

Factors of Missed Nursing Care in Intensive Care Units Palestinian Perspective

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Maintaining a high standard of nursing care is imperative for ensuring patient safety. Several factors significantly impact the provision of nursing care, including work environment resources, personnel coordination, work systems, and head nurse leadership. In addition, each nurse's clinical and academic career also plays a role in shaping the quality of care provided to patients. This article reports results of a cross-sectional study aimed to identify the different types of missed nursing care and the factors that contribute to them, as perceived by nurses, and second, to investigate how nurses' characteristics may relate to the occurrence of missed nursing care. Data for this study were obtained through a self-administered questionnaire that was distributed to participants working in an intensive care unit. The study included a final sample size of 176 participants, all of whom worked in intensive care unit hospitals located in the north region of Palestine. The study found that handwashing, setting up meals for patients who feed themselves, discharge planning, and response to a call light were the most frequently missed nursing care activities. The primary factors identified as reasons for missed nursing care were inadequate availability of labor and material resources, along with communication issues. Efforts to address these identified issues can potentially lead to improved quality of nursing care in intensive care units. **Key words:** communication problems, intensive care, labor shortages, nursing care omissions, resource limitations

TO ENSURE patient's safety, it is essential to provide high-quality nursing care.¹⁻³ Nurses have a critical role in identifying and addressing risks and harms in patient care through activities such as patient evaluation, care planning, monitoring, surveillance, verifying, offering assistance, and maintaining

effective communication with other health care team members.^{2,4} Promoting adherence of nursing staff to patient safety principles, which includes clear policies, effective leadership, evidence-based safety initiatives, ensuring that health care staff receive comprehensive training, and active patient engagement, is essential in reducing practice errors, such as missed nursing care (MNC), and establishing sustainable and safe health care systems.^{2,5,6}

MNC, which refers to the omission of essential care tasks by nurses, is a significant and pervasive issue in health care systems worldwide, with reported prevalence rates ranging from 55% to 98% globally.^{7,8} The issue of MNC is frequently attributed to a range of factors, such as escalated patient care demands, limited availability of workforce and material resources, along with difficulties in communication and effective teamwork in health care.⁷

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MNC is a worldwide problem for nurses and nurse administrators.⁹ By addressing the identified variables that contribute to MNC, nurse managers may successfully establish suitable interventions to support nurses' professional roles and ensure the provision of comprehensive, secure, and quality nursing care.^{10,11} Evidence suggests that hospitals with a more favorable patient safety climate tend to experience a lower rate of MNC.¹² MNC has been linked to hospital infrastructure, ward working conditions, nurse-to-patient ratios, and length of nurse shifts, as supported by multiple studies demonstrating a strong connection between the practice environment and the MNC.¹²⁻¹⁴

Jones et al⁷ found that while nurses' clinical and academic career factors may have some influence on MNC, the most significant influence stems from work environment factors such as material resources (availability of medications, equipment, and supplies), coordination among personnel, work system, and head nurse leadership. MNC is influenced by factors within organization, attributes of nurse, such as clinical experience, and the severity of patient illness.¹⁴

Based on the literature search, no previous studies have been conducted on the topic of MNC in Palestine. Consequently, the main aim of this study is to address this research gap by examining the frequency of MNC among nurses employed in intensive care units (ICUs) at hospitals located in the Northwest Bank region. In addition, the study aims to explore the factors that contribute to their occurrence. By examining the unique factors that may influence MNC specifically in the ICUs of the Northwest Bank region, the study can provide valuable insights into this issue in this particular setting and potentially guide the development of interventions or strategies to address it.

METHODS

The study was conducted using a cross-sectional design from February to September 2021, including both governmental and private sectors. The study included a total of 203 nurses who were actively working in ICUs.

The sample size for this study was determined using the Raosoft program, aiming for a confidence level of 95% and a margin of error of 5%. Assuming a response rate of 50%, the calculated sample size required was 152 participants. To account for potential incomplete questionnaires and dropouts, an additional 24 participants were added, resulting in a final sample size of 176 participants. Hence, the study was conducted with a sample size of 176 participants out of an estimated total of 250 nurses working in ICUs in the north region.

