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LEVELS OF AND REASONS FOR MISSED NURSING CARE FROM THE PATIENT AND NURSE PERSPECTIVE
HASTA VE HEMŞİRE PERSPEKTİFİNDEN KARŞILANAMAYAN/VERİLEMEYEN HEMŞİRELİK BAKIMI DÜZEYLERİ VE NEDENLERİ

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ABSTRACT

In terms of missing nursing care, linked with measuring how often and to what extent elements of nursing care are overlooked, identifying missed care interventions based on nurse and patient responses will pave the way for objectively assessing and developing solutions to the reasons behind missed care needs. The present study aimed to determine the levels of and the reasons for missed nursing care needs in a state hospital in Türkiye based on nurse and patient responses. This study was conducted with 172 nurses employed in the clinical divisions and 180 patients hospitalized in the clinical units. All analyses were performed on the SPSS 21.0 program. Based on the participating nurses' responses, the findings revealed the three most missed elements of nursing care assisting the patient in ambulating three times per day or as ordered, feeding the patient when the food is still warm, and turning the patient every two hours. When it comes to missed nursing care from the patient's perspective, the findings revealed the most overlooked elements of nursing care to be related to basic care: oral care, bathing, and ambulation. Overall, perceptions of nursing staff and patients were found to be similar for certain aspects of nursing care.

Keywords: Missed nursing care, nursing care, nursing care management, patient care, patient safety.

ÖZ

Hemşirelik bakımının öğelerinin ne sıklıkta ve ne ölçüde gözden kaçtığının ölçülmesiyle bağlantılı olan karşılanamayan hemşirelik bakımı açısından, karşılanamayan bakım müdahalelerinin hemşire ve hasta cevapları perspektifinde belirlenmesi; objektif bir değerlendirmenin ve bakım ihtiyaçlarını karşılanamamasının ardındaki nedenlere çözümler geliştirmenin yolunu açacaktır. Bu çalışmanın amacı, Türkiye'de bir kamu hastanesinde karşılanamayan hemşirelik bakım gereksinimi düzeyini ve nedenlerini hemşire ve hasta yanıtlarına dayalı olarak belirlemektir. Bu çalışma klinik birimlerde çalışan 172 hemşire ve klinik birimlerde yatan 180 hasta ile yürütülmüştür. Tüm analizler SPSS 21.0 programında gerçekleştirilmiştir. Katılımcı hemşirelerin yanıtları, karşılanamayan ilk üç hemşirelik bakımının sırasıyla; hastayı günde üç kez veya gerektiği kadar ayağa kaldırma/ dolaştırma, hastanın yemek henüz sıcakken beslenmesi ve her iki saatte bir hastanın çevrilmesi olduğunu ortaya koymuştur. Hasta perspektifinde karşılanamayan hemşirelik bakımı bulguları incelendiğinde ise, en sık karşılanamayan hemşirelik bakım öğelerinin ağız bakımı, banyo yaptırma ve yürütme (ambulasyon) gibi temel bakımla ilgili eylemler olduğu tespit edilmiştir. Genel olarak, hemşirelik personeli ve hastaların algıları hemşirelik bakımının belirli yönleri için benzer bulunmuştur.

Anahtar kelimeler: Karşılanamayan hemşirelik bakımı, hemşirelik bakımı, hemşirelik bakımı yönetimi, hasta bakımı, hasta güvenliği.

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INTRODUCTION

Patient care outcomes appear as a noteworthy indicator of the quality of care worldwide. It is evident that nurses play a significant role in achieving quality patient care outcomes[1], and all practices of nurses are considered within nursing care. A nursing care process can be assessed using several input variables (e.g., hospital type and staff characteristics) and output variables (e.g., patient falls, pressure ulcers, and infection rates) in the scope of quality measures.[2-3]

In patient safety, two fundamental error types are defined: error of commission - an error occurring when staff has made an action that they should not have done - (e.g., marking the wrong eye for surgery) and error of omission - an error occurring when staff has not done an action that they should have done (e.g., not providing patient ambulation).[4] Patient safety is deemed central to the nursing care process and is highly affected by both types of errors. While the error of commission receives substantial attention in the literature, it seems that the error of omission errors has not been adequately addressed.[5] Errors of omission can lead to undesirable consequences or adversely affect clinical outcomes. However, representing a bigger problem than errors of commission, errors or omission may become far more difficult to notice.[6,7]

