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Knowledge and opinions on nurses' Team Work's**Selver Guler¹, Sezer Avci¹, Betul Kaplan¹, Feride Yigit¹, Hatice Akkurt²**¹Hasan Kalyoncu University Faculty of Health Sciences Department of Nursing, Gaziantep, Turkey²Nizip State Hospital, Gaziantep, Turkey

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Abstract

The aim of this study is to determine the knowledge and opinions of the nurses about teamwork. This descriptive study was conducted with 206 nurses in Şahinbey Education Research and Application Hospital. Data were collected using the questionnaire prepared by the researchers, and the 'Teamwork Attitudes Questionnaire' (T-TAQ). Number, percentage, mean $\pm$ standard deviation and Chi-square, t-test, and ANOVA analysis were performed as descriptive statistics. 72.8% of the nurses are female, and 27.2% are male. The mean age of the nurses was 29.8 ± 4.8 years. 73.3% of the nurses were trained on the subject during primary education, 55.3% of them were trained on the subject after graduation, and 58.3% of them stated that teamwork was carried out in the unit they were working in. The mean score of the Teamwork Attitudes Questionnaire was 107.96 ± 23.21 . Despite receiving the lowest score from the mutual support sub-dimension, this score is above the mean. The highest mean score was taken from the leadership sub-dimension. It was determined that there was a statistically significant difference between the team structure and the mutual support sub-dimension in the comparison of the gender and teamwork attitudes scores of the nurses ($p < 0.05$). It was determined that there was a statistically significant difference in all sub-dimension and total mean scores except the communication in the comparison of the mean scores of the nurses' education status and teamwork attitudes ($p < 0.05$). When we compare the situation of nurses' definition of health team according to educational status, we found that there was no statistically significant difference between the two groups ($p > 0.05$). As a result of the study, it is seen that the nurses are trained in teamwork and acted effectively in the health team.

Keywords: Team, teamwork, nurse**Introduction**

It is stated that the concept of a team is a community formed by two or more people who have come together to reach pre-determined goals and are interdependent and act together [1,2]. It is also defined as a group of members, each with different knowledge and skills, who have come together to share their expertise in a common goal [3].

The need for strong teamwork has been emphasized as being necessary for improving quality care, with the increasing complexity of healthcare systems [4].

Nowadays, competition among healthcare institutions has been on the rise since individuals are more concerned about health, want quality care in health care services, and become more selective among related organizations when they need health care services. One of the factors that cause this competition is the increasing number of health service providers and the necessity of continuing their assets [4].

The work in health institutions is slowly carried out by teams [5], which also shows that this division of labor between physicians, nurses and other health personnel cannot be provided by a single professional group of health services [6]. This suggests that health services are interdisciplinary and that the delivery of health services depends on teamwork [7]. For this reason, sufficient teamwork forms the basis of health care provision [6].

Today, one of the necessary conditions for providing qualified health services is the necessity of specialized health professionals in the field, and the other is that these professionals should have worked in close cooperation and communication with each other within the team spirit [8]. Teamwork also shows that members better understand each other's roles and positions, better solve their problems, and the synergy within the team positively reflects on patient outcomes and employee job satisfaction and performance [9]. Tekin's (2010) "Study on health care services within the health care system and the nurse's roles" shows that the necessity of sufficient teamwork for a proper health care provision has been recognized by everyone as the necessity of sufficient teamwork for a proper health care provision, but the fact that the role and tasks cannot be sufficiently limited causes of conflict in the team [10].

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Manser has concluded that teamwork and communication plays an essential role in the formation of accidents and other adverse events in health services in the literature on patient safety and teamwork in her article. Delays in treatment and diagnostic procedures, having conflicting information about the patient, and poor quality of service can be problems in the units where teamwork is insufficient. Strong and harmonious teamwork has also provided quality service while at the same time, affecting the efficiency of the service offered and the outputs of the process in a positive way [9].

