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An Examination of the Relationship Between Nurse-Nurse Collaboration and Intrahospital Transfer Safety: A Cross-Sectional Study

Hemşireler Arası İş Birliği ile Hastane İçi Transfer Güvenliği Arasındaki İlişkinin İncelenmesi: Kesitsel Bir Çalışma

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ABSTRACT

Aim: *This study aims to explore the link between effective collaboration among nurses and the safety of intrahospital transfers.*

Material and Method: *This cross-sectional study, conducted between April 15, 2024, and June 28, 2024, included 501 nurses employed at a city hospital who agreed to participate. Data collection was carried out using the Personal Information Form, the Intrahospital Transfer Safety Scale, and the Nurse-Nurse Collaboration Scale.*

Results: *The average score on the Nurse-Nurse Collaboration Scale was 3.18 ± 0.55, while the Intrahospital Transfer Safety Scale had an average score of 3.01 ± 0.54. Nurses working in intensive care units outperformed their colleagues in the operating room, emergency department, and surgical wards on the Nurse-Nurse Collaboration Scale and also scored higher on the Intrahospital Transfer Safety Scale compared to those in the emergency department and surgical wards.*

Conclusion: *Inter-Nurse Collaboration was found to significantly enhance the safety of intrahospital transfers. Developing protocols to strengthen nurse collaboration is recommended to improve the quality of care in healthcare services.*

Keywords: *Care quality, Nurse, Nurse collaboration, Intrahospital transfer safety*

ÖZET

Amaç: *Bu çalışma, hemşireler arası iş birliği ile hastane içi transfer güvenliği arasındaki ilişkileri araştırmayı amaçlamaktadır.*

Gereç ve Yöntem: *Bu kesitsel çalışma, 15 Nisan - 28 Haziran 2024 tarihleri arasında, bir şehir hastanesinde çalışan ve çalışmaya katılmayı kabul eden 501 hemşire ile gerçekleştirilmiştir. Araştırma verileri Kişisel Bilgi Formu, Hastane İçi Transfer Güvenliği Ölçeği ve Hemşire-Hemşire İş Birliği Ölçeği kullanılarak toplanmıştır.*

Bulgular: *Hemşire–Hemşire İş Birliği Ölçeği ortalaması 3.18 ± 0.55, Hastane İçi Transfer Güvenliği Ölçeği ortalaması ise 3.01 ± 0.54'tür. Yoğun bakımda çalışan hemşireler, diğer birimlerde çalışan hemşirelerden daha yüksek puan almıştır. Yoğun bakımda çalışan hemşirelerin Hemşire-Hemşire İş Birliği Ölçeğinden aldıkları puanlar ameliyathane, acil servis ve cerrahi servislerde çalışan hemşirelere göre, Hastane İçi Transfer Güvenliği Ölçeği'nden aldıkları puanlar ise acil servis ve cerrahi servislere göre daha fazladır.*

Sonuç: *Hemşireler arası iş birliğinin hastane içi transfer güvenliğini anlamlı düzeyde artırdığı bulunmuştur. Sağlık hizmetlerinde bakım kalitesini yükseltmek için hemşire iş birliğini güçlendirecek protokollerin geliştirilmesi önerilmektedir.*

Anahtar Kelimeler: *Bakım kalitesi, Hemşire, Hemşire iş birliği, Hastane içi transfer güvenliği*

INTRODUCTION

In-hospital patient transfers are a critical component of clinical care, involving the movement of patients between departments for diagnostic, treatment, and care procedures. The safety of these transfers is paramount, as any mismanagement can lead to complications that endanger patient well-being and disrupt the continuity of care (Er & Alcan, 2022). Given the frequency with which these transfers occur, ensuring smooth and safe execution of patient transfers is a key responsibility in healthcare settings (Murata et al., 2022). Nurses, who play a pivotal role in every stage of patient care, are central to facilitating safe and efficient transfers within the hospital. They ensure that communication, coordination, and consistency are maintained during the transfer process, thereby safeguarding patient safety (Richardson & Storr, 2010; Köstekli, Çelik & Karahan, 2020).

