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Original Article

Exploring Approaches to Prevent Missed Nursing Care from the Perspective of Intensive Care Unit Nurses: A Qualitative Content Analysis Study

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Abstract

Introduction: The Intensive Care Unit is one of the most critical departments in a hospital, and the quality of nursing care in this area is of utmost importance. The absence of certain aspects of care can have irreparable effects on patient health. This qualitative study aimed to explore approaches to prevent missed nursing care from the perspective of Intensive Care Unit nurses.

Methods: Using a traditional content analysis method, this qualitative investigation identified strategies to prevent missed care in ICUs. Information was collected between April and June 2024 through in-depth, semi-structured personal interviews with 14 intentionally selected participants. The data analysis followed the five-phase framework developed by Graneheim and Lundman (2004) for coding and categorizing. MAXQDA version 10 software was used for data management.

Findings: Participants had an average of 10.66 ± 0.54 years of experience. Upon examining the data, seven key themes emerged that were linked to nurses' roles in care decisions. These included: developing a unified framework for identifying and managing high-risk situations, focusing on specialized tasks, ensuring an adequate number of nursing staff, enhancing nurses' skills, improving communication within and between professions, and providing strong institutional support.

Conclusion: The results of this study suggest that missed nursing care can be effectively reduced by implementing management approaches such as strengthening organizational support for nurses, boosting their motivation and commitment to work, fostering better collaboration between nurses and the healthcare system, decreasing nurses' workload, enhancing their professional skills and expertise, and actively including nurses in healthcare and care-related decision-making processes.

Keywords: Missed nursing care, Intensive care unit, Nurse, Qualitative content analysis

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Introduction

Nurses are a vital part of the healthcare team, and one of their primary responsibilities is to promote health, prevent disease, and care for patients with physical and mental health disorders across all age groups (1). In fact, the nurse's duty is to respond to all potential and actual problems of the patient, family, and community (2). Providing proficient and superior nursing services enhances patient satisfaction and leads to improved health outcomes (3). In other words, the nurse's role involves protecting, promoting, and optimizing health, preventing diseases and injuries, alleviating pain and suffering of patients through the diagnosis and treatment of human responses, and supporting the care of individuals, families, and populations (4, 5).

One of the fundamental rights of patients is the assurance that their needs are met and that they receive safe and comprehensive care (6). However, in certain situations and for various reasons, some aspects of care activities may be overlooked (i.e., comprehensive patient care and ensuring patient comfort and safety) (7). Missed nursing care is a newly defined concept that refers to all the minor and major aspects of the care required by patients that have been neglected or delayed (7). Therefore, missed nursing care is not only a type of nursing error that can impact patient safety, but it also leads to the disregard of patients' rights and jeopardizes human rehabilitation and recovery (8). Missed care has consequences, such as increased length of hospital stay, decreased patient satisfaction and safety, diminished hospital credibility in the eyes of patients, and medication errors (9, 10).

Missed nursing care has become a justifiable issue in acute care healthcare facilities worldwide and is an important concept in nursing (11). Hassles et al. reported that the level of missed care in their study was between 10% to 27%, while this rate was reported as 34% in the study by Blackman and colleagues (1, 12). Vincent et al.'s findings highlighted

missed care as encompassing disregarded doctor directives, medication delays exceeding 30 minutes, and poor mouth hygiene (13). Iranian research similarly indicates that omitted care is prevalent in facilities, necessitating further exploration. Crucially, understanding missed care requires pinpointing its triggers (14, 15). Dehghan Niri et al. identified structure, infrastructural factors, and barriers to reporting missed care as related factors in their study (16).

Patients admitted to the intensive care unit are more complex in terms of dimensions and levels of care, and they tend to have a relatively longer hospital stay (17). ICU nurses, in addition to their responsibility for patient care, must also pay special attention to the families of these patients (18). Health education, discharge preparation, oral hygiene, appropriate medication scheduling, and pain management are among the routine care practices in the ICU that may be overlooked or inadequately performed due to factors such as high nurse workload or other conditions (19). Providing safe and high-quality care is a fundamental patient right and plays a crucial role in achieving therapeutic goals. Therefore, it is essential to explore strategies that can help prevent missed nursing care in the intensive care unit (20, 21).