A recently developed measure of the nursing care process is missed nursing care (MNC). MNC is an error of omission according to the patient safety literature.[5,8,9] The concept, which is considered a quality indicator of nursing care[10], was uttered for the first time by Kalisch[11] and defined as "*care that is delayed, partially completed, or not completed at all*".[5,11]MNC, linked with measuring how often and to what extent elements of nursing care are overlooked[2,3], is a unique form of medical error categorized as underuse.[1] The error inevitably brings adverse effects on the quality of nursing care and puts patient safety at risk.[12] Moreover, it not only affects the health of patients and nurses but also indirectly increases the number of days of hospital stay, pumping the cost of care services due to additional treatments.[13]

Considering the conceptual framework of MNC within Donabedian's concepts of structure, process, and outcome[11,14], while structure variables include hospital, patient care unit, and staff characteristics, the activities in providing and receiving care constitute process variables Then, "process" leads to MNC needs, affecting patient outcomes (e.g., falls, pressure ulcers, etc.) and staff outcomes (job satisfaction, burnout, intent to leave, etc.).[15]

Several studies exploring nurses' perceptions previously revealed that a substantial number of elements within nursing care are overlooked or significantly delayed.[2] Besides, the reasons why nurses cannot satisfy the required care were clustered under seven categories: too few staff, the time required for nursing intervention, poor use of existing staff resources, "not my job" syndrome, ineffective delegation, habits, and denial.[11] In their research, Kalisch et al. investigated the causes of MNC and concluded that the lack of labor resources appears as the most significant cause of MNC.[14] In the case of a poor number of employees, it is more likely that the remaining staff will not be able to complete all the required care. The lack of staff also causes the available staff to be unable to assist others in providing the necessary care, which leads to less care for each patient. For example, when a nurse cannot assist the patient in ambulating (due to the priorities of other patients), they are less likely to get help from another nurse to fulfill this need.[16]

There is a need to link certain aspects of nursing care to patient outcomes to help determine how necessary certain elements of nursing care are and how their completion affects the cost-benefit balance. Nursing care bears some elements that patients cannot evaluate; however, patient perspective on nursing care is considered essential to ensure appropriate and comprehensive nursing care.[2] Kalisch et al. previously grouped patients' ability to assess elements of nursing care into three categories: fully reportable, partially reportable, and non-reportable. In fully reportable areas, patients can report situations such as oral care, bathing, listening, briefing, call and alarm response, food assistance, pain relief, and follow-up, while partially reportable areas include care needs such as ambulation, patient education, medication management, repositioning, vital signs, and hand washing. Non-reportable areas, on the other hand, cover patient assessment, surveillance, and intravenous care.[2]

The literature demonstrates that necessary nursing care is sometimes overlooked for various reasons[1,3,9,17] which may imply that MNC is a global issue that should be brought under spotlights. However, the national literature in Türkiye hosts few research articles on MNC[3,12,18] , albeit more evidence is needed on this subject. In addition, the available studies often considered only the views of nurses on whether nursing care was completed or not. However, eliciting patient views on MNC may be as important as consulting nurses' views. Therefore, asking patients to report on their nursing care is likely to help empower them and increase their interest and participation in their own care. Moreover, identifying missed care interventions based on nurse and patient responses will pave the way for providing an objective assessment of and developing solutions to the reasons behind missed care needs.

The present study aimed to determine the levels of and the reasons for missed nursing care needs in a 505-bed state hospital in Türkiye based on nurse and patient responses.

MATERIAL AND METHODS

Research Questions

What is the amount and reasons for MNC needs from a nurse perspective in a public hospital in Türkiye?

What is the amount of MNC needs from a patient perspective in a public hospital in Türkiye?

Study Design

This cross-sectional regarding time dimension and descriptive in terms of purpose study was carried out with 172 nurses employed in the clinical divisions and 180 patients hospitalized in the clinical units of the relevant hospital between 15/11/-15/12/2019. The research included voluntary patients who were at least 18 years old, hospitalized for at least two nights, and not diagnosed with dementia, Alzheimer's disease, or any other psychiatric disorder. In addition the research included voluntary nurses who were at least 18 years old.

