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Nurses' Perceptions of Patient Safety Culture and Evaluation of Organizational Commitment Level

Hemşirelerin Hasta Güvenliği Kültürü Algıları ve Örgütsel Bağlılık Düzeyinin Değerlendirilmesi

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ABSTRACT

This research was carried out to determine nurses' perceptions of patient safety culture and organizational commitment levels, as well as to show the relationship between these two variables.

In this descriptive and correlational study, data were collected between May and June 2018 with the participation of 299 nurses working in a public hospital. Turkish versions of surveys titled Hospital Survey on Patient Safety Culture and Organizational Commitment Scale were used in order to collect data. The data collected was summed using frequencies, percentages, means, and standard deviation. Pearson correlation in comparing categorical data between groups were benefitted in comparative analyses.

Nurses' perception of patient safety culture was at a level that needed improvement (Total average percentage of positive responses 54%). The standards of organizational commitments of the participants were found to be high (4.09±0.85). The association between nurses' perceptions of patient safety culture and their organizational commitment degrees (r=0.41) were found statistically significant (p≤0.01). As the level of patient safety culture of nurses increases their level of commitment to their institutions also increases.

The patient safety culture level of nurses is below the desired level and needs to be improved.. Enhancing the safety culture in hospitals will improve their organizational commitment.

Keywords: Patient Safety, Patient Safety Culture, Organizational Commitment, Nurse.

ÖZ

Bu araştırma, hemşirelerin hasta güvenliği kültürü algılarını ve örgütsel bağlılık düzeylerini belirlemek ve bu iki değişken arasındaki ilişkiyi ortaya koymak amacıyla yapılmıştır.

Tanımlayıcı ve ilişkisel tipte olan bu çalışmada veriler, bir devlet hastanesinde çalışan 299 hemşirenin katılımıyla Mayıs-Haziran 2018 tarihleri arasında toplanmıştır. Veri toplamak için Hasta Güvenliği Kültürü Hastane Anketi ve Örgütsel Bağlılık Ölçeği kullanılmıştır. Veriler frekans, yüzde, ortalama ve standart sapma kullanılarak değerlendirildi. Gruplar arası karşılaştırmada Pearson korelasyon testi kullanıldı

Hemşirelerin hasta güvenliği kültürü algıları geliştirilmesi gereken düzeydeydi (Olumlu yanıtların toplam ortalama yüzdesi: %54). Katılımcıların örgütsel bağlılık ortalamaları yüksek bulunmuştur (4.09±0.85). Hemşirelerin hasta güvenliği kültürü algıları ile örgütsel bağlılık düzeyleri arasındaki ilişki istatistiksel olarak anlamlı bulunmuştur (r=0.41, p≤0.01). Hemşirelerin hasta güvenliği kültürü düzeyi arttıkça kurumlarına bağlılık düzeyleri de artmaktadır.

Hemşirelerin hasta güvenliği kültür düzeyi istenilenin altındadır ve geliştirilmesi gerekmektedir. Hastanelerde güvenlik kültürünün güçlendirilmesi hemşirelerin kurumsal bağlılıklarını artıracaktır.

Anahtar Kelimeler: Hasta Güvenliği, Hasta Güvenliği Kültürü, Örgütsel Bağlılık, Hemşire.

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INTRODUCTION

Patient safety (PS) is defined as avoiding accidental injuries, not as avoiding errors.[1] PS is a discipline of medicine having emerged as a consequence of complications taking place in health systems and patients' being harmed in health facilities owing to this. Health services aim at preventing risks, mistakes, and harms which may be occur during its provision.[2] Nurses play a vital role in providing and supporting patient safety by the nature of their work.[3] The International Council of Nurses (ICN) defines the concept of PS as nursing practice and health quality. Because nursing services cover all areas of care delivery, nurses are in a good position to prevent harm and provide safe care to patients.[4] Enhancing the PS in medical services is one of the significant compounds of preventing and reducing mistakes and improving the quality of general medical services.[5] Safety culture can be defined as values, attitudes, perceptions, competencies that determine commitment to organization.[6] Creating and developing a culture of safety in health care is essential to prevent medical errors and improve the quality of health care. In studies on patient safety culture (PSC), nurses stated that they mostly suffer from the absence of non-punitive approach against mistakes, and that problems with organizational commitment (OC) cause obstacles in establishing a safety culture[5]. In order to overcome these problems, it is thought that objectives of the organizations should be embraced by all employees and this can be achieved with commitment to the organization.[7] OC refers to the extent to which employees adopt the goals of the organization and the degree of their commitment to the organization. Commitment has been identified as an important variable in understanding the work behavior of employees in organizations.[8]