This qualitative study seeks to provide a comprehensive understanding of the factors that prevent missed care in the intensive care unit. This study aimed to explore the approaches that influence the process of preventing neglected care, and to identify potential areas for improving the quality of nursing care by examining their experiences and perspectives. By shedding light on approaches to preventing missed care, this study can help develop targeted policies, protocols, and educational programs that effectively address this problem. Furthermore, understanding the experiences and perspectives of intensive care unit nurses can help identify approaches to modify the incidence of neglected care, promote safe care practices, and ultimately enhance the quality of care provided.

Methods

Study design

This investigation utillzed qualitative content analysis.

Participants and sampling method

The sample was selected using purposive sampling with the aim of obtaining the greatest possible diversity in terms of age, gender, level of education, and work experience. Volunteers who met the inclusion criteria were selected from a list provided by the Deputy Director of Treatment, Urmia University of Medical Sciences, and invited to participate in the interviews. Initially, the first author explained the objective of the study, the interview procedures, and the participants' right to withdraw from the study. Subsequently, informed consent was obtained from all participants. Data were collected through in-depth semi-structured individual interviews. The participants in the research were 14 nurses from the intensive care units selected from Imam Khomeini Hospital, Kowsar Hospital, and Taleghani Hospital in Urmia. The inclusion criteria included nurses' work experience in the intensive care unit and a minimum of a bachelor's degree, who were aware of the phenomenon under study and willing to share their experiences.

Data Collection

Data was gathered through semi-structured, in-depth interviews conducted between April and June 2024. The first author conducted the interviews, under the supervision of the second author, who is a faculty member at the university. The main interview questions (Table 1) were developed in consultation with the research team and through initial interviews with several patients. The interviews began with a broad question: "What is your definition of missed nursing care in the intensive care unit?" and "In your view, what factors influence the prevention of missed nursing care?" In addition, exploratory questions were used to gather deeper data about the participants' experiences. Examples of these questions included: "Can you elaborate more?" and "What do you mean by that?" At the end of each interview, participants were asked if they wanted to add anything else. All interviews were conducted in a quiet and private room in the study environment. The timing and duration of the interviews were adjusted according to the participants' preferences. If participants felt fatigued, the interviews were paused. The duration of the interviews ranged from 35 to 45 minutes, with an average of 40 minutes. Data collection continued until data saturation was reached (22).

Data analysis

Data analysis was conducted using the approach of Graneheim and Lundman (22). Graneheim and Lundman proposed five stages for analyzing qualitative data content: 1) Conducting the entire interview immediately after each interview, 2) Reading the entire text several times to gain an overall understanding of its content, 3) Identifying semantic units and basic codes, and 4) Classifying the codes. Data

Table 1. Participants' characteristics

Participant	Gender	Age (years)	Work history	Education
1	Female	30	5	Bachelor's degree
2	Female	52	25	Bachelor's degree
3	Female	28	3	Bachelor's degree
4	Male	32	7	Bachelor's degree
5	Male	35	11	Master's degree
6	Female	38	13	Bachelor's degree
7	Female	33	5	Bachelor's degree
8	Male	25	2	Bachelor's degree
9	Female	24	1	Bachelor's degree
10	Male	30	6	Master's degree
11	Female	40	14	Bachelor's degree
12	Female	35	11	Bachelor's degree
13	Female	42	19	Bachelor's degree
14	Male	28	5	Master's degree

analysis was performed simultaneously with data collection by two researchers (R.A. and R.B.). MaxQDA software version 10 was used for data analysis.

Trustworthiness

The trustworthiness of the data was established using the criteria proposed by Lincoln and Guba, specifically credibility, transferability, dependability, and confirmability (23). Credibility was ensured by dedicating ample time to data collection and analysis, building effective rapport with participants, continually cross-comparing data elements, having participants verify that the findings accurately reflected their experiences, and obtaining confirmation from seasoned qualitative researchers on the correctness of the interpretations. Transferability was ensured through maximum variation sampling and clear descriptions of the study participants and the environment. Dependability, or the stability of the data, was achieved using a standardized interview guide and having all interviews transcribed by a single individual.

