

The Relationship Between Surgical Nurses' Attitudes Toward Teamwork and Missed Nursing Care: A Descriptive Study

 Seda Cansu Yeniğün Akbulut¹,  Züleyha Öğür²,  Çağla Toprak³

¹Department of Surgical Nursing, Akdeniz University, Kumluca Faculty of Health Sciences, Antalya, Türkiye

²Antalya Provincial Health Directorate, Antalya, Türkiye

³Department of Nursing, İstanbul Atlas University Faculty of Health Sciences, İstanbul, Türkiye

Abstract

Introduction: Surgical units require highly skilled and well-equipped multidisciplinary teamwork to provide patient-centered care. Effective teamwork among surgical nurses is critically important for ensuring patient safety and preventing missed nursing care. The aim of this study is to examine the relationship between surgical nurses' understanding of teamwork and missed nursing care.

Methods: This study was conducted between March 30 and July 25, 2025, with 120 nurses working in the surgical units of two district and one provincial state hospitals located in southern Türkiye. The study employed the "Nurse Information Form," the "Nursing Teamwork Survey (NTS)-Turkish," and the "MISSCARE Survey – Turkish Version" scales.

Results: The study determined that surgical nurses exhibited a high level of teamwork (NTS mean score: 3.78 ± 0.67). However, higher nursing teamwork scores were positively associated with higher MISSCARE Part A scores ($r=0.319$, $p<0.001$). While teamwork and missed nursing care differed across clinical units, the reasons for missed nursing care differed according to professional experience and absenteeism during the previous three months ($p<0.05$).

Discussion and Conclusion: Although surgical nurses demonstrated high levels of teamwork, higher teamwork scores were positively associated with higher levels of missed nursing care. These findings suggest that missed nursing care may not be explained by teamwork alone and that, given the complex and dynamic nature of surgical care, teamwork should be considered together with clinical and organizational conditions when addressing missed nursing care.

Keywords: Surgical nursing; Nursing teamwork; Missed nursing care; Teamwork attitudes

Surgical clinics are highly specialized units that require dynamic, stressful, and multidisciplinary teamwork, where patient-centered nursing care is provided with advanced technological equipment and surgical nurses possess specialized knowledge, skills, and competencies.^[1]

Surgical nurses, who play a key role in all these processes and in patient-centered care, must take an active part in teamwork to ensure safe surgical care. In patient-centered care, teamwork and multidisciplinary collaboration are of great importance for patient safety and quality care.^[2]

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Correspondence: Seda Cansu Yeniğün Akbulut. Akdeniz Üniversitesi, Kumluca Sağlık Bilimleri Fakültesi, Cerrahi Hemşirelik Anabilim Dalı, Antalya, Türkiye

E-mail: seda.cansu.yenigun@gmail.com **Submitted:** 09.11.2025 **Revised:** 05.02.2026 **Accepted:** 16.02.2026 **Available Online:** 14.09.2026



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Surgical intervention causes many changes in patients, such as fear of death, anxiety, difficulty recovering from anesthesia, changes in body image, and separation from loved ones. To ensure patient recovery by providing nursing care to patients in surgical units that helps them cope with these challenges, nurses must communicate with the patient, family, and physician. Effective teamwork is necessary, allowing patients to easily reach their nurses.^[3,4] The success of teamwork in the surgical process positively affects the quality of patient care and postoperative outcomes. Effective communication and coordination within the team enhance patient safety and help prevent complications.^[5,6]

The concept of "Missed Nursing Care (MNC)" was first introduced in the literature by Kalisch and Williams^[7] as "the omission or delay of all or part of the required care". Studies show that the global incidence of missed nursing care ranges between 10% and 50%.^[8] According to findings from the literature, missed nursing care occurs regularly in clinical settings.^[9,10]

