

# The Effects of Supervisor Support, Emotional Exhaustion, and Sense of Personal Accomplishment on Hospital Nurse Turnover Intentions

Eunja Yeun<sup>1</sup> and Heejeong Kim<sup>2\*</sup>

<sup>1</sup>Department of Nursing, Konkuk University, Seoul, 143-701, South Korea

<sup>2</sup>Department of Nursing, Namseoul University, Cheonan, 331-707, South Korea;  
yshbb@nsu.ac.kr

## Abstract

The management of nursing staffs, who account for the largest number of medical professionals, is very important. However, now a days every medical institution is suffering from significantly higher turnover of nurses and is having trouble retaining nursing staffs. This study is an attempt to investigate the effects of supervisor support, sense of personal accomplishment, and emotional exhaustion on the turnover intentions of nurses. To determine the influences of supervisor support, sense of personal accomplishment, and emotional exhaustion on turnover intentions, a regression model was used in Hierarchical Step 1 to analyze the sociology of population characteristics which showed statistically significant differences: age, years worked, working unit, and position. In Hierarchical Step 2, supervisor support, sense of personal accomplishment, and emotional exhaustion were added, and the explanatory power increased by a statistically significant 19.4%. Among these factors, emotional exhaustion was shown to exert a significant influence on turnover intention, and as emotional exhaustion increased ( $B = .515$ ), it was shown to have the greatest influence on turnover intention. The total explanatory power of these factors on turnover intention was shown to be 32.3%. Emotional exhaustion turned out to be the factor with the most influence on turnover intention in this research. Nursing managers wishing to reduce turnover intention should focus their analyses on the issue of emotional exhaustion and look for ways to decrease emotional exhaustion among the nurses they supervise..

**Keywords:** Emotional Exhaustion, Personal Accomplishment, Supervisor Support, Turnover Intention

## 1. Introduction

The number of health care personnel working in hospitals in Korea in 2010 is currently 218,065. This includes: 46,314 doctors; 2,994 dentists; 2,036 oriental doctors; 95,187 nurses; 34,862 medical technicians; and 3,623 pharmacists. Nurses make up the largest proportion of the health care workforce<sup>1</sup>. Modern nursing has changed

from holistic nursing to disease nursing. Medical services are created and destroyed with uncertainty and diversity in close proximity with patients, so the role of nursing has become more complex<sup>2</sup>. The nurse's influence and role in performing the work which is closest to patients has become ever more important. However, nowadays every medical center is suffering from significantly increased turnover of nurses, and many institutions are having

\* Author for correspondence

difficulty maintaining their nursing workforces<sup>3</sup>. The nursing shortage is a serious problem in Korea, which among all 19 OECD countries has the lowest ratio of active nurses in the workforce per 1,000 people. Over the past 10 years, the turnover rate of nurses has been 15-20%<sup>4</sup>. However, a much higher rate of 27.1% was observed among first-year nurses in the US<sup>5</sup>. Moreover, the turnover rate was reported to have increased in many countries since the late 1990s<sup>6</sup>. High turnover of nurses has decreased the stability of organizations and has led to decreased average levels of nursing expertise due to the lack of skilled nurses and increased workloads and stress levels among the remaining co-workers<sup>7</sup>. Turnover intention seems to be affected by a number of variables. Several studies examined the effects of demographic characteristics such as age, gender, and marital status on nurses' intentions to leave their organizations. Burnout is detrimental to the personal lives of sufferers, and it adversely affects the job performance of individuals and groups. It may also be a factor that affects turnover<sup>8,9</sup>. Professionals working in negative environments are dissatisfied with their jobs, more frequently report an intention to leave their jobs, and are more exposed to burnout, a condition that negatively affects professionals and impacts the characteristics of the environment and patient outcomes<sup>10</sup>. Burnout is a syndrome characterized by emotional exhaustion, depersonalization, and low personal accomplishment. It mainly affects health workers due to their continuous exposure to patients afflicted by chronic diseases<sup>11</sup>. So there is a need to identify factors that affect turnover and turnover intention. The objective of this research was to understand the effects of supervisor support, emotional exhaustion, and sense of personal accomplishment on hospital nurses' turnover intentions in order to find ways to reduce turnover intention, as well as to investigate the relationships among these factors and to serve as a foundational study upon which to design an effective plan to decrease the turnover intention of nurses.

## 2. Methodology

### 2.1 Study Design

This current study is a survey of nurses who work at university hospitals located in Seoul and Chungcheongnam-do. This research is a descriptive correlation study designed to investigate the differences in the way that supervisor support, emotional exhaustion, and sense of personal accomplishment affect hospital

nurses' turnover intentions, as well as to examine the relationships among these factors.

