Original Article

The Examination of the Relationship Between Teamwork Attitudes and Patient Safety Attitudes in Operating Room Staff

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Abstract

Background: Practices that increase patient safety are crucial to keep the quality of care and treatment given to the patient by the healthcare team in the operating rooms at a high level and to reduce the risks.
Aim: This study was conducted to examine the relationship between teamwork attitude and patient safety attitude in operating room staff.
Method: The sample of the study consists of 135 team members (surgeon, nurse, anesthesiologist, anesthesia technician) who have been working in a University hospital operating theaters. Research data was collected using; Personal Information Form, Teamwork Attitudes Scale and Patient Safety Attitude Scale.
Results: The most common areas of dissatisfaction in the working life of the participants; equipment supply was determined as 80%, wages 66.7%, workload 66.7%. The total average score of the Teamwork Attitude Scale of the operating room staff was 113.3 ± 9.6 and the mean score of the Patient Safety Attitude Scale was 121 ± 21.
Cunclusion: The mean scores of teamwork attitudes questionnaire of the participants were found to be good, and the average of patient safety attitude questionnaire was found to be moderate. No statistically significant relationship was found between the mean total score of teamwork attitudes and the mean total score of patient safety attitudes.

Keywords; Operating Room; Patient Safety; Teamwork

Introduction

Considering the complex structure of health services, the need to respond quickly to changes, and rapid developments in care and treatment technologies, building effective teamwork among healthcare professionals is crucial (Onler et al. 2016, Weller et al. 2014). Surgical environments are risky for patients and healthcare professionals due to the risk of infection, trauma and exposure to hazardous substances for their complex structures. (Lafci et al. 2016). They are dangerous units with high risk but low probability of error (Aydemir and Yildirim, 2016). Patients and employees are at risk for medical errors due to the complex structure of operating rooms, the need for teamwork, and the frequent use of technological devices (Karayurt et al. 2017, Steelman and Graling 2013). The relational bonds that exist between team members in the operating room are a significant factor in reducing human-induced errors and ensuring patient safety by positively affecting the quality of surgical care (Aydemir and Yildirim, 2016). Operating rooms are units where different surgical techniques are used under the guidance of scientific innovations and are crucial for teamwork and quick decision-making (Baltaci Goktas, 2016, Hu et al. 2012). In addition, wrong side surgery, mismatched organ transplants or wrong blood transfusions, treatment delays, and medication errors occur because of the insufficient use of interpersonal dynamics in the operating room environment (Aydemir and Yildirim 2016, Prati and Pietrantoni, 2014: 669).

Effective teamwork in the field of health is essential for providing high-quality service in patient care (Dietz et al. 2014, Onler et al. 2016). It contributes significantly to the reduction of errors that may occur related to health services, the effective use of time for patient care, the increase of patient safety and satisfaction, and the reduction of stress levels (Onler et al. 2016, Leonard and Frankel 2011, Kallisch and Lee 2012, McCulloch et al. 2011, Leasure et al. 2013, Tang et al. 2013).

Following the principle of "do no harm", which is the basis of health services, the priority should be patient safety and prevention of medical errors while providing health services. (Baltaci Goktas, 2016). Patient safety, which is a crucial element of quality in the field of health, is defined as the measures taken by health institutions and professionals to prevent people from being adversely affected physically and psychologically by errors that may occur in health services (Baltaci Goktas, 2016).

In health services, medical errors are caused by deficiencies in non-technical skills such as communication and cooperation, which are major components of teamwork, rather than technical skills (Onler et al. 2016, Kwaan et al. 2006). Practices that increase patient safety are crucial to keep the quality of care and treatment given to the patient by the healthcare team in the operating rooms at a high level and to reduce the risks (Kapikiran et al. 2018). It has been emphasized that teamwork is essential to reduce the stress levels of the staff, increase their job satisfaction, and accordingly improve the patient results and service quality in health institutions; Also, it is recommended to measure the team performance of the workers at regular intervals to support teamwork and create a team culture (Onler et al. 2016).

As a result of the literature review, no study was found that examines the relationship between teamwork and patient safety attitude in the operating room. Accordingly, performing a situation assessment of teamwork and patient safety in operating room staff can contribute to the creation of necessary training plans to increase the effectiveness of teamwork and increase the level of patient safety. This study aims to examine the relationship between teamwork and patient safety attitude in operating room Staff.