Frequently neglected or unperformed nursing tasks include providing psychological and emotional support, maintaining complete nursing records, patient repositioning, nutrition, hygiene, oral care, physical assessments, patient education, and discharge planning.^[9,11,12] Additionally, the five most overlooked nursing tasks identified by perioperative nurses are: team communication before patient transfer to the operating room (43%), suspension of activities during time-out checks (39.9%), implementation of isolation precautions (36.1%), use of standard communication protocols (33.7%), and reporting of abnormal lab results (33.4%).^[13]

Missed nursing care is an error of omission—failing to do the right thing—which can lead to adverse outcomes for patients and negatively affect the quality of care. It can increase the risk of patient falls and pressure injuries, delay wound healing, and result in severe pain.^[14] It also extends the length of hospital stays following surgical interventions, leads to insufficient holistic and quality care, and increases the need for emergency interventions and intensive care unit admissions.^[10] Surgery can cause pain and wounds in patients. Surgical nurses provide nursing care for the patient, including pain management and wound care. Inadequate wound care by surgical nurses can lead to surgical infection, morbidity, and mortality. Inadequate pain management can lead to respiratory and cardiovascular complications, delayed mobilization, poor sleep quality, the development of chronic pain, and delayed discharge.^[11] Missed nursing care has negative impacts not only on the quality of healthcare services but also on the patient's perception

of being undervalued, decreased patient satisfaction, and a breakdown in trust and communication between the patient, nursing staff, healthcare team, and institution.^[15] Although studies have been conducted on missed care and teamwork among nurses,^[3,5] this relationship has received limited attention specifically in the context of surgical nursing. The time-sensitive and highly interdependent nature of care delivery in surgical units highlights the importance of nurses' teamwork attitudes in determining their capacity to provide necessary care. Despite evidence that poor coordination and communication increase the likelihood of missed care nursing, this relationship has not been thoroughly investigated in the context of surgical nursing. Therefore, by assessing the impact of teamwork attitudes on missed nursing care, particularly among surgical nurses, this study seeks to make a unique contribution.

Aim

This study was conducted to examine and clarify in more detail the relationship between surgical nurses' understanding of teamwork and missed nursing care.

Materials and Methods

Study Place and Design

This study was conducted between March 30, 2025, and 25 July, 2025, with nurses working in surgical units at two district state hospitals and one provincial state hospital located in the south of Türkiye.

Research Questions

The research questions of this study were:

- What is the level of surgical nurses' understanding of teamwork?
- What is the level of missed nursing care needs among surgical nurses?
- What is the relationship between surgical nurses' understanding of teamwork and their missed nursing care needs?

Considering the risk of data loss and missing data, a larger sample was preferred, and data were collected from 120 nurses. Inclusion criteria for the study were: (a) voluntary participation, (b) being employed as a surgical nurse, and (c) having worked actively in a surgical clinic for at least six months. Exclusion criteria included: (a) withdrawal from the study at any stage, (b) being on extended leave, such as unpaid leave, maternity leave, or medical leave, during the data collection period.

Research Type

This study is descriptive, correlational and cross-sectional in design.

Population

The study population consisted of a total of 143 nurses working in surgical departments (urology, otorhinolaryngology, ophthalmology, orthopedics, neurosurgery, general surgery), surgical intensive care units, and emergency departments. The sample size was calculated using the known population sampling formula, based on a 95% confidence level ($Z=1.96$), a 5% margin of error, and a probability value of $p=0.5$. According to the calculation, the minimum required sample size was determined to be 105 nurses. The study, however, included 120 nurses.

Data Collection Tools

The data for this study were collected using the "Nurse Information Form," the "Nursing Teamwork Survey (NTS)-Turkish," and the "MISSCARE Survey – Turkish Version."

Nurse Information Form

This form was developed by the researchers based on the literature to determine the demographic and professional characteristics of the participating nurses.^[4,16] It consists of 13 questions: 3 related to demographic information (e.g., most recently graduated school, age, gender) and 10 related to professional attributes (e.g., role in the clinic, total years of professional experience, shift hours, number of days or shifts missed in the last three months due to illness, injury, or other reasons, intent to leave the current nursing position, and tasks required during the shift but not considered within the scope of nursing roles).