### 2.2 Instruments

#### 2.2.1 Turnover Intention

The turnover intention scale was developed by Yeun and Kim<sup>12</sup>. For the turnover intention questionnaire, there were 10 items with a 5-point Likert scale consisting of 3 subcategories: job satisfaction, work performance, and interpersonal relationships. The possible scores ranged from a maximum of 50 points to a minimum of 10 points, in which higher scores indicate high turnover intention. Cronbach's  $\alpha$  was .83 in the original scale and .86 in the present study.

#### 2.2.2 Supervisor Support

The supervisor support scale was developed by Shinn, Wong, Simko and Oritz-Torres<sup>13</sup>. For the supervisor support questionnaire, there were 9 items. The possible scores ranged from a maximum of 45 points to a minimum of 9 points, in which higher scores indicate good supervisor support. Cronbach's  $\alpha$  was .88 in the original scale and .82 in the present study.

#### 2.2.3 Emotional Exhaustion

The emotional exhaustion scale was developed by Maslach and Jackson<sup>14</sup>. For the EE questionnaire, there were 9 items. The possible scores ranged from a maximum of 45 points to a minimum of 9 points, in which higher scores indicate severe emotional exhaustion. Cronbach's  $\alpha$  was .87.

#### 2.2.4 Personal Accomplishment

The personal accomplishment scale was developed by Maslach and Jackson<sup>15</sup>. For the personal accomplishment questionnaire, there were 8 items. The possible scores ranged from a maximum of 40 points to a minimum of 8 points, in which higher scores indicate high levels of personal accomplishment. Cronbach's  $\alpha$  was .87.

### 2.3 Method of Data Analysis

#### 2.3.1 Data Collection

The collected data were analyzed using SPSS 20.0 (SPSS Inc., Chicago, IL, USA). The general characteristics of the patients were analyzed using descriptive statistics,

including the means, standard deviations, frequencies, and percentages; differences in homogeneity were accounted for by t-test. Patterns in the differences among study participants according to general characteristics in relation to supervisor support, emotional exhaustion, personal accomplishment, and turnover intention were analyzed with t-test and ANOVA, and post hoc analysis was conducted with Duncan's. Differences according to years of career experience regarding supervisor support could not satisfy the ANOVA equal variances hypothesis, so a heteroskedasticity ANOVA Welch test was performed. When statistically significant differences were found, post hoc analysis on the differences among groups was performed using a Games-Howell test.

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## 3. Finding

The general characteristics of participants are shown in Table 1. The study participants included 4 males (2.1%) and 186 females (97.9%). There were 41 participants below 25 years of age, comprising 21.6% of the total; 35.8% were between the ages of 26 and 29; 76 participants were between the ages of 30 and 39 (40.0%); and 4 participants were over 40 years of age (2.6%). Seventy percent were single, and participants with between 6 and 10 years of career experience comprised 21% of the total. Eight-eight participants were 3rd year college students (46.3%), and 84 were 4<sup>th</sup> year university students (44.2%). In terms of working shifts, 132 nurses worked the third shift (69.5%),

and 158 participants were general nurses (83.2%). Nurses with turnover experience comprised 30%. Degrees of supervisor support, emotional exhaustion, sense of personal accomplishment, and turnover intention in hospital nurses are shown in Table 2. On a five-point scale measuring perceived supervisor support, the average overall score was  $3.12 \pm .44$ ; for males, the score was  $3.36 \pm .17$ ; and for females,  $3.12 \pm .45$ . On a five-point scale measuring emotional exhaustion, the scores were: average,  $3.02 \pm .57$ ; male,  $2.78 \pm .44$ ; and female,  $3.26 \pm .62$ . For personal accomplishment among hospital nurses, the scores were: average,  $3.89 \pm .46$ ; male,  $3.28 \pm .26$ ; and female,  $3.14 \pm .40$ . For turnover intention among hospital nurses, the scores were: average,  $3.82 \pm .63$ ; male,  $3.60 \pm .88$ ; and female,  $3.83 \pm .62$ . Differences in supervisor support, emotional exhaustion, sense of personal accomplishment, and turnover intention in hospital nurses according to general characteristics are shown in Table 1. The research participants' attitudes on supervisor support showed statistically significant differences according to the working unit ( $F=6.569$ ,  $p=.002$ ). Emotional exhaustion showed statistically significant differences according to: age ( $t=5.014$ ,  $p=.002$ ); marital status ( $t=2.699$ ,  $p=.006$ ); career years ( $F=5.061$ ,  $p=.001$ ); education ( $F=3.350$ ,  $p=.037$ ); and position ( $F=6.880$ ,  $p=.001$ ). Sense of personal accomplishment among hospital nurses according to general characteristics showed statistically significant differences according to: age ( $F=10.304$ ,  $p<.001$ ); marital status ( $F=3.645$ ,  $p<.001$ ); career years ( $F=8.510$ ,  $p<.001$ ); education ( $F=8.711$ ,  $p<.001$ ); position ( $F=5.322$ ,  $p=.006$ ); and turnover experience ( $t=3.055$ ,  $p=.003$ ). In terms of the participants' general characteristics, turnover intention showed statistically significant differences according to: age ( $F=4.264$ ,  $p=.006$ ); career years ( $F=5.458$ ,  $p=.001$ ); working unit ( $F=4.323$ ,  $p=.015$ ); and position ( $F=7.987$ ,  $p<.001$ ). To determine the influence of supervisor support, sense of personal accomplishment, and emotional exhaustion on turnover intention, a regression model was used in Hierarchical Step 1 to analyze the sociology of population characteristics which showed statistically significant differences: age, years worked, working unit, and position. In Hierarchical Step 2, supervisor support, sense of personal accomplishment, and emotional exhaustion were added, and the explanatory power increased by a statistically significant 19.4%. Among these factors, emotional exhaustion was shown to exert a significant influence on turnover intention, and as emotional exhaustion increased ( $B=.515$ ), it was shown