Effective ınter-nurse collaboration is essential in this context, as it enhances communication, reduces errors, and improves the overall safety of patient transfers (Germack et al., 2020). Collaboration between nurses involves the collective effort of professionals sharing common values and working towards mutual goals. This not only ensures that patient care is delivered smoothly but also directly impacts the safety of intrahospital transfers (Sten, Ingelsson, Bäckström & Häggström, 2021; Leonard, Whiteman, Stephens, Henry & Swanson-Biearman, 2022). Failures in collaboration, such as communication breakdowns, can result in significant patient safety risks during these transfers (Germack et al., 2020).

In light of these factors, the present study focuses on exploring the relationship between nurse collaboration and the safety of intrahospital transfers. Understanding how effective collaboration contributes to patient safety during transfers can provide valuable insights for improving care protocols and ensuring better health outcomes. This study aims to assess the level of collaboration among nurses and its impact on the safety of intrahospital transfers, identifying potential areas for improvement in healthcare services. Collaboration, as a professional relationship between nurses, is characterized by strong communication, effective coordination, and shared decision-making (Hatip & Seren, 2021). Studies have shown that collaborative efforts among nurses not only enhance the quality of care delivered but also reduce care costs and increase job satisfaction (Emich, 2018; Al-Ajarmeh, Rayan, Eshah & Al-Hamdan, 2022). Additionally, such collaboration contributes to higher job performance and retention in the nursing profession (Wargo-Sugleris, Robbins, Lane, & Phillips, 2018; Ylitörmänen, Kvist, & Turunen, 2019).

The aim of the study is to examine the relationship between collaboration among nurses and in-hospital transfer safety.

Research Questions

1. What is the level of in-hospital transfer safety of nurses and is there a difference according to demographic characteristics?

2. What is the level of inter-nurse collaboration, and are there variations in this collaboration based on demographic characteristics?

3. Is there a relationship between inter-nurse collaboration and in-hospital transfer safety?

MATERIAL AND METHODS

Research Type

This study is both descriptive and relational in design, utilizing a cross-sectional approach.

Study Population and Sample

The study population consisted of nurses employed at a tertiary city hospital. The total population size (N = 1384) was determined using institutional data provided by the hospital where the study was conducted. A sample size was calculated using G*Power software, based on the following parameters: "Correlation: Point biserial model" statistical test, an effect size (r) of 0.2, an α error probability of 0.01, power (1-β error probability) of 0.95, and a two-tailed test. These inputs were selected based on the assumption that the relationship between nurse collaboration and transfer safety, while potentially small, could still hold clinical significance in the healthcare context. Small but meaningful effects are common in healthcare research, where even modest improvements in collaboration can lead to significant enhancements in patient safety and care quality. Given the relatively large sample size, this smaller effect size allows for the detection of subtle yet important correlations, making it a suitable choice for this analysis. The resulting minimum sample size was 431. To accommodate potential data losses, the sample size was increased by 20%, resulting in the

recruitment of 520 nurses, with 501 valid data sets ultimately included in the analysis. Additionally, a post hoc power analysis was conducted using G*Power software based on the effect size of r = 0.2, an α error probability of 0.01, and a total sample size of 501 nurses. The power of the study was calculated as 97.6%, confirming that the sample size was sufficient to detect even small but significant correlations between nurse collaboration and in-hospital transfer safety.

Nurses were included in the study if they met the following inclusion criteria: being 18 years of age or older, currently employed as a nurse, and working in intensive care, emergency, or surgical services. Nurses who did not meet these criteria were excluded from the study. Additionally, only those nurses who provided informed consent were eligible to participate.

Data Collection Tools

Personal Information Form: Personal Information Form: This form, prepared by the researchers, contains nine questions about personal and professional characteristics (e.g., age, gender, years of experience, educational level, department).