Research Questions

- What is the teamwork attitude level of the operating room staff?
- What is the patient safety attitude level of the operating room staff?
- Is there a relationship between teamwork and patient safety attitudes of the operating room staff?
- What are the factors affecting the teamwork and patient safety attitudes of the operating room staff?

Methods

Type of the Study: This research is a descriptive and cross-sectional study.

Participants: The study population consists of surgeons, nurses, anesthesiologists, and anaesthesia technicians working in the operating rooms of a university hospital between March and May 2019. On the other hand, the study sample includes 135 team members (surgeon, nurse, anesthesiologist, and anaesthesia technician) who had been working in the operating room for at least six months and accepted to participate in the study.

Data Collection: The Personal Information Form, which includes questions regarding sociodemographic characteristics, the Teamwork Attitudes Questionnaire and the Patient Safety Attitudes Questionnaire were used to collect data.

Personal Information Form: In the personal information form created by the researcher there are questions about gender, age, working unit, position in the team, marital status, educational status, professional experience, working style, whether there is teamwork in the unit.

Teamwork Attitudes Questionnaire (TAQ): This scale was developed by Baker et al. (2008) to determine individuals' attitudes towards teamwork, and its validity and reliability studies were conducted in Turkey by Yardimci et al. (2012). The 5-point Likert-type scoring is used in the evaluation of the scale. In addition, it consists of five sub-dimensions, which are Team Structure (6 questions), Leadership (6 questions), Situation Monitoring (6 questions), Mutual

Support (5 questions), and Communication (5 questions). Also, a minimum of 28 and a maximum of 140 points can be obtained from this scale. A high score on the scale indicates that the teamwork attitudes of the workers increase (Yardimci et al., 2012).

Patient Safety Attitudes Questionnaire (PSAQ): The Turkish validity and reliability study of this scale, which was developed by Sexton et al. (2006), was performed by Baykal et al. (2010). The scale has 46 items and consists of six sub-dimensions (teamwork climate, safety climate, job satisfaction, perceptions of management, working conditions, and stress recognition). As a result of the validity and reliability analysis, it consists of 46 items and six sub-dimensions (Job satisfaction = 11 items, Teamwork climate = 12 items, Safety climate = 5 items, Perceptions of Management= 7 items, Stress recognition = 5 items, and Working conditions = 6 items). The five-point Likert-type scale is scored as "5- strongly agree", "4- agree", "3- partially agree", "2- disagree", and "1- strongly disagree", also some items of the scale are scored negatively. A minimum of 46 and a maximum of 230 points can be obtained from the scale. The total scale score is calculated by the scores obtained from the sub-dimension averages. According to the scale, job satisfaction is evaluated as 30 points, teamwork climate as 66 points, safety climate as 25 points, perceptions of management as 35 points, stress recognition as 25 points, and working conditions as 20 points. Respectively, as the Patient Safety Attitudes Questionnaire's score increases, the perception of patient safety increases (Baykal et al., 2010).

Procedure: Before starting the survey, participants were provided with information about the purpose of the study and their rights, including the right to decline participation at any time. After the participants were informed about the study, the researchers provided the printed survey directly to the volunteer staff. The participants were asked to respond to the survey questions at a convenient time and completion took approximately 5-10 minutes. Participants were instructed to leave their surveys in a discrete place in the operating room department once completed. Completed surveys were collected at regular intervals by researchers.

Data Analysis: Some descriptive statistics items like percentage, mean, standard deviation were used in the data analysis. The relationship between scale scores was evaluated with Pearson Correlation Analysis. In addition, the average comparisons between the groups were made using the Mann-Whitney U test (z) in case of two groups, and the Kruskall-Wallis H test (x2) in case of three or more groups. The value $P<0.05$ was accepted as the statistical significance limit.

Ethical considerations: Written permission (dated 3 May 2019, Ethics Committee No: 99166796-0500.06.04) was obtained from the Medical Research Ethics Committee of a University Hospital to conduct the study. Another written permission (dated 16 April 2019, numbered 69631334-100) was obtained from the chief physician of the hospital where the research was conducted. For using the Teamwork Attitudes Questionnaire in our study, permission was obtained from Yardimci, who conducted its Turkish validity and reliability study; And for using the Patient Safety Attitudes Questionnaire, permission was obtained from Baykal, who conducted its Turkish validity and reliability study. The study's purpose was explained to the individuals who participated in the study, and their voluntary consent was obtained for their participation.

