

## The Effect Of Structural And Psychological Empowerment Of Surgical Nurses On Patient And Employee Safety Culture

Cerrahi Hemşirelerinin Yapısal ve Psikolojik Güçlendirilmelerinin Hasta ve Çalışan Güvenliği Kültürüne Etkisi

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### ABSTRACT

**Aim:** Nurses constitute the most critical element of the healthcare workforce. Empowering nurses is essential for patients, healthcare institutions, and the community and benefits for employees. This study was conducted to determine the effect of surgical nurses' structural and psychological empowerment on patient and employee safety culture.

**Method:** The sample of this study, which is relational and cross-sectional, consisted of a total of 153 nurses working in the surgical clinics and operating rooms of two public hospitals. The data were collected using the "Introductory Information Form," Structural Empowerment Scale (SES), Psychological Empowerment Scale (PES), Patient Safety Culture Scale (PSCS), and Employee Safety Culture Scale (ESCS). SPSS 25.0 statistics package program was used to evaluate the data.

**Results:** The Structural Empowerment Scale (SES) total score average of the surgical nurses participating in the study was  $3.36 \pm .49$  at an acceptable level, the total score of the PES was  $5.13 \pm .09$ , good, and the PSCS total score was  $3.12 \pm .29$  good, and the ESCS average score was  $3.56 \pm .54$ . As a result of the regression analysis performed between the SES and PES sub-dimensions and the patient and employee safety culture sub-dimensions, a significant and positive relationship was found between them ( $p < 0.05$ ).

**Conclusion:** Surgical nurses with a high perception of structural and psychological strengthening will have high job satisfaction, and thus they will be able to provide safer health care.

**Key Words:** Structural and psychological empowerment, surgical nurses, patient and employee safety culture

### ÖZET

**Amaç:** Hemşireler, sağlık iş gücünün en kritik unsurunu oluşturmaktadır. Hemşirelerin güçlendirilmesi hastalar, çalışanlar, sağlık kurumları ve toplum için çok önemlidir. Bu çalışma, cerrahi hemşirelerin yapısal ve psikolojik güçlenmesinin hasta ve çalışan güvenliği kültürü üzerindeki etkisini belirlemek amacıyla yapıldı.

**Metaryal ve Metod:** İlişkisel ve kesitsel olan bu çalışmanın örneklemini iki devlet hastanesinin cerrahi kliniklerinde ve ameliyathanelerinde görev yapan toplam 153 hemşire oluşturdu. Veriler, "Tanıtıcı Bilgi Formu", Yapısal Güçlendirme Ölçeği, Psikolojik Güçlendirme Ölçeği, Hasta Güvenliği Kültür Ölçeği ve Çalışan Güvenliği Kültür Ölçeği kullanılarak toplandı. Verilerin değerlendirilmesinde SPSS 25.0 istatistik paket programı kullanıldı.

**Bulgular:** Araştırmaya katılan cerrahi hemşirelerinin Yapısal Güçlendirme Ölçeği toplam puan ortalaması  $3.36 \pm 0.49$  olarak iyi düzeyde, Psikolojik Güçlendirme Ölçeği toplam puan ortalaması  $5.13 \pm 0.09$ , iyi düzeyde, Hasta Güvenliği Kültürü Ölçeği toplam puan ortalaması  $3.12 \pm 0.29$  iyi düzeyde ve Çalışan Güvenliği Kültürü Ölçeği toplam puan ortalaması  $3.56 \pm 0.54$  olarak iyi düzeyde olduğu belirlendi. Yapısal Güçlendirme Ölçeği ve Psikolojik Güçlendirme Ölçeği alt boyutları ile hasta ve çalışan güvenliği kültürü alt boyutları arasında yapılan regresyon analizi sonucunda, aralarında anlamlı ve pozitif bir ilişki saptandı ( $p < 0.05$ ).

**Sonuç:** Yapısal ve psikolojik güçlenme algısı yüksek olan cerrahi hemşirelerin iş doyumunu yüksek olacak ve böylece daha güvenli sağlık hizmeti sunabileceklerdir.