Study instrument

The researchers developed a self-reported questionnaire consisting of 2 sections. The initial section focused on collecting demographic details and work-related information, such as age, gender, marital status, nursing degree, professional experience, years of experience in ICU, training courses, work hours, overtime hours in the past 3 months, hours worked per week, number of days or shifts that nurse were absent in the past 3 months, and hospital affiliation.

The MISSCARE nursing tool, developed by Kalisch et al,¹⁵ was utilized to evaluate nurses' perspectives on MNC. The tool comprises 2 main sections, with a total of 41 items. The first section includes 24 items that measure the frequency of MNC activities, such as aiding in patient mobility, patient repositioning, and vital sign assessments. Participants rate the frequency of missed care using a scale that ranged from "always missed" (5) to "never missed" (1). The second part of the tool comprises 17 items that examine the factors behind MNC activities. Participants rate the perceived significance of reasons for missing care using a scale that ranged from "significant reason" (4) to "not a reason for missing care" (1). The section of the tool that measures MNC is graded on a scale of 24 to 120, with higher scores indicating greater levels of missed care. The reasons section of the tool has a possible score range of 17 to 68, with higher scores indicating higher levels of perceived reasons for missing care. The MISSCARE Survey has

been previously established as a valid and reliable tool in previous studies, with Cronbach α values ranging from 0.64 to 0.86. In addition, interrater reliability has been established with a correlation coefficient (r) of 0.87 (95% confidence interval, 0.76-0.93; $P < .001$) in previous studies.^{15,16}

Data collection

After obtaining the necessary permissions to conduct the study from Arab american university and Palestinian Ministry of health, the researcher visited the hospitals where the study was conducted. During these visits, the researcher met with the chief nursing officer and head nurses of the ICUs to discuss the study and seek their cooperation. The study's objectives were explained to the nurses, and they were requested to provide a list of their names and shift assignments to facilitate the study. Informed consent forms were signed by the nurses who agreed to participate. The participants completed the surveys in English using paper forms.

Ethics

The study was a part of the master's thesis, which was approved by the research review board in faculty of nursing, Arab american university, on March 2021. Written consent was obtained from the chosen hospitals to conduct interviews and questionnaire surveys. The survey was administered anonymously and confidentially, and participating nurses were informed that they had the option to decline answering any specific questions.

Statistical analysis

The study's statistical analysis was conducted using SPSS (Statistical Program for Social Sciences) version 23. All the parameters included in the analysis were examined using descriptive statistics, which included means, standard deviations, frequencies, and percentages.

RESULTS

Out of the 203 nurses invited to participate in the study, 176 responded, resulting

in a response rate of 86.7%. The findings showed that the mean age of the participating nurses was 32.0 years (SD = 7.5). In terms of gender, slightly more than half of the participants were males (54.5%, $n = 96$). Table 1 displays that a significant portion of the participants (65.3%, $n = 115$) held a bachelor's degree. The examination of work-related conditions indicated that approximately half of the participants (47.16%, $n = 83$) had a general experience of 3 to 10 years working in hospitals, while 40.34% ($n = 71$) had an experience of 6 months to 2 years working in the ICU. Most of the participants (70.5%, $n = 124$) were staff nurses. On average, each nurse cared for 2.5 patients (SD = 0.9). Most of the participants (77.3%, $n = 136$) reported that their work shift was rotation. Also, 49 (27.8%) participants reported that 1 day or shift they missed work because of illness, injury, and extra rest within the last 3 months. Less than half of them (42.6%, $n = 75$) worked 1 to 12 hours overtime per month in the past 3 months. However, 71 (40.3%) of the nurses reported that 75% of the time there is adequate staffing, as seen in Table 2.

Missed care elements

The MISSCARE survey categorizes nursing care components into 4 distinct groups: "interventions-basic care, interventions-individual needs, assessment nursing procedure, and planning." The results for each of these categories are presented in the following section.