Healthcare professionals must have the ability to work within the team spirit. Cooperation and teamwork skills should also be developed in health workers [11]. People who share the team spirit should have unity, common goals, collective standards, direct and indirect communication, shared rights, and responsibilities. Taking the different professional contributions of the members of the team in the treatment and care into consideration, it is understood that collaboration based communication rather than the hierarchical relationship is necessary for the contemporary team [12,13]. In this study, it was aimed to determine the knowledge and opinions of the nurses about teamwork.

Material and Methods

Study design

It is a descriptive study applied to nurses in Şahinbey Education Research and Application Hospital in Gaziantep between April 6 and May 6, 2015.

Setting and samples

The population of the study consist of nurses working at Şahinbey Education Research and Application Hospital (N: 550). It was aimed to reach at least 50% of the universe in the study, but 37.45% was reached for various reasons (not wanting to participate in the work, rejecting the voluntary consent form, nurses' being on leave). 230 questionnaires were distributed to the volunteers who were willing to study, and there was no return from twenty of these forms, and four were eliminated due to incomplete information. In total, there are 206 nurses filling out the questionnaire.

Ethical considerations

This study was performed after obtaining approval from the Ethics Committee of Hasan Kalyoncu University of Health Sciences School (No:2015-10), and written permission was obtained from the Gaziantep University Şahinbey Education Research and Application Hospital Directorate. Written consent was obtained from each participant.

Instruments

In this research, we used a questionnaire (consists of 13 questions, the first seven questions consist of questions about the demographic characteristics of the volunteers such as age, gender, occupation, the next six questions consist of questions such as 'What is the health team?', 'Who should the health team consist of?'), and Teamwork Attitudes Questionnaire Turkish version (T-TAQ).

The T-TAQ was designed to measure individual attitudes related to the core components of teamwork that are captured within TeamSTEPPS. Specifically, individual attitudes toward team structure, leadership, mutual support, situation monitoring, and communication are measured. Turkish version of T-TAQ made

byYardımcı. et al. (2012) is a 5 point Likert type questionnaire included five sub-dimensions and 28 items. T-TAQ is scored as 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree and an increase in score in the relevant sub-dimension indicates that patient safety is positive. T-TAQ minimum score 28, the maximum is 140. The Cronbach alpha value of the scale is between 0.70-0.89 [11]. Cronbach alpha was found to be 0.96 in our study.

Data collection

Data of the research were collected by the questionnaire filled out by volunteers. The questionnaire forms were filled out after face-to-face interviews with individuals and verbal and written consents were received, and information about the study was given to the participants (the purpose of the study, the information, and names of them were never to be used at all).

Data analysis

SPSS version 17 (SPSS Inc., Chicago, IL, USA) was used to analyze the data. Descriptive statistical analyses were used (frequency, percentages, mean-standard deviation). In order to test the Parametric data t-test was used for comparing the frequency distribution of the socio-demographic characteristics of the nurses, T-TAQ scores arithmetic mean, socio-demographic characteristics and mean scores and comparison of two groups. The results of the study were interpreted as $p < 0.05$ value. Chi-square test was used to compare categorical variables, parametric data that the number of groups was more than two were evaluated by ANOVA test. Further analysis was performed with the post-hoc Tukey test to determine the group from which the difference was assessed in the ANOVA test. The results of the study were interpreted as $p < 0.05$ value statistically significant.

Results

As a result of interpreting the data obtained for the purpose of determining the knowledge and opinions of the nurses about teamwork, the following findings were obtained.

the majority (81.1%, 167) had a bachelor's degree and number of years half of them worked as 5 years or less (104 people, 50.5%). (147 people, 71.4%) and a number of years they worked in a unit was mostly 5 years or less. When the units the nurse's work are questioned, it is seen that 20.9% of them were working in other units (operating room, outpatient clinic, emergency, etc.) and 54.4% were working in service. More than half of the nurses (51.9%, 107 people) expressed the definition of a health care team completely (Table 1).

