Cancer Care Unit Missed Care and Related Factors: View of Nurses of Southeast Iran

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Abstract

Introduction: A key element affecting care quality is missed or unfinished care, especially in oncology departments. This study aimed to evaluate missed care and related factors in oncology wards of southeast Iran.

Methods: This study was conducted in five cities located in southeastern Iran. Ninety-three (93) health care providers of oncology departments participated in this study. Missed nursing care and related factors questionnaires were used for data collection. SPSS 22 was utilized to perform descriptive and inferential statistics. The significance level was set at $p<0.05$.

Results: Study results revealed that the highest missed nursing care was “Participation in interdisciplinary patient care conferences” (2.82 ± 1.08), and “Supervision of food preparation for the patient who can eat on his own” (2.67 ± 1.30). The highest reason of missed care was an “Unexpected increase in the number of patients or crowded wards” (3.78 ± 0.69) and “High volume of activities related to patient admission and discharge” (3.73 ± 0.58). Study findings also showed a significant relationship between missed nursing care and city.

Conclusion: According to the study results, allocating sufficient nursing staff to oncology wards can provide sufficient time for caregivers, resulting in decreased missed care which has been documented to contribute to increased quality of care, and improved patient safety.

Introduction

Given the large numbers of patients diagnosed with and treated for cancer annually, the toxicities associated with cancer therapies, and the substantial costs associated with treatment, high-quality cancer care is now a shared priority for policymakers, institutions, providers, and patients (1). The quality of nursing care is one determinant of patient outcomes (2). In developing countries, many unfavorable factors contribute to reduced patient safety, such as overcrowded health services, insufficient staff, an inadequate infrastructure, and poor sanitary and hygiene conditions (3).

Despite nurse managers’ efforts to provide high-quality healthcare management, concerns about patient safety (4)and quality of care (5) remain unsolved. A key factor affecting quality of care is missed nursing care. Missed nursing care is defined as omitting or delaying the whole or a part of required care for patients (6). Missed nursing care is influenced by many factors, including, but not limited to, lack of hospital resources, an unsupportive work environment, poor nurse-patient ratios, and the number of hours a nurse works per shift (7, 8). Cancer nursing requires skill and attention to physical, emotional, and spiritual aspects of care for patients and also requires specialized knowledge and preparation to deliver complex, multimodality therapies, and initiate timely management of side-effects to ensure the best outcomes for patients (9). The body of literature related to unfinished and missed nursing care has grown significantly over the last decade and a cursory review suggests that unfinished care is a global problem (10).

The issue of missed nursing care is of particular importance in oncology units as cancer patients, and those who have low levels of immunity due to chemotherapy and similar treatments. Therefore, missed nursing care in such units may result in high mortality rates (1). Kalisch (2006) used focus group methodology to identify the scope of care missed in the acute care setting. Findings revealed nine areas of missed care (ambulation, turning, delayed or missed feedings, patient teaching, discharge planning, emotional support, hygiene, intake and output documentation, and surveillance) and seven reasons for missing that care (inadequate staff, time required for nursing intervention, poor teamwork,..)(11). The results of the first quantitative study using the MISSCARE Survey identified that nursing interventions, basic care, and care planning were among 70% of respondents (6). A systematic review of 102 studies concluded that increased registered nurse (RN) staffing levels are associated with lower rates of hospital-related mortality and adverse patient events, also the quality of nursing care was significantly related to nursing reported rates of unfinished care (12). Khajooee et al. (2019) reported participation in interdisciplinary patient care classes had the highest mean score of missed care and the lowest missed care was belonged control of vital signs and blood sugar and documentation. (13).

Missed nursing care affects patient safety in any country and culture, as it has a direct impact on quality of care. Few studies have been conducted on the phenomenon of nursing missed care in Iran, but there is no quantitative study on missed nursing care and related factors in oncology departments. Since it is very important for cancer patients to perform proper care during hospitalization due to the severe conditions of the disease, this study aimed to assess the nursing missed care and related factors from the perspectives of nurses in oncology departments of medical universities in Southeast Iran.

Methods

This research is a cross-sectional descriptive study and was conducted in the oncology wards of hospitals affiliated with medical universities in southeastern Iran. The study population included all nurses working in the oncology wards of hospitals affiliated with medical universities in southeastern Iran. The sample size of this study was 93 nurses as follows:, 35 nurses in Kerman, 10 nurses in Rafsanjan, 19 nurses in Zahedan, 14 nurses in Yazd, and 15 nurses in Bandar Abbas.

Instruments

Two standard questionnaires were used in this study. The first questionnaire consisted of demographic and occupational characteristics. The second questionnaire was the Nursing Missed Care Questionnaire (MISSCARE). Details related to the two questionnaires follows.