Ethical Considerations

Participants received written information about the study before agreeing to participate. Upon meeting with the interviewer, they were again provided with written and verbal information regarding the purpose and procedures of the study, that participation was voluntary, and that they had the right to withdraw at any time and to skip any questions they did not wish to answer. Participants were informed that the interviews would be audio-recorded and that all data would be kept strictly confidential. Written and verbal consent was obtained from every participant.a

Results

This study involved 14 intensive care unit nurses, each with an average of 10.66 ± 0.54 years of professional experience. After data analysis, a total of 370 codes and 74 meaningful units were identified. These were then organized into seven main categories (Table 3).

Involving Nurses in Patient Care Decision-Making

According to the participants in the study, involving nurses in patient care issues and decision-making plays a significant role in preventing the occurrence of missed nursing care. One of the nurses stated: "*As nurses, we are in closer contact with the patients, so we know exactly what care the patient needs and which care should be prioritized. Therefore, we can better identify the needs of the patients, and our presence in care planning for patients should be greater. This way, there is less likelihood that care will be missed or delayed.*" (P. 2).

Creating an Integrated System for Reporting and Recording Errors

Most participants in the research identified the establishment of a reporting and error recording system as one of the most fundamental actions. They believed that by implementing this system, common overlooked care practices and their causes could be identified, allowing for corrective actions to be taken. One nurse stated, "*If a system is designed where all of us nurses can record the care practices we forget, this system could be a valuable resource for identifying overlooked care practices. It would help us learn from the experiences of others and prevent us from repeating those mistakes, making us more attentive.*" (P. 5)

Specializing Nursing Care

Nurses who participated in the study reported that specializing in nursing activities helps to create a more proactive and efficient nursing workforce. One nurse stated, "*I believe that we nurses should be trained based on the specific department where we are going to work from the very beginning. For example, in the intensive care unit, which is a very sensitive area requiring more specialized care, the most capable individuals should be utilized, and they should receive the necessary specialized training in this field*" (P. 7).

Providing Nursing Staff

Almost all participants in the research acknowledged that the shortage of human resources is one of the most important reasons for neglected care in the intensive care unit. One nurse mentioned, "*In the intensive care unit, the standard is that each nurse should care for one patient, but*

Table 2. Questions in the interview guide

General Questions
• Can you describe your experiences with missed nursing care in the ICU setting?
• What are the most common types of nursing care that tend to be missed in your unit?
• How do you perceive the impact of missed nursing care on patient outcomes?
Factors Contributing to Missed Care
• What factors do you believe contribute to missed nursing care in the ICU? (e.g., staffing, workload, communication)
• How does the work environment or organizational culture influence missed nursing care?
• Can you share any specific situations where patient acuity or volume affected your ability to provide complete care?
Strategies and Solutions
• What strategies have you or your team implemented to prevent missed nursing care in the ICU?
• How effective are interventions like teamwork, cross-monitoring, or resource allocation in reducing missed care incidents?
• In your opinion, what role does nurse empowerment or leadership play in addressing missed nursing care?
Challenges and Barriers
• What challenges do you face in implementing strategies to prevent missed nursing care?
• Are there systemic barriers (e.g., supply chain issues, management inefficiencies) that hinder your ability to provide comprehensive care?
Recommendations
• Based on your experience, what recommendations would you make to improve policies or practices aimed at preventing missed nursing care?
• How can hospital administrators better support ICU nurses in managing their workload and preventing missed care?

sometimes we nurses in the special unit care for five or six patients simultaneously. Due to the heavy workload and the numerous medications for these patients, there is a possibility of forgetting some aspects of care" (P. 9).

Enhancing the Professional Competence of Nurses

Study participants reported that competent and well-trained nurses are essential for enhancing the quality of patient care and reducing the occurrence of adverse events in intensive care units. Therefore, their theoretical and practical knowledge must be updated in line with the latest global standards. One nurse stated, "*Many of the nurses currently working in intensive care have over twenty years of experience, and most of their knowledge is not up-to-date or sufficient. I believe that if continuous in-service training is provided for us nurses in a specialized manner based on current scientific knowledge, it could significantly impact the improvement of neglected nursing care*" (P. 7).