Among the factors affecting the patient safety culture, the commitment of the employees to the organization has an important place.[9] Previous studies on safety culture have largely focused on the effects of communication skills, interpersonal relationships, and teamwork on patient safety culture.[10-12] Studies of the effects of beliefs, values, and attitudes on patient safety culture are sparse. The need for this type of research is particularly important, as the outcomes of patient care often depend on healthcare professionals' acknowledgment of the importance of adhering to safety procedures.

The aim of the study was to determine the level of Patient Safety Culture (PSC) and Organizational Commitment (OC) of nurses and to reveal the relationships between these two variables.

Research Questions

1. What is the nurses' perception of patient safety culture?

2. What is the organizational commitment level of nurses?

3. Is there a correlation between nurses' perceptions of patient safety culture and organizational commitment levels?

MATERIALS AND METHODS

Study Design

This study was designed as a descriptive and correlational.

Ethic

Research ethics committee approval for the study was taken from the committee of Non-Invasive Clinical Studies of Medical Sciences Faculty of Selcuk University with the register number of 2018/87 on 28.02.2018. The permission of the hospital administration was obtained for the research. The questionnaire of the study was applied to the nurses who volunteered for the study.

Participation

Nurses working in a public hospital with a capacity of 450 beds were included in the study. At the time of the study, 350 nurses

were working in the hospital. The sample was not selected and all nurses were asked to participate in the study. A questionnaire was applied to 229 nurses who agreed to participate in the study voluntarily. Participation rate was 85% (299/350). The data were collected by the first author while the nurses were taking a break in the work environment. Data collection took place in May-June 2018. The public hospital where the study was conducted was not accredited for patient safety. Nursing director stated that patient safety issues are also included in the in-service training given to nurses. During the data collection process, a brief explanation was given to nurses by defining patient safety and medical error.

Instruments

Sociodemographic questionnaire (eg. gender, age, education, workplace characteristics) PSC Scale and OC Scale were used.

Hospital Survey on Patient Safety Culture Survey (HSOPSC)

HSOPSC which was developed by Agency for Healthcare and Research (2016) and adopted into Turkish by Bodur and Filiz (2010) was used as data collection tool.[6,13] The survey consists of 42 items and 12 subdimensions. Eighteen items containing negative statements were reverse coded. Eight subdimensions of the HSOPSC in the survey were found to be above "Cronbach's Alpha Value" (0.50), (0.51; 0.88). The average "Cronbach's Alpha" value of 12 subdimensions of the very same questionnaire were within the scale of acceptable values (0.86) (Table 2).

Although it is stated that different methods can be used to evaluate the questionnaire, the most common and simply way to evaluate is to calculate the response frequency for each questionnaire item. When presenting the results, they are dichotomized by combining the two lowest response categories (eg Strongly Disagree/Disagree and Never/Rarely) and the two highest response categories (eg Strongly Agree/Agree and Often/Always). The mean percentage of positive responses is then calculated for each of the 41 items. In addition, the percentage of positive responses at the composite level is calculated for each dimension of the patient safety culture. Composite scores are calculated by averaging the percent positive response for all items within a dimension. Positive responses of 75% and above indicate strong areas. Those below this value are areas that need to be developed and strengthened.[6]

Organizational Commitment Scale

Scale of OC whose copyrights belong to Allen and Meyer (1991) and whose Turkish validity and reliability was done by Wasti (2000) was used so as to identify nurses' commitment levels to their institutions.[14-15] The scale is a 7-point Likert-type scale with 18 items and 3 dimensions, each consisting of 6 items: affective commitment, normative commitment and continuous commitment. In the calculation of the subdimensions, items 3, 4, 6 and 7 were codified reverse before being registered in the statistical tests. Subdimension results were acquired by adding the scores taken from each subdimension and dividing them into 6 which is the number of items they contain. Despite not having a breakpoint for the calculation of the scale, "4" indicates a neutral score in the studies where the scale was used. Those below this value were decided to be low and those above were evaluated as high.

