

# Determination of the Relationship between Structural Empowerment and Patient's Safety Culture among the Employees of a Public Hospital in Ahvaz

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## Abstract

**Introduction:** Patients' safety culture indicates the extent to which the staffs prioritize the safety of patients. In medical centers, it is very important to pay attention to the patients' safety. Hence, the patients' safety culture should be examined and improved. One of the factors which lead to the improved patients' safety culture is structural empowerment. Structural empowerment refers to adjusting workplace structures by managers and facilitating the staffs' access to organizational facilities. In other words, structural empowerment refers to the staffs' access to four environmental factors (i.e., opportunity, information, support, and resources) in the organization. The objective of the present study was to investigate the relationship between the dimensions of structural empowerment and patients' safety culture.

**Material and method:** The current study was descriptive-correlational research method, and the population included all staffs (i.e., 275 individuals) in the nursing department of a public hospital in Ahvaz. The research sample included 221 staffs who were selected through stratified random sampling. The data were collected through standardized tools, including Effective Working Conditions (the second version), and Patients' Safety Culture in Hospitals questionnaires. The reliability of the questionnaires was examined through Cronbach's alpha. Pearson correlation coefficient, multiple regression analysis (simultaneous method) and one-way analysis of variance were used to analyze the data through SPSS software, version 16.

**Results:** The dimensions of opportunity, support and resources have a positive and significant relationship with the patients' safety culture. However, the information dimension is not significantly related to the patients' safety culture. The results of multiple regression analysis showed that the dimensions of structural empowerment predict 59% of the variance of the patients' safety culture, and from among all dimensions of structural empowerment, opportunity and information in the model do not have a significant effect on the patients' safety culture. In addition, support and resources are the most important predictors of the criterion variables. The results of one-way analysis of variance showed that the score of safety culture among the midwives has the highest value, and the lowest value is attributed to the sitters. In other words, midwives pay more attention to the safety of patients and patients' safety culture.

**Conclusion:** Structural empowerment is one of the factors affecting patients' safety culture which increases patients' safety. Focusing on structural empowerment improves patients' safety culture because when the staffs are structurally empowered, their accuracy and performance would improve, and they would provide more safe services to the patients. Therefore, hospital managers are advised to pay attention to the issue of structural empowerment in order to strengthen the patients' safety culture, and to provide the necessary training and equipment to improve the structural empowerment of their staffs, especially nurses.

**Keywords:** Opportunity, Information, Support, Resources, Safety Culture, Hospital.

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## 1. Introduction

Patients' safety culture basically means accepting patients' safety as the first common priority and value in the organization [1]. The organization's safety culture creates a context in which patients' safety is one of the organization's most important priorities and it reinforces the behaviors which promote patients' safety. According to previous studies, various factors are related to and affect patients' safety culture. One of these factors is structural empowerment. In the context of Iran, no study has investigated these variables. However, in a few studies conducted abroad, it is found that structural empowerment has a positive and significant relationship with patients' safety culture [2-6]. Structural empowerment was defined by Counter; according to his model, the staffs' behavior will be more effective when the organization is structured to provide two factors of opportunity and power for all staffs at all levels. In this case, the output of the organization will also increase. Structural empowerment has four environmental factors, including access to opportunity, information, support, and resources. Therefore, it can be stated that the environment can support and improve the patients' safety culture, and this support is done through accessing to opportunity, information, support and increasing resources through power. In addition to the importance of paying attention to structural empowerment, examining its dimensions is one of the topics which have received little attention; to solve the problems related to structural empowerment of the staffs, it is very important to pay attention to these dimensions. Moreover, due to the importance of safety tips in medical centers and its direct relationship with structural empowerment, the main objective of the present study is to examine the relationship between structural empowerment and patients' safety culture. It finally provides some suggestions for improving the patients' safety culture. The main question of this research study is whether structural empowerment is related to the patients' safety culture.