Nurse-Nurse Collaboration Scale: Originally developed by Dougherty in 2009 to assess collaboration among nurses (Dougherty & Larson, 2010), the Nurse-Nurse Collaboration Scale (NNCS) consists of 35 items distributed across five dimensions: Problem Solving, Communication, Process Sharing, Coordination, and Professionalism. The scale uses a 4-point Likert scale, where 1 = never agree and 4 = totally agree. In the original version, six items (1.1, 1.2, 1.5, 2.3, 2.5, 2.7) were reverse-coded to reflect negative aspects of collaboration. Scores range from 1 to 4, with a cut-off point of 2.5; scores closer to 4 indicate stronger collaboration, while scores closer to 1 suggest weaker collaboration. The original scale's Cronbach's alpha was reported as 0.89.

In the Turkish validity and reliability study conducted by Durmuş Çelik and Yıldırım (2016), the scale was refined to 26 items, while maintaining the five original dimensions. During this refinement, most of the reverse-coded items were removed, leaving only one reverse-coded item (item 2.7). In this Turkish adaptation, the internal consistency was reported as Cronbach's α = 0.93. In the present study, Cronbach's α reliability coefficient was found to be 0.94, indicating high internal consistency.

Intrahospital Transport Safety Scale: The scale was developed by Bergman et al. (2020) to assess patient safety during the in-hospital transfer process, specifically within intensive care settings (Bergman, Chaboyer, Pettersson, & Ringdal, 2020). It initially consisted of 55 items, which were later reduced to 24 items after psychometric testing. These items are grouped into four sub-dimensions: Institution, Tools and Technologies, Environment, and Team Collaboration. The scale uses a 5-point Likert scale to evaluate patient safety during transfers, and higher scores indicate greater in-hospital transfer safety. Notably, the scale does not include any reverse-coded items. In the original development study, Cronbach's α coefficients for each subscale ranged from 0.72 to 0.82, and the total explained variance of the scale was 59%.

In the Turkish adaptation study by Er and Alcan (2022), Cronbach's α coefficient was reported as 0.93, demonstrating high reliability. Additionally, the Content Validity Index (CVI) was found to be 0.95, indicating excellent content validity. The explanatory factor analysis revealed four factors accounting for 63.59% of the total variance, consistent with the original sub-dimensions. In the present study, Cronbach's α reliability coefficient was calculated to be 0.93, further confirming the scale's reliability in the Turkish context.

Data Collection

Data were collected through face-to-face interviews, ensuring that follow-up and treatment processes were not interrupted. Each interview took an average of 10-15 minutes, following verbal information about the study and obtaining the nurses' consent.

Ethical Consideration

The principles of the Helsinki Declaration were adhered to throughout the research period. Approval was obtained from a University Scientific Research and Publication Ethics Board to conduct the study (Date: 14.03.2024, Number: 10). Institutional permissions required for the study were also obtained. Participants who volunteered for the study were informed about its purpose and were told they could withdraw at any time without providing a reason. Written and verbal consent was obtained from all volunteer participants.

Data Analysis

The data collected were entered into a computer and analyzed using IBM SPSS Statistics 21. Descriptive analyses, including number, percentage, mean, and standard deviation, were performed. Correlation analysis was conducted using scatter plots and Pearson Correlation, while internal consistency was assessed with Cronbach's Alpha. To compare variables with normal distribution, independent t-tests and ANOVA tests were applied. Following the ANOVA tests, Tukey's HSD (Honestly Significant Difference) post-hoc test was applied to identify which groups showed significant differences. For variables that did not meet the assumption of homogeneity of variances, Games-Howell post-hoc test was used instead. These post-hoc analyses allowed for a detailed comparison of specific group means and identification of the precise source of significant differences found in the ANOVA results. The results were evaluated within a 95% confidence interval, with statistical significance set at $p < 0.05$.

