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THE RELATIONSHIP BETWEEN COMMUNICATION SKILLS OF NURSING STUDENTS AND THEIR ATTITUDES TOWARDS TEAMWORK: A CASE FROM TURKEY

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Abstract: Effective communication and teamwork have a critical role in nursing. This study aims to determine the relationship between nursing students' communication skills and attitudes toward teamwork (n=334). The communication skills (104.82±11.47) and teamwork attitudes (120.41±13.28) scores of the students were found to be at a high level. The total scores of the communication skills scale (p=0.007) and the scores of the communication principles and basic skills (p=0.001), effective listening, and nonverbal communication (p=0.008) sub-dimensions of the students who received training on teamwork were higher than those of the students who did not receive training. The total scores of the teamwork attitudes questionnaire (p=0.024) and the sub-dimension scores of team structure (p=0.020) and situation monitoring (p=0.048) of the students who received training on teamwork were higher than those who did not receive training. It was found that the scores of male students in the mutual support sub-dimension of the teamwork attitudes questionnaire were significantly higher (p=0.026) compared to female students. There was a moderate positive correlation between the scores of communication skills and teamwork attitudes (r= 0.467, p<0.001). Nursing students had high communication skills and attitudes toward teamwork, and the relationship between them was significant.

Keywords: communication skills, teamwork, nursing students, socio-demographic factors

Relación entre las habilidades comunicativas de los estudiantes de enfermería y sus actitudes hacia el trabajo en equipo: Un caso de Turquía

Resumen: La comunicación eficaz y el trabajo en equipo tienen un papel fundamental en enfermería. Este estudio tiene como objetivo determinar la relación entre las habilidades comunicativas de los estudiantes de enfermería y las actitudes hacia el trabajo en equipo (n=334). Se encontró que las puntuaciones de las habilidades comunicativas (104,82±11,47) y las actitudes hacia el trabajo en equipo (120,41±13,28) de los estudiantes estaban en un nivel alto. Las puntuaciones totales de la escala de habilidades comunicativas (p=0,007) y de las subdimensiones de principios y habilidades básicas de comunicación (p=0,001), escucha eficaz y comunicación no verbal (p=0,008) de los estudiantes que recibieron formación sobre trabajo en equipo fueron más altas que las de aquellos que no recibieron formación. Las puntuaciones totales del cuestionario de actitudes de trabajo en equipo (p=0,024) y de las subdimensiones de estructura del equipo (p=0,020) y de control de la situación (p=0,048) de los estudiantes que recibieron formación sobre trabajo en equipo fueron superiores a las de los que no la recibieron. Se encontró que las puntuaciones de los estudiantes varones en la subdimensión de apoyo mutuo del cuestionario de actitudes de trabajo en equipo fueron significativamente superiores (p=0,026) en comparación con las de mujeres. Se encontró una correlación positiva moderada entre las puntuaciones de las habilidades de comunicación y las actitudes de trabajo en equipo (r= 0,467, p<0,001). Los estudiantes de enfermería tenían altas habilidades de comunicación y actitudes hacia el trabajo en equipo, y la relación entre ellas fue significativa.

Palabras clave: habilidades de comunicación, trabajo en equipo, estudiantes de enfermería, factores sociodemográficos

A relação entre habilidades de comunicação de estudantes de enfermagem e suas atitudes em direção ao trabalho em equipe: Um caso da Turquia

