The Relationship between Work Environments and Intention to Leave in Nursing: A Cross-sectional and Correlational Study

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ABSTRACT

Objective: Unfavorable work environments are among the factors that affect nurses' intention to leave. This study was explored to examine the relationship between nurses' work environments and their intention to leave.

Methods: This cross-sectional and correlational design study was carried out with 547 nurses working in a university, a private hospital, and a teaching hospital between November 2016 and February 2017. The Practice Environment Scale of the Nursing Work Index and a question about intention to leave was used. Descriptive statistics, Pearson correlation and multiple linear regression analysis were used in the analysis of the data.

Results: The mean total score of scale was found to be $M= 2.30\pm0.56$ and nurses' perceptions of work environments to be unfavorable. It was found that; 13.9% of the nurses did not intend to leave, 35.5% had a low, and 50.8% had a high intention to leave. It was determined that unfavorable work environments increases intention to leave ($R= .370$, $R^2= .137$, $p<0.001$).

Conclusion: This study found that it was nurses' intention to leave was negatively affected by their work environments. Hospital and nurse managers should be aware of the need to create positive work environments in order to prevent nurses from leaving the profession.

Keywords: Favorable, intention to leave, nursing, shortage, work environment.

1. INTRODUCTION

Considering the fundamental role nurses play in health services, it is clear that creating favorable work environments is important for nurses (1). A healthy and positive work environment has an important place in maintaining patient safety and achieving the desired results in patient care (2). There are many results showing that favorable work environments have beneficial effects in many areas, ranging from job satisfaction to patient outcomes (3,4). On the other hand, it is known that the unfavorable working environment is one of the important factors affecting the intention to leave of the nurses (5,6).

The quality of care, patient safety, and patient/employee satisfaction will increase with the improvement of work environments. In addition, as a result of unfavorable work environments, a global nursing shortage is currently being faced (7). Among the factors that affect nurses leaving the profession, which is the most important cause of loss of workforce in nursing, are the insufficient number of nurses, job dissatisfaction, low wages, work stress, friction

with colleagues, heavy workloads, and unfavorable work conditions (8,9,10). In addition to the negative impacts of unwanted departures on patients and nurses, it is also commonly agreed that nurses leaving increases costs (11). One of the strategies to prevent nurses leaving the profession is to improve their work environments. It is necessary to create healthy work environments and develop strategies to persuade nurses to stay in the profession and to develop the leadership skills of all the nurses employed in each institution.

Initial studies on creating healthy work environments for nurses were conducted in Canada and the United States and were opened to discussion in 2007 as the theme of that year's the ICN. In the ICN's report, it was stated that the most important problem triggering the crisis of a shortage of nursing staff was an unhealthy work environment and that this negatively affected both patient and nurse outcomes (12). Prior to this, a project launched by the Registered Nurses Association of Ontario (2003) in 2003 aimed to create,

"Healthy Work Environments Best Practice Guidelines" (13). The American Organization of Nurse Executives (2003) also examined changes and innovations in nursing work environments to solve the problem of nurse shortages in their study in 2003 (14). In another US study, the American Association of Critical-Care Nurses (2005) in 2005 defined standards for healthy work environments for nurses under six main headings (15).

In research conducted in Turkey, nurses evaluated the different dimensions of unfavorable/moderate work environments (1,4,16). In 2008, the Turkish Nurses Association published a report entitled "Working Conditions of Nurses in Turkey" (17). At the national level, the issue was examined in the "Quality Standards in Health – Hospital Version 5", published in March 2016 (18). However, the 12 standards covered include all health professionals and do not provide a framework for improving nurses' work environments.

One of the aims of creating a healthy work environment for nurses in developed and developing countries is to retain nurses in institutions and in the profession (1). Although there are several reasons for the shortage of nurses, the key factor that alienates nurses from their work environment or the profession is the unfavorable work environment (11). Most studies have concluded that nurses intention to leave nursing due to unfavorable work environments (10,19,20).