## 2. Material and Methods

The present study was a descriptive and correlational research. The statistical population included all staffs of the nursing office in the clinical department of one of the public hospitals in Ahvaz in 2018. They were 275 individuals (112 nurses, 47 sitters, 37 midwives and 79 sitter assistants). The research sample included 221 staffs who were selected through stratified random sampling. To collect data, Laschinger et al.'s Effective Work Conditions (the second version) standardized questionnaire [7] as well as Patients' Safety Culture in Hospitals questionnaire were used. The former tool contained 12 items, and the latter include 42 items which examine 12 dimensions of the patients' safety culture. The reliability coefficients of Effective Working Conditions questionnaire were .87 for the whole scale and 0.69, 0.86, 0.89, and .65 for the subscales of opportunity, information, support and resources, respectively. Moreover, the reliability of Patients' Safety Culture in Hospitals questionnaire was estimated through Cronbach's alpha; with a coefficient of 0.86. Then, the data were analyzed using SPSS software (version 16).

## 3. Results and Discussion

Pearson correlation coefficient was used to investigate the relationship between structural empowerment and its dimensions with patients' safety culture (Table 1 and Fig. 1). As it is evident in Table 1, structural empowerment has a positive significance relationship with patients' safety culture (0.67,  $P < 0.001$ ). There is also a positive relationship between the dimensions of structural empowerment (opportunity, information, support and resources) and patients' safety culture. The coefficients for these dimensions are 0.53, 0.31, 0.56 and 0.49, respectively. Given the fact that the significance level of opportunity and resources is less than 0.01 and the significance level of support is less than 0.05, these relationships were significant. However, concerning the relationship between information and patients' safety culture, it was not significant.

Table 2 represents the results of multiple

regression analysis of the dimensions of structural empowerment and patients' safety culture. According to **Table 2**, the dimensions of structural empowerment predict 59% of the variance of the patients' safety culture. The F-rate of the regression pattern is 14.32 and the significance level is 0.001. Therefore, concerning all variables, the regression pattern was significant; the regression pattern could predict the changes in the dependent variable significantly and appropriately. As a result, the applied pattern was a good predictor of the patients' safety culture. Since its significance level was less than 0.01, the regression pattern is significant. It is as follows:

$$\text{Patients' safety culture} = 24.51 + .031(\text{Opportunity}) + .16(\text{Information}) + .41(\text{Support}) + .23(\text{Resources})$$

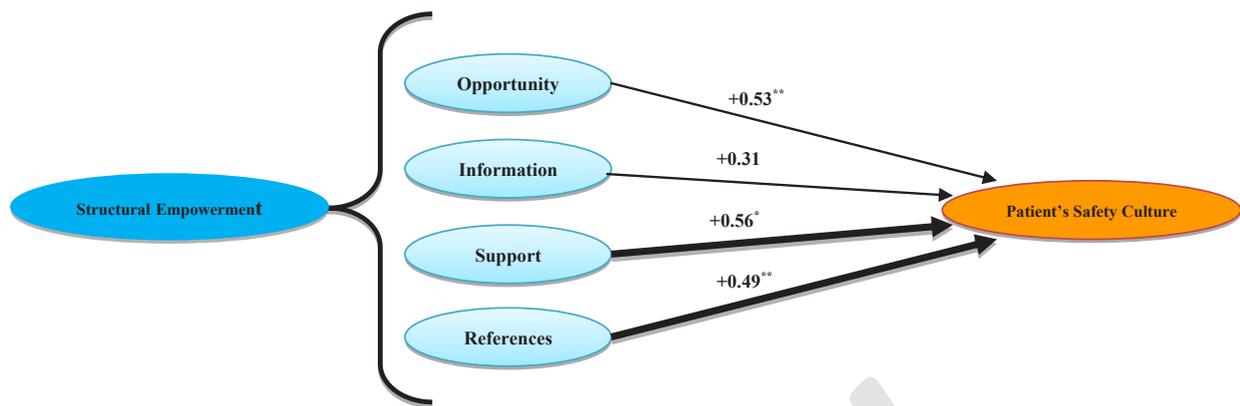
This pattern indicates a positive relationship between the variables of opportunity, information, support and resources which had a positive effect on the patients' safety culture. However, the results of t-test show that from the dimensions of structural empowerment, opportunity and information did not have a significant effect on the patients' safety culture because the value of their significance level was more than 0.05. However, the two dimensions of support and resources positively and significantly predict the patients' safety culture; they played the greatest roles in this regard ( $p < 0.05$ ).