The demographic and occupational characteristics questionnaire: including variables such as age, gender, marital status, degree of education, work experience, work experience in the oncology department, shift work, post, type of employment, and type of hospital.

The Nursing Missed Care Questionnaire (MISSCARE): This questionnaire consists of 41 questions in two sections A and B. Section A of this questionnaire has 24 questions in the form of 4 sub-scales 1- Continuous patient evaluation 2- Patient planning and education 3- Interventions related to the individual needs of the patient 4- Interventions related to basic patient care. For each question, five options were designed: Always Forget-1, Regularly Forget-2, Sometimes Forget-3, Rarely Forget-4, and Never Forget-5. Scores 1, 2, and 3 are considered nursing missed care [24]. Based on previous studies, the questionnaire has been translated into the Persian language. Content validity was approved (0.99), and Cronbach's alpha coefficient was used for internal consistency 0.91 [23].

Section B of this questionnaire has 20 items about the reasons for missed nursing care, each question four options were designed: "An important reason for nursing missed care " Score 1, "Average reason for nursing missed care Is " Score 2," a minor reason for nursing missed care " Score 3," no reason for nursing missed care " Score 4 is awarded. Scores 1 and 2 are considered as the reason for nursing missed care [24]. Based on previous studies, the questionnaire has been translated into the Persian language. Content validity was approved (0.98), and Cronbach's alpha coefficient was used for internal consistency of 0.98 [23].

Population And Data Collection

In this study, the necessary permits were obtained from the Neuroscience Research Center to implement the project. Registered nurse study participants were recruited from the subject oncology departments by the researcher. The researcher explained the purpose, potential risks, and benefits of the study to the participants. Voluntary participation in the study was also explained to this convenience sample.

Data Analysis

Data analyses were performed using SPSS version 22 (SPSS Inc., Chicago, Illinois, United States). Descriptive statistics (frequency, percentage, mean, and standard deviation) and inferential statistics (t-test, one-way analysis of variance and Pearson correlation coefficient, Chi-square, logistic regression) were used for data analysis, considering a 95% confidence interval and $p < 0.05$.

Results

The mean of age and work experience in nurses who participated in the study were 5.97 ± 30.28 (min = 22, max = 48) and 6.38 ± 5.68 (min = 1, max = 30), respectively. The average work experience in the oncology department in this nurse sample was 2.81 ± 3.18 years. The majority of nurses who participated in this study were female and married, had a bachelor's degree, and had less than five years of work experience (see Table 1).

Table 1. Demographic characteristics of nurses that working in oncology wards in southeastern of Iran and its relationship with missed nursing care

Variable	Nurses		Missed Nursing Care		Type of test	P Value
	n	%	Mean	Standard deviation		
Age (years)						
22-30	39	65	39.72	7.34		
>30	21	35	37.24	8.05	t= -1.21	0.23
Gender						
Female	49	81.7	39.45	7.74	t= -1.29	0.20
Male	11	18.3	36.18	6.79		
Marital status						
Single	18	30	40.33	5.83		
Married	42	70	38.21	8.26	t= -0.99	0.33
Level of Education						
Diploma of Nursing						
Bachelor Masters						
	2	3.3	26.50	3.54	H= 5.66	0.06
	55	91.7	39.47	7.52		
	3	5.0	35.67	2.31		
Work experience						
≤5 years						
>5 years	34	56.7	40.03	7.46		
	26	43.3	37.31	7.70	t= -1.038	0.17
Work experience in oncology unit						
<5 years						
5-10 years	44	73.3	39.18	7.52		
	16	26.7	37.94	8.09	t= -0.56	0.58
Employment Status						
Manpower plan						
Company						

Contractual	26	43.3	40.50	8.06	H= 4.80	0.31
Peymani	4	6.7	43.50	1.73		
Official	9	15	35.33	7.52		
	13	21.7	38.08	5.54		
	8	13.3	36.38	9.64		
Work Shift						
Morning	16	26.7	37.75	8.30	F= 1.92	0.14
Evening	9	15	42.33	9.68		
Night	14	23.3	41.29	5.99		
In circulation	21	35	36.57	6.55		
City						
Zahedan	7	11.7	32	7.21	F= 8.76	<0.001
Yazd	14	23.3	36	5.002		
Bandar Abbas	4	6.7	31	10.23		
Kerman	35	58.3	42.26	6.37		

F= Variance Analysis, t= Independent t-test, H= Kruskal Wallis

The mean ± (SD) of missed nursing care in the oncology ward was 38.85 ± 7.26. Among the missed nursing care, the lowest mean scores were for “Measure vital signs according to the doctor's instructions” (1.07) and “Control the absorption of fluid and excretion” (1.10). The highest mean scores were for “Participate in interdisciplinary patient care conferences” (2.82) and “Supervise e the preparation of food for the patient who can eat on his own” (2.67) (see Table 2).