The worldwide shortage of nurses has been exacerbated by the impact of the COVID-19 pandemic. According to the report published by ICN in 2022, there is a global need for 5.9 million nurses, and this need is predicted to increase to 13 million in the future (5). In the international literature, there are studies reporting that the rate of thinking about intention to leave of nurses during the pandemic varies between 3.1% and 45.2% (21,22,23). Unfavorable working environments such as exposure to coronavirus infection and illness of nurses working on the front lines due to the pandemic, lack of personal protective equipment, and burnout have shown an increase in the intention to leave (24,25). As stated in the ICN report, unfavorable working environments affect the intention to leave nurses (5). It is important to prevent nurses from leaving the organization where they work, as it affects the continuity and quality of patient care. Therefore, managers and policymakers have a great responsibility in improving the unfavorable working environments, which is one of the factors that cause nurses to intention to leave. Although there are studies in the literature that an unfavorable working environment affects leaving the job, this study aims to contribute to the literature by examining the work environment variables that affect the intention to leave, with a new sample, for this ongoing problem. Additionally, considering that favorable working environments are one of the factors that reduce the intention to leave that this study was carried out to determine the relationship between the working environment of nurses and their intention to leave.

2. METHODS

2.1. Study Design, Setting and Samples

This study was a cross-sectional and correlational design. This study was carried out in a university hospital, a private hospital, and a training hospital, which have the highest number of nurses in the city center where the research was conducted. The university hospital had a total of 450 nurses with a capacity of 1174 beds, the private hospital had a total of 178 nurses with a capacity of 201 beds and the teaching hospital had a total of 380 nurses and a capacity of 598 beds. The universe of the study consisted of all nurses who had worked in these three hospitals for at least six months (n: 823). As a criterion for the samples, it was determined that the nurses had to have worked in the institution for at least six months in order to have valid concerns about the institution and to be able to evaluate the work environments. This study, it was aimed to reach the whole population without using any sampling method, and data were collected from 603 nurses. However, 547 nurses filled in the data collection tools fully.

2.2. Measurements

2.2.1. The Practice Environment Scale of the Nursing Work Index (PES-NWI)

Nurses' work environments were measured with PES-NWI (26). It was translated and adapted to Turkish by Türkmen et al. (2011) (27). The scale consists of 31 items and five sub-dimensions. This instrument uses a 4-point Likert-type scale (*strongly agree* = 1 to *strongly disagree* = 4). All items in the scale are reversed. Scale evaluation is made over the average scores of the total and sub-dimension items and a scale score between 1-4 is obtained. As the scores of individuals from the scale increase, their attitudes towards the work environment also increase in a positive way (26). In the Turkish version, the Cronbach's alpha coefficient was found to be .94, while the Cronbach's alpha coefficient was .95 in this study.

2.2.2. The Intention to Leave

The intention to leave the profession of the participants was measured using a question (28). The scale has five responses. Thinking about leaving ''several times a month'', ''several days a week'' or ''every day'' indicate high levels of intention to leave the profession; ''several times a year'' indicates a low level of intention to leave, and ''never'' signifies no intention to leave.

2.3. Data Collection

Research data were collected between November 2016 and February 2017. All clinics were visited and the participants were informed about the study. The questionnaires were distributed to each nurse by the researcher and it was agreed that they would be completed. The average time to fill out the survey questions is 7-10 minutes.

2.4. Data Analysis

Data analysis was performed using the IBM SPSS version 28.0 software (IBM Corp., Armonk, NY, USA). The results of the research were evaluated at the 95% confidence interval and $p<0.05$ significance level. Data on the nurses' characteristics and distribution of intention to leave were presented with frequency and percentage. The evaluation of the total and sub-dimensions of the scale was based on mean, standard deviation, minimum, and maximum values. The relationship between intention to leave and the total and sub-dimensions of the work environment scale was evaluated with Pearson Correlation analysis, and work environment scale sub-dimensions predicting intention to leave were presented with multiple linear regression analysis.