Nursing Teamwork Survey (NTS)-Turkish

This scale was developed by Kalisch et al.^[17] to assess nursing-specific teamwork. The Turkish adaptation and validation were conducted by Taskiran Eskici and Baykal.^[18] The scale comprises 33 items and five subscales: trust (items 1–7), team orientation (items 8–16), backup (items 17–22), shared mental model (items 23–29), and team leadership (items 30–33). The nine items under team orientation are reverse scored. The scale uses a 5-point Likert-type (1=Rarely, 2=Sometimes, 3=Occasionally, 4=Frequently, 5=Always). Total average scores range from a minimum of 1 to a maximum of 5, with higher scores indicating better teamwork among team members. The overall Cronbach's alpha for the original scale is 0.94, with subscale values ranging from 0.74 to 0.85. In this study,

the Cronbach's alpha for the scale was found to be 0.907, and for the subscales: trust (0.920), team orientation (0.818), backup (0.904), shared mental model (0.931), and leadership (0.889).

MISSCARE Survey – Turkish Version

Originally developed by Kalisch and Williams^[7] and adapted into Turkish by Kalisch et al.^[19] this scale evaluates missed nursing care needs. The survey includes 21 items rated on a 4-point Likert scale (1=rarely missed, 2=occasionally missed, 3=frequently missed, 4=always missed), with higher scores indicating greater levels of missed nursing care. Moreover, there was an option of not applicable (0 points), where nursing care activities are not required. The Cronbach's alpha was 0.936, and the test-retest reliability was 0.95 ($p<0.001$). In this study, the Cronbach's alpha was 0.980.

The survey also includes a 16-item section measuring nurses' perceptions of the reasons for missed care, categorized into three subscales: labor resources, communication/teamwork, and material resources. This part is rated using a 4-point Likert scale, where increasing scores indicate greater perceived importance of each reason. The Cronbach's alpha for this section was 0.80, and the test-retest reliability was 0.667 ($p<0.001$). In the present study, the Cronbach's alpha was 0.929, with subscale reliabilities of 0.810 for labor resources, 0.926 for communication/teamwork, and 0.883 for material resources.

Study Procedure

The researchers visited the clinical settings and provided eligible nurses with detailed information regarding the study's purpose, scope, and procedures. Written informed consent was then obtained to secure their voluntary participation.

During the data collection phase, three instruments were utilized: the Nurse Information Form, the NTS, and the MISSCARE Survey – Turkish Version. The Nurse Information Form was used to gather data on participants' demographic and professional backgrounds. The NTS assessed nurses' levels of teamwork, collaboration, and communication, while the MISSCARE Survey evaluated missed nursing care needs and the perceived reasons behind them.

Nurses were given sufficient time to complete the questionnaires independently and comfortably, either within their working environment or in a designated suitable area. Throughout the data collection process, the researcher provided clarifications only when necessary, ensuring that responses were given autonomously.

Table 1. Descriptive characteristics of the nurses participating in the study (n=120)