Resumo: Comunicação efetiva e trabalho em equipe tem um papel crítico em enfermagem. Esse estudo objetiva determinar a relação entre as habilidades de comunicação de estudantes de enfermagem e atitudes em direção ao trabalho em equipe (n=334). Os escores de habilidades de comunicação (104.82±11.47) e atitudes de equipes de trabalho (120.41±13.28) dos estudantes foram encontrados em um nível alto. Os escores totais da escala de habilidades de comunicação (p=0.007) e os escores de princípios de comunicação e habilidades básicas (p=0.001), escuta efetiva e comunicação não verbal (p=0.008), sub-dimensões dos estudantes que receberam treinamento em trabalho em equipe foram mais altos que aqueles dos estudantes que não receberam treinamento. Os escores totais do questionário de atitudes de equipes de trabalho (p=0.024) e os escores das sub-dimensões de estrutura de equipe (p=0.020) e monitoramento da situação (p=0.048) dos estudantes que receberam treinamento em trabalho em equipe foram mais altos que aqueles dos estudantes que não receberam treinamento. Os escores dos estudantes masculinos na sub-dimensão de apoio mútuo do questionário de atitudes de equipes de trabalho foram significativamente mais altos (p=0.026) comparados com estudantes femininas. Houve uma correlação positiva moderada entre os escores de habilidades de comunicação e atitudes de equipes de trabalho (r= 0.467, p<0.001). Estudantes de enfermagem tinham altas habilidades de comunicação e atitudes em direção ao trabalho em equipe, e a relação entre elas eram significativas.

Palavras chave: habilidades de comunicação, equipes de trabalho, estudantes de enfermagem, fatores sócio-demográficos

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Introduction

Communication is as important as vital needs in health care and is recognized as a fundamental skill of medical practice*(1)*. Effective communication facilitates the establishment of a relationship based on trust and therapeutic cooperation between healthcare professionals and their patients*(2)*. Additionally, good communication skills are necessary for healthcare professionals to establish positive relationships with their patients and improve their quality of life*(3)*. Despite the outstanding efforts of healthcare professionals, the structure and dynamics of health services sometimes involve unacceptable communication problems*(4)*. Therefore, effective communication skills are essential for all interlocutors and dimensions of health services.

Teamwork involves cooperation, coordination, and communication among team members to achieve the desired results*(5).* The importance of effective teamwork among healthcare professionals is increasing due to the complex structure of health services, the need to respond quickly to changes, high expectations from service outcomes, and rapid developments in care and treatment technologies*(6)*. Although each member's role in health teams is different from the others, they are complementary to each other. Thus, the essence of providing quality health services today is that specialized healthcare professionals act in close cooperation and effective communication with a team approach*(7)*.

Nursing as a health science is a profession that focuses on serving the needs of people as biopsychosocial beings, requiring scientific knowledge as well as interpersonal, intellectual, and technical abilities and skills. The nursing process is performed through dialogue, interpersonal environment, and specific verbal communication skills*(8)*. Communication skills are among the effective strategies for improving the quality of patient care and health services*(3).* Inadequate teamwork in nursing services negatively affects patient care and unit operations*(9)*. For the execution of reliable care processes and the consistent delivery of high-quality care, effective teamwork is essential*(4).* It is reported that inadequate communication and teamwork failure in health services may lead to various negativities and threaten patient safety*(10)*.

The knowledge and exhibition of the attitudes and awareness of nursing students, who are the healthcare professional candidates of the future and will share a long period with the patient, regarding communication skills, teamwork and cooperation within the team in line with the contemporary medical understanding, and elimination of the deficiencies, if any, during their education, will be a guide in solving the problems that may arise in this regard in the provision of health care, and prevent the occurrence of problems and ensure that the quality of health care reaches the desired level.

The questions of the research are as follows:

- What are the levels of communication skills and teamwork attitudes of nursing students?
- Are the socio-demographic characteristics of nursing students effective in their communication skills and teamwork attitude levels?
- Is the relationship between communication skills and teamwork attitudes of nursing students statistically significant?

Materials and Methods

Ethical Approval

Ethics committee permission was received for this study (Protocol No: 2022/70). The study was designed in accordance with the principles of the Declaration of Helsinki. Informed consent was obtained from all volunteer participants.