to have the greatest influence on turnover intention. The total explanatory power of these factors on turnover intention was shown to be 32.3%.

### 4. Discussion

This study is an attempt to investigate the effects of supervisor support, sense of personal accomplishment, and emotional exhaustion on the turnover intentions of nurses. The analysis reveals several statistically significant differences in turnover intention based on general characteristics. This study found that younger nurses had higher levels of turnover intention. This is supported by several studies<sup>16,17</sup>. It was expected that nurses with more years of experience should have higher salaries and promotions that prevent them from leaving their hospitals. In this analysis, it was revealed that the nurses who had few years of working experience also had higher levels of turnover intention. This is similar to the results for age. In this study, it was found that as supervisor support, sense of personal accomplishment, and emotional exhaustion were added into the hierarchical regression model step 2, the explanatory power to explain turnover increased by a statistically significant 19.4%.

Among these factors, emotional exhaustion was shown to exert a significant influence on turnover intention, and as emotional exhaustion increased (B=.515), it was shown to have the greatest influence on turnover intention. This is supported by several studies<sup>4,7,10,18,19</sup>. Nurses with greater levels of perceived supervisor support experienced more positive job outcomes and fewer negative outcomes, including less occupational stress, than nurses with less perceived supervisor support<sup>18</sup>. Registered nurses constitute an around-the-clock surveillance system in hospitals for early detection and prompt intervention when patients' conditions deteriorate. So nurses are always exposed to heavy workloads and stress. Emotional exhaustion is due to heavy workloads. The more one's workload increases, the more exhaustion one feels<sup>4</sup>. In conclusion, the results of this research show that emotional exhaustion is the factor with the greatest influence on turnover intention. Additionally, supervisor support and personal accomplishment are also factors with important influences on the turnover intentions of nurses. However, since this research only looked at a small sample of nurses, it will be difficult to extend the results of this study to other analyses, so follow-up studies must be carried out.

**Table 1.** General characteristics of university nurses: differences in supervisor support, emotional exhaustion, personal accomplishment, and turnover intention (N=192)