Variable	Category	n	%
Age (year) min-max, average $\pm$ SD		23.55 35.15 $\pm$ 8.30	
Education	Associate degree	11	9.2
	Bachelor's/Master's/Doctorate (PhD) in non-nursing fields	10	8.3
	Bachelor's/Master's/Doctorate (PhD) in Nursing	99	82.5
Gender	Female	88	73.3
	Male	32	26.7
Clinical role	Staff nurse	109	90.8
	Nurse manager	11	9.2
Weekly working hours	<40 h	14	11.7
	40 h or more	106	88.3
Work schedule	Day shift	43	35.8
	Evening shift	6	5.0
	Night shift	4	3.3
	Rotating shifts	23	19.2
	24 h shift	44	36.7
Unit of employment	Surgical ward	46	38.3
	Surgical intensive care unit	32	26.7
	Emergency department	42	35.0
Total professional experience (months) min-max, average $\pm$ SD		12–444 148.03 $\pm$ 109.59	
Experience in the current unit (months) min-max, average $\pm$ SD		12–348 51.49 $\pm$ 60.79	
Shift duration	<8 h	4	3.3
	8 h	34	28.3
	10–12 h	5	4.2
	>12 h	77	64.2
Absence duration in the last 3 months	1 day/shift	54	45.0
	2–3 days/shift	14	11.7
	3–6 days/ shift	9	7.5
	>6 days/ shift	9	7.5
	No leave taken	34	28.3
Intention to leave the nursing position	Within 6 months	8	6.7
	Within 1 year	8	6.7
	I am not considering leaving	104	86.7
Mandatory non-nursing duties	Yes	50	41.7
	No	70	58.3
Non-nursing mandatory duties	Physician duties	24	48.0
	Clerical/secretarial duties	11	22.0
	Auxiliary/support staff duties	3	6.0
	Physician and clerical duties	4	8.0
	Physician, clerical, and support staff duties	8	16.0
	Total	50	100

SD: Standard deviation.

Table 2. Mean total scores of the NTS and the questionnaire on missed nursing care needs and reasons for missed nursing care services among participants (n=120)

Scales	Minimum–Maximum ^a	Mean±SD
Nursing teamwork survey (NTS)	1.97–4.94	3.78±0.67
Trust	1–5	3.69±0.91
Team orientation	1–5	3.76±0.75
Backup	1–5	3.67±0.94
Shared mental models	1–5	3.89±0.86
Team leadership	1–5	3.93±0.91
Missed nursing care needs questionnaire-A	1.05–4	3.59±0.58
Reasons for missed nursing care services questionnaire-B	1–4	1.74±0.66
Labor resources	1–4	1.36±0.59
Communication/teamwork	1–4	1.93±0.80
Material resources	1–4	1.67±0.87

a: The values were obtained in this study. SD: Standard deviation.

Completion of the surveys took approximately 20 to 30 minutes. Once completed, all questionnaires were reviewed for missing or incorrect responses. In cases where incomplete data were identified, the respective participant was contacted to complete the missing information. All collected data were coded and entered a database in accordance with confidentiality principles, with each participant assigned a unique identification number.

Ethical Considerations

The study was approved by Akdeniz University Medical Scientific Research Ethics Committee (Date: March 06, 2025 and No: TBAEK-273). Permission was obtained from the Antalya Provincial Health Directorate (Date: March 28, 2025 and No: E-98360293-604.01-272662667). Informed consent was obtained from all participants. Each research phase was conducted according to the ethical principles of the Declaration of Helsinki of the World Medical Association.

Data Analysis

The research data were analyzed using the Statistical Package for the Social Sciences (IBM SPSS Statistics 25, New York, NY, USA). The distribution of numerical variables was examined using the Kolmogorov-Smirnov test, and it was determined that the data did not follow a normal distribution. Therefore, non-parametric test methods were preferred for data comparison. Descriptive statistics included frequency, percentage, arithmetic mean, median, and interquartile range (IQR) values.

The Mann-Whitney U test was used for comparisons between two groups, while the Kruskal-Wallis test

was employed for comparisons involving more than two groups. Spearman correlation analysis was used to determine the relationships between variables. A significance level of $p < 0.05$ was accepted for all statistical analyses.

Results

A total of 120 nurses participated in the study. The majority were female (73.3%) and staff nurses (90.8%), with a mean age of 35.15 ± 8.30 years. Most worked 40 hours or more per week (88.3%), primarily in surgical wards (38.3%), surgical ICUs (26.7%), or emergency departments (35.0%). The mean professional experience was 148.03 ± 109.59 months (Table 1).