RESULTS

Sociodemographic Characteristics and Scale Comparisons

The comparison of Nurse-Nurse Collaboration Scale (NNCS) and In-Hospital Transfer Safety Scale (IHTSS) scores based on the sociodemographic characteristics of nurses is presented (Table 1).

Gender: There was no statistically significant difference in NNCS (t=0.995, p=0.535) and IHTSS (t=1.131, p=0.171) scores based on gender (Table 1).

Age: No significant differences were found in NNCS (F=1.772, p=0.133) and IHTSS (F=0.534, p=0.711) scores according to the age groups of nurses (Table 1).

Marital Status: NNCS scores showed no statistically significant difference based on marital status (t=4.739, p=0.294), and there was also no significant difference in IHTSS scores (t=0.628, p=0.963) (Table 1).

Education Level: A significant difference was found in IHTSS scores based on the level of education (F=3.823, p=0.010), with graduate-level nurses scoring higher in transfer safety compared to those with lower educational qualifications. However, no significant difference was observed in NNCS scores based on education level (F=1.370, p=0.251) (Table 1).

Years of Service: There was a statistically significant difference in NNCS scores based on years of service (F=5.544, p=0.004), with nurses having over 21 years of experience scoring higher on collaboration. A significant difference was also observed in IHTSS scores based on years of service (F=3.146, p=0.044) (Table 1).

Type of Working: No significant difference was found in NNCS scores based on the type of working shift (F=2.455, p=0.87), nor was there any significant difference in IHTSS scores (F=1.578, p=0.207) (Table 1).

Working Unit: There were statistically significant differences in both NNCS (F=6.690, p=0.000) and IHTSS (F=6.201, p=0.000) scores based on the nurses' working units. Nurses working in intensive care units scored higher on both scales compared to their counterparts in other departments (Table 1).

Training on Teamwork: Nurses who received teamwork training had significantly higher NNCS (t=0.976, p=0.000) and IHTSS (t=6.860, p=0.000) scores compared to those who did not receive such training (Table 1).

Training on Transfer Safety: Nurses who received transfer safety training scored significantly higher on both NNCS (t=4.958, p=0.000) and IHTSS (t=5.742, p=0.000) compared to those who did not receive the training (Table 1).

Distribution of NNCS and IHTSS Scores

The distribution of scores on the NNCS and IHTSS is presented in Table 2.

The overall mean score for the NNCS was 3.18 ± 0.55 (min=1.62, max=4.04), with the highest mean score in the Coordination sub-dimension (3.16 ± 0.68) and the lowest in the Communication sub-dimension (2.84 ± 0.61).

For the IHTSS, the overall mean score was 3.01 ± 0.54 (min=1.79, max=4.92), with the highest mean score in the Team Collaboration sub-dimension (3.13 ± 0.62) and the lowest in the Tools and Technologies sub-dimension (2.85 ± 0.63).

Correlations Between NNCS and IHTSS

A correlation analysis was conducted between the sub-dimensions and overall scores of the NNCS and IHTSS (Table 2).

Table 1. Distribution of Nurses' Descriptive Characteristics and Comparison of Nurse-Nurse Collaboration Scale (NNCS) and In-Hospital Transfer Safety Scale (IHTSS) Scores (n= 501)