Universe and Sampling

The study was conducted with 2nd, 3rd and 4th year students in the Department of Nursing, Faculty of Health Sciences of a state university in Turkey. The 1st year students were not included in the study because they were not part of a team providing patient care services. Required institutional permission was received for the study. The data of the descriptive study were obtained through a face-to-face questionnaire technique in March-April 2022. A total of 334 volunteer stu-

dents who filled up the forms and questionnaires were included in the study.

Data Collection Tools

The data were collected through the "Socio-Demographic Data Form", "Communication Skills Scale" and "Teamwork Attitudes Questionnaire". The required permissions from the authors were obtained for the use of the scales.

Socio-Demographic Data Form

It was created by the researchers to obtain descriptive information about the students. This form consists of 6 questions regarding the gender, age, grade, the status of receiving education on teamwork and health communication of the students and their voluntary preference for the nursing department.

Communication Skills Scale

The scale was developed by Owen and Bugay (2014) to measure the communication skills of university students. The scale consists of 25 items and 5 sub-dimensions. The reliability coefficient of the 5-point Likert-type scale is 0.88. The scale consists of 4 sub-dimensions as communication principles and basic skills, self-expression, effective listening and nonverbal communication, and willingness to communicate (11). In this study, the reliability coefficient of the scale was found to be 0.92.

Teamwork Attitudes Questionnaire

Developed by Baker et al. (2008), the scale identifies the attitudes of individuals toward team structure, leadership, situation monitoring, mutual support and communication. The scale consists of 28 items and 5 sub-dimensions. The Turkish validity and reliability of the scale was conducted by Yardımcı et al. (2011) and Cronbach's alpha value was found to be between 0.70-0.89. The scale is a 5-point Likert-type scale with a range of 28 to 140 points*(7,12)*. In this study, Cronbach's alpha value was found to be between 0.73-0.92. Cronbach's alpha value for all items of the scale was 0.93.

Since there was no cut-off point for the evaluation of the scales, the median values of the scores obtained by the students from the scales were accepted as the cut-off point and the scores below the median value of the scale were categorized and interpreted as low and the scores above the median value of the scale as high.

Statistical Analysis

Statistical analyses of the study were conducted with the SPSS 22.0 package program. The results were expressed as mean, standard deviation, number and percentage values. For the normality distribution of the data, skewness and kurtosis values were examined and the Kolmogorov-Smirnov test was applied. Mann Whitney U test, Kruskal Wallis H test and post-hoc Dunn's test were applied for the analysis of the Teamwork Attitudes Questionnaire which did not show normal distribution. As the data of the Communication Skills Scale were normally distributed, independent sample t-test and one-way analysis of variance test were applied. The relationship between the scale scores was calculated through the Spearman correlation coefficient. The relationship level of the correlation coefficient was interpreted according to the criteria as "0,00-0,19: very weak relationship, 020-0,39: weak relationship, 0,40-0,69: moderate relationship, 0,70-0,89: high relationship, 0,90-1,00: very high relationship"*(13)* and $p<0,05$ was considered statistically significant in the analyses.

Results

Descriptive statistics of nursing students are presented in Table 1. The mean age of the students was 21.34±1.56. Of the students, 76.0% were female and 24.0% were male. Additionally, 33.2% of the students were in the 2nd year, 34.4% in the 3rd year and 32.3% in the 4th year. The proportion of students who received training on teamwork was 54.5%, while the proportion of students who received training on health communication was 76.6%. While 75.1% of the students stated that they voluntarily preferred the nursing profession, 24.9% did not voluntarily prefer the profession (Table 1).

The mean score of the Communication Skills Scale was 104.82±11.47 and the median value was 104.00. The minimum score was 64 and the maximum score was 125 (Table 2). The mean score of the Teamwork Attitudes Questionnaire was 120.41±13.28 and the median value was 120.00. The minimum score was 28 and the maximum score was 140 (Table 3).