2.5. Ethical Consideration

Authorities who adapted the scale used in the study to Turkish were notified by e-mail. The study was approved by the Ethics Committee (IRB No: 2016/702). Written permissions were also obtained from the management of the hospitals where the research was conducted. Informed consent of the nurses is taken orally and the consent is indicated in the prepared questionnaire.

3. RESULTS

The mean age of the nurses was 31.03±7.98, 59.8% were married, and 41.9% were employed in a university hospital. It was determined that the average number of years of nursing experience in hospital was 7.53±7.05, 31.4% worked in surgical units, 29.4% worked in internal medicine units and 87.9% worked as bedside nurses (Table 1).

The distributions of the intention to leave of the nurses are shown in Table 2. It was determined that 13.9% of the nurses did not intention to leave, 35.5% of them had a low intention to leave and 50.6% of them had a strong intention to leave (Table 2).

The mean total PES-NWI score was found to be 2.30 ± 0.56. When the mean scores obtained from the sub-dimensions were examined, the highest score of 2.47±0.64 was for the sub-dimension of "Nursing Foundations for Quality Care", and the lowest score of 1.88±0.62 was for the sub-dimension of "Staffing and Resource Adequacy". A significant and negative way correlation was found between the intention

to leave and the total and sub-dimensions of the PES-NWI (Table 3).

According to the results of the regression analysis, a highly significant relationship at a medium level was identified between "Nurse Participation in Hospital Affairs", "Nurse Manager Ability and Leadership", "Nurse Foundations for Quality of Care", "Collegial Nurse–Physician" and "Staffing and Resource Adequacy" and intention to leave (R= .370, R2= .137, p<0.001). These sub-dimensions were determined to explain 13.7% of the total variance in intention to leave. According to standardized regression coefficient (β)" Staffing and Resource Adequacy" and "Collegial Nurse-Physician Relationships" were found to have an effect on intention to leave (p <0.05) (Table 4).

Table 1. *Nurses' characteristics (n: 547)*

Characteristics	n (%)
Age ($\bar{x} \pm Sd$ = 31.03±7.98)	
19-28	251 (45.9)
29-39	202 (36.9)
40 or more	94 (17.2)
Marital status	
Married	327 (59.8)
Single	220 (40.2)
Working Hospital	
University Hospital	229 (41.9)
Teaching Hospital	186 (34.0)
Private Hospital	132 (24.1)
Years of nursing experience in hospital ($x \pm Sd$ = 7.53±7.05)	
5 years or less	279 (51.0)
6-10 years	140 (25.6)
11 years or more	128 (23.4)
Working unit	
Surgical units	172 (31.4)
Internal medicine units	161 (29.4)
Intensive Care Unit	70 (12.8)
Emergency	44 (8.0)
Operating Room	34 (6.2)
Management	34 (6.2)
Outpatient units	32 (5.9)
Position	
Bedside Nurse	481 (87.9)
Senior / Intermediate Manager	34 (6.2)
Other[*]	32 (5.9)

* Outpatient units and polyclinics

Table 2. *Distribution of intention to leave in nursing*

Intention to Leave	n (%)
No intention to leave	76 (13.9)
Low intention to leave	194 (35.5)
High intention to leave	277 (50.6)

Table 3. Correlation between Intention to Leave and the PES-NWI

	Mean	SD	Min-Max	1	2	3	4	5	6
Intention to Leave (1)	2.76	1.22	1-5						
PES-NWI									
Nurse Participation in Hospital Affairs (2)	2.24	0.63	1-4	-.291*					
Nursing Foundations for Quality of Care (3)	2.47	0.64	1-4	-.216*	.801*				
Nurse Managers Ability and Leadership (4)	2.20	0.68	1-4	-.283*	.830*	.721*			
Staffing and Resource Adequacy (5)	1.88	0.62	1-4	-.344*	.583*	.438*	.608*		
Collegial Nurse-Physician Relationships (6)	2.37	0.74	1-4	-.268*	.641*	.565*	.575*	.461*	
PES-NWI Total score	2.30	0.56	1-3.94	-312*	.946	.902	890	670	722