In addition, the answers given by the nurses to the question "Whom should the health team consist of?" was mostly answered as physicians and nurses by 98.1%, and it was followed by a 56.3% as health officer. More than half of the nurses (76.2%, 157 people) stated that the health team leaders should be physicians.

The mean age of the nurses was 29.8 ± 4.8 years. According to the answers given to the question of applying teamwork in the units where the nurses were informed and educated about the concept of team during and after basic vocational training, 73.3% of the nurses were trained during primary education; 55.3% were trained about the concept of team after primary education, and 58.3%

stated that teamwork was carried out in the unit they were working in.

Table 1. Distribution of Socio-Demographic Characteristics of Nurses (N = 206)

Gender	n	%
Female	150	72.8
Male	56	27.2
Educational Background		
High school	14	6.8
Associate degree	10	4.9
Bachelor's degree	167	81.1
Master's degree	15	7.3
Number of Years Worked		
5 years and less	104	50.5
6-10 years	62	30.1
11 years and more	40	19.4
Working Unit		
Service	112	54.4
Intensive care	33	16.0
Other units	61	29.6
Number of Years Worked in A Unit		
5 years and less	147	71.4
6-10 years	43	20.9
11 years and more	16	7.8
Position in The Unit		
Nurse	184	89.3
Executive Nurse	22	10.7
Definition of Health Team		
Complete	107	51.9
Incomplete	99	48.1

The minimum score for teamwork attitudes scale is 28, and the maximum score is 140. Nurses have a minimum of 40 points; maximum of 140 points — the mean score of is 107.96 ± 23.21 . While the mutual support sub-dimension is lowest at 17.10 ± 4.11 points, this score is above the mean. The highest mean score is from the leadership sub-dimension with 24.29 ± 6.57 (Table 2).

Table 2. Distribution of Descriptive Findings Related to Nurses' Teamwork Attitudes Questionnaire

Teamwork Attitudes Questionnaire Sub dimensions	N	Mean $\pm$ Sd	Min - Max
Team Structure	206	22.97 ± 5.21	6-30
Leadership	206	24.29 ± 6.57	6-30
Situation Monitoring	206	23.83 ± 5.40	6-30
Mutual Support	206	17.10 ± 4.11	5-25
Communication	206	19.75 ± 5.03	5-25
Teamwork Attitude Total	206	107.96 ± 23.21	40-140

When we examine Table 3, the gender of nurses and teamwork attitudes were found to be statistically significant ($p < 0.05$) in the team structure and mutual support sub-dimensions in the comparison of the mean scores. It was observed that the average scores of males were higher than females. It was calculated that there was no statistically significant difference between the scale total mean and other sub-dimension average scores, and the scores were similar (Table 3).

When the position of the nurses in the unit and the mean scores of teamwork attitudes scale, it was found that there was no statistically significant difference between the mean scores ($p > 0.05$, Table 4).

When the comparison of nurses' educational background and the mean scores of teamwork attitudes scale in Table 5 is examined, it was determined that there was a statistically significant difference in all sub-dimensions and total mean scores except for communication ($p < 0.05$). As the education level of the nurses increased, the mean scores increased, and the lowest point average was found in the high school graduated nurses, and the highest average was nurses with MA degree (Table 5).

When we compare the situation of nurses' definition of health team according to education level, it is seen that there is no statistically significant difference between them ($p > 0.05$, Table 6).

When we compare the number of working years and the working unit, the number of working years in a unit with scale mean scores, it is calculated that there is no statistically significant difference between these ($p > 0.05$).