Results

Of the operating room staff included in the study, their mean age was 32.96±6.90 years, 0% were surgeons, 32.6% were nurses, 51.1% had a total weekly working time of more than 50 hours, and 78.5% worked in a permanent position. The mean working years of the participants in the profession was 9.51±7.5 years, and the average working years in the operating room was 6.58±6.4 years. Among the staff, the rate of interdisciplinary teamwork in the unit was found to be 91.1%. The most common areas of dissatisfaction in the work life of the participants were determined as the supply of tools and equipment at 80%, wages at 66.7%, and workload at 66.7% (Table 1).

The mean score of the Teamwork Attitudes Questionnaire of the operating room staff was 113.3±9.6; And the averages of its sub-dimensions were as follows, team structure 24.9±2.8; leadership 26.2±2.9; situation

monitoring 25.6±2.9; mutual support 15.3±2.7; and communication 21.25±2.7. On the other hand, the mean score of the Patient Safety Attitudes Questionnaire of the operating room staff was 121±21; And the averages of its sub-dimensions were as follows, job satisfaction 32.7 ±7.5; teamwork climate 27.6±7.3; safety climate 12.2±3.6; perceptions of management 17±4.8; stress recognition 16.1±4.3; and working conditions 15.4±3.2 (Table 2).

The correlations between the teamwork attitudes questionnaire pursuant to the demographic and work characteristics of the staff are included in Table 3. Accordingly, there was a significant relationship between marital status, educational status, choosing a profession voluntarily, satisfaction with the working environment, the total weekly working hours, and the teamwork attitudes questionnaire total score and sub-dimension scores ($p<0.05$) (Table 3).

The correlations between the patient safety attitudes questionnaire according to the demographic and work characteristics of the staff are given in Table 4. Based on this, there was a significant relationship between gender, educational status, occupation, total weekly working hours, and total score of the patient safety attitudes questionnaire and sub-dimension scores ($p<0.05$) (Table 4).

When the relationship between the total scores of the Teamwork Attitudes Questionnaire and the Patient Safety Attitudes Questionnaire was analyzed by correlation analysis, there was no significant relationship between them ($p>0.05$). When the relationship between the total score of the Teamwork Attitudes Questionnaire and the age of the staff, the years of working in the profession and the years of working in the operating room was examined by correlation analysis, there was a weak positive relationship between them ($p<0.05$). In addition, as the age of the staff, their working years in the profession and their working years in the operating room increased, their teamwork attitudes also increased (Table 5).

Table 1: Sociodemographic and Working Characteristics of the Staff

Characteristics	Sub Category	n	%
Gender	Female	78	57.8
	Male	57	42.2
Marital Status	Married	63	46.7
	Single	72	53.3
Education Status	Licence	59	43.7
	Graduate	79	56.3
Profession	Surgeon	54	40
	Nurse	44	32.6
	Anesthesiologist	19	14.1
	Anesthesia technician	18	13.3
Willingly choose the profession	Willingly choose	119	88.1
	Unwilling to choose	16	11.9
Willingly choose the service that works	Willingly choose	97	71.9
	Unwilling to choose	38	28.1
Satisfaction with the Work Environment	Satisfied	76	56.3
	Partially Satisfied	53	39.3
	Not glad	6	4.4
Weekly Working Hours	40 hours	10	7.4
	40-49 hours	56	41.5
	More than 50 hours	69	51.1
Working system	Shift (8 hours)	21	15.6
	Watch + Shift	114	84.4
Way of Working	Continuous Daytime	22	16.3
	Daytime and night	113	83.7

Squad	Regular	106	78.5
	Contractual	29	21.5
Having interdisciplinary teamwork in the unit he/she works in	Yes	123	91.1
	No	12	8.9
Areas of dissatisfaction in working life	Supply of tools	108	80
	Inability to work in coordination with team members	24	17.8
	Colleague behavior	28	20.7
	Lack of social sharing with colleagues	22	16.3
	Difficulty accessing information sources	18	13.3
	Fee	90	66.7
	Management Style	27	20
	Physical conditions of my workplace	67	49.6
	Insufficient consideration of work-related remedial and development suggestions	23	17
	Lack of job security	21	15.6
	Frequent applications that are not my duty	42	31.1
	Lack of in-service training	17	12.6
	Workload	90	66.7
	Conflicts with patients	5	3.7