PES-NWI, Practice Environment Scale of the Nursing Work Index; SD, standard deviation
Min, Minumum; Max, Maximum. *p>0.01

Table 4. Regression analysis for determining the effect of the PES-NWI sub-dimensions of the Intention to Leave

Variables	B	Standart Error	β	t	p
Intention to Leave					
Constant	4.412	0.217		20.289	0.000*
Nurse Participation in Hospital Affairs	-0.179	0.170	-0.093	-1.052	0.293
Nurse Foundations for Quality of Care	0.086	0.131	0.045	0.660	0.509
Nurse Managers Ability and Leadership	-0.054	0.135	-0.031	-0.403	0.687
Staffing and Resource Adequacy	-0.477	0.102	-0.243	-4.674	0.000*
Collegial Nurse-Physician Relationships	-0.170	0.086	-0.104	-1.972	0.049*
R= 0.370 R^2= 0.137	*F*=17.216		*p*<0.001		

*p <0.05

4. DISCUSSION

A lack of nurses in health institutions and a high number of nursing staff leaving the profession cause disruption to health care services. In this regard, it is important to determine the relationship between nurses' work environments and their intention to leave, to improve their work environments and, to prevent them from resigning.

As a result of the findings of the study, it was determined that nurses' perceptions of their work environments were negative way. The results of studies in the literature show that nurses perceive their work environments to be unfavorable at a moderate level (20,26,27,29). Unfavorable work environments can lead to a loss of staff, a decrease in the quality of care, and most importantly, an increase in medical errors. Therefore, managers have a major responsibility to improve work environments.

In the study, it was determined that the sub-dimension with the highest score was "Nursing Foundations for Quality of Care". This result is in parallel to other studies which found that this sub-dimension had the highest score (20,26,27). Accordance to the Turkish Health Ministry's service quality standards, using nursing care plans, and offering patient safety training and regular in-service training are thought to lead to high scores in this sub-dimension.

The lowest score in the study was found to be in the sub-dimension of "Staffing and Resource Adequacy". This

sub-dimension, which influences work environments, has often been found to have the lowest score in other studies too (26,27,30,31). As the shortage of nurses is both a global and national problem, this may have led to the low scores for the "Staffing and Resource Adequacy" sub-dimension. This is likely to be a result of increasing workload experienced worldwide due to the insufficient number of nurses. In the "Organization for Economic Co-operation and Development (OECD) Health Statistics for the European Union and Turkey" published by the Turkey Ministry of Health the number of nurses per 1000 people between 2000 and 2013 in OECD countries was examined. The average rate in OECD countries was nine per 1000, but in Turkey, unfortunately, it was found to be fewer than two nurses per 1000 (32). These data explain why the nurses in this study found that staffing and resources were insufficient. In addition, the contractual employment of nurses and the fact that they are seen as easily expendable resources may lead to them leaving institutions. In terms of the institutions themselves, the lack of clear definitions of nurses' duties, being obliged to do other professionals' works, and the lack of support staff can lead to them developing a dislike for the profession and may cause them to leave an institution. Moreover, factors such as the inability of the managers to represent their employees, how specific problems are approached, not taking the opinions of the nurses into account when decisions are made and other related policies may affect whether nurses leave the

profession, and consequently lead to there being insufficient numbers of staff.

