

Original Article

Patient Safety Culture: Evaluating Turkish Nurses' Attitudes and Knowledge

Yurdanur Ege, RN, MSc

Erzurum Regional Training and Research Hospital, Erzurum, Turkey

Dilek Kilic, PhD

Professor, Ataturk University, Nursing Faculty, Public Health Nursing Dept. Erzurum, Turkey

Esra Yildiz, PhD

Assoc. Prof. Ataturk University, Nursing Faculty, Public Health Nursing Dept. Erzurum-Turkey

Correspondence: Esra Yıldız Assoc. Prof. Ataturk University, Nursing Faculty, Public Health Nursing Dept. Erzurum-Turkey E-mail: esrazengin82@gmail.com

Abstract

Purpose: The research was planned with the purpose to determine the perception of patient safety culture of nurses.

Procedure: Research was conducted with 265 nurses working at Erzurum Regional Training and Research Hospital located in Erzurum. "Information Form" and "Patient Safety Culture Hospital Survey" were used in the research. While analysing data seven different statistical analysis, which are frequency, percentage, t test, Mann Whitney U test, Kruskal Wallis test, Dunnet T3 Post Hoc test were used and these analysis's were carried out by SPSS 18.0 statistical package programme on the computer.

Findings: Most of the nurses stated that the level of security in the hospital is acceptable. It is found that "Group work within Units" sub field (X: 3.78±0.471) was the highest, "Providing Staff" sub field (X: 2.83±0.471) was the lowest. It is detected that nurses do not report the defective incidents. There is a statistically obvious education are prone to report regarding reporting the incidents.

Conclusion: It was determined that the patient safety culture of nurses acceptable and their education levels and job satisfaction found that a affected the patient safety culture sub dimension score means.

Keywords: patient, culture, nurse, Turkey

Introduction

Patient security refers to the work carried out for preventing the health-related faults and the elimination of injuries and deaths caused by these faults. The first step in providing a safe health service consists of creating a patient safety culture (Akalin, 2005; Cipri, 2009; Dursun, Bayram, & Aytac, 2010, Rekleiti et al. 2012). Nurses have an important role in terms of ensuring and maintaining patient security because of their affinity to the patient and their effectiveness in carrying out care taking activities for 24-hours (Seyman & Ayaz, 2016; Turkmen, Baykal, Seren, & Altuntaş, 2011, Mina Azmirad et al. 2016). Therefore, nurses have a significant responsibility in determining and solving the

problems related to patient security within the health system (Gundogdu & Bahcecik, 2012).

Due to high risks, it is important to prevent faults in health care system. Therefore, for health care providers to have a hospital security culture, will provide opportunities for them to see faults and to improve the system (Jones, Skinner, High, & Reiter-Palmon, 2013). Hospital security culture plays a key role in solving problems, ensuring quality and improving standards (El-Jardali, Dimassi, Jamal, Jaafar, & Hemadeh, 2011). This way, it will create an environment in which errors, processes and system-related problems can be discussed openly and without fear of punishment. It will ensure that the works on patient safety is successful and continuous. Thus,

diagnosis, treatment and care processes and health outcomes will improve significantly (Gundogdu & Bahcecik, 2012). However, along with the fact that nurses' approach to patient safety in our country is not clear, in the studies conducted, it was revealed that nurses' hospital security culture was not sufficient. As a result of the study carried out by Bodur and Filiz (2010), it is seen that health workers are not at a good level in terms of patient security culture in the hospital and there is a need to improve the safety culture in hospitals (Bodur & Filiz, 2010). In the study of Cipri et al., it was determined that nurses considered patient security applications necessary and that they were involved in practices (Cipri, 2009).

In order for a culture of patient security to be created and to be permanent, it is very important that all personnel and especially leaders in health care services take up seriously the issue and understand that they are the most important elements (Dursun et al., 2010). In the study of Bodur and Filiz (2010), it was determined that improving patient security and hospital management support for patient security were insufficient (Bodur & Filiz, 2010). In the study conducted by Gundogdu (2012); in the education and research hospital regarding patient security, employees believe that there is a punitive approach in the case of medical malpractice in their institution and that management do not support themselves in patient security issues (Gundogdu & Bahcecik, 2012). Therefore, it is important to determine the nurses' hospital security culture. This study was carried out to determine patient security culture of nurses.