The number of nurses working in the hospital is 400.

The minimum sample size in the study was determined by performing power analysis with G*Power (v3.1.9.7) programme. Accordingly, the minimum sample size to be included in the study for 95% statistical test power (1-β) and 0.05 significance level (α) was calculated as at least 147 nurses. We tried to reach all of the nurses to increase the power of the study. The exclusion criteria of the study were nurses who were on leave or on report on the dates of the study and who did not accept to participate in the study. Three questionnaires were excluded due to incomplete responses to the distributed questionnaire forms. A total of 172 nurses' questionnaires were evaluated in the study.

Another research group in the study consisted of hospitalised patients. The sample of the research was determined by power analysis (G*Power). In the power analysis, the significance level (α)= 0.05 and the test power of the study (1-β) was taken as 0.95. In the power analysis, the type 1 error rate (α)= 0.05 and the power of the study (1-β) was taken as 0.95. As a result of the analysis, the sample size was calculated as 147 patient. On the dates of the study, an attempt was made to reach all patients who met the inclusion criteria of the study. Patients who did not meet the inclusion criteria and did not accept to participate in the study were excluded from the study. Ten questionnaires were excluded due to incomplete responses to the distributed questionnaire forms. A total of 180 patient questionnaires were evaluated in the study.

Data Collection Tools

The data were collected using two different questionnaires designed for nurses and patients.

The questionnaire administered to the nurses covered questions inquiring about the demographic characteristics of the nurses (12 items) and the Missed Nursing Care (MISSCARE) Survey (Part A 21 items and Part B 16 items). In the questionnaire applied to the patients, demographic characteristics of the patients (8 items) and MISSCARE-Patient (13 items) questions were included. The questionnaires were administered face-to-face to the participants. Prior to data collection, the authors, both holding the copyright of the surveys and adapting them in Turkish, were requested relevant permissions via e-mail.

MISSCARE Survey: Developed by Kalisch and Williams (2009) [8] and adapted into Turkish by Kalisch et al. (2012b) the survey is utilized to determine nurses' assessments of both the frequency and causes of missed care. [3] It consists of two parts. In the first part (Part A), the nursing staff is asked to rate how frequently each element is missed on a 5-point Likert-type scale ranging from "always missed" to "never missed." Part A consists of 21 items. In the second part (Part B), nurses are asked to state their views about the reasons for missed care in their units on a 4-point Likert-type scale ranging from "significant reason" to "not a reason for missed nursing care." Part B consists of 16 items. While interpreting the results, no score range indicates that the frequency of an investigated event is increasing or decreasing. Instead, higher scores in Part A show an increased frequency of missed nursing care, while higher scores in Part B indicate the importance of the reasons for missed nursing care. Reasons for not providing care are interpreted under three subscales: labor resources, material resources, and communication. In the first part of the scale (Part A), an increase in the score indicates an increase in the amount of missing nursing care needs, while an increase in the score in the second part (Part B) indicates the degree of importance of the reasons for missing nursing care needs.In the original study, Cronbach's α value for the first part of the scale was 0.93 and Cronbach's α value for the second part was 0.80. In this study, Cronbach's α value for the first part of the scale (Part A) was found to be 0.91, and Cronbach's α value for the second part of the scale (Part B) was found to be 0.86.

MISSCARE Survey-Patient: The MISSCARE Survey-Patient is a patient report survey assessing whether appropriate nursing care is provided. It was developed by Kalisch[11], tested for validity and reliability by Kalisch et al.[19](2014), and adapted into Turkish by Sönmez et al.[20](2020) The survey consists of 13 items related to the frequency and duration of nursing care interventions and three components: communication, timeliness, and primary care.[21] The communication component consists of five items, each scored on a 5-point Likert-type scale (1= never, 5= always), about how often the patient communicates with the nurse, whether they are informed about tests, procedures, treatment, and care, and whether their views are taken into account. The timeliness component includes four items; each scored between 1 (< 5 minutes) and 5 (> 30 minutes) and inquiring about the time elapsed before nurses respond to the need to urinate, the beeping monitor or machine, and the call signal or beep. Finally, the primary care component covers four questions about basic care needs (e.g., bathing, oral care, and transfer from bed to chair), scored on a 5-point Likert type scale (1 = never, 5 = always)[21]. Besides, two questions on the primary care component and four questions on the timeliness component included an additional response option to indicate that the patient does not need it (e.g., "I could not walk," "I never pushed my call button," etc.). Items in the communication and essential care components are reversely scored. The total score obtained from 13 items shows the total score of miss care. The Cronbach alpha internal consistency coefficient for the original scale[21] is 0.83. In the study conducted by Sönmez et al. [20] the Cronbach alpha internal consistency coefficient was 0.78.In this study, Cronbach's alpha coefficient of the scale was found to be 0.73.