	Mean±SD	**Min.**	**Max.**
Age	32.96±6.90	24	62
Years of Employment	9.51±7.5	1	41
Years of work in this hospital	7.7±7.3	1	41
Years of work in the operating room	6.58±6.4	1	37

Table 2: Total and Sub-Dimensional Scores of the Patient Safety and Teamwork Attitudes Scale

Teamwork Attitudes Scale		**Mean±SD (Min-Max)**	**Median**
Team Structure	(6-30)	24.9±2.8 (19-30)	24
Leadership	(6-30)	26.2±2.9 (19-30)	26
Situation Monitoring	(6-30)	25.6±2.9 (18-30)	26
Mutual Support	(5-25)	15.3±2.7 (7-25)	15
Comminication	(5-25)	21.25±2.7 (11-25)	21
Scale Total Score	(28-140)	113.3±9.6 (89-140)	112
Patient Safety Attitudes Scale			
Job Satisfaction	(11-55)	32.7 ±7.5 (11-53)	33
Teamwork	(12-60)	27.6±7.3 (12-56)	27
Safety Climate	(5-25)	12.2±3.6 (5-25)	12
Management Understanding	(7-35)	17±4.8 (7-35)	17
Stress Definition	(5-25)	16.1±4.3 (5-23)	17
Working Conditions	(6-30)	15.4±3.2 (8-24)	15
Scale Total Score	(46-230)	121 ±21 (61-176)	121

Table 3: Comparison of Characteristics and Teamwork Attitudes Scale Scores of the Staff

Characteristics	n	%	Teamwork Attitudes Scale					
			Team Structure X±SD	Leadership X±SD	Situation Monitoring X±SD	Mutual Support X±SD	Comminication X±SD	Scale Total Score X±SD
Gender			24.8±2.8	26.1±3	25.4±2.9	15.4±2.9	21.2±2.8	113.1±10.6
Female	78	57.8	25.1±2.8	26.2±2.8	25.8±2.9	15.1±2.3	21.2±2.4	113.5±8.1
Male	57	42.2	z=-1.314,p=.635	z=-.100, p=.920	z=-.875, p=.382	z=-.600, p=.549	z=-.416,p=.678	z=-.475,p=.635
Marital Satus			24.9±3	26.6±2.9	25.4±3	15.7±2.8	21.8±2.6	114.7±10.2
Married	63	46.7	24.9±2.7	25.7±2.7	25.7±2.8	14.8±2.5	20.7±2.6	112.1±8.9
Single	72	53.3	z=-.307,p=.759	z=-1.711,p=0.87	z=-.559,p=.576	z=-1.587,p=.112	z=-2.536,**p=.011**	z=-1.265,p=.206
Education status			25±2.7	26±2.9	25.6±	15.8±2.9	21.5±2.3	114.1±9.7
Licence	59	43.7	24.8±2.9	26.3±2.9	25.6±3	14.8±2.4	21±2.9	112.6±9.5
Graduate	79	56.3	z=-.459,p=.646	z=-.410,p=.681	z=-.034,p=.973	z=-2.205,**p=.027**	z=-.830,p=.407	z=-.606,p=.544
Profession			25.1±2.6	26.3±2.7	25.6±2.7	14.7±2.2	21±2.4	112.8±7.4
Surgen	54	40	23.7±3.2	25.8±3.3	25.2±3.9	14.6±2.9	20.5±3.9	110±12.8
Anesthesiologist	19	14.1	24.9±2.8	26.4±3.1	25.8±3	16±3.2	21.9±2.4	115.2±11.1
Nurse	44	32.6	25.6±2.9	25.6±2.4	25.6±1.9	15.6±2.1	20.8±2.1	113.5±7.2
Anesthesia technician	18	13.3	x^2=4.789,p=.188	x^2=1.456,p=.692	x^2=.542,p=.909	x^2=7.034,p=0.71	x^2=5.176,p=.159	x^2=2.437,p=.487
Willingly choose the profession			24.8±2.9	26.1±2.9	25.4±2.9	15±2.5	21.1±2.7	112.5±9.1
Willingly choose	119	88.1	25.8±2.5	27.1±2.8	27.2±2.6	17.1±3.1	22.2±2.6	119.4±11.7
Unwilling to choose	16	11.9	z=-1.608,p=.108	z=-1.336,p=.181	z=-2.182,**p=.029**	z=-2.436,**p=.015**	z=-1.181,p=.238	z=-2.174,**p=.030**
Willingly choose the service that works			25.2±2.8	26.2±3	25.6±2.9	15.3±2.6	21.2±2.8	113.5±9.3
Willingly choose	97	71.9	24.2±2.7	26.2±2.7	25.5±2.9	15.3±2.9	21.4±2.5	112.6±10.6
Unwilling to choose	38	28.1	z=-1.782, p=.075	z=-.025,p=.980	z=-.168,p=.867	z=-.138,p=.890	z=-.109,p=.913	z=-.984,p=.325
Satisfaction with the work environment			25.6±2.9	26±2.9	25.6±2.8	15.6±2.6	21.4±2.5	113±8.9
Satisfied	76	56.3	24.2±2.6	26.5±2.9	25.4±3.1	14.9±2.8	21±2.9	112.1±11
Partially satisfied	53	39.3	23.6±1.6	25.5±2.6	27±2.7	14.5±2.3	21.2±2.4	111.8±0.7
Not glad	6	4.4	x^2=8.472,**p=.014**	x^2=1.108,p=.575	x^2=1.829,p=.401	x^2=2.464,p=.292	x^2=.496,p=.780	x^2=1.858,p=.395