No significant difference was found between the groups in the comparison of communication skills scores of nursing students in terms of gender, grade, health communication training and voluntary preference for the department ($p>0.05$). The Communication Skills Scale total scores ($p=0.007$) and the scores of Communication principles and basic skills ($p=0.001$) and Effective listening and nonverbal communication ($p=0.008$) sub-dimensions of the students who received training on Teamwork were found to be higher than those of the students who did not receive training (Table 4).

There was no significant difference between the groups in the comparison of the teamwork attitudes scores of nursing students in terms of health communication training and voluntary preference for the department ($p>0.05$). Male students had significantly higher scores in the mutual support sub-dimension compared to female students ($p=0.026$). While 4th-year students' scores in the mutual support sub-dimension of the scale were significantly higher than the other grades ($p=0.000$), 4th-year students' total scores in the teamwork attitudes questionnaire were significantly higher than 2nd-year students ($p=0.016$). The teamwork attitudes questionnaire total scores ($p=0.024$) and the scores of team structure ($p=0.020$) and situation monitoring ($p=0.048$) sub-dimensions of the students who received training on teamwork were higher than those who did not receive training (Table 5).

A moderate positive correlation ($r= 0.467$, $p<0.001$) was found between the communication skill scores and teamwork attitudes scores of the students. Other correlation values of the scales and their sub-dimensions are presented in Table 6.

Discussion

Nurses are professionals who take responsibility for safe and high-quality care in an increasingly challenging healthcare environment. In today's health services, healthcare professionals with leadership, teamwork and good communication skills are needed*(14)*. Effective communication and collaboration among team members allow for better solutions and higher success, while effective communication and teamwork among healthcare professionals have the potential to prevent possible adverse events in service delivery, medical errors and decreases in the quality of care*(15)*. In this study, the attitudes of nursing students towards communication skills and teamwork and the relationship between them were revealed.

Nursing services include many tasks such as physical care, emotional support and information exchange with patients, which cannot be performed in the absence of communication*(16)*. Effective communication is considered an essential skill for nurses, especially since they spend more time with patients and their relatives than other healthcare professionals*(17)*. It is emphasized that nursing students should have strong communication skills in order to cope with the needs and concerns of patients in clinical practice and their professional lives in the future*(18)*. The findings of this study revealed that the mean score of communication skills of nursing students was quite high (104.82±11.47). Sancar and Aktaş (2019) found the mean score of communication skills of nursing students to be 91.16±12.99*(19)*. On the other hand, Hendekci (2020) found the mean score of nursing students' communication skills to be 99.62±17.31*(20)*. It is extremely important to prepare students as individuals with critical thinking and effective communication skills in today's complex health care environment. Health sciences students should have effective communication skills as well as psychomotor skills*(21)*. It is stated that effective communication in nursing is not only a personal skill but also a technique acquired during the educational process*(19)*. Therefore, good communication skills of nursing students should be recognized as an important part of nursing education and these skills should be supported during the learning process. It is thought that students with high communication

Table 1. Descriptive statistics of nursing students (n=334)

Variables		
Age	21,34±1,56	
	n	%
Gender		
Female	254	76,0
Male	80	24,0
Grade		
2nd year	111	33,2
3rd year	115	34,4
4th year	108	32,3
Status of receiving education on teamwork		
Yes	182	54,5
No	152	45,5
Status of receiving education on health communication		
Yes	256	76,6
No	78	23,4
Voluntary preference for the nursing department		
Yes	251	75,1
No	83	24,9

Table 2. Descriptive statistics of the Communication Skills Scale

	$\bar{x}\pm\sigma$	median	min.	max.	median/min.-max. scores of the scale	Cronbach alpha
Communication Skills Scale	104,82±11,47	104,00	64	125	75 / 25- 125	0,92
Communication principles and basic skills	42,34±4,63	42,00	25	50	30 / 10- 50	0,83
Self-expression	16,66±2,52	17,00	6	20	12 / 4- 20	0,78
Effective listening and nonverbal communication	25,58±3,21	26,00	14	30	18 / 6- 30	0,82
Willingness to communicate	20,23±2,84	20,00	9	25	15 / 5- 25	0,69