Table 1. Demographic Characteristics of the Participants (N = 176)

Characteristics	M (SD)	N (%)
Age, y	32.0 (7.5)	
Gender		
Female		80 (45.5)
Male		96 (54.5)
Educational level		
Diploma		51 (29.0)
Bachelor		115 (65.3)
Master		10 (5.7)

Table 2. Work-Related Conditions Characteristics of the Participants (N = 176)

Characteristics	M (SD)	N (%)
Job title/role		
Practical nurse		48 (27.3)
Staff nurse		124 (70.5)
Head nurse		4 (2.3)
Experience in hospital		
<6 mo		20 (11.4)
6 mo to 2 y		49 (27.8)
3-10 y		83 (47.2)
> 10 y		24 (13.6)
Experience in ICU		
<6 mo		21 (11.9)
6 mo to 2 y		71 (40.3)
3-10 y		60 (34.1)
> 10 y		24 (13.6)
“On the current or last shift you worked, how many patients did you care for?”	2.5 (0.9)	
Work shift		
Days		21 (11.9)
Evening		6 (3.4)
Night		13 (7.4)
Rotations		136 (77.3)
“In the past 3 months, how many days or shifts did you miss work due to illness, injury, extra rest, etc?”		
None		62 (35.2)
1 d or shift		49 (27.8)
2-3 d or shifts		32 (18.2)
4-6 d or shifts		14 (8.0)
>6 d or shifts		19 (10.8)
“In the past 3 month, how many hours/month of overtime did you work?”		
None		78 (44.3)
1-12 h		75 (42.6)
> 12 h		23 (13.1)
Perceived adequacy of staffing		
100% of the time		19 (10.8)
75% of the time		71 (40.3)
50% of the time		68 (38.6)
25% of the time		18 (10.2)

Abbreviation: ICU, intensive care unit.

Assessment nursing procedures

The most missed were “Handwashing,” 46 (26.2%); “monitoring fluid intake/output,” 45 (25.6%); and “Patient assessments performed each shift,” 42 (23.9%).

Interventions—individual needs

The most missed were “call light within five minutes” (22.7%), “emotional support

to patients and/or family” (19.8%), and PRN (as needed) “medication requests acted on within five minutes” (14.8%).

Interventions—basic care

The most missed were “setting up meals for patients who feed themselves” (26.7%), “feeding patients when the food is still warm” (17.1%), and “skin/wound care” (16.5%).

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Planning

The nursing care items related to planning that were most frequently missed by nurses in the ICU were “ensuring discharge planning” (29%), “attending interdisciplinary care conferences whenever held” (28.4%), and “patient teaching about illness, tests, and diagnostic studies” (11.9%), as shown in Table 3.

Inadequate labor resources, insufficient material resources, and communication issues were identified as the underlying causes of MNC. The findings revealed that the most frequently reported reasons for missing nursing care among participants ranged from 126 (71.6%) to 156 (86.6%) and were at-

tributed to a lack of material resources, followed by labor resources (range from 133 [75.6%] to 159 [84.7%]), followed by communication/teamwork issues (range from 106 [60.2%] to 141 [80.1%]), as seen in Table 4.

DISCUSSION

The primary objective of the current study was to evaluate the frequency of MNC among nurses working in ICUs at hospitals in the Northwest Bank region, as well as to identify the factors that influence such occurrences. Based on these factors, the study categorized interventions into 4 groups: those related

Table 3. Categories of Missed Nursing Care (N = 176)

Item	N (%)
Assessment	
“Handwashing”	46 (26.2)
“Monitoring intake/output”	45 (25.6)
“Patient assessments performed each shift”	42 (23.9)
“IV site care and assessment according to hospital policy”	30 (17.1)
“Bedside glucose monitoring as ordered”	28 (15.9)
“Vital signs assessed as ordered”	24 (13.6)
“Focused reassessment according to patient”	20 (11.4)
“Full documentation of all necessary data”	18 (10.2)
Interventions—individual needs	
“Response to call light is provided within five minutes”	40 (22.7)
“Emotional support to patient and/or family”	35 (19.8)
“PRN medication requests acted on within five minutes”	26 (14.8)
“Assess effectiveness of medications”	19 (10.8)
“Medications administered within 30 minutes before or after scheduled time”	19 (10.8)
“Assist with toileting needs within five minutes of request”	16 (9.1)
Interventions—basic care	
“Setting up meals for patients who feed themselves”	47 (26.7)
“Feeding patient when the food is still warm”	30 (17.1)
Skin/wound care	29 (16.5)
Turning patient every 2 h	27 (15.3)
Patient bathing	23 (13.0)
Mouth care	20 (11.4)
Ambulation 3 times per day or as ordered	17 (9.6)
Planning	
Ensuring discharge planning	51 (29.0)
Attend interdisciplinary care conferences whenever held	50 (28.4)
Patient teaching about illness, tests, and diagnostic studies	21 (11.9)