Weekly working hours	10	7.4	26±3.7	28.7±2.5	28±2.3	18.5±3.9	23.5±2.1	124.7±10.1
40 hours	56	41.5	24.9±2.6	25.6±2.8	25.2±2.7	15.3±2.5	21.3±2.4	112.4±9.3
40-49 hours	69	51.1	24.8±2.9	26.3±2.8	25.5±3	14.7±2.3	20.8±2.8	112.3±8.8
More than 50 hours			x^2=1.522,p=.467	x^2=9.512,**p=.009**	x^2=7.687,**p=.021**	x^2=12.140,**p=.002**	x^2=8.527,**p=.014**	x^2=11.764,**p=.003**
Getting training on teamwork	54	40	25.2±3.1	25.9±3.1	25.4±2.9	15.1±2.6	21.2±3.1	112.7±11
Yes	81	60	24.8±2.7	26.4±2.7	25.8±2.9	15.4±2.8	21.3±2.3	113.7±8.7
No			z=2020.0,p=.449	z=1980.5,p=.343	z=1985.5,p=.361	z=2180.0,p=.975	z=2089.5,p=.657	z=2082.5,p=.638
Getting trainingon patient safety	108	80	24.9±2.8	26.1±2.9	25.7±2.8	15.5±2.7	21.5±2.7	113.8±10.2
Yes	27	20	24.9±2.8	26.2±2.7	25.1±3.4	14.5±2.4	20.3±2.3	111.1±6.5
No			z=1449.0,p=.960	z=1451.0,p=.969	z=1342.0,p=.520	z=1137.0,p=.075	z=977.5,**p=.007**	z=1243.5,p=.238

Mann-Whitney U Test (z), Kruskall wallis testi (x^2)

Table 4: Comparison of Characteristics and Patient Safety Attitudes Scale Scores of the Staff