($\bar{x}$: mean; σ: standart deviation; min.: minimum value; max.: maximum value)

Table 3. Descriptive statistics of the Teamwork Attitudes Questionnaire

	$\bar{x}\pm\sigma$	median	min.	max.	median/min.-max. scores of the scale	Cronbach alpha
Teamwork Attitudes Questionnaire	120,41±13,28	120,00	28	140	84 / 28- 140	0,93
Team structure	25,82±3,42	26,00	6	30	18 / 6-30	0,81
Leadership	27,41±3,28	29,00	6	30	18 / 6-30	0,92
Situation monitoring	26,86±3,13	27,00	6	30	18 / 6-30	0,86
Mutual support	18,24±4,16	17,00	5	25	15 / 5-25	0,73
Communication	22,08±2,71	22,00	5	25	15 / 5-25	0,86

($\bar{x}$: mean; σ: standart deviation; min.: minimum value; max.: maximum value)

Table 4. The Comparison of Communication Skills Scores of Nursing Students in Terms of Socio-Demographic Characteristics

Variables		Communication principles and basic skills		Self-expression		Effective listening and nonverbal communication		Willingness to communicate		Communication Skills Scale	
		$\bar{x}$±(sd)	p	$\bar{x}$±(sd)	p	$\bar{x}$±(sd)	p	$\bar{x}$±(sd)	p	$\bar{x}$±(sd)	p
Gender	**Female**	42,24±4,65	,448	16,56±2,57	,172	25,57±3,18	,975	20,13±2,92	,219	104,50±11,51	,358
	Male	42,69±4,59		17,00±2,32		25,59±3,33		20,58±2,59		105,85±11,34	
Grade	**2nd year**	41,82±4,27	,338	16,47±2,53	,604	25,33±3,09	,612	19,85±3,00	,168	103,47±10,75	,315
	3rd year	42,67±4,15		16,77±2,29		25,73±2,77		20,30±2,45		105,46±9,92	
	4th year	42,54±5,41		16,76±2,73		25,67±3,73		20,56±3,05		105,53±13,52	
Status of receiving education on teamwork	**Yes**	43,10±4,49	**,001**	16,85±2,45	,137	26,01±3,11	**,008**	20,39±2,97	,272	106,35±11,28	**,007**
	No	41,43±4,65		16,44±2,59		25,07±3,26		20,05±2,68		102,99±11,45	
Status of receiving education on health communication	**Yes**	42,55±4,61	,137	16,73±2,53	,416	25,74±3,17	,098	20,25±2,82	,813	105,27±11,46	,191
	No	41,65±4,67		16,46±2,48		25,05±3,29		20,17±2,94		103,33±11,42	
Voluntary preference for the nursing department	**Yes**	42,38±4,41	,812	16,63±2,39	,694	25,62±2,99	,729	20,29±2,76	,494	104,93±10,87	,787
	No	42,23±5,28		16,76±2,88		25,46±3,82		20,05±3,09		104,49±13,18	

Table 5. The Comparison of Teamwork Attitudes Scores of Nursing Students in Terms of Socio-Demographic Characteristics