Material and Method

The study was conducted as descriptive in Erzurum Regional Training and Research Hospital between November and December 2013. The research population was composed of nurses (N:530) working in Erzurum Regional Training and Research Hospital. No sample selection was made in the study; all nurses who were working and accepted to participate in the study were included in the study (n:265).

Data Collection Tools: The study data were collected with information form and Patient Security Culture Hospital Survey.

Information Form: The survey prepared according to the purpose of the research includes introductory and occupational characteristics of

nurses. There are a total of 6 questions in the information form as age, gender, duty, educational status of nurses, working style and job satisfaction.

Patient Security Culture Survey: In order to determine the patient safety culture in hospitals, a Patient Security Culture Hospital Survey was developed by the Agency for Healthcare Research and Quality- AHRQ. The validity and reliability study of the survey was performed by Bodur and Filiz (2010). And the scale's reliability coefficient was found to be between 0.63 and 0.84. The survey, whose reliability and validity studies were made, was adapted to Turkish society. Patient Security Culture Hospital Survey consists of 42 items and 12 sub-areas. In a five-point Likert-type questionnaire, in evaluating the degree of patient security, questions that measure the dimensions of the patient security culture at the unit level and at the hospital level (Bodur & Filiz, 2010).

The dimensions of patient security culture survey at unit / section level are indicated as follows:

1. Executive expectations and security development activities (4 items)
2. Organizational learning and continuous improvement (3 items)
3. Teamwork in the units (4 items)
4. Keeping communication open (3 items)
5. Feedback and communication about faults (3 items)
6. Non-punitive response to faults (3 items)
7. Providing personnel (4 items)
8. Hospital management support for patient security (3 items)

Dimensions Measured by the Patient Safety Culture Survey at the Hospital Level:

Team work between hospital units and hospital interventions and exchange (4 items)

Hospital interventions and change (4 items)

Topics Covering Result Variables of Patient Safety Culture Survey:

Detailed perception of Security (4 items)

Frequency of reporting incidents (3 items)

The degree of patient security in the hospital unit (1 item)

Number of reported incidents (1 item).(Bodur & Filiz, 2010)

Data Collection: Surveys applied to nurses were implemented by the second writer after getting oral consent of the individuals.

Ethical Principles: In order to perform the research, written permission was obtained from the Ethics Committee of the Faculty of Health Sciences of Atatürk University and from the institution where the research was conducted. Also, verbal consent was obtained from the nurses, to whom survey would be applied.

Difficulties and Limitations of the Study: Nurses were included in the study working at Erzurum Regional Training and Research Hospital.

Data Analysis: 7 different statistical analyses were used for data analysis and these analyses were done by SPSS 18.00 statistical package program. These analyses are as follows; frequency and percentage values in order to determine the demographic characteristics of the participants, t test, Mann-Whitney U test and Kruskal-Wallis test, Dunnet T3 Post Hoc test was used to understand the source of the differences.

Findings

This section includes the findings regarding patient security culture perceptions of 265 nurses working in hospital. Findings and reviews obtained as a result of statistical analysis of the data collected in the study are given in the table below. Information about the characteristics of the nurses in the research are given in Table 1.

From the health workers included in the study, % 84.9 % are females, 15.1 % are males, % 86.8 work as nurse, 10.6 % as head nurse, 0.8 % as nursing services officer, 1.5 % as supervisor nurse, 0.4 % as nursing services manager/assistant managers, 15.5 % high school graduate, 56.2 % university graduate, 20.8 % have two-year degree, 7.5 % have master's/doctorate degree, 37.7 % work daytime, 21.5 % in shift, 40.8 % in watch method. 75.8 % of the nurses are pleased with their job, 43.8 % work in service and 14.7 % in intensive care unit 60.4 % have been working at the hospital for 1-5 years, 46 %

have been working in the profession for less than 5 years. The age range of the nurses varies between 18 and 53 and the average age is 28.98. The arithmetic mean and standard deviation values of the responses of the nurses to the Patient Security Culture Hospital Survey are given in Table 2.