The mean total score on the NTS was 3.78 ± 0.67 , indicating level of teamwork. Subscale scores were as follows: Trust= 3.69 ± 0.91 , Team Orientation= 3.76 ± 0.75 , Backup= 3.67 ± 0.94 , Shared Mental Model= 3.89 ± 0.86 , and Team Leadership= 3.93 ± 0.91 . For the MISSCARE Survey, mean scores were 3.59 ± 0.58 for Part A and 1.74 ± 0.66 for Part B. Subscale mean scores in Part B were: Labor Resources= 1.36 ± 0.59 , Communication/Teamwork= 1.93 ± 0.80 , and Material Resources= 1.67 ± 0.87 (Table 2).

No statistically significant differences were found in NTS and MISSCARE (Part A and B) scores by educational background, gender, age, clinical role, weekly working hours, shift duration, experience in the current unit, work schedule, intention to leave the nursing position, or mandatory non-nursing duties ($p > 0.05$). However, significant differences were found in NTS ($\chi^2=11.29$, $p=0.004$) and MISSCARE

Table 3. Comparison of NTS, MISSCARE Part A, and MISSCARE Part B scores according to participants' characteristics (n=120)

Variable	Category	NTS M (IQR)	Missed Nursing Care Needs Survey – A M (IQR)	Reasons for Missed Nursing Care Services Survey – B M (IQR)
Education	Associate degree	3.97 (0.91)	3.81 (0.53)	1.56 (1.94)
	Bachelor's/Master's/Doctorate (PhD) in non-nursing fields	4.09 (1.53)	3.76 (0.53)	2.16 (1.69)
	Bachelor's/Master's/Doctorate (PhD) in Nursing	3.82 (1.00)	3.84 (0.48)	1.56 (0.88)
	χ^2/df	1.09/2	0.28/2	1.84/2
	p	0.578	0.869	0.399
Gender	Female	3.88 (1.02)	3.84 (0.46)	1.56 (0.88)
	Male	3.88 (1.18)	3.63 (0.47)	1.75 (1.23)
	Z/U	-0.07/1396.50	-1.52/1157.50	-1.37/1178.00
	p	0.946	0.129	0.172
Age (year)	34 and under	3.82 (1.02)	3.80 (0.53)	1.66 (1.03)
	35 or older	3.94 (1.09)	3.84 (0.46)	1.53 (0.86)
	Z/U	-1.25/1531.50	-1.04/1575.00	-1.24/1534.50
	p	0.210	0.296	0.215
Clinical role	Staff nurse	3.85 (1.00)	3.82 (0.53)	1.56 (0.94)
	Nurse manager	4.03 (1.58)	3.84 (0.46)	1.56 (0.75)
	Z/U	-0.64/529.50	-0.58/536.50	-0.45/550.50
	p	0.524	0.558	0.655
Weekly working hours	Less than 40 hours	3.92 (0.37)	3.85 (0.43)	1.69 (0.83)
	40 hours or more	3.85 (1.14)	3.82 (0.53)	1.56 (0.89)
	Z/U	-0.89/633.50	-0.81/645.00	-0.63/665.00
	p	0.375	0.418	0.528
Work schedule	Day shift	3.94 (1.21)	3.88 (0.46)	1.50 (0.81)
	Evening shift	3.08 (1.49)	3.47 (0.84)	1.78 (1.33)
	Night shift	3.70 (1.45)	4.00 (0.68)	1.31 (1.50)
	Rotating shifts	3.58 (0.67)	3.80 (0.46)	1.94 (0.69)
	24-hour shift	3.91 (0.98)	3.82 (0.49)	1.50 (1.14)
	χ^2/df	8.05/4	7.19/4	1.74/4
	p	0.090	0.126	0.784
Unit of employment	Surgical ward	4.11 (0.77)	3.95 (0.24)	1.66 (0.98)
	Surgical intensive care unit	3.70 (0.86)	3.55 (0.63)	1.53 (0.88)
	Emergency departmentc	3.74 (1.08)	3.54 (0.62)	1.56 (0.83)
	χ^2/df	11.29/2	11.49/2	0.61/2
	p	0.004*	0.003*	0.736
Total professional experience (months)	147 and below	3.83 (0.95)	3.82 (0.53)	1.75 (0.92)
	148 and above	3.92 (1.17)	3.83 (0.46)	1.38 (0.89)
	Z/U	-1.42/1484.00	-1.04/1558.00	-2.51/1280.00
	p	0.157	0.296	0.012*