Data Analysis

Descriptive statistics (frequency, percentage, mean, standard deviation, and minimum and maximum values) were presented to reveal the demographic characteristics of the participants and the levels of missed care. All analyses were performed on the SPSS 21.0 program.

Ethics Committee Approval

In order to carry out the research, research permission was obtained from the Chief Physician of Antalya Atatürk State Hospital with the letter numbered 7173619-619 and dated 15.10.2019. Ethics committee approval was obtained from the Clinical Research Ethics Committee of Antalya Training and Research Hospital (Date: 07.11.2019; Number:24/20). All nurses and patients participating in the study were informed

about the purpose of the study and the questionnaire, and after the necessary explanations were made, the consent of the nurses and patients who wanted to participate was obtained.

RESULTS

Descriptive Statistics of the Survey Scores

The mean and standard deviation values computed on the subscale and total scores are shown in Table 1. Considering the MISSCARE Survey-Patient, it was found out that the highest mean score was calculated on the primary care component (3.15 ± 1.22), while the lowest mean score belonged to the timeliness component (1.12 ± 0.90). The participants had a mean missed care score to be 2.05 ± 0.46. Considering the MISSCARE Survey, in contrast the participants got a mean score of 1.11±0.42 on Part A, it was 3.14 ± 0.50 on Part B.

The findings revealed that almost all (95.3%) nurses were females, 84.9% were married, and 80.2% had an undergraduate degree. The mean age of the nurses was 43 years. In addition, about half of them (41.9%) were deployed in surgical units, 69.8% worked in shifts, and 70.3% had a shift length of 24 hours. Most nurses (93%) claimed the number of nurses was insufficient, while 65.7% had moderate job satisfaction. Besides, 62.2% had no intent to leave the institution, while 70.9% had no intention to leave the profession. Considering the frequently confronted events in their units, 74.42% complained about prolonged hospitalization, 48.26% reported an increase in infectious diseases, and 31.40% claimed that the mortality rates increased.

Regarding the participating patients, 50.6% were women, and 78.9% were under 65. While 75% were hospitalized in surgical clinics, 85% had also been hospitalized. While 88.9% had a companion, 43.9% reported good health status. In addition, it was found that 27.8% were hospitalized with neurological diseases, 17.8% with heart diseases, 13.9% with bone diseases and ear, nose, and throat disorders, respectively, 13.3% with digestive disorders, 4.4% with kidney diseases, 3.9% with lung diseases, 3.3% with diabetes, and 1.7% with cancer.

Findings of MISSCARE Survey

Table 2 presents the nurse-reported frequencies of missed nursing care. Accordingly, the three most missed elements of nursing care were assisting the patient in ambulating three times per day or as ordered (6.4%), feeding the patient when the food is still warm (5.8%), and turning the patient every two hours (3.5%) (Table 2). Besides, the three sometimes/often missed elements of nursing care appeared as feeding the patient when the food is still warm (13.4% + 33.1%), patient bathing/skincare (18% + 9.9%), and assisting with toileting needs of the patient within five minutes of request (22.7% + 4.1%). Finally, the three least missed elements of nursing care (i.e., the most satisfied ones) became complete documentation of all necessary data (87.8%), patient assessments performed in each shift (86.6%), and hand washing (86%) (Table 2).

On the other hand, the nurses showed the inadequate number of staff (labor resources) (88.4%), supplies/equipment not functioning correctly (material resources) (62.8%). Other departments' not providing the care needed (communication) (59.9%) as the most significant reasons for missed care (Table 3).