**Anahtar Kelimeler:** Yapısal ve psikolojik güçlendirme, cerrahi hemşireler, hasta ve çalışan güvenliği kültürü

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## Introduction

Empowerment has an important place in human resources and management practices today. Also, it has become increasingly valuable and researched in both individual and organizational work success. The health sector is vital as the service provided is indispensable for human beings (Kurtluk, 2019). Therefore, in health care, nurses should be managed effectively and by today's approaches, thus contributing to the welfare of employees, healthcare enterprises, and society, especially patients (Uğrak et al. 2016). Empowerment is defined as "the ability of an individual to benefit from the resources available to achieve the goals and to make decisions independently" (Laschinger et al. 2010; O'Brien, 2010). The concept of structural strengthening generally defines working conditions in the workplace and is not concerned with employees' responses to these conditions. These responses constitute the subject of psychological empowerment, which is another dimension of empowerment. Psychological empowerment refers to how employees interpret the conditions of structural strengthening psychologically. It is related to the employees' perception of managerial practices and their attitudes (Metcalf, 2014). The concept of structural empowerment and psychological empowerment has been studied together in various studies conducted around the world (Knol & Linge, 2009; Connolly, Jacobs, & Scott, 2018). Similar results have been obtained in different studies that dealt with structural and psychological strengthening together.

In a study that handles personnel empowerment practices in the field of health with a holistic approach, it is stated that the issue of personnel empowerment is mostly focused on nurses. This study emphasizes that this tendency is based on the fact that the nurse is the healthcare personnel who has the most contact with the patient (Uğrak et al. 2016). In this study, it was found that structural and psychological empowerment in working environments was significantly associated with increased job satisfaction and nurses' organizational commitment (Vacharakiat, 2008). A study conducted on nurses working in the emergency room emphasized that developments in structural and psychological strengthening would improve nurses' ability to act as clinical leaders (Connolly, Jacobs, & Scott, 2018). In the study examining the relationship between structural strengthening and patient safety culture in nurses in adult intensive care units, it was determined that there is a significant correlation between structural strengthening and patient safety culture, and as structural strengthening increases, nurses' perception of patient safety increases. To support the culture of patient safety, it has been suggested that nurse leaders create structurally reinforcing work environments (Armellino, Griffin, & Fitzpatrick, 2010). Safety culture must be established in order to ensure patient and employee safety in health institutions. Although many studies have been conducted to strengthen personnel in the field of healthcare, it has been determined that most of the studies are on nurses and especially on issues such as turnover, job satisfaction, organizational citizenship, organizational commitment, and quality, but research on patient and employee safety is insufficient (Kurtluk, 2019).

Examination of the effects of structural and psychological empowerment of nurses working in surgical clinics on patient safety and employee safety culture; It is essential to draw attention to the problems that cannot be seen in surgical clinics, to contribute to the reorganization of the working environment in line with the conditions and to create awareness for determining the safety culture / revising the existing safety culture. It is thought that this awareness will reflect positively on patient-employee safety and patient care. It can be said that surgical nurses with a high perception of structural and psychological empowerment will have high job satisfaction, less negative emotions and behaviors, thus providing safer health care. This study; was aimed to determine the effect of structural and psychological empowerment of surgical nurses on patient and employee safety culture.

## Methodology

### Study design

This study's universe, which is relational and cross-sectional, was conducted in the surgical clinics of two different public hospitals operating in Istanbul between January 06 and February 24, 2020.

### Setting and sampling

The universe of this research consisted of a total of 187 nurses working in the surgical clinics and operating rooms of two different public hospitals operating in Istanbul between January 06 and February 24, 2020. It was aimed to reach the entire universe by not choosing the sample. However, 34 nurses were excluded due to the shift work system, being on leave, and not wanting to participate in the study. The research was carried out with 153 participating nurses.

### Collection of Data

The data were collected using the Introductory Information Form for Nursing Workplace (Structural) Empowerment Scale, Psychological Empowerment Scale, Employee Health and Safety Culture Scale, and the Patient Safety Culture Scale.

### Instruments

**Introductory Information Form:** This form was developed by researchers to collect introductory information about the nurses working in the surgery clinic to be included in the study sample. The form includes individual information such as age, duration of professional experience, the clinic where they work, the status of working in another institution,



duration of work in the hospital, weekly working hours, and status of the previous patient and employee safety training, which reveal the socio-demographic characteristics of the nurses.