Descriptive caracteristic	n	%	NNCS Mean ± SD	Statistic	p	IHTSS Mean ± SD	Statistic	p
Gender								
Famale	407	81.2	3.17 ± 0.55	t=0.995†	p=0.535	3.02 ± 0.54	t=0.131†	p=0.171
Male	94	18.8	3.21 ± 0.56			2.94 ± 0.55		
Age								
Between 20-25 years[1]	51	10.2	3.16 ± 0.45			2.98 ± 0.55		
Between 26-30 years[2]	156	31.1	3.11 ± 0.61			2.99 ± 0.58		
Between 31-35 years[3]	99	19.8	3.16 ± 0.59	F=1.772‡	p=0.133	3.06 ± 0.46	F=0.534‡	p=0.711
Between 36-40 years[4]	110	22.0	3.18 ± 0.55			2.97 ± 0.55		
41 years and above[5]	85	17.0	3.31 ± 0.45			3.05 ± 0.56		
Marital status								
Married	348	69.5	3.16 ± 0.58	t=4.739†	p=0.294	3.01 ± 0.55	t=0.628†	p=0.963
Single	153	30.5	3.22 ± 0.50			3.01 ± 0.53		
Education level								
High School[1]	20	4.0	3.11 ± 0.52			2.76 ± 0.41		
Associate's Degree[2]	67	13.4	3.06 ± 0.54	F=1.370‡	p=0.251	2.87 ± 0.48	F=3.828‡	**p=0.010***
Bachelor's Degree[3]	286	57.1	3.19 ± 0.56			3.02 ± 0.57		
Graduate Studies[4]	128	25.5	3.2 ± 0.55			3.09 ± 0.52		
Years of service								
1-10 years[1]	277	55.3	3.10 ± 0.56			3.00 ± 0.54		
11-20 years[2]	172	34.3	3.25 ± 0.55	F=5.544‡	**p=0.004***	2.97 ± 0.55	F=3.146‡	**p=0.044***
21 years and above[3]	52	10.4	3.32 ± 0.44			3.18 ± 0.52		
Type of working								
Usually during the day[1]	208	41.5	3.24 ± 0.54			3.05 ± 0.54		
Usually at night[2]	18	3.6	3.18 ± 0.60	F=2.455‡	p=0.87	2.83 ± 0.57	F=1.578‡	p=0.207
Day-night rotation[3]	275	54.9	3.13 ± 0.56			2.99 ± 0.54		
Working unit								
Operating Room[1]	73	14.6	3.13 ± 0.58			3.00 ± 0.55		
Intensive Care Unit[2]	140	27.9	3.35 ± 0.55			3.16 ± 0.63		
Emergency Department[3]	91	18.2	3.07 ± 0.59	F=6.690‡	**p < 0.001***	2.87 ± 0.45	F=6.201‡	**p < 0.001**
Surgical Ward[4]	197	39.3	3.12 ± 0.50			2.96 ± 0.49		
Training on teamwork								
Evet	257	51.3	3.30 ± 0.55	t=0.976†	**p<0.001***	3.14 ± 0.57	t=6.860†	**p <0.001***
Hayır	244	48.7	3.04 ± 0.52			2.86 ± 0.48		
Training on transfer safety								
Evet	297	59.3	3.29 ± 0.56	t=4.958†	**p<0.001***	3.12 ± 0.56	t=5.742†	**p <0.001***
Hayır	204	40.7	3.00 ± 0.50			2.84 ± 0.48		

n: number, %: percentages, *= p value, SD: Standard Deviation, ‡ One way ANOVA Test, † Independent Samples t Test.** ***Note: The scores presented in the table represent the mean scores (± SD) obtained from the Nurse-Nurse Collaboration Scale and the In-Hospital Transfer Safety Scale. These values reflect the average responses for each group, with higher scores indicating greater collaboration and transfer safety.

A significant positive correlation was found between the overall NNCS and IHTSS scores (r=0.33, p<0.01), indicating that higher levels of nurse collaboration are associated with greater safety during intrahospital transfers.

Positive correlations were also observed between certain NNCS sub-dimensions and IHTSS sub-dimensions. For example, the Problem Solving sub-dimension of NNCS was positively correlated with the Institution sub-dimension of IHTSS (r=0.45, p<0.01). The strongest correlation was between the overall NNCS and the Team Collaboration sub-dimension of IHTSS (r=0.89, p<0.01).