Findings of MISSCARE Survey-Patient

The patient-reported proportions of missed nursing care are given in Tables 4 and 5. Accordingly, it was found that the three most missed elements of nursing care were covered in the primary care component: oral care (31.7%), bathing (28.9%), and ambulation (18.3%). On the other hand, the three least missed elements of nursing care (i.e., the most satisfied ones) appeared in the communication component: providing information about tests/procedures (47.8%), talking to the patient about the treatment/care (35.0%), and the nurse's introducing themselves to the patient (31.7%) (Table 4).

The timeliness component consists of items inquiring about the time elapsed before nurses respond to the patient's needs. The patients reported the following happened within 5-10 minutes on average: the nurse responded when a monitor or other machine beeped (25.1%), the nurse responded to the call light (37.2%), the patient got help when the call light was answered (37.2%), and the nurse arrived when the patient needed to go to the bathroom (37.2%) (Table 5).

When the rates of adverse events reported by the patients in the last part of the misscare survey-patient were examined, patients stated that they experienced subcutaneous leakage from the vascular (26.1%), vascular occlusion (23.3%), development of new infections (14.4%) and deterioration of skin integrity/bed sores (10%). Most patients stated that they did not experience falls or medication errors (Table 6).

DISCUSSION

Missed nursing care is considered a multidimensional

Table 1. Descriptive statistics of scales

Scales and Subscale	Number of Items	Min	Mak	$\bar{X}$	SD
Misscare Survey-A	**21**	0.10	3.05	1.1099	0.41772
Misscare Survey-B	**16**	1.00	4.00	3.1395	0.49662
Labor resources	4	1.00	4.00	3.5131	0.53617
Communication	9	.00	3.00	1.0336	0.38399
Material resources	3	1.00	4.00	3.4225	0.67907
	Number of Items	**Min**	**Mak**	$\bar{X}$	**SD**
Misscare Survey -Patient	**13**	**0.85**	**3.08**	**2.0555**	**0.46828**
Communication	5	1.00	3.40	1.9067	0.52772
Basic care	4	0.50	5.00	3.1542	1.22197
Timeliness	4	0.00	3.00	1.1222	0.90324

Source: The authors.
Note: Min: Minimum, Max: Maximum, $\bar{X}$: Average; SD: Standard deviation

Table 2. The nurse-reported frequencies of missed nursing care

	Never missed	Rarely missed	Sometimes missed	Often missed	Always missed
	n (%)	n (%)	n (%)	n (%)	n (%)
Ambulation three times per day or as ordered	42 (24.4)	91 (52.9)	10 (5.8)	18 (10.5)	**11 (6.4)**
Turning patient every 2 hours	41 (23.8)	92 (53.5)	10 (5.8)	23 (13.4)	**6 (3.5)**
Feeding patient when the food is still warm	20 (11.6)	62 (36.0)	**23 (13.4)**	**57 (33.1)**	**10 (5.8)**
Setting up meals for patients who feed themselves	31 (18.0)	127 (73.8)	8 (4.7)	5 (2.9)	1(0.6)
Medications administered within 30 minutes before or after scheduled time	13 (7.6)	145 (84.3)	7 (4.1)	6 (3.5)	1 (0.6)
Vital signs assessed as ordered	19 (11.0)	142 (82.6)	7 (4.1)	4 (2.3)	0
Monitoring intake/output	14 (8.1)	146 (84.9)	8 (4.7)	4 (2.3)	0
Complete documentation of all necessary data	10 (5.8)	**151 (87.8)**	8 (4.7)	3 (1.7)	0
Patient teaching about procedures, tests, and other diagnostic studies	12 (7.0)	146 (84.9)	6 (3.5)	7 (4.1)	1 (0.6)
Emotional support to patient and family	9 (5.2)	141 (82.0)	13 (7.6)	6 (3.5)	3 (1.7)
Patient bathing/skin care	40 (23.3)	79 (45.9)	**31 (18.0)**	**17 (9.9)**	5 (2.9)
Mouth care	21 (12.2)	119 (69.2)	18 (10.5)	11 (6.4)	3 (1.7)
Handwashing	15 (8.7)	**148 (86.0)**	6 (3.5)	3 (1.7)	0
Teach the patient about plans for their care after discharge and when to call after discharge	19 (11.0)	140 (81.4)	8 (4.7)	4 (2.3)	1 (0.6)
Bedside glucose monitoring as ordered	13 (7.6)	147 (85.5)	8 (4.7)	4 (2.3)	0
Patient assessments performed each shift	12 (7.0)	**149 (86.6)**	6 (3.5)	5 (2.9)	0
IV/central line site care and assessments according to hospital policy	12 (7.0)	147 (85.5)	7 (4.1)	6 (3.5)	0
Response to call light is initiated within 5 minutes	26 (15.1)	116 (67.4)	24 (14.0)	6 (3.5)	0
PRN medication requests were acted on within 15 minutes	15 (8.7)	136 (79.1)	15 (8.7)	5 (2.9)	1 (0.6)
Assess the effectiveness of medications	21 (12.2)	133 (77.3)	8 (4.7)	9 (5.2)	1 (0.6)
Assist with toileting needs within 5 minutes of request	29 (16.9)	94 (54.7)	**39 (22.7)**	7 (4.1)	3 (1.7)