**Nursing Workplace (Structural) Empowerment Scale (SES):** Developed on the basis of Kanter's Theory, this scale was revised by Laschinger in 2001 and finalized (CWEQ-II). Mortaş conducted the validity and reliability study of the scale in our country in 2005 with nurses. The scale is used to evaluate nurses' perception of workplace structural strengthening. The scale consists of 19 items and six dimensions: access to opportunities, access to information, access to resources, support, formal and informal power. In 1995, the Global Empowerment Sub-Scale with two items was added to the scale to obtain the construct validity, and this score was not included in the scale score. Each sub-dimension score of the scale is evaluated separately between 1-5 points. The total score between the score range 6-13 low, the total score between 14-22 medium, and the total score between 23-30 indicate a high level of empowerment. 5-point Likert was used in the scale. Accordingly, it expresses "1-Absolutely disagree, 2-Disagree, 3-I am undecided, 4- I agree and 5- I absolutely agree". Cronbach alpha values result from the validity and reliability study of the scale; It was found to be between 0.74 and 0.90. (Mortaş, 2005). In this study, Cronbach alpha values; It was found to be 0.69-0.90.

**Psychological Empowerment Scale (PES):** It was developed by Spreitzer in 1995. The validity and reliability study of the scale in our country was conducted by Üner and Turan in 2010 with nurses and doctors, and it was found that the scale can be used in terms of psychometric properties. Psychological empowerment in the scale is defined under four dimensions: meaning, competence, autonomy, and impact. There are a total of 12 questions in the scale, three of which are in each dimension of psychological empowerment. The questions are 7-point Likert type, and the participants mark their degree of agreement with each statement regarding psychological empowerment dimensions in the scale in 7 stages. In Likert, 1 point indicates that the participant does not agree with the statement at all, while the score given increases as the degree of agreement increases, 7 points indicates that the participant "completely agrees" with the statement. The psychological empowerment score is obtained by adding the scores of the answers given to the statements in the scale. The lowest score that can be obtained from the scale is 12 and indicates low psychological empowerment perception, while the highest score indicates 84 points for a high perception of psychological empowerment (Üner and Turan 2010).

**Patient Safety Culture Scale (PES):** This scale was developed by Türkmen et al. (2011). This scale, whose validity-reliability study was conducted in the nursing group, consists of 51 items. The scale consists of five sub-dimensions: management and leadership (17 items), employee behavior (14 items), unexpected event and error reporting (5 items), employee training (7 items), and care environment (8 items). It is a four-point Likert type

measuring instrument. The effectiveness of patient safety practices was evaluated on the basis of the results of scores ranging from "1" to "4" such as "1 I totally disagree", "2 I disagree", "3 I agree", "4 I completely agree". In the interpretation of the scale score, the increase of the average score towards 4 indicates the positive patient safety culture, and the decrease towards 1 indicates the existence of a negative patient safety culture (Türkmen et al., 2011).

**Employee Health and Safety Culture Scale (EHSCS)** was developed by Yorgun and Atasoy (2013). Scale 6 items "Infection Prevention," 7 items "Management Policies," 6 items "Health screenings," 4 items "Chemical Substance Safety," 5 items "Safety training," 3 items "Prevention of Violence," 2 items "Food Safety" and two items consist of 35 questions including "Prevention of Falling" sub-dimensions. "Strongly Agree (5)," "Agree (4)", "Undecided (3)", "Disagree (2) to determine the realization level of each item in the scale. "And" Strictly Disagree (1) "were used. The higher the scores, the higher the Employee Health and Safety Culture level (Yorgun and Atasoy 2013).

#### Ethical Aspect of the Research

In conducting the study, both hospitals' directors were informed about the study, and their written consent was obtained (Approval no: 07/12/2019-E.2485). Written and verbal consents of the participants were obtained that they volunteered to participate in the study. The research was carried out in accordance with the Helsinki Declaration Principles.

#### Statistical Analysis of Data

SPSS 25.0 statistics package program was used to evaluate the data. The distribution of the questions in the Personal Information Form was evaluated as frequency, percentage, and scale scores as mean and standard deviation. Before the analysis, the normal distribution of the data was examined with the Kolmogorov-Smirnov test, or it was found that it showed a normal distribution. In the comparison of quantitative data, the "t" test was used in two groups (independent samples). In the case of more than two groups, the one-way (Oneway) Anova test and the Scheffe test were used to determine the group that caused the difference. Also, regression analysis was performed. The results were evaluated at 95 percent confidence interval and  $p < 0.05$  significance level.