			Patient Safety Attitudes Scale						
Characteristics	**n**	**%**	**Job Satisfaction X±SD**	**Teamwork X±SD**	**Safety Climate X±SD**	**Management Understanding X±SD**	**Stress Definition X±SD**	**Working Conditions X±SD**	**Scale Total Score X±SD**
Gender	78	57.8	33.4±7.4	28.2±7	12.1±3.8	16.3±4.5	15.7±4.5	15.5±3.2	121.4±21
Female	57	42.2	31.7±7.3	26.7±7.6	12.1±3.4	17.9±5.1	16.6±4.1	15.1±3.1	120.3±21
Male			z=-.207,p=.228	z=-1.314,p=.189	z=-.052,p=.959	z=-2.159,**p=.031**	z=-1.251,p=.211	z=-.862,p=.389	z=-.363,p=.716
Marital Satus	63	46.7	33.1±8	28.8±8	12.1±3.8	16.6±4.7	15.8±4.4	15.4±3.2	121.2±21.5
Married	72	53.3	32.3±6.9	26.6±6.5	12.1±3.5	17.3±4.8	16.4±4.2	15.3±3.2	120.2±20.6
Single			z=-.609,p=.542	z=-1.321,p=.187	z=-.107,p=.915	z=-1.254,p=.210	z=-.947,p=.344	z=-.117,p=.906	z=-.441,p=.659
Education status	59	43.7	33.2±7.3	28.2±7.3	11.9±3.8	15.8±4.6	14.9±4	15.1±3.3	119.2±20.1
Licence	79	56.3	32.3±7.6	27.2±7.3	12.3±3.5	17.9±4.8	17.1±4.3	15.6±3.1	122.4±21.6
Graduate			z=-.540,p=.589	z=-.731,p=.465	z=-1.013,p=.311	z=-2.494,**p=.013**	z=-3.388,p=.001	z=-1.028,p=.304	z=-1.012,p=.312
Profession	54	40	33.2±6.8	27.4±6.8	12.5±3.2	18.6±5	17.3±4.1	15.5±3	124.5±17.8
Surgen	44	32.6	34.1±7.6	29.1±8	12.3±4.1	16±4.5	15.2±4.8	15.7±3.2	122.5±20.8
Anesthesiologist	19	14.1	29.5±9.7	26±9	11.6±4.4	16.3±3.4	15.9±4.7	15.7±3.4	115.1±30.5
Nurse	18	13.3	31.1±5.6	26.5±4.5	11.5±2.9	15.4±5.1	14.8±2.1	14±3.1	113.4±16.2
Anesthesia technician			x^2=9.525**p=.023**	x^2=3.297p=.348	x^2=1.859,p=.602	x^2=10.648,**p=.014**	x^2=10.308,**p=.016**	x^2=3.601,p=.308	x^2=7.203,p=.066

Willingly choose the profession	119	88.1	32.8±7.4	27.3±6.9	12.1±3.4	16.9±4.6	16.2±4.3	15.5±2.9	121±20.6
Willingly choose	16	11.9	31.8±8.2	30±9.8	12.2±5.2	17.4±6.6	15.1±4.8	14.5±4.4	121.1±24.5
Unwilling to choose			z=-.498 p=.619	z=-1.367,p=.172	z=-.021,p=.984	z=-.379,p=.705	z=-.860,p=.390	z=-1.115,p=.265	z=-.426,p=.670
Willingly choose the service that works	97	71.9	32.9±7.3	26.8±7	11.8±3.4	17±4.8	16.2±4.5	15.2±3.1	120±2.7
Willingly choose	38	28.1	32.3±7.9	29.5±7.7	12.9±4.1	16.9±4.9	16±4.1	15.7±3.3	123.5±21.6
Unwilling to choose			z=1.019,p=.308	z=-2.024,**p=.043**	z=-1.447,p=.148	z=-.005,p=.996	z=-.353,p=.724	z=-.988,p=.323	z=-.744,p=.457
Satisfaction with the work environment	76	56.3	32.3±7.8	27.9±8.3	12±3.8	16.6±5	15.7±4.7	15.1±3	119.6±22.6
Satisfied	53	39.3	33±7.4	27.5±5.8	12.3±3.5	17.2±3.8	16.7±3.8	15.63±.1	122.5±18.1
Partially satisfied	6	4.4	34.5±4.1	24.2±5.2	12.7±2.7	20.5±8.2	16.7±4	18±4.5	126.5±25.2
Not glad			x^2=.724,p=.696	x^2=1.663,p=.435	x^2=.572,p=.751	x^2=2.602,p=.272	x^2=1.155,p=.561	x^2=3.634,p=.162	x^2=1.427,p=.490
Weekly working hours	10	7.4	35±11.5	33.1±12.1	14.1±5	18±7.1	14.8±5.9	16.5±4.3	131.5±25.8
40 hours	56	41.5	33±5.6	26.6±5.2	11.5±3.2	15.8±4.1	14.9±4.1	14.7±2.8	116.5±17.1
40-49 hours	69	51.1	32.1±8.1	27.6±7.7	12.4±3.6	17.8±4.8	17.3±3.9	15.8±3.2	123.1±22.4
More than 50 hours			x^2=1.681,p=.432	x^2=1.767,p=.413	x^2=3.734,p=.155	x^2=3.998,p=.135	x^2=13.311,**p=.001**	x^2=4.437,p=.109	x^2=4.262,p=.119
Getting training on teamwork	54	40	32.7±7.7	27.8±7.5	12.4±3.2	16.6±4	15.9±4.2	15.5±3.1	121.1±21.2
Yes	81	60	32.7±7.3	27.5±7.2	11.9±3.9	17.2±5.3	16.2±4.4	15.2±3.2	120.1±20.9
No			z=2062.5p=.576	z=2170.0,p=.939	z=1932.0,p=.248	z=2116.0,p=.749	z=2061.0,p=.570	z=2151.0,p=.871	z=2162.5,p=.912
Getting trainingon patient safety	108	80	32.9±7.7	27.4±7.4	12.1±3.7	16.8±4.6	16.2±4.2	15.6±3.2	121.1±20.6
Yes	27	20	32.1±6.6	28.3±7	12.4±3.3	17.5±5.5	15.9±4.9	14.6±3.2	120.9±22.8
No			z=1382.5p=.674	z=1232.0,p=.213	z=1409.0,p=.786	z=1281.5,p=.330	z=1449.9,p=.960	z=1255.5,p=.263	z=1406.0,p=.775