Source: The authors.
Note: n=Number **; %=**Percentage

Table 3. The nurse-reported frequencies of reasons for missed nursing care

	Significant a reason	Moderately important reason	Little a reason	Not a reason for missed nursing care
Labor Resources	n (%)	n (%)	n (%)	n (%)
(Level of staffing) Inadequate number of staff	**152 (88.4)**	13 (7.6)	4 (2.3)	3 (1.7)
Urgent patient situations (e.g., a patient's condition worsening)	107 (62.2)	51 (29.7)	8 (4.7)	6 (3.5)
Unexpected rise in patient volume and acuity in the unit	85 (49.4)	63 (36.6)	20 (11.6)	4 (2.3)
Inadequate number of assistive personnel (e.g., nursing assistants, techs, unit secretaries, etc.)	84 (48.8)	76 (44.2)	7 (4.1)	5 (2.9)
Communication				
The high number of inexperienced personnel in the service	61 (35.5)	82 (47.7)	22(12.8)	7 (4.1)
(The method of making patient assignments) Unbalanced patient assignments	48 (27.9)	61 (35.5)	48 (27.9)	15 (8.7)
Inadequate handoff from the previous shift or sending unit	78 (45.3)	60 (34.9)	26 (15.1)	8 (4.7)
Other departments did not provide the care needed (e.g., physical therapy did not ambulate)	**103 (59.9)**	41 (23.8)	22 (12.8)	6 (3.5)
Lack of backup support from team members	62 (36.0)	57 (33.1)	45 (26.2)	8 (4.7)
Tension or communication breakdowns with other ancillary/ support departments	44 (25.6)	48 (27.9)	63 (36.6)	17 (9.9)
Tension or communication breakdowns within the nursing team	42 (24.4)	52 (30.2)	54 (31.4)	24 (14.0)
Tension or communication breakdowns with the medical staff	47 (27.3)	43 (25.0)	59 (34.3)	23 (13.4)
The nurse leaving the service for any reason other than the nursing care service or not being able to reach their	44 (25.6)	29 (16.9)	37 (21.5)	62 (36.0)
Material Resources				
Medications not available when needed	89 (51.7)	59 (34.3)	19 (11.0)	5 (2.9)
Supplies/equipment not available when needed	99 (57.6)	53 (30.8)	13 (7.6)	7 (4.1)
Supplies/equipment not functioning correctly when needed	**108 (62.8)**	46 (26.7)	14 (8.1)	4 (2.3)

Source: The authors.
Note: n=Number **; %=**Percentage

Table 4. The patient-reported frequencies of missed nursing care (communication and primary care)