Enhancing Intra- and Inter-disciplinary Communication

Participants in the research identified good and professional communication among nurses, as well as between nurses and other members of the care team, as one of the fundamental principles for preventing forgotten care. They believed that having good communication leads to better sharing of patient care information, thereby reducing the likelihood of certain aspects of care being overlooked. One nurse stated, "… *if we nurses can strengthen our communication, we will be better able to obtain all the information we need from other nurses, as well as from doctors and other members of the care team, which will help reduce forgotten care or redundant work"* (P. 9).

Effective Organizational Support

Most participants in the study considered effective organizational support and motivation from the organization to be a significant factor in reducing missed care. They believed that the organization could enhance nurses' commitment to their work and, consequently, mitigate missed nursing care by creating motivational factors such as material and moral incentives. One nurse stated, "*If we nurses know that our positive actions are valued by the organization and that the organization appreciates the sacrifices made by nurses, we feel uplifted, and our motivation for providing more principled and higher-quality care increases*" (P. 13).

Discussion

This study aimed to elucidate the approaches to preventing missed care from the perspective of intensive care unit nurses. The results indicated that factors such as involving nurses in patient care decision-making, creating an integrated system capable of identifying and managing risk cases, specializing activities, ensuring adequate nursing staff, enhancing the professional competence of nurses, improving intra- and inter-professional communication, and effective organizational support were among the strategies that Intensive Care Unit nurses identified as approaches to prevent missed nursing care.

One strategy highlighted by participants in the study for preventing missed care is to involve nurses in making decisions about patient care. In a study conducted by Henderson on Australian nurses, it was concluded that involving nurses in care planning can reduce the incidence of missed care, which aligns with the results of the present study (24). It can be explained that nurses, due to spending more time with patients and consequently having a more comprehensive awareness of the patients' problems and needs, are better able to plan for these issues and needs, taking into account all aspects of the required care in the planning and implementation of therapeutic interventions.

Another finding of the present study, which participants believe could help mitigate the occurrence of missed nursing care, is the establishment of an integrated system for reporting and documenting errors. Khrais's study found that implementing error reporting systems and addressing missed care can significantly help reduce the occurrence of missed care incidents (25). To explain this, it can be said that when nurses have access to a comprehensive and integrated information system that displays the types of missed care and their causes in detail, they are more informed and aware of their patients, which helps prevent the recurrence of missed care. As a result, the quality and safety of care are also improved (26).

Specializing nursing care was one of the aspects that nurses participating in the study identified as a way to prevent the occurrence of missed nursing care. Research by Dehghan Niri has shown that using non-specialized nurses in oncology wards, due to their lack of knowledge and expertise in specialized cancer care, is a significant factor in missed nursing care. This finding aligns with the

Table 3. Main theme and categories related to Approaches to Prevent Missed Care from the Perspective of Intensive Care Unit Nurses

Main Theme	Categories	Primary codes
Approaches to prevent forgotten nursing care from the perspective of intensive care unit nurses	Involving Nurses in Patient Care Decision-Making	2-3, 2-10, 3-3, 3-6, 3-10, 4-4, 4-6, 5-9, 6-2, 7-7, 7-8, 7-9, 8-1, 8-2, 9-5, 10-4, 10- 6, 10-9, 10-10, 11-1, 11-6
	Creating an Integrated System for Reporting and Recording Errors	2-5, 4-12, 6-3, 8-4, 9-11, 11-8, 12-4, 13-6
	Specializing Nursing Care	1-6, 2-9, 5-11, 6-8, 8-8, 9-10, 11-4, 13-10
	Providing Nursing Staff	2-4, 3-7, 3-11, 6-4, 9-12, 12-11, 13-5
	Enhancing the Professional Competence of Nurses	1-8, 2-6, 3-12, 4-10, 6-9, 9-9, 10-8
	Enhancing Intra- and Inter-disciplinary Communication	1-3, 1-5, 1-7, 2-7, 3-4, 4-2, 4-5, 4-7, 4-9, 4-11, 5-3, 5-4, 5-5, 5-7, 5-8
	Effective Organizational Support	2-1, 2-2, 3-8, 4-8, 5-2, 11-7, 8-6, 10-1

results of the present study (16). In Iran, nurses are usually assigned to specific hospital departments based on their specialized training and clinical experience. Unfortunately, this principle is sometimes ignored or disregarded in certain healthcare facilities. It seems that employing specialized nurses for specialized departments, such as intensive care units, is an important factor in preventing the occurrence of missed nursing care.