This study found that 13.9% of the nurses did not intend to leave the profession, 35.5% had a low and 50.8% had a strong intention to leave. In the study conducted by Çaylak and Altuntaş (2017), this number was 35.6% (19). Greinacher et al. (2021) reported that 30% (33), and Ying et al. (2021) reported that 20% of nurses intention to leave (34). According to the results of the study conducted by Lee et al. (2015) in Taiwan, it was determined that 59% of nurses intention to leave the profession (35). These results show that the intention to leave nursing is a problem in both developed and developing countries. The high likelihood of nurses leaving the profession in different countries suggests that the reasons affecting their decision to leave or stay are similar. A strong intention to leave is important in terms of demonstrating nurses' job dissatisfaction. Inadequate employment conditions, negative perceptions of the roles and responsibilities of the profession, inadequate developmental and career opportunities, inequality in wage distribution and managerial problems can all lead to job dissatisfaction which affects nurses' intention to leave.

According to the results of the regression analysis in this study, it was observed that the sub-dimensions of "Staffing and Resource Adequacy and Collegial Nurse-Physician Relationships", which are two variables in the work environment scale, have an effect on intention to leave and that these variables predict intention to leave by 13.7%. In a study, it was determined that the satisfaction rate of the patients who received service in the unit with a sufficient number of nurses and where the collegial nurse-physician relations were good was higher. In stressful environments, conflicts between team members are inevitable and negative situations such as leaving the job are reflected in the organization. As a result of this study, the lack of a sufficient number of employees in the organizations seen and communication problems among colleagues affect the intention to leave. There are studies in the literature reporting that there are different variables that affect the intention to leave. In the regression analysis conducted by Çaylak and Altuntaş (2017), it was found that seven variables affected intention to leave by 16% (19). Kloutsiniotis and Mikhail (2017) study showed that job satisfaction had a 44% negative impact on intention to leave (36), while, in a study by Lavoie-Tremblay et al. (2016), it had an 11% effect on intention to leave and was determined to be affected by weekly working hours, education, experience and the unit worked in (37). In Arslan and Kocaman (2016), study on Turkish nurses' dissatisfaction, the number of years worked in the institution, emotional exhaustion, depersonalization, relations between nurses and physicians and lack of personnel and resources were determined to affect the nurses' intention to leave the profession by 44% (38). In Leineweber et al. (2016) study conducted in 10 European countries, it was concluded that dissatisfaction and unfavorable work environments affected employment and the intention to leave nursing (10).

These studies investigate the effects of a different number of variables on the intention to leave nursing. The results show that there is no single variable which has an effect on the intention to leave and the effect of the variables on intention to leave changes at different rates. For this reason, it is thought that managers should analyze the variables that affect intention to leave well and take precautions accordingly.

5. CONCLUSION

This study was carried out to explore the relationship between nurses' intention to leave the profession and their work environments. As a result of the study:

- Nurses' perceptions of their work environments were unfavorable.

- The most positive perceptions of nurses for work environments were in the sub-dimension for "Nursing Foundations for Quality of Care".

- Nurses' most unfavorable perceptions of nurses were about the adequacy of staffing and resources in their work environments.

- 50.6% of nurses had a high level of intention to leave.

- Nurses' intention to leave is affected by their work environments.

One of the most important reasons for the decrease in the number of nurses in the world and in Turkey is nurses leaving the profession. A heavy workload, insufficient wages, job dissatisfaction and, in particular, an unfavorable work environment are among the factors that affect whether nurses will leave. We are confronted with the problem of a shortage of nurses due to the fact that although existing nurses continue to work, their commitment to the institution is not strong, and that nurses who are new to the profession often leave the profession after a short period of time. Nurse managers should determine nurse and patient ratios at regular intervals, plan nursing according to the patient profile, as well as ensuring that an appropriate number of staff are employed and that appropriate resources are available, as these are the factors most contributing to an unfavorable work environment. When under taking workforce planning, they should also take into account the results of studies about nurses' intention to leave. In addition, nurses' intention to leave should be measured at regular intervals and necessary measures should be taken to identify those who have a strong intention to leave.

Conflict of Interest

The authors have no conflicts of interest to declare.

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