Abbreviations: IV, intravenous; PRN, as needed.

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Table 4. Reasons for Missed Nursing Care (N = 176)

Item	Significant/ Moderate/ Reason, N (%)	Minor/NOT a Reason, N (%)
Material resources		
“Supplies/equipment not available when needed”	156 (88.6)	20 (11.4)
“Medications were not available when needed”	146 (83.0)	30 (17.0)
“Supplies/equipment not functioning properly when needed”	126 (71.6)	50 (28.4)
Labor resources		
“Unexpected rise in patient volume and/or acuity on the unit”	159 (84.7)	17 (15.3)
“Heavy admission and discharge activity”	144 (81.8)	32 (18.2)
“Inadequate number of staff”	142 (80.7)	34 (19.3)
“Inadequate number of assistive and/or clerical Personnel (e.g. nursing assistants, techs, unit secretaries etc.)”	136 (77.3)	40 (22.7)
“Urgent patient situations (e.g. a patient’s condition worsening)”	133 (75.6)	43 (24.4)
Communication/teamwork resources		
“Caregiver off unit or unavailable”	141 (80.1)	35 (19.9)
“Lack of back up support from team members”	130 (73.9)	46 (26.1)
“Tension or communication breakdowns with the MEDICAL STAFF”	126 (71.6)	50 (28.4)
“Other departments did not provide the care needed (e.g. physical therapy did not ambulate)”	124 (70.5)	52 (29.5)
“Tension or communication breakdowns within the nursing team”	123 (29.9)	53 (30.1)
“Unbalanced patient assignments”	123 (69.9)	53 (30.1)
“Inadequate hand-off from previous shift or sending unit”	123 (69.9)	53 (30.1)
“Tension or communication breakdowns with other ancillary/support departments”	122 (69.3)	54 (30.7)
“Nursing assistant did not communicate that care was not provided”	106 (60.2)	70 (39.8)

to basic care, those for specific requirements, those for assessments, and those for planning procedures. The results showed that the nursing care items most commonly missed by the nursing staff were handwashing, monitoring of intake/output, and patient assessments completed during each shift. This result aligns with earlier research conducted by Kalisch et al¹⁶ and Kiekkas et al,¹⁷ which also reported patient assessment as one of the commonly MNC tasks in ICU settings. In contrast, Hassona and El-Aziz¹⁸ found that 70.4% of nurses in their study most frequently missed nursing care related to pa-

tient assessment. However, the findings of a study conducted in an Australian hospital indicated that the most commonly MNC was documentation.¹⁸

In the present study, the nursing staff identified several nursing care elements in the “individual needs” category that were frequently missed. These included responding to call lights within 5 minutes, providing emotional support to patients and/or families, attending evaluation visits for interdisciplinary care, and acting on PRN (as needed) medication requests within 5 minutes. These findings are consistent with

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previous research studies,^{15,17,19} which have also reported higher rates of MNC in drug preparation and administration in critical care units.

Similarly, Hassona and El-Aziz¹⁸ reported that 63.9% of nurses identified medication administration as the most frequently MNC element.