	Always (not missed nursing care)	Usually	Sometimes	Rarely	Never
Communication	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
How often do you know who the nurse assigned to look after you on the shift is?	57 (31.7)	99 (55.0)	20 (11.1)	2 (1.1)	2 (1.1)
How often did your nurse talk to you about your treatment and care?	63 (35.0)	94 (52.2)	22 (12.2)	1 (0.6)	0
How often did your nurse inform you about the tests and procedures performed during your hospitalization?	86 (47.8)	78 (43.3)	14 (7.8)	2 (1.1)	0
Did your nurse listen to you when you had a question or concern about your care or illness?	48 (26.7)	85 (47.1)	39 (21.7)	5 (2.8)	3 (1.7)
When you had an opinion or idea about what needs to be done about your care, did the nurse take these views and ideas into account?	38 (21.1)	75 (41.7)	53 (29.3)	10 (5.6)	4 (2.3)
Basic care	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
How often did the nurse check if you brushed your teeth and rinsed your mouth (or how often did the nurse do your oral care if you couldn't do this)?	9 (5.0)	13 (7.2)	50 (27.8)	51 (28.3)	**57 (31.7)**
During your hospital stay, how often did the nurse check on you to make sure you were taking a bath or that your body was clean?	13 (7.2)	26 (14.4)	46 (25.6)	43 (23.9)	**52 (28.9)**
*On average, how often did the nurse assist or watch you get out of bed and sit in a chair?	29 (16.1)	17 (9.4)	43 (23.9)	35 (19.4)	32 (17.8)
*On average, how often did the nurse assist or monitor your walking?	41 (22.8)	16 (8.9)	36 (20.0)	31 (17.2)	**33 (18.3)**

* In the last two items with a sixth response option in the primary care subscale, 13.3% of the participants reported being unable to get out of bed, and 12.8% unable to walk.
Source: The authors.
Note: n=Number **; %=**Percentage

Table 5. The patient-reported frequencies of missed nursing care (timeliness)

Timeliness	No Machine Beeps	< 5 minutes	5 -10 minutes	11 - 20 minutes	21 - 30 minutes	> 30 minutes
	n (%)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
When a monitor or other machine beeped, how long did it usually take for the nurse to intervene?	105 (58.3)	15 (8.3)	45 (25.1)	13 (7.2)	2 (1.1)	0
When you pressed your call light/ bell (or called the nurse), how long, on average, did it take the nurse to respond?	59 (32.8)	21 (11.7)	67 (37.2)	30 (16.17)	1 (0.6)	2 (1.1)
Once your call light/bell (or call) was answered, how long on average did it take you to get the help you wanted?	58 (32.2)	23 (12.8)	67 (37.2)	29 (16.1)	3 (1.7)	0
When you needed help going to the toilet, how long did it take for the nurse to come to your room to help?	104 (57.7)	18 (10.0)	45 (25.1)	11 (6.1)	2 (1.1)	0

Source: The authors.
Note: n=Number**; %=**Percentage

Table 6. Findings on patient-reported adverse events

Adverse Events	Yes	No	I'm not sure
	n (%)	**n (%)**	**n (%)**
Fall	0	153 (%85)	27 (%15)
Deterioration of skin integrity / Bed sores	18 (%10)	135 (%75)	27 (%14.4)
Medication errors	0	145 (%80.6)	35 (%19.4
Development of new infections	26 (%14.4)	111 (%61.7)	43 (%23.9)
Vascular occlusion	42 (%23.3)	95 (%52.8)	43 (%23.9)
Subcutaneous leakage from the vascular	47 (%26.1)	88 (%48.9)	45 (%25)

Source: The authors.
Note: n=Number **; %=**Percentage

construct; thus, the nursing profession must demonstrate a multifaceted response to address it.[22] Besides, patients, as well as nurses, can be decisive in missed nursing care. Further research is needed to investigate how patients perceive missed care to suggest a more comprehensive definition of the concept.[23] The present research was carried out to determine missed nursing care in a state hospital based on the perceptions of nurses and patients.

Based on the participating nurses' responses, the findings revealed the three most missed elements of nursing care: assisting the patient in ambulating three times per day or as ordered, feeding the patient when the food is still warm, and turning the patient every two hours. In addition, patient bathing/skincare, and assisting with toileting needs of the patient within five minutes of the request were found to be the elements of sometimes/often missed nursing care. Özdelikara and Yaman conducted a study to reveal the health anxiety and frequencies and causes of missed nursing care among nurses deployed during the pandemic.[24] The participating nurses indicated assisting the patient in ambulating three times per day or as ordered (23.5%), turning the patient every two hours (20%), and patient bathing/skincare (19.5%) as the most missed elements of nursing care. In their study in a university hospital, İlaslan and Şişman concluded that the most missed elements of nursing care are ambulating three times per day or as ordered, providing emotional support to patient and family, and attending interdisciplinary care conferences whenever held.[12] In addition, Palese et al. found patient ambulation (91.4%), turning the patient every two hours (74.2%), and medication at the right time (64.6%) to be frequently missed practices.[7] Ultimately, the findings in this study and the literature overlap, concluding that the nurses reported the most missed care element to be patient ambulation, that is, assisting the patient in ambulating three times per day or as ordered. Similarly, the literature host other studies revealing ambulation to be the most missed element of nursing care.[3,14,18,25-27]