One-way analysis of variance was used to compare the patients' safety culture's score among four groups of midwives, sitters, sitter assistants and nurses (**Table 3**). As it is shown in **Table 3**, the value of F was 2.324 with a significance level of 0.026. Therefore, there are significant differences among the four groups in terms of the patients' safety culture. According to **Table 3**, midwives had the highest and sitters the lowest patients' safety culture score. In other words, midwives have paid more attention to the patients' safety and adherence to patients' safety culture.

#### 4. Conclusions

The results of statistical analyses in **Table 1** showed that structural empowerment and its three dimensions (i.e., opportunity, support and resources)

have a positive and significant relationship with patients' safety culture. This finding is in line with those of previous studies (6-2). Furthermore, as it is evident in **Table 2**, the two dimensions of support and resources have the greatest impact on the patients' safety culture. This finding is consistent with Armstrong et al. study (2006), Armellino et al. (2010), Almotairi (2018), Atmospera (2017) and Theeb Moeidh (2015). The findings of the presented study can be explained by referring to the fact that opportunity, information, support and resources are among the necessities which help the staffs to adapt to their work's environment and expand their skills. In fact, providing the staffs with opportunity, promotes growth, development, success and increases efficiency in the organization. Providing the staffs with information gives them a chance to learn important organizational decisions, information, and policies as well as organizational goals. Accessing to resources allows the staffs to access the materials, money, time, and equipment needed to achieve organizational goals. In addition, when the staffs are emotionally supported by the manager and other colleagues and receive feedback and constructive suggestions, they feel that they have what they need to achieve their goals, and they receive the necessary support and guidance. In this case, they will have high performance. According to the results of the present study, hospital managers and other service centers which deal with patients are advised to pay attention to the issue of structural empowerment of their staffs in order to create and strengthen the patients' safety culture. They should pay special attention to the training needed to improve the structural empowerment of their staffs, especially nurses. Of course, they should first examine the existing safety culture in their health center because the assessment of safety culture increases the managers' awareness of the staffs' beliefs about patients' safety in addition to their identification of the existing problems [8]. Furthermore, future researchers are advised to replicate the present study in other public and private hospitals and medical centers in other provinces.



**Fig. 1.** Structural Empowerment of Patient’s Safety Culture

With regard to the limitations of the present study, since the data were collected through a questionnaire, there was room for bias in answering the questions. Moreover, this research study was conducted among the staffs of the nursing office of a clinical department in one of the public hospitals in Ahvaz; therefore, the generalization of the findings

to other public and private hospitals in other cities should be done with caution.

**5. Acknowledgment**

The authors would like to thank and appreciate the cooperation of the director and the staffs of the studied hospital in Ahvaz.

**Table 1.** Investigating the relationship between research variables through Pearson correlation coefficient

Variables	Patients’ safety culture	Sig.
Structural empowerment	0.67	0.001
Opportunity	0.53	0.001
Information	0.31	0.1
Support	0.56	0.03
Resources	0.49	0.001

**Table 2.** Multiple regression analysis of dimensions of structural empowerment and the patients’ safety culture

	Beta	t	p<	R2	F	p<
Predictors	Opportunity	0.031	1.06	0.39	0.59	14.32
	Information	0.04	1.56	0.09		
	Support	0.61	1.23	0.001		
	resources	0.47	0.79	0.02		

**Table 3.** One-way analysis of variance to compare the occupational groups in terms of the patients’ safety culture

Occupational groups	mean	SD.	F	p
Midwives	41.56	8.45	2.324	0.026
Sitters	31.17	10.02		
Sitter assistants	39.25	9.84		
Nurses	34.24	13.49		

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