When Table 2 is reviewed, it is seen that the nurses' responses to "Manager expectations and security development activities", "on-punitive response to faults" "Providing Staff" dimensions of the "Patient Security Culture Hospital Survey" are at the level of "I neither agree nor disagree (2.83-3.14)"; **to responses** "Organizational learning and continuous improvement", "Teamwork in the Units", "Hospital management support for patient security", "Teamwork among the Hospital Units", "Hospital interventions and change" and "Detailed perception of security" dimensions at the level of "I agree (3.24-3.55)"; **responses to** "Keeping communication open", "Frequency of reporting incidents" dimensions are at the level of "Sometimes (2.97)" and "Feedback and communication about fault" dimensions at the level of "Mostly (3.47)".

Again in the table, it is seen that "Evaluating his/her unit on patient security" is at the level of "acceptable (2.59)" and "The number of writing and giving report in the last 12 months" is at the level of "Never (1.27)".

The answers that the nurses gave to the question "Patient Security Culture Hospital Survey" according to their gender are given in Table 3.

Mann-Whitney U test was applied to determine whether there was any difference in terms of the responses of the nurses to the "Patient Security Culture Hospital Survey" according to gender. All the values regarding the differences in terms of the responses of nurses to the Patient Security Culture Hospital Survey according to their gender were found to be insignificant at $p > 0.05$ significance level. These findings show that there is no difference in the responses of the nurses to the "Patient Security Culture Hospital Survey".

The responses that the nurses gave to Patient Security Culture Hospital Survey according to the educational status are given in Table 4.

Table 1. Distribution of Nurse Informative Features

Informative Features (n:265)	Number	%
Gender		
Female	225	84.9
Male	40	15.1
Duty		
Nurse	230	86.8
Head nurse	28	10.6
Person in charge of nursing services	2	0.7
Supervisor nurse	4	1.5
Nursing services manager/assistant managers	1	0.4
Educational state		
High School	41	15.5
License	149	56.2
Associate degree	55	20.8
Graduate / Doctorate	20	7.5
Working Style		
Day	100	37.7
Shift	57	21.5
Watch Style	108	40.8
Being Satisfied With the Job		
Yes	201	75.8
No	64	24.2
Unit of Work		
Emergency	9	3.4
Operating room	11	4.2
Paediatric Emergency	10	3.8
For one day	2	0.8
Management	5	1.8
Bloodletting	1	0.3
Service	116	43.8
Intensive care	39	14.7
Empty	72	27.2
Working time at the hospital		
Less than a year	37	14,0
1-5 years	160	60,4
6-9 years	51	19,2
more than 10 years	17	6,4
Working period in the profession		
Less than a year	122	46,0
5-9 years	74	27,9
10-15 years	37	14,0
15 years and more	32	12,1
Age (Year)	28,98±6,10 (Min:18 Max:53)	

Table 2. Patient Security Culture Score Averages

	X	SD
Patient security culture unit / department level		
Manager expectations and security development activities	3.14	.72
Organizational learning and continuous development	3.39	.63
Teamwork in the units	3.78	.81
Keeping communication open	3.28	.67
Feedback and communication about faults	3.47	.72
Non-punitive response to the fault	2.86	.75
Providing staff	2.83	.47
Hospital management support for patient security	3.24	.73
Hospital level of security culture		
Team work among hospital units	3.42	.58
Hospital interventions and change	3.56	.63
Result variables		
Detailed perception of security	3.55	.62
Frequency of reporting incidents	2.97	.77
Evaluating the unit about patient security	2.59	.81
The number of incident reports written and submitted in the last 12 months	1.27	.69

Table 3. The Comparison of Patient Security Culture Survey Score Averages according to the Gender of Nurses