#### Results

In Table 1, the introductory and professional characteristics of the surgical nurses are given. Half of the surgical nurses (31.4%) are in the age group 25 and under; 92% are female, and 79.7% are undergraduate. Of the surgical nurses, 81% married, 49% have 11 years or more experience. Most surgical nurses (51.6%) work more than 40 hours a week and 79% work in shifts. It was found that 85.6% of the nurses



received training on patient and employee safety. The average age of the service nurses included in the study is

21.18 ± 3.77 years, and the average time spent in the profession is 13.17 ± 4.74 years (Table 1).

**Table 1. introductory and professional characteristics of the surgical nurses (n = 153)**

Variables	Frekans(n)	Percent (%)
<b>Age</b>		
25 Years and Under	13	8.5
26-30	48	31.4
31-35	17	11.11
36-40	27	17.6
41-45	31	20.3
46 and over	17	11.11
<b>Marital status</b>		
The married	124	81
Single	29	19
<b>Education status</b>		
Health vocational high School	11	7.2
Associate Degree in Nursing	5	3.3
Bachelor in Nursing	122	79.7
Postgraduate in Nursing	15	9.8
<b>Period of experience in the profession</b>		
1-5 years	13	8.5
6-10 years	65	42.5
≥ 11 years	75	49
<b>Working hours per week</b>		
40 hours	74	48.4
≥ 41 hours	79	51.6
<b>How it works</b>		
Day and night (shift)	121	79
Continuous day	32	21
<b>Patient and Employee Safety Course / Scientific Participating in Activities</b>		
Yes	131	85.6
No	22	14.4

As a result of the evaluation of the research data, the total score average of the nurses' "Nursing Structural (Workplace) Empowerment Scale" was  $\bar{X} = 3.36 \pm 0.4$ , and the total score average of the "Psychological Empowerment Scale" was  $\bar{X}$

$= 5.13 \pm 0.9$ , as well It was determined that the mean score of "Patient Safety Culture Scale" was  $\bar{X} = 3.88 \pm 0.8$ , and the total mean score of the "Employee Health and Safety Culture Scale" was  $\bar{X} = 3.56 \pm 0.5$  at an acceptable level (Table 2).

**Table 2. Scale Score Averages**

Scales	n	Median±SD	Min.	Max.	Scale Range
Nursing Workplace (Structural) Empowerment Scale	153	3.36±0.49	1.25	5.00	1-5
Psychological Empowerment Scale	153	5.13±0.09	2.40	7,00	1-5
Patient Safety Culture Scale	153	3.88±0.80	1.00	4.67	1-5
Employee Health and Safety Culture Scale	153	3.56±0.54	2.00	5.00	1-5

SD: standard deviation

In order to determine whether the total mean scores of the nurses included in the study in the Nursing Workplace

(Structural) Empowerment Scale, Psychological Empowerment Scale, Patient and Employee Safety Culture



scales show a significant difference according to the introductory variables (Independent samples), the "t" test and the single Directional analysis of variance (Anova) was performed. It was determined that there was a significant difference ( $p < 0.05$ ) between the age variable and the Patient Safety Culture scale. It was determined that the difference was due to the fact that the average of the 36-40 age group was higher than the other age groups. A statistically significant difference ( $p < 0.05$ ) was found between the educational status variable and the structural and psychological empowerment scales, and the patient safety culture scale. It was determined that the difference was due to the average scores of those with undergraduate education.

A statistically significant difference ( $p < 0.05$ ) was found between the working year variable and the mean scores of the psychological empowerment and patient safety scale. It was determined that the difference was caused by those who worked for 11 years or more. A significant difference ( $p < 0.05$ ) was found between the weekly working hours and the way of working, and the mean scores of the structural and psychological empowerment scales and patient-employee safety scales. There was a significant difference ( $p < 0.05$ ) between the mean scores of the nurses who received training and employee safety training and the averages of all scales (Table 3).