Variables		Team structure		Leadership		Situation monitoring		Mutual support		Communication		Teamwork Attitudes Questionnaire	
		x̄±(sd)	p	x̄±(sd)	p	x̄±(sd)	p	x̄±(sd)	p	x̄±(sd)	p	x̄±(sd)	P
Gender	**Female**	25,90±3,30	,643	27,59±3,00	,220	26,86±3,12	,893	17,92±4,08	**,026**	22,08±2,70	,758	120,35±12,94	,570
	Male	25,55±3,80		26,85±4,01		26,86±3,16		19,25±4,28		22,09±2,73		120,60±14,38	
Grade	**2nd year**	25,67±3,53	,108	27,19±3,56	,192	26,29±3,33	,054	17,74±3,94[b]	**,000**	21,73±2,85	,106	118,61±14,06[b]	**0,016**
	3rd year	25,65±2,76		27,87±2,36		27,20±2,81		17,06±3,56[b]		22,18±2,31		119,97±10,84	
	4th year	26,15±3,92		27,15±3,78		27,08±3,18		20,01±4,42[a]		22,33±2,93		122,72±14,53[a]	
Status of receiving education on teamwork	**Yes**	26,13±3,60	**,020**	27,60±3,43	,121	27,10±3,27	**,048**	18,56±4,31	,106	22,18±2,81	,296	121,57±14,09	**,024**
	No	25,45±3,17		27,18±3,10		26,57±2,94		17,86±3,95		21,96±2,58		119,01±12,13	
Status of receiving education on health communication	**Yes**	25,86±10,97	,971	27,55±3,11	,220	27,02±2,99	,107	18,30±4,13	,681	22,17±2,55	,438	120,91±12,52	,434
	No	25,67±14,23		26,94±3,79		26,35±3,51		18,03±4,28		21,78±3,17		118,76±15,48	
Voluntary preference for the nursing department	**Yes**	26,02±3,07	,249	27,61±2,95	,223	27,09±2,78	,085	18,29±4,07	,729	22,30±2,34	,062	121,31±11,50	,180
	No	25,22±4,29		26,80±4,10		26,17±3,95		18,07±4,43		21,42±3,54		117,67±17,39	

Table 6. The Correlation Analysis Between Communication Skills and Teamwork Attitudes Scores of Nursing Students

	1	2	3	4	5	6	7	8	9	10	11
1- Team structure	-										
2- Leadership	,624**	-									
3- Situation monitoring	,637**	,660**	-								
4- Mutual support	,428**	,260**	,417**	-							
5-Communication	,612**	,600**	,664**	,403**	-						
6- Teamwork Attitudes Questionnaire	,834**	,759**	,833**	,669**	,808**	-					
7- Communication principles and basic skills	,334**	,354**	,373**	,266**	,343**	,417**	-				
8- Self-expression	,317**	,267**	,250**	,268**	,295**	,351**	,643**	-			
9- Effective listening and nonverbal communication	,331**	,346**	,391**	,280**	,384**	,437**	,743**	,672**	-		
10- Willingness to communicate	,317**	,317**	,357**	,283**	,318**	,405**	,631**	,689**	,675**	-	
11- Communication Skills Scale	,384**	,375**	,401**	,310**	,385**	**,467****	,893**	,833**	,855**	,839**	-

**p<0.01

skills will increase the quality of health services, patients' satisfaction and trust in the educational and professional process and will contribute to effective care with the participation of the patients.

Teamwork contributes to the reduction of medical errors based on employee commitment and, accordingly, to higher patient satisfaction and better-quality health services. Besides, it not only increases productivity but also reduces burnout among healthcare professionals*(22)*. Safe care processes delivered through effective teamwork form the basis for high-quality care*(4)*. Effective teamwork in nursing is considered an important element of a healthy working environment*(23)*. From the findings of this study, it was determined that the mean score of teamwork attitudes of nursing students was quite high (120.41±13.28). Çelik et al. (2019) found the mean score of teamwork attitudes of nurses to be 112.11±17.86 in their study*(24)*. In the study by Önler et al. (2014), the mean score of teamwork attitudes of nursing students was found to be 112.945±16.03*(25)*. It is reported that nursing students cannot experience teamwork sufficiently during their clinical education and that the theoretical courses on professional occupational teams, especially in nursing departments, are not adequately followed in clinical education*(26)*. There is evidence indicating that some errors arising from nursing services occur due to inadequate teamwork*(27)*. Some errors and complications in healthcare are attributed to failures in team performance rather than individual performance*(6)*. Additionally, the World Health Organization emphasizes the importance of professional teamwork and recommends educational programs that equip health students with the necessary skills and competencies to actively participate in effective teamwork*(26)*. Since teamwork is an indicator of personal, academic and professional success, higher education institutions include this skill in their curricula*(28)*. In the context of the results of this study, nursing students' positive teamwork attitudes indicate that they will make a significant contribution to the provision of safer, effective and patient-oriented care in health services. Moreover, this attitude will help the health system to function better by encouraging collaboration between nurses and other healthcare professionals.