		X	SD.	U	P
Patient security culture unit / department level					
Manager expectations and security development activities	Female	3.17	.71	1173.00	.273
	Male	2.98	.75		
Organizational learning and continuous development	Female	3.41	.62	1266.50	.650
	Male	3.30	.70		
Teamwork in the units	Female	3.81	.79	1158.00	.242
	Male	3.58	.95		
Keeping communication open	Female	3.29	.65	1307.00	.663
	Male	3.20	.79		
Feedback and communication about faults	Female	3.49	.68	1271.50	.496
	Male	3.32	.94		
Non-punitive response to the fault	Female	2.87	.74	1220.00	.425
	Male	2.80	.81		
Providing staff	Female	2.84	.45	1185.50	.524
	Male	2.75	.59		
Hospital management support for patient security	Female	3.23	.71	1305.00	.619
	Male	3.28	.91		
Hospital level of security culture					
Team work among hospital units	Female	3.43	.56	1307.50	.664
	Male	3.33	.74		
Hospital interventions and change	Female	3.55	.64	1216.00	.541
	Male	3.64	.62		
Result variables					
Detailed perception of security	Female	3.55	.62	1376.00	.983
	Male	3.55	.66		
Frequency of reporting incidents	Female	3.00	.74	1187.00	.553
	Male	2.77	.97		
Evaluating the unit about patient security	Female	2.58	.77	1357.00	.811
	Male	2.65	1.09		
The number of incident reports written and submitted in the last 12 months	Female	1.30	.73	1155.00	.085
	Male	1.05	.22		

Table 4. Comparison of Patient Security Culture Score Averages According to Nurses' Educational Status

		X	SD	KW	P
Patient security culture unit / department level					
Manager expectations and security development activities	High School	3.07	.62		
	License	3.09	.77	3.190	.363
	Associate degree	3.27	.66		
	Graduate / Doctorate	3.50	.43		
Organizational learning and continuous development	High School	3.28	.56		
	License	3.42	.72	1.530	.675
	Associate degree	3.40	.50		
	Graduate / Doctorate	3.42	.42		
Teamwork in the units	High School	3.57	.99		
	License	3.80	.83	2.809	.422
	Associate degree	3.88	.64		
	Graduate / Doctorate	3.44	.47		
Keeping communication open	High School	3.31	.66		
	License	3.36	.67	5.010	.171
	Associate degree	3.13	.64		
	Graduate / Doctorate	2.92	.88		
Feedback and communication about faults	High School	3.37	.60		
	License	3.55	.73	4.291	.232
	Associate degree	3.40	.76		
	Graduate / Doctorate	3.17	.33		
Non-punitive response to the fault	High School	2.93	.59		
	License	2.90	.79	2.332	.506
	Associate degree	2.72	.75		
	Graduate / Doctorate	3.17	.58		
Providing staff	High School	2.83	.44		
	License	2.82	.49	1.008	.799
	Associate degree	2.87	.43		
	Graduate / Doctorate	2.81	.55		
Hospital management support for patient security	High School	3.17	.78		
	License	3.22	.76	.530	.912
	Associate degree	3.33	.68		
	Graduate /	3.17	.19		

		Doctorate			
Hospital level of security culture					
Team work among hospital units	High School	3.32	.42		
	License	3.44	.61	2.711	.438
	Associate degree	3.45	.63		
	Graduate / Doctorate	3.19	.38		
Hospital interventions and change	High School	3.48	.47		
	License	3.55	.65	4.026	.259
	Associate degree	3.67	.68		
	Graduate / Doctorate	3.25	.66		
Result variables					
Detailed perception of security	High School	3.52	.59		
	License	3.53	.66	.630	.890
	Associate degree	3.62	.58		
	Graduate / Doctorate	3.50	.71		
Frequency of reporting incidents	High School	3.39	.53		
	License	2.90	.80	12.049	.007
	Associate degree	2.93	.75		
	Graduate / Doctorate	2.25	.74		
Evaluating the unit about patient security	High School	2.52	.82		
	License	2.65	.82	.911	.823
	Associate degree	2.53	.79		
	Graduate / Doctorate	2.25	.96		
The number of incident reports written and submitted in the last 12 months	High School	1.54	1.18		
	License	1.25	.61	5.331	.149
	Associate degree	1.12	.33		
	Graduate / Doctorate	1.75	.96		

Table 5. Comparison of Patient Security Culture Score Averages of the Nurses According to their job satisfaction