Mann-Whitney U Test (Z), Kruskall wallis testi (x^2)

Table 5.Correlation between Teamwork Attitudes Scale Score and Patient Safety Attitudes Scale Score

	Patient Safety Attitudes Scale		Teamwork Attitudes Scale	
	r	p	r	p
Teamwork Attitudes Scale	-0.154	0.075		
Age	-0.021	0.805	0.214	**0.013***
Years of work in the profession	-0.019	0.825	0.171	**0.047***
Years of work in the operating room	0.001	0.993	0.182	**0.035***

*p<0.05

Discussion

The health team is defined as a union where two or more clinicians work in cooperation with the common goals of providing comprehensive, quality health care services to individuals in line with their needs, joint decisions are made, and coordination and communication are provided. One of the principal conditions of providing quality health care is that health professionals who are experts in their fields work with each other in line with the team mentality (Ulusoy and TokgOz, 2009; Yardimci et al. 2012). It was determined that the teamwork attitudes (113.3±9.6) of the operating room personnel who participated in the study were at a good level. In the study conducted by Ture Yilmaz and Yildirim (2018) with nurses, the mean total score obtained from the "Teamwork Attitudes Questionnaire" was 111.53±11.47, while in Celik and Karaca's (2017) study it was 110.67±18.78. According to these data, there is effective teamwork in the health institutions where these studies were conducted. Suggestions were made on the importance of healthcare professionals having the ability to work in a team spirit, and it is recommended to develop the skills of working together, cooperation and teamwork of healthcare professionals (Yardimci et al., 2012; Ture Yilmaz and Yildirim, 2018).

When the sub-dimension scores of the Teamwork Attitudes Questionnaire of the operating room staff were examined; The highest average among the sub-dimensions was in the "leadership" sub-dimension, and the lowest was in the "mutual support" sub-dimension. Similar to these results, some other studies have the highest score in the "leadership" sub-dimension (Ture Yilmaz & Yildirim, 2018; Celik & Karaca (2017), and the lowest score in the "mutual support" sub-dimension (Ture Yilmaz & Yildirim, 2018). Teamwork is of great importance in providing effective and quality services following the purpose of health institutions (Ture Yilmaz and Yildirim, 2018). These results show that the level of leadership in healthcare professionals is high and that the "mutual support" feature needs to be developed for the importance of teamwork.

The duty of any of the health team members is not more or less important than the duty of the other, so the health team members should be complementary to each other (Ture Yilmaz & Yildirim, 2018). There was no significant relationship between the profession of the operating room staff and the total score of the Teamwork Attitudes Questionnaire and the averages of its sub-dimensions (team structure, leadership, situation monitoring, mutual support, and communication). These results indicate that the teamwork attitudes of surgeons, anesthesiologists, nurses and anaesthesia technicians working in the operating room are similar and at a good level, and that the concept of teamwork is adopted by all staff. Successful and harmonious teamwork will not only positively affect the outputs of the process but also increase the efficiency and quality of the service provided (Yardimci et al. 2012). This result is thought to be important in this sense as well.

Accordingly, the total score of the leadership, situation monitoring, communication, mutual support sub-dimensions and teamwork attitudes questionnaire was higher in the patients whose weekly working hours did not exceed 40 hours in the operating room (p<0.05). Similarly, in the study conducted by Celik and Karaca (2017) with nurses, they found that the "Mutual Support" scores of

nurses with a working time of 40 hours were statistically significantly higher ($p<0.05$). These results show that working hours are a significant factor affecting teamwork attitudes.