Table 3 (cont.). Comparison of NTS, MISSCARE Part A, and MISSCARE Part B scores according to participants' characteristics (n=120)

Variable	Category	NTS M (IQR)	Missed Nursing Care Needs Survey – A M (IQR)	Reasons for Missed Nursing Care Services Survey – B M (IQR)
Experience in the current unit (months)	50 and below	3.79 (1.00)	3.84 (0.49)	1.56 (0.97)
	51 and above	3.94 (0.94)	3.80 (0.48)	1.56 (0.75)
	Z/U	-1.29/1350.00	-0.80/1439.00	-0.14/1555.50
	p	0.198	0.421	0.893
Shift duration	<8 hours	4.06 (0.29)	3.88 (0.88)	1.63 (0.83)
	8 hours	3.82 (1.58)	3.91 (0.61)	1.66 (0.80)
	10-12 hours	4.12 (1.77)	3.54 (0.28)	1.56 (1.25)
	>12 hours	3.85 (0.97)	3.82 (0.49)	1.56 (0.97)
	χ^2/df	1.76/3	1.05/3	0.22/3
	p	0.623	0.788	0.974
Absence duration in the last 3 months	1 day/shift	3.76 (1.00)	3.78 (0.53)	1.50 (0.89)
	2-3 days/shift	3.68 (1.58)	3.67 (0.77)	1.78 (0.88)
	3-6 days/ shift	3.85 (1.08)	3.85 (0.50)	1.75 (1.38)
	6+ days/ shift	3.82 (0.73)	3.56 (1.14)	2.19 (0.81)
	No leave taken	3.91 (0.84)	3.86 (0.46)	1.38 (1.06)
	χ^2/df	0.74/4	3.16/4	9.72/4
Intention to leave the nursing position	p	0.947	0.531	0.045*
	Within 6 months	3.45 (0.99)	3.86 (0.46)	1.47 (0.56)
	Within 1 year	3.47 (1.07)	3.78 (0.96)	2.09 (1.36)
	I am not considering leaving	3.89 (1.02)	3.83 (0.49)	1.56 (0.88)
	χ^2/df	2.34/2	1.09/2	4.59/2
	p	0.310	0.581	0.101
Mandatory non-nursing duties	Yes	3.84 (0.92)	3.94 (0.47)	1.53(0.95)
	No	3.89 (1.11)	3.76 (0.53)	1.59 (0.86)
	Z/U	-0.51/1653.50	-1.63/1450.00	-0.56/1644.00
	p	0.607	0.103	0.572

Z: Mann-Whitney U test; χ^2 : Kruskal-Wallis H test; M: Median; IQR: Interquartile range; *: p<0.05.

Part A scores ($\chi^2=11.49$, $p=0.003$) based on clinical unit. Significant differences were also found in MISSCARE Part B scores based on total professional experience ($z=-2.51$, $p=0.012$) and absence duration during the previous three months ($\chi^2=9.72$, $p=0.045$) (Table 3).

A positive and statistically significant correlation was found between total NTS scores and MISSCARE Part A scores ($r=0.319$, $p<0.001$), whereas no significant correlation was found between NTS scores and MISSCARE Part B scores ($r=0.069$, $p=0.456$). Among the NTS subscales, Trust ($r=0.296$, $p=0.001$), Team Orientation

($r=0.233$, $p=0.011$), Backup ($r=0.234$, $p=0.010$), Shared Mental Model ($r=0.183$, $p=0.045$), and Team Leadership ($r=0.267$, $p=0.003$) were positively and significantly correlated with MISSCARE Part A scores. No statistically significant correlations were found between the NTS total or subscales and MISSCARE Part B or its subscale scores ($p>0.05$) (Table 4).