		X	SD.	t	P
Patient security culture unit / department level					
Manager expectations and security development activities	Yes	3.18	.73	.948	.344
	No	3.05	.66		
Organizational learning and continuous development	Yes	3.42	.63	1,286	.200
	No	3.26	.62		
Teamwork in the units	Yes	3.87	.76	2,912	.004
	No	3.43	.88		
Keeping communication open	Yes	3.33	.68	1.653	.100
	No	3.11	.61		
Feedback and communication about faults	Yes	3.48	.71	.738	.461
	No	3.38	.72		
Non-punitive response to the fault	Yes	2.93	.72	2,581	.011
	No	2.57	.77		
Providing staff	Yes	2.89	.46	2,660	.009
	No	2.66	.44		
Hospital management support for patient security	Yes	3.30	.75	2,252	.026
	No	2.99	.59		
Hospital level of security culture					
Team work among hospital units	Yes	3.48	.59	2,745	.007
	No	3.18	.49		
Hospital interventions and change	Yes	3.64	.62	2,858	.005
	No	3.30	.64		
Result variables					
Detailed perception of security	Yes	3.61	.62	2,171	.031
	No	3.35	.60		
Frequency of reporting incidents	Yes	2.99	.76	.727	.468
	No	2.88	.82		
Evaluating the unit about patient security	Yes	2.57	.82	.734	.464
	No	2.69	.76		
The number of incident reports written and submitted in the last 12 months	Yes	1.32	.75	2,130	.036
	No	1.11	.40		

When Table 4 is examined, the difference in the responses nurses gave to the dimension of "Frequency of reporting of incidents" according to their education was found to be significant ($p < 0.05$). However, it was determined that comparisons of all other dimensions did not make any difference ($p > 0.05$).

These findings show that there is a difference in the responses that nurses gave to the dimension of "Frequency of reporting of incidents" according to their duties. Dunnet T3 test was applied to understand the source of the difference. As a result of the test, those with high school education had higher scores in "Frequency of reporting of incidents" dimension than those with associate degree, undergraduate and postgraduate degree. The responses that the nurses gave to the "Patient Security Culture Hospital Survey" according to job satisfaction are given in Table 5.

When Table 5 is examined, while the difference is significant in terms of the responses that nurses gave to the following dimensions according to job satisfaction; "Teamwork in units", "Non-punitive response to fault", "Providing staff", "Hospital management support for patient security", "Teamwork among hospital units", "Hospital interventions and change", "Detailed Perception of Security" and "The number of incidents written and submitted in the last 12 months" ($p < 0.05$), all other dimensions do not create a difference ($p > 0.05$).

When Table 5 is examined, it is seen that the score averages of the dimensions of "Teamwork in units", "on-punitive response to fault", "Providing staff", "Hospital management support for patient security", "Teamwork among hospital units", "Hospital interventions and change", "Detailed Perception of Security" and "The number of incidents written and submitted in the last 12 months" are higher in those who are satisfied with their jobs than those who aren't.

Discussion

In the study conducted to determine the nurses' culture of patient security, 84.9% of the study group ($n = 265$) were female and 15.1% were male nurses. It is seen that male nurse ratio in our study is lower than the ratio in the study of Ozdemir (Ozdemir & Sahin, 2015).

56.2% of the nurses participating in the study had undergraduate degree, 20.8% associate

degree, 15.5% health vocational high school degree and 7.5% had graduate or doctorate degree. In the studies conducted by Gundogdu and Bahcecik and by Karaca and Arslan the ratio of the nurses with graduate degree were found lower (Gundogdu & Bahcecik, 2012; Karaca & Arslan, 2014).

When we look at the average age of the nurses participating in the study, it is seen that it is 28.98 (Min:18, Max: 53). This finding is similar to the study that Karaca carried out on nurses in 2014 (Karaca & Arslan, 2014).

In patient security culture score averages, the area of the number of writing and submitting incident reports in the last 12 months constitutes the lowest mean score (1.27 ± 0.69). These findings can be interpreted as the fact that the communication about faults is very high within the unit / department decreases report writing. Also, nurses may not have chosen the way of penalty, criticism and fault reporting thinking that they may prevent progress in their career (Bodur & Filiz, 2010). In the studies that Chen et al. conducted in Taiwan, they have reported that reporting of faults is at the lowest rate in health workers and the fear of punishment may have an impact on reporting faults due to the fact that in the past the faults were compensated by punishment (Chen & Li, 2010). Also, Wagner et al. have concluded that the reporting of faults in Taiwan is lower than in the United States (USA) and the Holland.