Analysis

SPSS version 24.0 was used for data analysis. The data was summed through frequency, percentages, mean and standard deviation. Pearson Correlation analysis has been applied for determining of whether there is any relation between the PSC and OC level of the nurses. $p<0.05$ was recognized as statistically significant

Limitations

The limitation of the study was that the study was conducted in only one hospital and with a relatively small sample. Another limitation was that it was not known whether

nurses gave correct answers to questions about their working environment.

RESULTS AND DISCUSSION

The mean age of the participants was 34.81±7.46 (min: 20, max:56). Eighty-six-point three percent of the participant were female, 71.2% were married, and 59.5% had a university or graduate degree. Seventy-two-point two percent were working in shifts. Forty-two-point five percent of the nurses worked in emergency, operating room and intensive care units, 51.5% worked between 41-49 hours (Table 1).

Table 1. Socio-demographic features of the participants (n=299)

		n	%
Gender	Male	41	13.7
	Female	258	86.3
Age	18-25 years old	38	12.7
	26-35 years old	112	37.5
	36-40 years old	88	29.4
	41 years old or over	61	20.4
Education	High School	36	12.0
	Associate degree	85	28.4
	Bachelor's degree	178	59.5
Marital status	Single	86	28.8
	Married	213	71.2
Type of work	Shiftless	83	27.8
	Shift	216	72.2
Occupational experience	1-10 years	143	47.8
	11-20 years	102	34.1
	21 years or over	54	18.1
Experience in current hospital	Less than 1 year	24	8.0
	1-5 years	124	41.5
	6-10 years	77	25.8
	11 years or over	74	24.7
Weekly working hours	Less than 40 hours	67	22.4
	41-49 hours	154	51.5
	50 or over	78	26.1
Unit worked	Emergency/ICU/ Surgery	127	42.5
	Clinics/Services	172	57.5

The PSC level of the nurses was at a level that could be considered low (54%). The highest percentage of positive response belonged to teamwork within units and was determined as 83%. Nurses reported that they were successful in teamwork in their departments, but that their cooperation with other departments was not good. This finding shows that each unit in the institution has a culture independent from the others. The lowest percentage of positive response belonged to the non-punitive response to error (33%), staffing (33%) and frequency of reported events (41%) sub-dimensions, respectively (Table 2). Nurses' hesitancy to report incidents, punishing mistakes and the prevalence of blame culture may be related to the fear that mistakes will be recorded and used against them in the future.

The percentage of positive response to the patient safety culture was higher in female nurses (Female: 55%; Male: 48%; $p<0.05$). There was no difference in other socioeconomic characteristics.