Discussion

Team cognition reflects the extent to which team members understand each other's roles and responsibilities, act in

Table 4. The relationship between the total scores of the NTS and the missed nursing care needs questionnaire-a and the reasons for missed nursing care services questionnaire-B among participants (n=120)

Scales/Sub scales	Missed nursing care needs questionnaire-A r/p	Reasons for missed nursing care services questionnaire-B r/p	Sub scale	Sub scale	Sub scale
			Labor resources r/p	Communication/ teamwork r/p	Material resources r/p
NTS	0.319/<0.001**	0.069/ 0.456	0.039/0.671	0.064/0.485	0.036/0.699
Trust	0.296/0.001**	0.102/0.267	0.059/0.521	0.066/0.472	0.099/0.282
Team orientation	0.233/0.011*	0.071/0.439	0.022/0.813	0.060/0.513	0.082/0.375
Backup	0.234/0.010*	0.083/0.367	-0.001/0.992	0.088/0.340	0.048/0.602
Shared mental models	0.183/ 0.045*	0.011/0.909	-0.046/0.619	0.033/0.721	-0.058/0.530
Team leadership	0.267/0.003*	0.084/0.365	0.031/0.735	0.092/0.315	0.068/0.460

*: $p < 0.05$; **: $p < 0.01$. r =Spearman's rank correlation coefficient. NTS: Nursing teamwork survey.

alignment with shared goals, and coordinate effectively. Surgical units, by their nature, are multidisciplinary environments where all healthcare professionals must work in close collaboration due to time pressure and low tolerance for errors. Previous studies have shown that clear role definitions and shared mental models enhance team communication and collaboration.^[20] In line with these findings, the present study also revealed high levels of teamwork among surgical nurses, consistent previous studies conducted by Taskiran Eskici and Baykal.^[18] This high level of teamwork appears to be inherent to the nature of surgical care, which demands mutual trust, collaboration, and rapid decision-making.

In the current study, nurses scored highest on the team leadership subscale and lowest on the backup subscale, differing from previous studies in which shared mental model was the highest-scoring dimension.^[18,21] This difference may reflect variations in sample characteristics and clinical settings. The relatively high team leadership scores observed among surgical nurses may be related to the nature of surgical care, which requires rapid decision-making, effective coordination, and clear leadership within the team.

The mean MISSCARE part A score in our study was higher than those reported by Yurttaş et al.^[5] and Chegini et al.^[15] This difference may be related to variations in clinical settings, workload, staffing conditions, and sample characteristics. The relatively high level of missed nursing care observed in the present study may also reflect the complex and time-sensitive nature of care delivery in surgical units.

The positive correlation between total NTS scores and MISSCARE Part A scores indicates that higher teamwork

levels were accompanied by higher levels of missed nursing care in this study. Positive correlations with MISSCARE Part A were also observed across all NTS subscales. However, this finding contrasts with several studies reporting that higher team orientation is associated with lower levels of missed care.^[3,5] The finding that higher teamwork scores were associated with increased levels of missed nursing care in this study requires careful interpretation. One plausible explanation is the phenomenon of compensatory teamwork, in which nurses exhibit heightened mutual support under conditions of excessive workload, staffing shortages, and resource limitations. Previous research has shown that when structural conditions are suboptimal, nurses rely more heavily on one another to maintain basic care continuity, leading to increased perceptions of teamwork even as care omissions rise.^[7,15] In line with this, rather than deficiencies in interpersonal collaboration, missed care has been repeatedly associated with insufficient staffing, role overload, and conflicting demands.^[9,11] Therefore, rather than being a sign of the best possible care delivery, high teamwork scores in our study may represent an adaptive response to workload pressure. Previous studies have shown that staffing adequacy and the nursing practice environment are important factors associated with missed nursing care and patient outcomes.^[12,13] Taken together, these findings suggest that systematic and organizational factors, rather than team process alone, are the primary determinants of missed nursing care; thus, teamwork by itself is insufficient to overcome structural constraints.