Another finding of the present study that could play an important role in preventing the occurrence of missed nursing care is the provision of nursing staff to address workforce shortages and consequently reduce the workload. A study by Dutra and colleagues in the United States found that nursing shortages and heavy workloads are the main factors contributing to missed nursing care. This aligns with the findings of the current study (27). One of the problems that healthcare systems around the world, including Iran, face is a shortage of nurses, which is attributed to several main causes: the increasing aging population in the country, unfavorable working conditions for nurses, financial issues within the Ministry of Health, the lack of hiring new staff, and a significant number of nursing graduates who emigrate from the country each year (28). Therefore, it seems essential for healthcare authorities to take necessary actions to hire nursing staff to reduce the workload on nurses and, as a result, improve both the quantity and quality of nursing care.

The enhancement of the professional qualifications of nurses was another significant finding expressed by the participants in the present study. In a study conducted by Jannat Makaan in Iran, it was shown that nurses and nursing students had a moderate level of awareness regarding oral and dental health, which was not satisfactory given the health needs of today's society (29). With the expansion of medical and caregiving knowledge, some of the knowledge of nurses becomes outdated, and there is a need to update and enhance the competencies and capabilities of nurses. Continuous education seems to be one of the factors that can significantly impact achieving this goal, as it can lead to their professional efficiency.

Another finding of this research is the enhancement of intra- and inter-disciplinary communication, which had been overlooked as one of the approaches to mitigate the level of missed nursing care. Khatouni and colleagues concluded in their study that effective communication among nurses, other healthcare team members, and the community plays a crucial role in preventing missed care. This finding is consistent with the results of the current study (30). Developing communication strategies, holding interdisciplinary meetings, and expanding communication channels can greatly enhance awareness of the patient's condition and the necessary care and attention, thereby reducing the occurrence of missed nursing care.

The latest finding of this research is the effective organizational support for nurses, which can play a role in reducing missed nursing care. Malayi's study found that higher levels of organizational support for nurses are associated with a significant reduction in missed nursing care. This finding is consistent with the results of the current study (31). By increasing organizational support for nurses and considering both material and moral incentives for them, nurses' motivation to continue working and providing quality nursing care increases, and consequently, the rate of missed nursing care also decreases (32). Therefore, officials need to create a supportive environment, free from any form of reprimand or punishment, to facilitate the reduction of missed nursing care.

The study has some limitations that should be considered. One of the limitations is that the sample size was limited to intensive care unit nurses from one city, potentially limiting generalizability. Another limitation is that the reliance on self-report may introduce recall bias and social desirability bias. Future studies should include more diverse samples of intensive care unit nurses from different regions to increase generalizability. Further research should evaluate interventions or educational programs aimed at reducing the incidence of missed care and improving patient care practices.

Conclusion

Missed nursing care is a significant problem within the nursing system and can lead to serious consequences, including compromising patient safety and reducing the overall quality of care. Therefore, health managers and policymakers must pay special attention to the issue of missed nursing care and take necessary actions to identify and plan for solvable or modifiable problems. They can create an environment to reduce or eliminate missed nursing care by implementing measures such as increasing organizational support for nurses, enhancing their motivation and work commitment, improving interaction between nurses and the healthcare system, reducing nurses' workload, promoting nurses' professional competence, and involving nurses in health and care decision-making.

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Authors' Contribution

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Competing Interests

There are no conflicts of interest among the authors of this article.

Ethical Approval

This study was registered at Urmia University of Medical Sciences (Ethical code: IR.UMSU.REC.1403.060). The confirmation of acceptability was also achieved by setting aside assumptions, documenting all stages of data analysis, and having a review by the participants. The study's objectives were fully explained to the participants, and they were assured that participation in the study would be voluntary and that their information would be kept confidential. The participants were also free to withdraw from the study, and informed written consent was obtained from all of them.

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