**Table 3 . Introducing the features scale total score of average comparison**

Introductory Specifications	Structural Strengthening Scale	Psychological Empowerment	Patient Safety Culture Scale	Employee Health and Safety Scale
<b>Age</b>	Mean ± S D	Mean ± S D	Mean ± S D	Mean ± S D
25 years and under	3.16 ± 0.491	3.02 ± 0.679	3.09 ± 0.597	3.97 ± 0.508
26-30 years	3.57 ± 0.845	2.82 ± 0.777	3.76 ± 0.739	3.70 ± 0.662
31-35 years	3.29 ± 0.901	3.27 ± 0.685	3.13 ± 0.635	3.82 ± 0.611
36-40 years	3.55 ± 0.818	3.29 ± 0.547	2.85 ± 0.844	3.82 ± 0.686
41-45 years	3.38 ± 0.939	2.98 ± 0.784	2.21 ± 0.921	3.68 ± 0.610
46 and over	3.78 ± 0.865	2.96 ± 0.412	3.19 ± 0.772	3.98 ± 0.429
F =	1,979	1,970	9,384	1,999
p =	0,083	0,084	<b>0,000</b>	0,080
PostHoc =			2> 1, 2> 6, 1> 5, 2> 5, 3> 5, 4> 5, 6> 5 (p <0.05)	
<b>Marital status</b>	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
The married	3.58 ± 0.868	2.99 ± 0.731	2.68 ± 0.948	3.74 ± 0.616
single	3.57 ± 0.684	3.07 ± 0.655	3.00 ± 0.582	3.93 ± 0.552
t =	0,052	-0,778	0,824	-1 ,345
p =	0,957	0,438	0,5 3 1	0,3 20
<b>Education status</b>	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Health vocational high School	3.62 ± 0.570	3.39 ± 0.613	2.33 ± 0.926	3.75 ± 0.598
Associate Degree in Nursing	3.29 ± 0.608	2.97 ± 0.716	2.81 ± 0.669	3.88 ± 0.553
Bachelor in Nursing	3.72 ± 1.078	2.96 ± 0.662	2.93 ± 0.974	3.75 ± 0.667
Degree in Nursing Top	3.52 ± 0.1 08	2.81 ± 0.5 16	2.72 ± 0.61 9	3.7 8 ± 0.553
F =	6,523	4,760	6,445	1,269
p =	0,002	0,010	0,002	0,283
PostHoc =	3> 1> 2 (p <0.05)	1> 2, 1> 3 (p <0.05)	2> 1, 3> 2> 1 (p <0.05)	
<b>Working Year in the Profession</b>	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
1-5 years	3.66 ± 0.629	3.07 ± 0.691	3.05 ± 0.634	3.92 ± 0.529
6-10 years	3.74 ± 0.812	2.61 ± 0.832	2.57 ± 0.634	3.65 ± 0.777
≥ 11 y 11	3.40 ± 0.830	3.31 ± 0.704	2.79 ± 1.067	3.85 ± 0.508
F =	1,026	4,352	8,831	1,727
p =	0,395	0,002	0,000	0,145
PostHoc =		1> 2, 3> 2, 4> 2, 3> 5, 4> 5 (p <0.05)	1> 2, 1> 4, 2> 4, 3> 4, 5> 4 (p <0.05)	
<b>Weekly Working Hours</b>	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
40 hours	3.89 ± 0.511	3.16 ± 0.871	3.00 ± 0.675	4.03 ± 0.614
≥ 41 hours	3.93 ± 0.570	3.4 9 ± 0.631	3.3 6 ± 0.644	4.02 ± 0.544
t =	2,898	2,805	2,015	1,952
p =	0,010	0,016	0,04 5	0,074
PostHoc =	2> 1 , (p <0.05)	2> 1 , (p <0.05)	2> 1 , (p <0.05)	



Patient and Employee Safety Course / Scientific Participating in Activities	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Yes	3.74 ± 0.792	3.04 ± 0.699	2.83 ± 0.845	3.92 ± 0.608
No	3.56 ± 0.803	2.85 ± 0.691	2.70 ± 0.676	3.84 ± 0.499
t =	-1.078	1.317	0.682	-0.148
p =	0.022	0.018	0.023	0.012
Mode of Operation	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Day and night (shift)	3.89 ± 0.511	3.16 ± 0.871	3.00 ± 0.675	4.03 ± 0.614
Continuous day	4.14 ± 0.470	3.24 ± 0.521	3.45 ± 0.464	4.08 ± 0.362
F =	3.677	3.610	2.799	2.260
p =	0.002	0.002	0.012	0.039
PostHoc =	2 > 1, (p < 0.05)	2 > 1, (p < 0.05)	2 > 1, (p < 0.05)	2 > 1 (p < 0.05)

p < 0.05

The Pearson Correlation coefficients of the variables were calculated to determine the relationship between the mean scores of structural and psychological strengthening of the nurses included in the study and the patient and employee safety total score averages in Table 4. A high level of positive correlation was found between structural strengthening and

patient safety culture (r = .841) and employee safety culture (r = .855). In addition, a high level of positive correlation was found between psychological empowerment and patient safety culture (r = 0.769) and employee safety culture (r = 0.732) (Table 4).