Table 2
Mean and standard deviation of missed nursing care in oncology wards in southeastern of Iran

Nursing Missed Care Questionnaire	Mean	Standard Deviation
1. Move the patient 3 times a day or according to the doctor's instructions	1.52	0.83
2. Rotate the patient every 2 hours	1.88	0.90
3. Monitor feeding to the patient before cooling	2.58	1.28
4. Supervise the preparation of food for the patient who can eat on his own	2.67	1.30
5. Medication should be prescribed within 30 minutes before or after the scheduled time	1.33	0.70
6. Measure vital signs based on your doctor's instructions	1.07	0.25
7. Control the absorption and excretion of fluids	1.10	0.30
8. Complete registration of necessary information in the file	1.15	0.36
9. Educate the patient about the disease, tests, and diagnostic tests	1.68	0.83
10. Emotional support for the patient and family	2.23	1.06
11. Perform or monitor patient baths and skin care	1.87	0.85
12. Perform oral care	1.40	0.56
13. Wash your hands before caring	1.40	0.72
14. Educate the patient at the time of discharge	1.13	0.34
15. Blood glucose control with glucometer	1.12	0.32
16. Overall patient evaluation in each shift	1.27	0.48
17. Focus on re-evaluating the patient based on the patient’s condition	1.65	0.63
18. Evaluate and monitor the patient's peripheral and central venous pathways	1.13	0.39
19. Respond to patient news alarm within 5 minutes	1.22	0.45
20. Prescribe PRN drugs no later than 15 minutes after the patient's request	1.23	0.46
21. Evaluate the effectiveness of drugs	1.88	0.72
22. Participate in interdisciplinary patient care conferences	2.82	1.08
23. Cooperation and supervision of the patient going to the toilet in the first 15 minutes of the request	2.28	1.11
24. Skin Wound Care	1.23	0.46
	38.85	7.62

According to Table 3, the highest mean score of factors relating to missed care were “Unexpected increase in the number of patients or crowded wards” (3.78), "Large volume of activities related to patient admission and discharge” (3.73), and “Lack of nursing staff” (3.72).

Table 3
Mean and standard deviation of factors related to missed nursing care in oncology wards in southeastern of Iran

Factors related to missed nursing care in oncology wards	Mean	Standard Deviation
1. Lack of nursing staff	3.72	0.58
2. Urgent patient situations (e.g., worsening of the patient's condition)	3.70	0.65
3. Unexpected increase in the number of patients or crowded wards	3.78	0.69
4. Lack of support staff or secretary (e.g., assistant, ward staff, patient mover)	3.55	0.68
5. Unusual doctor's instructions for the patient	3.40	0.67
6. Unavailability of medicines when needed	3.47	0.65
7. Inefficient delivery and shift transformation at the time of shift delivery or patient transfer	3.28	0.74
8. Failure to provide the required care by other departments (for example, not moving the patient by the physiotherapy team)	3.12	0.88
9. Unavailability of tools and equipment when necessary	3.22	0.86
10. Malfunction of tools and equipment when necessary	3.20	0.99
11. Lack of support from treatment team members	3.50	0.79
12. Tension or poor communication with other support and support centers	3.07	0.97
13. Stress or poor communication in the nursing team	3.33	0.95
14. Tension or disruption in communication with medical staff	3.12	1.09
15. Failure to explain the nurse helper or caregiver about the reasons for not taking care	2.85	1.13
16. Unavailability or absence of the nurse responsible for patient care	3.23	1.06
17. Large volume of activities related to patient admission and discharge	3.73	0.58
18. Engaging the nurse with other actions such as secretary duties and ...	3.60	0.64
19. Large amount of information to be written in the file	3.67	0.63
20. The mentioned care is not related to the duties of the current nurse	3.52	0.77

Missed nursing care was significantly different only by city (P < 0.001). Bonferroni's post hoc test showed that the score of missed nursing care from the perspective of nurses in Kerman was significantly higher than Zahedan (P = 0.002), Yazd (P = 0.02), and Bandar Abbas (P = 0.01). However, the score of missed nursing care was not significantly different between nurses in Zahedan, Yazd, and Bandar Abbas.

Discussion

The findings of the study showed that most of the missed care in the oncology wards were related to "participation in interdisciplinary patient care conferences" and "supervision of food preparation for the patient who can eat on his own." These findings are in line with the findings of previous research conducted on oncology and non-oncology units [Chegin (2020) (15), Kalish et al. (2011) (14), Khajoui et al. (2019)(13)]. Results of additional studies by Friese (2013) (16), Shih-Ping Pan et al. (2021) (17), and Vryonides et al. (2016) done in oncology wards showed that turning and positioning of patients every two hours and attendance at cross-functional/team meetings were common items for missed nursing care. "Measure vital signs based on your doctor's instructions" (1.07), "Control the absorption of fluid and excretion" (1.10), and "Blood glucose control with glucometer" (1.12) were ranked as the least nursing missed care. These findings are consistent with the previous research findings of Kalish et al. (2011) (14), Khajooee et al. (2019) (13), and Rabin et al. (2019) (18).