Furthermore, 41.7% of the surgical nurses reported performing tasks outside their nursing role, including

duties normally assigned to physicians, clerks, and support staff. Among these nurses, the reported duties included tasks normally assigned to physicians, clerical staff, and support personnel. The literature identifies insufficient staffing, poor communication, lack of professional role clarity, and inadequate material resources as important factors contributing to missed nursing care.^[9,22] Although performing non-nursing duties was not significantly associated with NTS or MISSCARE scores in the present study, a considerable proportion of nurses reported undertaking such duties. This finding highlights the importance of considering workload distribution and role clarity in clinical practice.

The results also showed that both NTS and MISSCARE Part A scores differed significantly across clinical units. Consistent with our findings, a previous study also reported significant variation in nursing teamwork according to unit type.^[23] Likewise, Dursun Ergezen et al.^[24] reported significant unit-based differences in several missed nursing care activities. This difference may be related to variations in workload intensity and unit-specific stress. The structural characteristics of the clinical environment may influence teamwork and missed nursing care. Accordingly, unit-based strategies addressing communication, teamwork, workload, and stress may be considered in pressure settings such as ICUs and emergency departments.

In terms of professional experience, less experienced surgical nurses reported higher scores for the reasons behind missed care, suggesting that they perceive more factors contributing to missed nursing care. Although some previous studies have reported no significant differences in missed care by experience level^[25,26] or higher levels among more experienced nurses,^[27,28] However, it aligns with findings by Mainz et al.,^[29] who reported that nurses with less than five years of experience were more likely to leave basic care needs missed.

Although numerous studies have examined the relationship between professional experience and the frequency of missed care,^[25,26] few have explored how experience influences perceptions of why care is missed. These findings suggest that professional experience may influence nurses' perceptions of the reasons for missed care, even though the overall level of missed nursing care did not differ significantly according to professional experience. Overall, the findings highlight that teamwork alone cannot ensure comprehensive care; structural and organizational support is equally essential to prevent omissions and strengthen patient safety.

Finally, one of the noteworthy findings of this study was that scores related to the reasons for missed nursing care differed according to the duration of absence during the previous three months. The highest median MISSCARE part B score was observed among nurses who reported more than six days/shifts of absence. Similarly, a previous study reported an association between nurses' absenteeism and missed nursing care.^[30] However, in the present study, the observed difference emerged not in the frequency of missed care itself, but in nurses' perceptions of the reasons contributing to missed nursing care. This finding suggests that the duration of absence may be associated with how nurses perceive the conditions that contribute to interruptions or omissions in care.

Strength and Limitations

A major strength of this study is its specific focus on the relationship between teamwork and missed nursing care among surgical nurses. However, the study has several limitations. First, it included only nurses working in the surgical units of three public hospitals, which may limit the generalizability of the findings. Second, the study relied entirely on self-reported data from nurses for all primary variables, rather than using direct observational techniques. As with all survey-based research, this introduces the potential for response bias and social desirability bias. Third, since the study was conducted in three hospitals located within a specific geographical region, the findings may not reflect working conditions or cultural differences in other regions.

Conclusion

This study demonstrated that surgical nurses had high levels of nursing teamwork and missed nursing care. Nursing teamwork and missed nursing care differed across clinical units, while the reasons for missed nursing care varied according to professional experience and duration of absence during the previous three months. In addition, a positive association was found between nursing teamwork and missed nursing care. Therefore, when addressing missed nursing care, nursing teamwork should be considered together with clinical and organizational conditions.

The current findings suggest that strengthening teamwork alone may not be sufficient to reduce missed nursing care in surgical settings. Nurse managers should also consider workload distribution, adequate staffing, and clarity of professional roles.

Ethics Committee Approval: The Akdeniz University Medical Scientific Research Ethics Committee granted approval for this study (date: 06.03.2025, number: TBAEK-273).

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