DISCUSSION

The Relationship Between Experience, Unit, and Education with Nurse-Nurse Collaboration and Transfer Safety

The findings of this study demonstrate that nurses' education level, years of experience, and the units in which they work have a significant impact on

Tablo 2. Correlation Between Participants' Mean Scores on the Nurse-Nurse Collaboration Scale and In-Hospital Transfer Safety Scale Scores (n=501)

		NNCS Sub-dimensions					IHTSS Sub-dimensions				NNCS	IHTSS
	Mean ± SD	1	2	3	4	5	1	2	3	4	Total	Total
NNCS Total	3.18 ± 0.55	0.64	0.83	0.88	0.81	0.90	0.31	0.12	0.28	0.30	1.00	0.33
Sub-dimension 1	2.92 ± 0.62	1.00	0.61	0.42	0.45	0.45	0.53	0.31	0.50	0.52	0.64	0.58
Sub-dimension 2	2.84 ± 0.61		1.00	0.70	0.60	0.60	0.27	0.10	0.23	0.28	0.83	0.30
Sub-dimension 3	3.02 ± 0.66			1.00	0.70	0.74	0.19	0.03	0.16	0.16	0.88	0.19
Sub-dimension 4	3.16 ± 0.68				1.00	0.69	0.20	0.11	0.24	0.23	0.81	0.24
Sub-dimension 5	3.12± 0.63					1.00	0.22	0.09	0.21	0.20	0.90	0.24
IHTSS Total	3.01 ± 0.54						0.86	0.68	0.84	0.89	0.33	1.00
Sub-dimension 1	2.88 ± 0.67						1.00	0.59	0.60	0.63	0.31	0.86
Sub-dimension 2	2.85 ± 0.63							1.00	0.51	0.47	0.12	0.68
Sub-dimension 3	3.11 ± 0.66								1.00	0.74	0.28	0.84
Sub-dimension 4	3.13 ± 0.62									1.00	0.30	0.89

NNCS Sub-dimensions: 1. Problem Solving, 2. Communication, 3. Process Sharing, 4. Coordination, 5. Professionalism; IHTSS Sub-dimensions: 1. Institution, 2. Tools and Technologies, 3. Environment, 4. Team Collaboration

inter-nurse collaboration and intra-hospital transfer safety. Nurses with postgraduate degrees scored higher on these scales compared to those with associate or high school degrees, highlighting the crucial role education plays in enhancing collaboration skills and awareness of patient safety. Additionally, nurses with more than 21 years of experience achieved higher scores, further reinforcing the value of experience in these domains. Nurses working in intensive care units (ICUs) scored higher than those in other departments, suggesting that collaboration and safety practices are more rigorously implemented in these high-risk environments. Furthermore, nurses who had received teamwork and transfer safety training also scored higher, supporting the idea that such educational programs positively influence both collaboration and patient safety outcomes.

These results are consistent with previous literature. Vaismoradi, Tella, Logan, Khakurel, and Vizcaya-Moreno (2020) found that nurse collaboration is a critical factor that directly affects patient safety by reducing error rates and improving patient outcomes. Çelik Durmuş and Gezer (2022), in a study conducted in Turkey, reported that nurse-nurse collaboration and patient safety culture were at a moderate level, emphasizing the need to enhance collaboration in nursing practices. In our study, we found that nurses with higher education levels exhibited stronger collaboration skills, further affirming that education is a key factor in fostering effective teamwork and improving safety in hospital transfers.

Transfer Safety in Relation to Experience and Education

In this study, the impact of experience and education levels on intra-hospital transfer safety was also clearly observed. Nurses with more than 10 years of experience scored higher, indicating that experience plays a critical role in both collaboration and patient safety. Particularly, the higher scores obtained by nurses working in intensive care units (ICUs) can be attributed to the critical nature of patient conditions in these settings, where the need for collaboration is heightened. This aligns with findings from the literature. Neal-Williams, Walker, Lines, Ugoni, and Taylor (2021) highlighted that patient transfers in ICUs and emergency departments pose higher risks, and collaboration among nurses plays a vital role in mitigating these risks. Similarly, Temsah et al. (2021) found that improving teamwork and communication within the team can significantly enhance transfer safety. Furthermore, Hashemian et al. (2023) reported that including nurses in the transfer processes in emergency departments led to a substantial improvement in patient safety outcomes.