According to the participating nurses, the most apparent reasons for missed nursing care were the inadequate number of staff (labor resources) (88.4%), supplies/ equipment not functioning correctly (material resources) (62.8%), and other departments' not providing the care needed (communication) (59.9%). Similarly, in different studies in Türkiye, the participating nurses reported the inadequacy of the number of staff as the most crucial reason for missed nursing care.[12,24] Saqer and Abu Al Rub reported that the most common cause for missed nursing care be related to labor resources.[28] According to 2019 OECD data, the average number of nurses per 1,000 people in OECD countries was about 8.85. Yet, Türkiye ranks as the last country on the list with an average number of 2.4 nurses per 1,000 people.[29] While the OECD average for the ratio of physicians to nurses was 2.6, this ratio became 1.2 in Türkiye in 2019. The relevant OECD statistics indicate the insufficient number of nurses in Türkiye and their excessive workload. The same story applies to nursing education. The average number of nursing graduates per 100,000 people was 44.5 for OECD countries, albeit it was 18.7 for Türkiye[30], which implies that the problem of the insufficient number of staff is not likely to be eliminated shortly.

The relevant research in the literature often linked missed nursing care to complicated registration systems and technical procedures in the management of nursing care, the insufficient number of staff, and intensive patient admission and discharge procedures.[3,9,17,31-33] Thus, it can confidently be asserted that the present findings overlap the literature regarding insufficient staff.

When it comes to missed nursing care from the patient's perspective, the findings revealed the most missed elements of nursing care to be related to primary care: oral care, bathing, and ambulation. In the study of Kalisch et al. the five most missed elements of nursing care were reported to be oral care, ambulation, assisting the patient in getting out of bed and sitting on a chair, informing the patient about tests/procedures, and bathing.[19] Besides, the participating patients reported missed nursing care within primary care rather than communication and timeliness. In their research, Gustafsson et al. found that patients reported problems with primary care, communication, and timeliness, respectively.[23]

In this study, the patients also reported adverse events to be intravenous (IV) leakage in their skin (26.1%), IV occlusions (23.3%), new infection (14.4%), and skin breakdown/pressure ulcer (10%). The fact that IV leakage in the skin and IV occlusion were among the most frequently reported adverse events overlaps the findings in previous research.[19,20,34] Nevertheless, the patients did not report falls or medication administration errors, unlike the findings in other studies.[19,34]It is thought that the reasons uttered for missed nursing care (e.g., the insufficient number of staff, communication, and teamwork) may have caused the mentioned adverse events. Indeed, there were patient reports that more nurses provide a faster response to patient needs.[21] Gustafsson et al. concluded that patient-reported adverse events were associated with patients' perceptions of staff competence and that a perceived lack of staff and inadequate staff experience might lead to missed care.[23]

CONCLUSION

This study aimed to determine the perspectives of nurses and patients towards investigating missed nursing care. Accordingly, it was found that ambulation, feeding the patient while the food was still warm, and turning the patient every two hours became the most missed elements of nursing care. From the patient's perspective, it was determined that the most missed elements of nursing care were related to primary care (e.g., oral care, bathing, and ambulation). Overall, perceptions of nursing staff and patients were similar for certain aspects of nursing care. Besides, it is noteworthy that the nurses showed the insufficient number of staff as the most significant reason for missed nursing care. Furthermore, the patients reported experiencing IV leakage in their skin, IV occlusion, new infections, and skin breakdown/pressure ulcers. In line with these results, it is recommended to make necessary arrangements (adequate number of personnel, etc.) with manpower planning based on scientific basis for the working conditions of nurses, and to increase and support training opportunities and in-service training pro-

grammes. In addition, further research is recommended to recruit the views and perceptions of nurses and patient on missed nursing care.

Ethics Committee Approval: Ethics committee approval was received for this study from the Clinical Research Ethics Committee of Antalya Training and Research Hospital (Date: 07.11.2019, Number: 24/20).
Informed Consent: Written and/or verbal consent was obtained from patients and nurses participating in the study.
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