Table 2. Descriptive statistics of hospital survey on PSC positive response

Subdimensions and survey items (Cronbach's Alpha)	Positive response %
Overall perceptions of safety (Cronbach's Alpha 0.32)	**71**
Patient safety is never sacrificed to get more work done	80
Our procedures and systems are good at preventing errors from happening	68
It is just by chance that more serious mistakes do not happen around here	70
We have patient safety problems in this facility	64
Frequency of events reported (Cronbach's Alpha 0.88)	**41**
When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?	38
When a mistake is made, but has no potential to harm the patient, how often is this reported?	36
When a mistake is made that could harm the patient, but does not, how often is this reported?	47
Manager expectations and actions promoting patient safety (Cronbach's Alpha 0.37)	**52**
Manager says a good word when he/she sees a job done according to established patient safety procedures	48
Manager seriously considers staff suggestions for improving patient safety	47
Whenever pressure builds up, my manager wants us to work faster, even if it means taking shortcuts	42
My manager overlooks patient safety problems that happen over and over	70
Organizational learning—continuous improvement (Cronbach's Alpha 0.53)	**61**
We are actively doing things to improve patient safety	62
Mistakes have led to positive changes here	54
After we make changes to improve patient safety, we evaluate their effectiveness	65
Teamwork within units (Cronbach's Alpha 0.83)	**83**
People support one another in this facility	81
When a lot of work needs to be done quickly, we work together as a team to get the work done	88
In facility, people treat each other with respect	84
When one area in this unit gets really busy, others help out	80
Communication openness (Cronbach's Alpha 0.62)	**50**
Staff will freely speak up if they see something that may negatively affect patient care	63
Staff feel free to question the decisions or actions of those with more authority	27
Staff are afraid to ask questions when something does not seem right	60
Feedback and communication about error (Cronbach's Alpha 0.76)	**61**
We are given feedback about changes put into place based on event reports	55
We are informed about errors that happen in the facility	69
In this facility, we discuss ways to prevent errors from happening again	61
Non-punitive response to error (Cronbach's Alpha 0.62)	**33**
Staff feel like their mistakes are held against them	25
When an event is reported, it feels like the person is being written up, not the problem	35
Staff worry that mistakes they make are kept in their personnel file	38
Staffing (Cronbach's Alpha 0.22)	**33**
We have enough staff to handle the workload	44
Staff in this facility work longer hours than is best for patient care	14
We use more agency/temporary staff than is best for patient care	61
We work in 'crisis mode' trying to do too much, too quickly	12
Management support for patient safety (Cronbach's Alpha 0.40)	**55**
Management provides a work climate that promotes patient safety	61
The actions of management show that patient safety is a top priority	57
Management seems interested in patient safety only after an adverse event happens	48
Teamwork across units (Cronbach's Alpha 0.52)	**57**
Units do not coordinate well with each other	58
There is good cooperation among units that need to work together	53
It is often unpleasant to work with staff from other units	66
Units work well together to provide the best care for patients	52
Handoffs and transitions (Cronbach's Alpha 0.70)	**66**
Things 'fall between the cracks' when transferring patients from one unit to another	69
Important patient care information is often lost during shift changes	61
Problems often occur in the exchange of information across units	59
Shift changes are problematic for patients in this facility	76
Overall (Cronbach's Alpha 0.86)	**54**

OC levels of nurses have been found to be high (4.09±0.85). In terms of subdimensions, on the other hand, continuance (4.15±1.22) and affective commitment (4.14±1.23) levels have been found to be high while normative one (3.98±1.26) is concluded to be low (Table 3). This finding suggests that nurses have strong ties with their organizations and employees within these organizations, they think about continuing to work with their organizations, they try not to lose the opportunities and opportunities they have, and they also feel indebted to their organizations.

Affective commitment level was higher in shift working nurses (3.91±1.19) compared to day workers (4.23±1.22) ($p<0.05$). No difference was found between other socioeconomic characteristics and organizational commitment scores.

Table 3. Descriptive statistics of OC scale items

Subdimensions of and Items	x̄	SD
Affective Commitment (Cronbach's Alpha 0.66)	4.14	1.23
1. I would be very happy to spend the rest of my career with this organization.	3.97	2.10
2. I really feel as if this organization's problems are my own	4.22	1.94
3. I do not feel like 'part of my family' at this organization.	3.76	2.04
4. I do not feel like 'part of the family' at my organization	3.67	2.04
5. This organization has a great deal of personal meaning for me	4.05	2.00
6. I do not feel a 'strong' sense of belonging to my organization	3.97	1.97
Normative Commitment (Cronbach's Alpha 0.72)	3.98	1,26
7. I do not feel any obligation to remain with my organization	3.99	1.99
8. If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization	4.35	1.95
9. I would feel guilty if I left this organization now	3.49	1.92
10. This organization deserves my loyalty	4.13	1.98
11. I would not leave my organization right now because of my sense of obligation to it.	4.11	1.92
12. I owe a great deal to this organization	3.78	1.92
Continuance Commitment (Cronbach's Alpha 0.70)	4.15	1,22
13. Right now, staying with my organization is a matter of necessity as much as desire	4.00	1.97
14. It would be very hard for me to leave my organization right now, even if I wanted to.	4.48	1.96
15. Too much in my life would be disrupted if I decided to leave my organization now	3.87	2.04
16. I feel that I have very few options to consider leaving this organization.	4.15	1.95
17. One of the few serious consequences of leaving this organization would be the scarcity of available alternatives	3.99	1.81
18. One of the major reasons I continue to work for this organization is that I have sacrificed a lot personally.	3.87	1.93
Overall (Cronbach's Alpha 0.74)	**4.09**	**0.85**

There was a moderate significant positive correlation between PSC scale and organizational commitment scale total score, affective commitment sub-dimension and normative commitment sub-dimension ($p<0.01$). On the other hand, there was a negative but non-significant correlation between the continuance commitment sub-dimension ($p>0.05$) (Table 4).