Teamwork behaviors, which are formed as a result of the performance of team tasks, include communication, coordination and cooperation actions of team members*(29)*. In daily interactions among healthcare professionals, effective communication and timely information sharing require healthcare professionals to collaborate in a critical way*(30)*. According to the findings of this study, the mean total score of the communication skills scale and the mean scores of the communication principles and basic skills, effective listening and nonverbal communication sub-dimensions of the scale of nursing students who received training on teamwork were found to be higher compared to students who did not receive training. In a study evaluating the benefit of teamwork skills training, it was revealed that trained team members had a higher level of knowledge of teamwork competencies, and those who received training showed more competence in planning and task coordination, collaborative problem solving and communication*(31)*. It was reported that the teamwork workshop affected the communication skills of pharmacy students, and while the team communication sub-dimension scores of the students in the intervention group increased significantly, no significant change was observed in the scores of the students in the control group*(32)*. According to the results of this study, it can be said that the training on teamwork strengthens the communication skills of nursing students. In the process of health service delivery, team communication, especially among nurses who provide the most care to patients, is of critical importance. The studies conducted demonstrate that the lack of communication between team members can lead to various risks for patients*(33)*. Therefore, it is thought that communication skills strengthened by teamwork training will support nursing students to be more effective and sensitive in patient care and minimize the negativities to be experienced.

Mutual support in teamwork is defined as "*the ability to anticipate and support the needs of team members with accurate information about their responsibilities and workload*"*(34)*. It is reported that the items of the mutual support sub-dimension of the scale include concepts such as cooperation, assistance and support that are important for a team*(35)* According to the findings of this

research, the distributions of the teamwork attitudes questionnaire and sub-dimension mean scores were examined and it was found that there was a statistically significant difference in the mutual support sub-dimension with gender variable and the mean score of the males was higher than those of females. In contrast to this study, Çavuşoğlu et al. (2020) found a difference in favor of females in the gender variable in the total score and other sub-dimensions of the scale, except for the mutual support sub-dimension*(35).* It was reported in another study that there was no relationship between the gender of the nurses and their attitudes towards teamwork*(36).* Therefore, the results of this study suggest that male students have a more positive approach to cooperation and support and tend to cooperate more.

Nursing students work in teams in clinical practices, simulation-supported education planning and in-course learning activities as their grade level increases. During these processes, the students are expected to act in line with teamwork*(37).* According to the findings of this study, it is understood that as the grade level increases, the mean total score of the teamwork attitudes questionnaire increases and there is a statistically significant difference between the students of the 2nd and 4th years. For the mutual support sub-dimension of the scale, the students of the 4th years had the highest mean score and there was a statistically significant difference between them and the other grades. In contrast to this study, the study of Çavuşoğlu et al. (2020) revealed that there was no statistically significant difference between the grades of nursing students and the total score and sub-dimension total score distributions of the teamwork attitudes questionnaire*(35).* In another study, there was a statistical difference between students' grade levels and the scores on the teamwork attitudes questionnaire*(37)* It is stated that the grade level of nursing students is an important factor in the implementation of professional behaviors*(38).* Considering that teamwork is an important part of professionalization in the field of nursing, the increase in positive attitudes towards teamwork according to grade level in the context of the results of this study is very promising. This may be associated with the increase in positive attitudes towards teamwork in parallel with the increase in the grade level of nursing students and the effect of the training received and the experiences gained during this process. Therefore, it can be thought that students in higher grades are more aware and ready to collaborate and participate in teamwork in nursing practice.