Table 3. Comparisons of Nurses' Gender and Mean Scores of Team Work Attitudes Questionnaire

Teamwork Attitudes Questionnaire Sub dimensions	Female		Male		t	P
	n	Mean $\pm$ Sd	n	Mean $\pm$ Sd		
Team Structure	150	22.84 ± 4.80	56	23.32 ± 6.20	4.603	.033
Leadership	150	24.16 ± 6.492	56	24.62 ± 6.82	.271	.603
Situation Monitoring	150	23.66 ± 5.39	56	24.28 ± 5.45	.099	.754
Mutual Support	150	17.00 ± 3.70	56	17.37 ± 5.07	6.236	.013
Communication	150	19.81 ± 4.71	56	19.60 ± 5.84	3.578	.060
Teamwork Attitude Total	150	107.49 ± 21.74	56	109.21 ± 26.93	2.158	.143

Table 4. Comparisons of Nurses' Position in Their Unit and Mean Scores of Team Work Attitudes Questionnaire

Teamwork Attitudes Questionnaire Sub dimensions	Nurse		Executive Nurse		t	p
	n	Mean $\pm$ Sd	n	Mean $\pm$ Sd		
Team Structure	184	22.89 $\pm$ 5.22	22	23.59 $\pm$ 5.19	.425	.515
Leadership	184	24.26 $\pm$ 6.64	22	24.50 $\pm$ 6.10	.367	.546
Situation Monitoring	184	23.78 $\pm$ 5.42	22	24.22 $\pm$ 5.38	.631	.428
Mutual Support	184	16.96 $\pm$ 4.12	22	18.27 $\pm$ 3.90	.024	.877
Communication	184	19.63 $\pm$ 5.19	22	20.77 $\pm$ 3.29	3.550	.061
Teamwork Attitude Total	184	107.55 $\pm$ 23.35	22	111.36 $\pm$ 22.23	.307	.580

Discussion

This study was carried out in order to determine the opinions of nurses working at Gaziantep University Şahinbey Training Research and Application Hospital regarding teamwork.

It has been determined that the nurses sampled have different educational levels. The differences in the educational status of the nurses may be due to a lack of standardization in the education of the nursing profession for many years.

According to the definition of the team concept in the literature, the definition of the team concept is entirely accepted by those who use similar expressions [1-3,14]. More than half of the nurses (51.9%, 107 people) expressed the definition of the health care team ultimately. According to the results obtained from our study, this can be related to the training about the concept of the team that more than half of the nurses received during basic training and after basic training (73.3%, 55.3% respectively).

98.1% of the nurses stated that the health team consists of physician and nursing staff. Many kinds of literature view the physician and nurse as the cornerstones of the health team and define it accordingly [15-19]. The results obtained in our study were in parallel with literature knowledge. In another study, it was determined that there were differences between physicians' and nurse groups' perception level of teamwork and that a vast majority of the physicians participating in the study indicated that they had teamwork with the nurses while a few nurses stated that they had teamwork while working with physicians [20].

More than half of the nurses (76.2%, 157 people) stated that the health team leaders should be physicians. In the survey conducted by Ulusoy and Tokgöz (2009), for 75.2% of the participants in the survey, a physician is always the leader of the health team [21]. In similar studies, the nurses stated that the physician is the health care team member who is in charge of giving health services in the first place [22,23]. In the end, the answer is that the team's leadership is still a traditional understanding, and the physician supports decision-making, authoritarian, localized patterns. According to these results, the answers of the nurses that the physician is the leader of the team show that they are still in traditional understanding in which the physician is decision-maker and authority.

In our study, 73.3% of nurses received training on team concept during primary education. In a similar study, it was determined

that 86.9% of the nurses received training on this subject during primary education [21]. According to another study conducted on 102 students from seven different disciplines, training on teamwork during vocational training has been found to positively change the perspective and attitudes in the care provided to the patient [24].

