

In the present study, most participants belonged to the age group of 25–50 years and had less than five years of critical care experience. The majority were GNM-qualified nurses working predominantly in ICU and NICU settings. These findings reflect the active involvement of relatively young nursing professionals in critical care practice. However, despite working in specialized units, most participants had not attended any educational program related to critical care nutrition, highlighting inadequate exposure to nutrition-focused academic training.

A major finding of this study was that 93.7% of nurses recognized that nutrition plays an important role in influencing outcomes among critically ill patients. Similar findings have been reported in previous studies where ICU nurses acknowledged the significance of nutritional therapy in reducing morbidity and improving recovery. Hadera et al. reported that nurses generally had positive attitudes toward enteral nutrition and recognized its importance in patient management.[7]

Despite recognizing the importance of nutrition, only 12.6% of participants in the present study were aware that energy requirements should be calculated according to disease-specific conditions. This finding indicates poor knowledge regarding individualized nutritional assessment and calorie calculation. Similar observations were reported by Doménech Briz et al., who identified inadequate knowledge among ICU nurses regarding nutritional screening and assessment methods.[8] Since critically ill patients have varying metabolic requirements depending on their clinical condition, inadequate knowledge in this area may negatively affect nutritional adequacy and patient outcomes.

The present study also demonstrated inconsistent nutritional monitoring practices. Only 28.4% of nurses reported routinely monitoring nutritional intake, while more than half performed monitoring only occasionally. Regular monitoring of enteral and parenteral nutrition is essential to prevent feeding interruptions, undernutrition, and metabolic complications. Persenius et al. similarly reported inadequate nutritional monitoring and documentation practices among ICU nurses, suggesting the need for improved clinical protocols and education.[9]

Another important finding was that 77.9% of nurses considered dieticians primarily responsible for nutritional management in ICU patients, while only a small proportion identified nurses as responsible contributors. This reflects limited nursing involvement and role ambiguity regarding nutritional care. Effective nutritional support in critically ill patients requires a multidisciplinary team approach involving physicians, dieticians, and nurses. Since nurses provide continuous bedside care, their participation in nutritional assessment, administration, and monitoring is essential. Previous studies have also identified lack of role clarity and insufficient nursing involvement in nutritional management practices.[10]

Although 66.3% of participants reported familiarity with enteral and parenteral nutrition methods, none of the nurses had received formal training regarding critical care nutrition. This lack of training may explain the low confidence observed in identifying signs of malnutrition, as only 40% of participants felt confident in nutritional assessment. Similar findings were reported by Bourgault et al., who demonstrated that inadequate educational exposure among critical care nurses contributes to deficiencies in evidence-based enteral feeding practices.

The majority of participants in the present study agreed that inadequate nutrition could prolong ICU stay and increase complications. This finding is supported by evidence showing that poor nutritional support in critically ill patients is associated with increased infections, delayed wound healing, prolonged mechanical ventilation, and higher mortality rates. Furthermore, most nurses expressed willingness to attend educational programs on critical care nutrition and supported multidisciplinary collaboration in nutritional management. These findings indicate

a positive attitude toward improving nutritional competency and suggest that structured educational interventions may significantly enhance nurses' knowledge and involvement.

Overall, the findings of the present study highlight the gap between awareness of nutritional importance and practical nutritional competency among critical care nurses. The study emphasizes the urgent need for regular training programs, evidence-based nutritional protocols, and continuing nursing education to improve nutritional assessment, monitoring, and management practices in critical care settings. Strengthening nurses' nutritional knowledge and interdisciplinary participation may ultimately improve patient outcomes and quality of care in intensive care units.

Limitation of the study: The study was conducted in a singe centre. Hence the results cannot be generalized. A multicentric study with larger sample size may evaluate the status of awareness of nutrition among critical care nurses.

Conclusion:

The present study highlights that although critical care nurses possess positive attitudes toward the importance of nutrition in improving outcomes among critically ill patients, significant gaps exist in their knowledge, formal training, and practical involvement in nutritional management. Most participants recognized the role of nutrition in reducing complications and improving recovery; however, awareness regarding disease-specific energy requirement calculations, nutritional assessment, and routine monitoring practices was inadequate. The study also revealed that many nurses perceived nutritional management primarily as the responsibility of dieticians, indicating limited nursing participation in nutritional care.

The absence of formal training programs related to critical care nutrition among the participants further emphasizes the need for structured educational interventions. Encouragingly, the majority of nurses expressed willingness to attend regular educational programs and supported multidisciplinary collaboration in nutritional management.

Overall, the findings suggest that improving nutritional awareness and competency among critical care nurses through continuing education, evidence-based guidelines, and interdisciplinary training programs may enhance the quality of nutritional care and contribute to better patient outcomes in critical care settings.

References:

1. Bourgault A, Ipe L, Weaver J, et al. Development of evidence-based guidelines and critical care nurses' knowledge of enteral feeding. Crit Care Nurse. 2007;27(4):17-29
2. Chowdhury R, Lobaz S. Nutrition in critical care. BJA Educ. 2019;19(3):90-95
3. Doménech Briz V, Gea-Caballero V, Chover-Sierra E, et al. Knowledge Level of ICU Nurses Regarding Nutritional Assessment of Critically Ill Patients: A Systematic Review. Nurs Rep. 2024;14(1):586-602
4. O'Leary-Kelley C, Bawel-Brinkley K. Nutrition Support Protocols: Enhancing Delivery of Enteral Nutrition. Crit Care Nurse. 2017;37(2):e15-e23

5. Khosa SP, Phetla MC, Manafe M. Nutrition Knowledge and Eating Habits of Healthcare Workers at a Tertiary Hospital in Limpopo Province, South Africa. Int J Environ Res Public Health. 2025 Dec 9;22(12):1838.
6. Turan M, Cengiz Z, Olmaz D. Evidence-Based Investigation of Nurses' Nutrition Interventions in Intensive Care Patients Regarding Enteral Nutrition. Dimens Crit Care Nurs. 2024;43(3):123-129
7. Hadera T, Worku T, Tuli W. Nurses' Knowledge, Practice, and Associated Factors with Enteral Nutrition in Adult Intensive Care Units of Public Hospitals. Ethiop J Health Sci. 2022 Mar;32(2):423-432
8. Doménech Briz V, Gea-Caballero V, Chover-Sierra E, Czapla M, Fehler P, Rodríguez-Calvo A, Ballestar-Tarín ML, Marín-Maicas P, Cabellos-García AC, Pardo-Bosch M, Juárez-Vela R, Martínez-Sabater A. Knowledge Level of ICU Nurses Regarding Nutritional Assessment of Critically Ill Patients: A Systematic Review. Nurs Rep. 2024 Mar 8;14(1):586-602.
9. Wentzel Persenius M, Larsson BW, Hall-Lord ML. Enteral nutrition in intensive care nurses' perceptions and bedside observations. Intensive Crit Care Nurs. 2006 Apr;22(2):82-94
10. Bourgault AM, Ipe L, Weaver J, Swartz S, O'dea PJ. Development of evidence-based guidelines and critical care nurses ' knowledge of enteral feeding. Crit Care Nurse. 2007 Aug;27(4):17-22, 25-9; quiz 30

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