Variable	Category	N (%)	Supervisor support			Emotional exhaustion			Personal accomplishment			Turnover intention		
			M ±SD	t/F	p	M ±SD	t/F	p	M ±SD	t/F	p	M ±SD	t/F	p
Sex	Male	4 (2.1)	3.3†6±.17	1.088	.278	2.78±.44	-1.544	.124	3.28±.26	.683	.496	3.60±.88	-.722	.471
	Female	186 (97.9)	3.12±.45			3.26±.62			3.14±.40			3.83±.62		
Age	≥25	41 (21.6)	3.12±.41	.655†	.589	3.32±.59	5.014	.002	2.97±.35 <sup>a</sup>	10.304	<.001	3.88±.49	4.264	.006
	≤26 ≥29	68 (35.8)	3.07±.33			3.43±.59			3.05±.34 <sup>ab</sup>		a<b<c	4.00±.58		
	≤30 ≥39	76 (40.0)	3.18±.54			3.05±.63			3.31±.42 <sup>bc</sup>			3.65±.69		
	≤40	5 (2.6)	3.04±.32			3.22±.39			3.43±.38 <sup>c</sup>			3.67±.58		
Marital status	Unmarried	133 (70.0)	3.12±.36	-.262	.794	3.33±.60	2.699	.006	3.08±.37	-3.645	<.001	3.87±.56	1.717	.088
	Married	57 (30.0)	3.14±.60			3.06±.37			3.30±.43			3.71±.75		
Career years	≥2	39 (11.6)	3.14±.42	.827†	.482	3.37±.59 <sup>b</sup>	5.601	.001	3.03±.36 <sup>a</sup>	8.510	<.001	3.89±.56 <sup>b</sup>	5.458	.001
	≤3 ≥5	66 (19.6)	3.08±.30			3.37±.65 <sup>b</sup>		a<b	3.03±.37 <sup>a</sup>		a<b<c	3.99±.57 <sup>b</sup>		a<b
	≤6 ≥10	71 (21.1)	3.09±.55			3.27±.56 <sup>b</sup>			3.21±.38 <sup>b</sup>			3.82±.61 <sup>b</sup>		
	≤10	120 (35.7)	3.21±.51			2.91±.59 <sup>a</sup>			3.38±.43 <sup>c</sup>			3.50±.69 <sup>a</sup>		
Education	College	88 (46.3)	3.14±.36	.903	.407	3.30±.64 <sup>b</sup>	3.350	.037	3.11±.39 <sup>a</sup>	8.711	<.001	3.91±.59	2.922	.056
	University	84 (44.2)	3.08±.49			3.28±.60 <sup>b</sup>		a<b	3.11±.38 <sup>a</sup>		a<b	3.79±.58		
	Graduate school	18 (9.5)	3.23±.44			2.90±.56 <sup>a</sup>			3.50±.44 <sup>b</sup>			3.54±.88		
Working shift	full-time	40 (21.1)	3.16±.36	1.347	.262	3.14±.60	.768	.465	3.29±.43 <sup>b</sup>	4.263	.015	3.81±.75	.685	.505
	2-shift	18 (9.5)	2.96±.54			3.25±.46			3.21±.43 <sup>ab</sup>		a<b	3.67±.67		
	3-shift	132 (69.5)	3.13±.45			3.28±.65			3.09±.38 <sup>a</sup>			3.85±.58		

Working unit	Ward	80 (42.1)	3.09±.40 <sup>b</sup>	6.569	.002	3.30±.60	2.176	.116	3.10±.38	1.428	.242	3.89±.55 <sup>a</sup>	4.323	.015
	Specific	85 (44.7)	3.22±.43 <sup>b</sup>		a<b	3.16±.65			3.20±.44			3.69±.68 <sup>ab</sup>		a<b
	OPD	25 (13.2)	2.88±.53 <sup>a</sup>			3.42±.56			3.10±.32			4.06±.56 <sup>b</sup>		
Position	Nurse	158 (83.2)	3.10±.44	1.554	.214	3.32±.61	6.880	.001	3.10±.37	5.322	.006	3.89±.59 <sup>a</sup>	7.987	<.001
	Charge Nurse	28 (14.7)	3.25±.45			2.86±.59			3.36±.49			3.41±.71 <sup>ab</sup>		a<b
	Head Nurse	4 (2.1)	3.00±.35			3.25±.45			3.31±.41			4.13±.45 <sup>b</sup>		
Experience turnover	Yes	57 (30.0)	3.19±.50	1.354	.177	3.14±.63	-1.640	.103	3.28±.42	3.055	.003	3.73±.66	-1.332	.185
	No	133 (70.0)	3.86±.61			3.30±.61			3.08±.38			3.86±.61		

**Table 2.** Degree of supervisor support, emotional exhaustion, personal accomplishment, and turnover intention

Variables	Step 1			Step 2		
	B	$\beta$	t	B	$\beta$	t
Constant	41.497			25.583		
Age	-.335	-.044	-.396			
Years worked	-.822	-.142	.239			
Working unit (special word)	-1.326	-.106	-1.396			
Working unit (OPD)	2.512	-.146	1.805			
Position (CN)	-2.570	-.146	-1.671			
Position (HN)	4.756	.109	1.484			
Supervisor support				-.102	-.065	-.993
Personal accomplishment				.102	.052	.760
Emotional exhaustion				.515	.460	6.925***
R2 ( $\Delta$ R2)		.128			.323 (.194)***	
F		4.486***			9.526***	

**Table 3.** Association of supervisor support, emotional exhaustion, personal accomplishment, and turnover intention in Hierarchical regression

Variables	Items	Range of score	Min.	Max.	Total	
					Mean (SD)	Item Mean (SD)
Supervisor support	9	9-45	12.00	38.00	28.11 (3.99)	3.12 (.44)
Emotional exhaustion	9	9-45	16.00	45.00	29.26 (5.60)	3.02 (.57)
Personal accomplishment	8	8-40	15.00	34.00	3.32 (.77)	3.89 (.46)
Turnover intention	10	10-100	14.00	50.00	38.24 (6.25)	3.82 (.63)

\* p<.05, \*\* p<.01, \*\*\* p<.001, OPD: outpatient department, CN: charge nurse, HN; head nurse

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