Table 4. Association between PSC and OC

		Subdimensions of Organizational Commitment			
		Organizational Commitment	**Affective Commitment**	**Normative Commitment**	**Continuance Commitment**
Patient Safety Culture	**r**	0.406**	0.518**	0.406**	-0.093
	p	≤0.001	≤0.001	≤0.001	0.109

**. Correlation is significant at the 0.01 level.

This study evaluated the PSC perceptions and OC levels of nurses working in a public hospital. Evaluating the PSC is the first step in improving the quality of health services in hospitals and reducing errors in the delivery of health services.[16] The findings of this study show that nurses' PSC is poor and needs improvement. Nurses' PSC perception was highest for "Teamwork within units". The Non-Punitive response to the error was the dimension with the least percentage of positive response (Table 2). Similar to our study, other studies using HSPSC achieved high percentage of positive response for teamwork within units, particularly in different developing countries.[17] The lowest percentage of positive response was given in the "Non-Punitive Response to Error" item and was similar to the results of other studies.[18-22] The results show that when nurses make mistakes, they are likely to be vulnerable to blame and punishment by their managers. The reason why mistakes are not reported is usually due to the blaming and punitive approach in institutions.

Staffing is the one of most problematic area and an important factor affecting PS.[23] The skilled nurse workforce has been shown to be associated with better patient outcomes, including lower hospital mortality.[24] However, it is recognized that the lack of care caused by a lack of staff can be managed

by implementing interventions that promote a positive work environment and a culture of patient safety.[25]

OC level of nurses was high. In the study, it was determined that the levels of continuance commitment and affective commitment were high, while normative commitment was lower. The highest mean value in the scale items belonged to the item "it would be very difficult for me to leave my organization right now even if I wanted to" in the continuous commitment sub-dimension. The lowest mean value belonged to the item "I would feel guilty if I left my organization now" in the normative commitment sub-dimension (Table 3). Unlike this study, the level of OC was moderate in studies conducted with nurses in the literature.[26-28] OC can affect employee performance in an organization, increasing productivity and also reducing employee turnover.[29] OC shows the engagement of employees and the willingness to put in extra effort to keep a work environment safe.[30] "This will lead to an improvement in the quality of services. In this study, a significant relationship was determined between nurses' perceptions of PSC and OC levels. Among the health professions, nurses play an important role in ensuring the quality and safety of health services. Recent studies have shown that a high level of OC has positive effects on the level of PSCof nurses and physicians.[29,31] Harsul et al (2018) stated that there was a significant relationship between OC and PSC, and that nurses with high OC have a higher error/incident reporting culture. It was thought that increasing the OC of nurses would help increase the quality of error/incident reporting in patient safety culture.[32] Similarly, Hwang and Lee (2017) argue that nurses with a high level of OC will be responsible for the services provided and will positively approach improvements that will increase the quality of nursing services and PS.[33] The positive significant relationship between staff engagement/ commitment and patient safety culture, which was determined as a result of a systematic review, shows that the relationship previously defined in other sectors is also present in health services. The review found an association between staff engagement/commitment and both PSC and errors. The review predicts that increasing nurses' commitment to the organization will be an effective and cost-effective way to improve positive PS outcome.[9]

CONCLUSION AND RECOMMENDATIONS

As a result of the study, it was determined that nurses' perception of PSC was at a level that needed improvement and OC level was high. However, it was determined that both variables were in a positive relationship with each other. Depending on nurses' perceptions of patient safety culture, their level of commitment to the organization also increases. Studies with larger samples are needed to show the relationship between PSC and OC level.

A low PSC level indicates the need for effective leadership. In order to improve the PSC, policies should be established to support the personnel, especially to eliminate the lack of personnel, to create an environment where errors can be reported easily without fear of punishment, and to use the reporting system more effectively and actively. Nurse managers should support nurses by adopting the appropriate leadership style in their relations with nurses, gain their trust and thus enable them to speak freely about anything that may affect PS. Nurse managers and leaders should make efforts to improve the organizational commitment of the employees in order to improve the PSC.

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