The study findings revealed that nurses identified a notable occurrence of missed or omitted care for fundamental interventions, including assisting patients with meal setup, ensuring timely feeding, and providing skin/wound care. These findings are consistent with previous studies by Kalisch et al¹⁵ and Palese et al.²⁰ Nurses frequently presume that patients, in the absence of physical or cognitive limitations, can independently manage basic care tasks, with the support of a family member, if necessary. However, basic care should be provided on the basis of the nursing category, with routine care being the responsibility of nursing assistants but ultimately the responsibility of the nursing staff to ensure its provision.²¹

The current study highlights that ensuring discharge planning is the most frequently MNC item among ICU nurses. The results of this study align with earlier research studies,^{15,22} which emphasized the importance of effective patient education and discharge planning in improving patient outcomes. A lack of these aspects can result in negative consequences such as comorbidities and readmissions.^{15,19} Therefore, it is crucial to emphasize these aspects in nursing practice. In addition, the current study showed that nurses agreed that discharge planning and patient education were frequently missed during hospitalization. This finding is consistent with the study by Tubbs-Cooly et al,²³ who reported that preparing patients and their families for discharge was one of the most MNC items. However, it is noteworthy that the study by Hassona and El-Aziz¹⁸ reported a different finding, with 50.0% of the studied nurses most commonly missing nursing care associated with attending interdisciplinary conference. This underscores the

significance of addressing MNC in a manner that considers the unique characteristics of individuals and specific health care units, as the factors contributing to MNC can vary across different health care settings.

Based on the findings of the current study, material resources were identified as the most frequently mentioned cause of MNC by participants, followed by labor resources and communication/teamwork issues. The insufficient dissemination of information among health care providers can be attributed to factors related to education, psychology, and organization within the health care system.²⁴ The study by Gabr and El-Shaer²⁵ highlighted the significant influence of communication and human resources on MNC and nurses' workflow. Attia et al²⁶ reported that in ICUs, MNC was largely associated with heavy admission and discharge activity (80.2%), the number and condition of patients (79.7%), unavailability of material resources (77.5%), and medication administration when needed (75.3%). Moreno-Monsiváis et al²⁷ also discovered that inadequate material resources and communication issues were frequently cited as reasons for MNC. A study conducted in Jordan similarly identified workforce, material resources, and communication as frequent factors contributing to MNC.⁹

MNC tends to occur during periods of increased work demand, such as unexpected admissions or actions related to inadequate resources and staffing. Inadequate staffing is recognized as a contributing factor in explaining the occurrence of missed care, and raising nursing staff awareness about the factors influencing missed care can lead to a better understanding of the risks and hidden costs associated with it.²⁸ Srulovici and Drach-Zahavy²⁹ recommended that administrators ensure that nurses have adequate resources to assist them in managing complex patients and emphasized the importance of warning nurses about liability in their ward.

Diab and Ebrahim³⁰ reported that the most frequently reported perceived cause of MNC among surveyed nurses was a lack of labor resources. Communication and teamwork

challenges were also identified as significant factors contributing to nurses' inability to provide care. This finding is consistent with the study by Hernández-Cruz et al,³¹ who emphasized the importance of human resources aspects, such as effective communication with various specialties of the health care team and availability of material resources, in ensuring the completion of patient care activities.

Strength and limitation

Although the study has limitations, such as the use of self-reported questionnaires that may introduce bias, particularly social desirability bias, and impact data accuracy, it still provides valuable insights into the factors that contribute to MNC. The study identifies material and labor resources, as well as communication, as key factors in this phenomenon. The findings shed light on the issue of insufficient staffing and highlight specific care areas, such as handwashing and discharge planning, that are commonly overlooked. These findings underscore the need

for further investigation and development of interventions to address inadequate nursing care. Additional research and measures are necessary to ensure comprehensive and effective nursing care, with adequate staffing and attention to all aspects of patient care, including basic care and discharge planning.

CONCLUSION

Based on the findings of the current study, the main causes of MNC in health settings were identified as staffing shortages, insufficient material and labor resources, and issues with teamwork and communication. The study also highlighted specific nursing care tasks that were frequently overlooked, such as handwashing, feeding patients while their meal is still hot, discharge preparation, and timely response to call lights. These findings underscore the need for addressing systemic issues related to staffing and resources, as well as promoting awareness and adherence to essential nursing care tasks to ensure optimal patient care delivery.

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