The higher scores of nurses who received teamwork and transfer safety training are also consistent with findings from other studies. Schmidt et al. (2021) demonstrated that training programs aimed at improving safety culture and communication between nurses and physicians had a positive impact on patient safety. After such

training, an increase in collaboration among nurses was observed, and the transfer processes became safer. These results support the notion that education and experience levels of nurses have a direct effect on patient transfer safety, emphasizing the importance of continuous professional development in enhancing safety outcomes.

The Relationship Between Nurse-Nurse Collaboration and Transfer Safety

This study found a significant positive correlation between the Nurse-Nurse Collaboration Scale and the Intra-Hospital Transfer Safety Scale. Strong collaboration among nurses contributes to safer and more efficient patient transfers. This finding highlights the critical role that collaboration plays in enhancing patient safety during transfers. Ma, Park, and Shang (2018) reported that a one-unit increase in nurse collaboration resulted in a 31% reduction in hospital-acquired pressure sores and an 8% reduction in patient falls. Additionally, their study also found that collaboration between nurses and physicians had similarly positive effects on patient safety. These results align with the findings of the current study, suggesting that strong nurse collaboration improves both safety and quality of care during hospital transfers.

Further supporting this, Abdurrouf & Pandin (2021) conducted a comprehensive review, which demonstrated that effective collaboration between nurses and other healthcare professionals significantly reduces errors and improves patient safety. Their analysis, based on articles published between 2019 and 2021 from databases like Proquest and Pubmed, confirmed that collaboration minimizes risks and enhances safety across healthcare settings. Our study similarly observed that nurses with high levels of collaboration contributed to safer transfer processes, reinforcing the connection between teamwork and patient safety. In conclusion, the findings of this study demonstrate that nurse collaboration and awareness of transfer safety have a profound impact on patient safety. Experience and education are key factors that contribute to the improvement of collaboration and safety levels. Therefore, expanding training programs and interventions aimed at fostering collaboration and safety awareness among nurses could improve the quality of healthcare services and reduce the risks to patient safety.

Limitations

The limitations of this study include its cross-sectional design, which captures data at a single point in time and may not reflect changes over longer periods. Additionally, the data were collected from a single hospital, limiting the generalizability of the findings to other healthcare settings. The study's reliance on self-reported measures may also introduce response bias, as participants may have answered questions in a socially desirable manner. Future research should aim to include a more diverse sample from multiple institutions and consider longitudinal designs to assess changes over time.

CONCLUSION

Strengthening inter-nurse collaboration through targeted training programs is essential for enhancing patient safety during intrahospital transfers. The fact that nurses trained in teamwork and transfer safety have higher scores emphasizes the importance of education and collaboration in improving patient care quality. Additionally, the higher collaboration and safety scores among nurses working in intensive care units compared to those in other wards clearly reveal the positive effects of teamwork in these units. In this context, healthcare managers and policymakers should develop and implement policies that encourage and support collaboration among nurses.

Ethics Committe Approval
Ethics committee approval was received for this study from the Erzurum Teknik University Ethics Committee (Tarih: 14.03.2024ve Karar No: 3/10)

Author Contributions
Idea/Concept: F.U., Ş.K., S.M.; Design: F.U., Ş.K., S.M.; Supervision/Consulting: F.U., Ş.K., S.M.; Analysis and/or Interpretation: F.U., Ş.K., S.M.; Literature Search: F.U., Ş.K., S.M.; Writing the Article: F.U., Ş.K., S.M.; Critical Review: F.U., Ş.K., S.M.

Peer-review
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Conflict of Interest
The authors have no conflict of interest to declare.

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