The fact that the findings of these two studies support the findings of our study may be due to common Asian culture of Turkish and Taiwanese societies (Wagner, Smits, Sorra, & Huang, 2013). Fujita and colleagues have found that reporting fault in Japanese society is quite high (Fujita et al., 2013). This may be due to the intercountry health system. This intercountry difference is important for literature.

In our study, the "Frequency of reporting of incidents" was found significantly higher in high school graduates compared to those with undergraduate, associate or postgraduate degrees. This result is similar to the findings of the studies of Gundogdu and Bahcecik. While this difference between educational backgrounds may indicate that hospital management treats differently to nurses according to their educational status, (Gundogdu & Bahcecik, 2012) it can also be interpreted that high school

graduate nurses prefer to report rather than solve the problems they face in units. At the same time, in the study of Gokdogan and Yorgun (2010), they reported that majority of nurses, who are associate degree graduates, stated that faults should be reported, that nurses are supported by the institution to report medical faults, that they feel comfortable in reporting on patient security and sharing of experiences prevents faults (Gokdogan & Yorgun, 2010).

When the mean score of hospital security culture item score average of the nurses participating in our research is examined, it is seen that "Teamwork in Units" sub-dimension item average score has the highest item score average ($3.78 \pm .81$). This finding shows that the understanding in teamwork of nurses is high. It is seen that the item mean score of nurses in "Feedback and communication about faults" has the highest item point average at the unit / department level ($3.47 \pm .72$).

In the study of Wagner et al. in which they examined the patient security culture of United States of America (USA), Holland and Taiwan, they reported that results from Taiwan and the US have more positive responses than those in Holland and the average score of the teamwork sub-dimension within the units has the highest positive response rate in all three countries (Wagner et al., 2013). Also in the studies that Chen et al. conducted in Taiwan, Helling et al. in Belgium, Smith et al. in Holland, "team work within units" mean scores have the highest positive response rate (Chen & Li, 2010; Hellings, Schrooten, Klazinga, & Vleugels, 2007; Smits, Christiaans-Dingelhoff, Wagner, van der Wal, & Groenewegen, 2008). The findings of these studies support the findings in our study.

It was determined that the score averages of the nurses were very low in terms of "The number of writing and submitting incident reports in the last 12 months". This finding is similar with the study findings of Karaca (2014) and Gundogdu and Bahcecik (2012) (Gundogdu & Bahcecik, 2012; Karaca & Arslan, 2014). Nurses are not at the desired level in terms of incident reporting levels. This conclusion may have been based on the nurses' fear of being criticized of receiving punishment. In addition, the team understanding within the units and the high-level understanding of team within the hospital may have caused the problems to be solved within the team and

among the teams rather than reporting the incidents, and this may have caused the incidents not to be reported.

It has been determined that the job satisfaction of the nurses affect teamwork within the units, providing staff, providing hospital support for patient security, team work among hospital units, hospital interventions and change, detailed perception of security, the number of writing and submitting incident reports in the last 12 months and hospital security scale scores of nurses who are satisfied with their jobs are positively affected. This finding seems to support the finding of our study. Studies have shown that nurses working in health institutions, working at extremely busy pace, not having enough staff, that individuals do not work in an equally dedicated way and nurses have a negative impact on hospital security culture (Dursun et al., 2010). This result can be interpreted as improving the working conditions of nurses will be an important factor in ensuring patient security culture in health institution.

Conclusion

Consequently, it has been determined in this study that patient security culture is acceptable, education level of nurses and job satisfaction makes a difference in the sub-areas of patient safety culture. It has been found that the educational status of nurses is effective on the frequency of reporting of incidents. The job satisfaction of the nurses has been determined to be effective on teamwork within the units, non-punitive response to faults, providing staff, and support from hospital management for patient security, hospital interventions and change, detailed perception of security and the number of writing and submitting incident reports in the last 12 months. This study show that the patient safety culture is different from other countries in Turkey.

Recommendations

- Emphasizing the importance of patient security and its adoption by all employees and the creation of a patient security culture,
- Establishment of the fault reporting system, enabling it to become active and making evaluations,
- Managers' undertaking a constructive, supportive and explanatory roles in the fault reporting,

- Establishment of patient security culture in nurses related to faults according to the units they work in, organizing trainings in order for it to be permanent and ensuring that all of the employees of the institution take embrace this issue,
- In order to contribute positively to nurses' approach and perspectives, it is recommended that nurses take an active role in institutions in patient security practices and studies.