In our study, 55.3% of the nurses were trained in the concept of the team after primary education. There are also surveys that show that health workers are generally poorly trained in teamwork [3,25]. In Taylan's (2002) study, he investigated attitudes and perceptions towards teamwork in operating room teams, and 23.6% of health workers reported that they were trained on team concept after basic training [25]. There are studies in the literature which indicate that the quality of service increase when it is provided by the ones who receive adequate and comprehensive training on teamwork. In the study of Morey et al., which contained 684 physicians, nurses and health technicians, it was determined that the mistakes in the service provided by the individuals trained in teamwork decreased and the employees' attitudes towards each other improved [26]. This means that the institution the health care workers are working with should focus more on in-service training related to this topic.

58.3% of the nurses stated that teamwork was done in the unit they were working on. This shows that the team spirit is not fully established in other health care workers.

It is considered that the attitude toward teamwork regarding patient safety in the relevant sub-dimension is positive as the total score increases in the teamwork attitudes questionnaire. The maximum score that can be taken from the T-TAQ is 140. The mean score is determined as 107.96 ± 23.21 . The lowest mean score among the sub-dimensions included in the teamwork attitude questionnaire was taken from the leadership sub-dimension (24.29 ± 6.57), the highest mean score was taken from the mutual support sub-dimension (17.10 ± 4.11). In Hull's (2013) study conducted with operating room staff, the highest score was taken from the leadership sub-dimension [27]. Similar results were obtained in the research of Önler et al. (2014) [28]. According to this, we can say that the knowledge of the nurses participating in the research is generally high in all sub-dimensions of the T-TAQ.

It was determined that there was a statistically significant difference in the team structure and mutual support sub-dimensions between the genders of the nurses and teamwork attitudes in the comparison of the mean scores. It was observed that the questionnaire mean scores of males were higher than the questionnaire mean scores of females'. Although this shows that the attitudes of men are more

favorable for teamwork, in a study it was found that there is no difference between the groups in terms of determining team goals according to gender [29]. In another study, it was found that gender difference was not considered to be a factor affecting teamwork negatively [22].

In our study, it was determined that there was a statistically significant difference in total mean scores and all the sub-dimensions except the communication when the educational background of the nurses and teamwork attitudes questionnaire mean scores were compared. As the education level of the nurses increased, the mean scores increased, and the lowest point average was found in the high school graduated nurses, and the highest average was nurses with an MA degree. We can say that the main reason for this is that nurses may have been trained in teamwork during their postgraduate education. In a study conducted, it was determined that as the level of education of nurses increases, the success, harmony, and respectability of the nurse in the team increases [10].

When we compare the situation of nurses' definition of health team according to their education level, it is seen that there is no statistically significant difference between these. This can be attributed to the fact that more than half of the nurses (73.3%, 151 people) in our study were trained in the concept of the team during primary education.

Limitations of the Study

Comments on the study are based on the opinions of nurses who agreed to participate in the study (37.45%), not on the views of all nurses working in the hospital. The results of the research cannot be generalized because the research is related to the sample in the study. When collecting research data, some problems occurred. It has been observed that because the health workers are often asked to answer questionnaires, and due to their intensive work, they were reluctant to answer questionnaires.

Conclusion

As a result of the study, it is seen that the nurses are trained in teamwork and act effectively in the health team. 76.2% of the nurses stated that the health team leader should be a physician, and they seem to have a traditional view on the leader of the team. Today, competition among health care institutions and the fact that patients expect to receive an excellent health care service oblige these institutions to offer a better service management model. In order for health services to be able to be achieved in line with the goals set out in good quality, a team spirit must be set up in order to have a working environment where all health workers combine creative forces, labor, and knowledge. Quality health service is possible with proper teamwork. It is stated in the literature that the quality of service increases when it is provided by the ones who received adequate and comprehensive training about teamwork.

In this context, it is recommended that nurses receive training on teamwork in their professional education lives. In addition, training should be organized in health institutions to raise awareness of all team members with their roles and responsibilities.

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Conflict of interest

The authors declare that there are no conflicts of interest.

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Ethical approval

The study protocol has approved from local ethic committee.

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