From a clinical point of view, these nursing care interventions are directly related to the patient's health and care outcomes. Missed nursing care puts the patient at risk for poor patient care outcomes and decreased patient safety. Nursing care must be recorded, reported, and routinely audited by nursing wards. Khajooee (2019) noted that accurate recording of nursing care in the patient's file can aid in not forgetting such care (13). Contrary, care such as attending a conference, cooperation and supervision of the patient going to the toilet in the first 15 minutes of the request, supervision of food preparation for the patient who can eat on his own, turning and positioning of patients every two hours, attendance at cross-functional/team meetings may not be perceived as vital care may not be recorded, or reported in nursing documentation, and also have less chance to perceived as missed care. Yet, these factors have a direct relationship with patient care outcomes. Therefore, all nursing care should be documented.

Again, according to the study results, the highest mean score of factors relating to missed care were "Unexpected increase in the number of patients or crowded wards" (3.78), "Large volume of activities related to patient admission and discharge" (3.73), and "Lack of nursing staff" (3.72). Kalisch et al. (2011) also found that an unexpected rise in patient volume and/or acuity was consistently identified as the top factor for missed care (94.9% for all respondents), with a range in frequency between 87.4–98.3% across hospitals (14). While Blackman (2015) found that a sudden increase in admission and discharge activities can be a factor in nursing missed care (19). Further, according to Hesselink et al. (2012), if the discharge and admission process is inappropriate, the quality of nursing services will be significantly affected (20). Lastly, Albelbeisi et al. (2021) reported that approximately 63.5% of their participants reported that there are not enough registered nurses on staff to provide quality patient care (9).

Along the same lines several studies in Mexico reported that labor resources were the principal factor of missed nursing care (Blackman et al. (2015) (19), Cyprus Papastavrou et al. (2016) (30), Italy Sist et al. (2017) (26), Kalisch et al. (2012) (26), Moreno-Monsivais et al. (2015) (21), Recio-Saucedo et al. (2018) (23), and Winsett et al., (2016) (22). Friese et al. (2013) identified a significant relationship between higher patient workloads and reported missed nursing care, and believed his findings support the framework of the missed care model that asserts a relationship between structure (i.e., unit-level staffing) and processes of care (missed nursing care) (16). Ball et al. (2019) reported care being left undone (or 'missed') when nurses are working on shifts with high numbers of patients per registered nurse (24).

Based on the results of this study and the literature review less staff, more patients, and increased workload for nurses in oncology units were factors relating to missed care. Dehghan-Nayeri et al. (2018) claimed many elements related towards extra workload for nurses in oncology units, including patients' inability to explain their healthcare needs due to old age, low education levels, or being in a critical condition, as well as the inability by patients to practice self-care (1). Umpiérrez et al. (2015) also reported that an inadequate number of staff has a direct influence on the occurrence of adverse events, since low staffing numbers, excessive workloads, and unfavorable conditions experienced by nurses restrict adequate implementation and management of healthcare (25).

Conclusion

The key limitation of the current study is that the researcher was unable to connect nurses' responses to the patients under their care, making it impossible to consider the effect of reported missed care on patient outcomes. Therefore, this is an important consideration for future research.

Yet, from the findings of this study, it can be concluded that missed care and related factors in the oncology ward are not much different from other wards. Since patients in oncology wards are in a more critical situation, it could be helpful to pay more attention to the balance between the number of nurses and patients (nurse: patient ratios). As ultimately nurses need enough time to perform both vital and non-vital care as both impact patient care outcomes and patient safety. Thus, allocating sufficient nursing staff to oncology wards can provide sufficient time for caregivers, resulting in decreased missed care which has been documented to contribute to increased quality of care, and improved patient safety.

Declarations

This study has been approved by Neuroscience Research Center, Institute of

Neuropharmacology, Kerman University of Medical Sciences, Kerman, Iran, NO 9932. Data collection permission was obtained from the research committee of Sirjan University of Medical Sciences and handed over to the management of Imam Reza and Dr. Gharazi hospitals.

Consent to participate Participation informed consent was obtained from the participants in the study, and they were assured that the information was confidential

Author contribution All authors contributed to the study design and conception. Also all authors contributed to preparation of material an collection of data. Data analysis were performed by Mahlagha Dehghan. The primary manuscript draft was written by Ala Shamsi and Mansooreh Azizzadeh Forouzi. Tori Canillas-Dufau commented on last version of the manuscript all authors read and approved the final manuscript.

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