**Table 4: Correlation Coefficients for the Scales**

	Mean	SD	1	2	3	4
1. Structural strengthening	3,36	0.49	1	.755 **	.841 **	.855 **
2. Psychological empowerment	5,13	0.09	.755 **	1	.769 **	.732 **
3. Patient Safety Cult	3,88	0.80	.841 **	.769 **	1	.659
4. Employee Health and Safety Culture	3,56	0.54	.855 **	.732 **	.659 **	1

\* p < 0.05, \*\* p < 0.01 r: Pearson Correlation

According to Table 5, regression analysis performed to determine the relationship between structural reinforcement, psychological reinforcement, patient and employee safety training, and patient safety and employee safety culture was found to be statistically significant (F = 449.365; p = 0.000 < 0.05, F = 742.189; p = 0.000 < 0.05). It was observed that the relationship (explanatory power) with the variables of structural and psychological empowerment and training, as

determinants of the level of patient safety and employee safety culture, was found to be very strong (R<sup>2</sup> = 0.668). The structural empowerment level of surgical nurses increases the level of patient safety culture (β = 0.498) and employee health and safety culture (β = 0.330). The psychological empowerment level of surgical nurses increases the level of patient safety culture (β = 0.430) and employee health and safety culture (β = 0.498).



**Table 5 . Patients with structural and psychological empowerment, employee safety culture variables in regression of analiz**

	Independent variables	Dependent Variables	Standardized B	Sg.	Adjusted R <sup>2</sup>	F Value
1.Regression	Structural Reinforcement	Patient Safety Culture	0.498 **	0.000	0.668	449.365
	Psychological Empowerment		0.430 **	0.000		
	Receiving Patient Safety Training		0.398 **	0.000		
	Receiving Employee Health and Safety Training		0.231 **	0.000		
2.Regression	Structural Reinforcement	Employee Health and Safety Culture	0.330 **	0.008	0.711	742.189
	Psychological Empowerment		0.498 **	0.000		
	Receiving Patient Safety Training		0.322 **	0.000		
	Receiving Employee Health and Safety Training		0.264 **	0.000		

\*: p<0.05 \*\*: p<0.01 \*\*\*: p<0.001

**Discussion**

Efficient use of human resources is of paramount importance in the health sector, which is a sub-branch of the service sector where human and labor factors play a more significant role than all other sectors. Empowering nurses, who constitute the essential elements of the workforce in the sector, to work effectively and efficiently is necessary for patients, healthcare institutions, and society as well as its benefits to employees. When the studies on structural and psychological strengthening practices in nursing are evaluated, empowerment mainly increases job satisfaction, supports the provision of safe health care, and reduces negative feelings and behaviors such as turnover and burnout. The positive effects of empowerment showed similar results across all studies, and it was also determined that nurses were generally moderately empowered (Hauck, Griffin, & Fitzpatrick, 2011, García-Sierra & Fernández-Castro, 2018, Callicutt, 2015, Ouyang, Zhou, & Qu, 2015). However, studies to determine the effect of structural and psychological empowerment of surgical nurses on patient and employee safety culture are insufficient. This study was conducted to measure the effect of structural and psychological empowerment of surgical nurses on patient and employee safety culture, based on the fundamental research question in this study, systematic arrangement and interpretation of the findings obtained from the results of the surveys conducted on nurses working in the operating rooms and surgical clinics of two public hospitals in Istanbul. Testing with the following conclusions were reached.