Changes in health services and global demand require the adoption of a patient-centered teamwork approach and the parallel development of healthcare professionals. This is possible through the adoption of a broad culture of values and principles, placing the patient at the center of care. This approach promotes effective team building and development, enhancing the ability to deliver superior care to patients*(39).* Successful teamwork is recognized as a requirement for many aspects of effective health services and team training is reported to be effective in improving teamwork in health services*(40).* According to the findings of this study, the mean total score of the teamwork attitudes questionnaire and the mean scores of the team structure and situation monitoring sub-dimensions of the scale of nursing students who received training on teamwork were found to be higher compared to students who did not receive training. Similar to the results of this study, Çavuşoğlu et al. (2020) found that the mean scores of team structure and situation monitoring sub-dimensions were higher in favor of those who received teamwork training*(35).* On the other hand, in the study by Düzgün et al. (2019), it was found that there was no statistically significant difference between the total mean scores of the teamwork attitudes questionnaire and the mean scores of the sub-dimensions of the scale*(41).* It was reported that the training on teamwork had a positive effect on the attitudes of nursing students towards teamwork*(34).* In a study on the importance of teamwork training for nursing students, significant results were obtained in terms of the attitudes towards teamwork of anesthesia and operating room nursing students who received teamwork training*(42)*. In connection with the results of this study, the fact that nursing students who received teamwork training had a higher level of attitudes towards teamwork can be explained by the fact that the training on teamwork focuses on this skill theoretically and practically, increases teamwork awareness and en-

courages team spirit. All these factors contribute to the development of teamwork skills and a better quality of delivery of healthcare.

The delivery of health care is becoming increasingly complex, requiring health professionals to bring together their critical skills, experience and expertise and work together in the care of the patient. A paradigm shift in which an interprofessional and interdisciplinary approach to patient care emerged has brought the importance of communication skills and teamwork to the agenda*(43)*. There is a very close relationship between teamwork and communication skills. It is stated that effective teamwork relies especially on the communication skills of the members, and in cases where these skills are not sufficiently developed beforehand, the focus on teamwork may initially be ineffective*(44)*. Interpersonal skills, especially teamwork and communication, are both fundamental to good health care and play a decisive role in safe and reliable patient care, as they can help prevent medical errors and reduce patient risk*(45,46)*. Additionally, failures in teamwork and communication are considered among the most common causes of negativity in medical events*(47)*. From the findings of this study, it was determined that there was a moderate positive relationship between the mean total score of the communication skills scale and the mean total score of the teamwork attitudes questionnaire. Besides, there was a statistically significant positive relationship between the sub-dimensions of the scales. The positive correlation between communication skills and teamwork indicates that there is an increasing relationship between these two factors. The findings of this study revealed that communication skills and teamwork positively affected each other. In conclusion, the positive correlation between communication skills and teamwork refers to better patient care, safety, satisfaction and collaboration in health care. Therefore, the development of communication skills for health care professionals and the promotion of teamwork are critical for the improvement of the quality of health services.

Conclusion

It is understood that the scores of nursing students' communication skills and teamwork attitudes are at a high level. The communication skills of students who received training on teamwork are higher than those of students who did not receive training. The students who received training on teamwork have more positive attitudes towards teamwork. The scores of mutual support sub-dimension of male students were significantly higher than those of female students. There was a moderate positive correlation between communication skills and teamwork attitudes scores.

Due to the individual, institutional and patient benefits of teamwork and effective communication skills, it is necessary to identify and implement strategies to increase the awareness of students and professionals in the health field and evaluate the results of these initiatives to find evidence-based best practices.

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