One of the primary topics of quality programs in health institutions is to ensure patient safety (Hakverdioglu YOnt, 2011; Karaca and Arslan, 2014). It is a topic that should be embraced by all staff in health services, and ensuring it in health institutions demands a certain process for its requirement of a change in behaviour and attitude (Dursun et al., 2010; Karaca and Arslan 2014). The patient safety attitudes (121±21) of the operating room staff were found to be moderate according to the total score of the Patient Safety Attitudes Questionnaire. Providing high-quality and safe health care by improving patient safety is a significant factor (Ozer et al., 2019). This result reveals that patient safety attitudes in operating room staff should be developed and adopted by all.

When the Patient Safety Attitudes Questionnaire sub-dimension scores of the operating room staff were examined, the highest average was in the "stress recognition" sub-dimension, and the lowest was in the "teamwork climate" sub-dimension. According to the studies on the subject; For instance, in Ozer et al.'s study (2019), the nurses gave the highest average among the sub-dimensions of patient safety to the sub-dimensions of "perceptions of management" and "safety climate". Also, the lowest average was in the "stress recognition" sub-dimension. In Turk (2015)'s study on operating room nurses, the highest average was on the safety climate sub-dimension, while the lowest was on the working conditions sub-dimension. In the study of Susam Ozsayin and Ozbayir (2015), while job satisfaction scores are the highest, the scores of stress recognition are the lowest. It is assumed that the reason for the emergence of these particular results is the fact that the studies were carried out in different units and with divergent sample groups.

When the relationship between the total scores of the Patient Safety Attitudes Questionnaire of the operating room staff and their ages was examined by correlation analysis, there was no statistically significant relationship between them ($p>0.05$). Yet, in the literature, some studies found the opposite (Elsous et al., 2017; Sahin et al., 2015). While there was no significant relationship between job satisfaction, teamwork climate, safety climate, stress recognition, working conditions sub-dimensions and Patient Safety Attitudes Questionnaire total scores according to the gender of the operating room staff ($p>0.05$), the perceptions of management sub-dimension score of male workers was higher ($p<0.05$). Unlike this study, Ozer et al. (2019) found that nurses' scores on job satisfaction, teamwork climate, safety climate and perceptions of management sub-dimensions showed significant differences according to their genders, and females' scores were found to be higher than males' in all dimensions. In the studies of Sahin et al. (2015) and Susam Ozsayin and Ozbayir (2015), the safety attitudes did not differ according to gender.

When the relationship between the total score of the Patient Safety Attitudes Questionnaire and the working years of the workers in the profession/operating room was examined by correlation analysis, there was no significant relationship between them ($p>0.05$). Unlike the results of this study, in other studies, the patient safety attitude total score/sub-dimension scores of individuals with longer working hours were higher (Aljadhey et al., 2016; Ozer et al. (2019).

In this study, no statistically significant relationship was found between the total scores of the Teamwork Attitudes and Patient Safety Attitudes Questionnaires of operation room staff. In the research conducted by Adiguzel (2010) on the perception of patient safety culture by healthcare professionals, he found that healthcare professionals emphasize teamwork in patient safety practices and attach importance to it. Also, effective teamwork ensures patient safety (Ture Yilmaz and Yildirim, 2018). In patient care, stakeholders, especially nurses and physicians, are responsible for providing patient care safely and preventing harm in patients (Ozer et al., 2019). In other words, teamwork is crucial in terms of patient safety.

Limitations of the study: Among the limitations of the study; only the fact that the study was conducted in the operating room of

a university hospital and the small sample size can be counted.

Conclusion: According to the study results, the mean Teamwork Attitudes Questionnaire scores of the operating room staff were at a decent level, and the mean Patient Safety Attitudes Questionnaire scores were moderate. There was no statistically significant relationship between the Teamwork Attitudes Questionnaire total scores of the operating room staff and their Patient Safety Attitudes Questionnaire total scores. As per these results, we recommend increasing the training on patient safety and teamwork for the operating room staff, improving their attitudes towards patient safety, choosing the people who will work in the operating theatres due to difficult and tiring working conditions, and improving their working hours.

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