The (Structural) Empowerment Scale total score of the surgical nurses participating in the study was 3.36 ± 0.49 good, the Psychological Empowerment Scale total score mean was 5.13 ± 0.09, good level, the Patient Safety Culture Scale total score mean was 3.12 ± 0.29 good and the Employee Safety Culture Scale average score was 3.56 ±

0.54. The relationship between the factors affecting nurses' empowerment and safety culture and the scale's total score was examined. It was found that weekly working hours are effective in empowerment, and those who work more than 40 hours a week have lower empowerment than other nurses, and there is a significant difference. (p <0.05), It was determined that the perception of patient and employee safety culture was significantly different between those who received training on patient and employee safety and those who did not. As a result of the regression analysis performed between the sub-dimensions of the Structural Strengthening Scale and Psychological Empowerment Scale and the sub-dimensions of patient and employee safety culture, a significant and positive relationship was found between them (p <0.05), The structural and psychological strength of nurses increased their perception of patient and employee safety. It was determined that it affected. The structural empowerment level of surgical nurses increases patient safety culture (β = 0.498) and employee health and safety culture (β = 0.330). The psychological empowerment level of surgical nurses increases the level of patient safety culture (β = 0.430) and the level of employee health and safety culture (β = 0.498). This study adds to the literature linking SE and patient safety climate (Armstrong & Laschinger 2006, Armstrong et al. 2009). The research results are directly similar to the literature. Also, it contributes by filling the space in the literature to determine the effect of structural and psychological empowerment of surgical nurses on patient and employee safety culture.

In the study, which examined the relationship between structural empowerment and patient safety culture in nurses in adult intensive care units, it was found that there was a significant correlation between structural empowerment and patient safety culture, and nurses' perception of patient safety increased as structural strengthening increased. To support



the culture of patient safety, it has been suggested that nurse leaders create structurally reinforcing work environments (Armellino, Griffin, & Fitzpatrick, 2010). In a study conducted among intensive care nurses in the United States and showing the relationship between structural empowerment and expected turnover rate, it was found that structural empowerment applied in the workplace was inversely proportional to expected quitting. Nurses in the five intensive care units surveyed perceived themselves as partially empowered, more vital structural empowerment would reduce the expected turnover rate, and nurses who saw themselves as empowered had higher organizational commitment levels. It has been stated that organizations that support and realize these characteristics may be more successful in retaining employees (Hauck, Griffin, & Fitzpatrick, 2011).

Nurses perceived themselves as moderately empowered. A significant negative correlation was found between structural empowerment and expected turnover rate in the study showing the relationship between structural empowerment and the rate of resignation on nurses working in clinical and intensive care units. It was emphasized that these results were similar to studies on nurses working in other clinical fields (Smith et al., 2012). In a study conducted on nurses in Israel, the relationship between structural strengthening practices and moral collapse and distress was examined, and a weak relationship was found between the frequency of moral distress and structural empowerment (Ganz et al., 2013). In the study examining the effects of structural empowerment on nurses' welfare, it was found that the shared perceptions about the quality of leader-member interaction in their units affected the structural empowerment and caused the level of individual nurse job satisfaction to increase significantly. It has also been determined that higher structural empowerment is associated with lower emotional exhaustion (Laschinger, Finegan, & Wilk, 2011).

In a study conducted in the Netherlands in 2007, it was stated that while structural empowerment expresses the strength of the employee based on his / her position in the organization, psychological empowerment consists of the fundamental personal beliefs that employees have about their roles in the organization. As a result of the research, it was stated that psychological empowerment functions as an intermediary between structural empowerment and innovative behavior (Knol & Linge, 2009). As a result, a right, safe work environment for nurses is related to structural and psychological empowerment in the workplace, and structural empowerment is the pioneer of psychological empowerment. This relationship positively affects job satisfaction and, therefore, patient safety in the workplace through psychological empowerment (Cicolini, Comparcini, & Simonetti, 2014).

### Study limitations

This study is limited to the participation of only the surgical nurses of two public hospitals. Therefore, it cannot be generalized to all nurses and health care services.

### Conclusion

In light of the information obtained from national and international studies on structural and psychological empowerment, it is necessary to increase the empowerment level of nurses. It is essential to support studies for this purpose. Evaluating the different aspects of structural and psychological strengthening and their effects on each other in every healthcare institution, especially in public and private hospitals, will increase nursing service delivery, patient and employee safety, and nursing management.

### Implications for nursing management

The participants in this study worked within a limited setting, therefore limiting generalizability to all health care settings. Additional studies assessing these concepts in other health care settings, including a broader range of health care professionals, are recommended.

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