References

- Akalin, H. E. (2005). Patient safety in intensive care units. *Intensive Care Journal*, 5(3), 141-146.
- Bodur, S., & Filiz, E. (2010). Validity and reliability of Turkish version of " Hospital Survey on Patient Safety Culture" and perception of patient safety in public hospitals in Turkey. *BMC health services research*, 10(1), 1.
- Chen, I.-C., & Li, H.-H. (2010). Measuring patient safety culture in Taiwan using the Hospital Survey on Patient Safety Culture (HSOPSC). *BMC health services research*, 10(1), 152.
- Cipri, F., Merih, YD, Kocabey, MY (2009). Nursing Practices That Are Aims To Patient Safe And Determining The Nurses Point View Of This Topic. *Journal of Maltepe University Nursing Science and Art*, 2(3), 26-34.
- Dursun, S., Bayram, N., & Aytac, S. (2010). An application on patient safety culture. *Social Science*, 8(1), 1-14.
- El-Jardali, F., Dimassi, H., Jamal, D., Jaafar, M., & Hemadeh, N. (2011). Predictors and outcomes of patient safety culture in hospitals. *BMC health services research*, 11(1), 45.
- Fujita, S., Seto, K., Ito, S., Wu, Y., Huang, C.-C., & Hasegawa, T. (2013). The characteristics of patient safety culture in Japan, Taiwan and the United States. *BMC health services research*, 13(1), 20.
- Gokdogan, F., & Yorgun, S. (2010). Patient Safety and Nurses in Health Services. *Journal of Anatolia Nursing and Health Sciences*, 13(2) 53-59.
- Gundogdu, S. K., & Bahcecik, N. (2012). Determination of patient safety culture perception in nurses. *Journal of Anatolia Nursing and Health Sciences*, 15(2) 119-128.
- Hellings, J., Schrooten, W., Klazinga, N., & Vleugels, A. (2007). Challenging patient safety culture: survey results. *International journal of health care quality assurance*, 20(7), 620-632.
- Jones, K. J., Skinner, A. M., High, R., & Reiter-Palmon, R. (2013). A theory-driven, longitudinal evaluation of the impact of team training on safety culture in 24 hospitals. *BMJ quality & safety*, 22(5), 394-404.
- Karaca, A., & Arslan, H. (2014). A Study for Evaluation of Patient Safety Culture in Nursing Services. *Journal Of Health And Nursing Management*, 1, 9-18.
- Mina Azimirad RN, M. N. S., & Mika Karjalainen RN, C. N. S. (2016). The Functioning of a Medical Emergency Team at a Finnish Hospital: A Quantitative, Retrospective Study for Quality Improvement. *International Journal of Caring Sciences*, 9(3), 744-753.
- Ozdemir, F. K., & Sahin, Z. A. (2015). Perceptions of Nurses Regarding The Patient Safety Culture: The Kars Case. *ODÜ Medical Journal*, 2(3).
- Rekleiti M, Kyloudis P, Toska A, Saridi M (2012). Patient safety and healthcare quality. *International Journal of Caring Sciences* 5 (2): 74-79
- Seyman, C. C., & Ayaz, S. (2016). Opinions of Operating Room Nurses Regarding Patient and Staff Safety in Operating Room. *Dicle Medical Journal*, 43(1), 12-17.
- Smits, M., Christiaans-Dingelhoff, I., Wagner, C., van der Wal, G., & Groenewegen, P. P. (2008). The psychometric properties of the Hospital Survey on Patient Safety Culture'in Dutch hospitals. *BMC health services research*, 8(1), 230.
- Turkmen, E., Baykal, U., Seren, S., & Altuntas, S. (2011). Development of Patient Safety Culture Scale. *Journal of Anatolia Nursing and Health Sciences*, 14(4)38-46.
- Wagner, C., Smits, M., Sorra, J., & Huang, C. (2013). Assessing patient safety culture in hospitals across countries. *International Journal for Quality in Health Care*, 25(3), 213-221.