

A Comparison of the Influence of Work Satisfaction and Job Stress on the Turnover Intention of Nurses in the General Ward and the Comprehensive Nursing Service Ward

Myung Suk Koh¹, Nam Suk Lee², Hyeon Cheol Jeong^{1*}

¹*Dept. of Nursing, Sahmyook University*

²*Dept. of Nursing, Sahmyook University Graduate School*

Hwarang-ro 815, Nowon-gu, Seoul, Korea

** Corresponding author: love2hc@syu.ac.kr*

Abstract

This study was conducted with the aim of providing baseline data for the establishment of policies for system enhancement, by identifying the influences of work satisfaction and job stress on turnover intention within the nursing force in the Comprehensive Nursing Service ward, a newly adopted service, and the General ward. The study subjects were nurses in the General and Comprehensive Nursing Service wards at two hospitals in Seoul, and one in Gyeonggi region. The survey was conducted in the form of a self-administered questionnaire. The study discovered no significant disparities between the two groups, with regard to the salience of the variables, namely, turnover intention and work satisfaction and job stress levels. In both groups, there was a significant negative correlation between work satisfaction level and turnover intention, and between turnover intention and job stress level. Moreover, in both groups, work satisfaction and job stress levels had significant influences on turnover intention. In conclusion, to enable the establishment of the Comprehensive Nursing Service ward system as an effective healthcare management system, nurses' work satisfaction and job stress levels must become critical factors of consideration. It is necessary for the system to evolve into a form that is satisfactory to patients, families, and nurses.

Keywords: *Comprehensive Nursing Service, General ward, Job Stress, Turnover Intention, Work Satisfaction*

1. Introduction

1) Importance of the Study

The nursing force, which plays a highly influential role in patient recovery, takes up the largest proportion of the workforce within a hospital, making up 30–40%. This group also has a direct influence on a hospital's reputation and customer evaluation, as they are responsible for many aspects of the medical service [1]. Moreover, the nursing profession involves direct contact with medical consumers and is a critical contributing factor towards service quality [2].

However, the current reality of the medical field is that there is a high prevalence of severe diseases even in the General ward. In addition, the development of new medical technology and equipment has contributed to additional pressure, ironically resulting in a decrease in work satisfaction [3], which is in inverse proportion to job stress, creating a vicious cycle of an increasing turnover rate. Based on these, nursing force management is coming to the fore in the area of hospital administration [4].

The high turnover rate of nurses places a heightened workload upon the remaining nursing force, resulting in a high proportion of new nurses and, ultimately, a decline in

the quality of nursing practice, which could hamper the achievement of the personal goals of those in the nursing profession [5]. As a result, there are many issues for the medical field to contend with, including, but not limited to financial loss and a decrease in the quality of patient nursing, workforce morale, and organizational efficiency and productivity [6].

According to the Hospital Nurses Association, the current domestic nurse turnover rate is at an average of 16.9%; the highest being 24.6% in hospitals with less than 200 beds and 7.9% in hospitals with more than 1000 beds. As for nurses' reasons for turnover, "moving to another hospital" was the most frequently cited, at 1791 (19.4%), followed by "marriage, childbirth, and child-rearing," at 1463 (15.9%), and "maladjustment at work," at 1195 (13.0%)[7].

However, social changes have occurred and the shifts in the population and industry structures have led to the contraction of family size from the nuclear family to a one-man family unit. Such changes in the social structure have led to the transition from the tradition of family members nursing each other when one falls ill, to the frequently observed trend of hiring a carer; this transition has revealed a number of issues [8]. The problem with this trend is that the financial burden placed on the family when opting to hire a carer becomes increasingly onerous as the patient's hospitalization period lengthens, even leading to conflict within the family. Other issues have arisen, where the patients' health can be at risk, as non-practitioner carers become responsible for their nursing [9].

The Ministry of Health and Welfare, aware of the abovementioned social issues, launched a prototype service model and began the test operation of "the Comprehensive Nursing Service ward" in July 2013. The Comprehensive Nursing Service ward is an operation of the Ministry of Health and Welfare, consisting of nurses and nurses' aides operating at a nurse-to-patient ratio of 1:7.6. This initiative was established with the aim of relieving patients' families of financial and physical burdens, by expanding the nursing force; its aim is also to provide psychological and financial counseling services, when required, in cooperation with social workers. Despite the initial expansion of the nursing force, however, in hospitals that have adopted this test operation system, the workload of nurses has continuously increased, as they take exclusive responsibility for the treatment, nursing, and caring of the patients. This inevitably leads to an increase in job stress and an upward trend in the turnover rate [10].

In spite of the above, there have been few studies on the relationship between the turnover intention of the General ward/Comprehensive Nursing Service ward nurses and their work satisfaction and job stress levels. Thus, this study was conducted as an attempt to provide baseline data for systematic and sustainable policy enhancement in future, by identifying the General ward/Comprehensive Nursing Service ward nurses' turnover intention and work satisfaction and job stress levels, and comparing these.

2) The Purpose of the Study

The aim of this study was to compare and analyze the turnover intention and work satisfaction and job stress levels of nurses working in the General ward and the Comprehensive Nursing Service ward; the specific goals of this study were as follows:

- Analyze disparities in turnover intention and work satisfaction and job stress levels between different types of wards.
- Analyze the correlations between turnover intention and work satisfaction and job stress levels 및.
- Analyze the influences of work satisfaction and job stress levels among nurses on their turnover intention.

2. Methods

1) Plan

This is a predictive study investigating and comparing work satisfaction and job stress levels, and turnover intention of nurses working in the General ward, the Comprehensive Nursing Service ward, and the Attended ward.

2) Study Subjects

The purpose of the study was explained to the nurses working in two hospitals located in S City and one in K province, where the Comprehensive Nursing Service ward was operational. Ward nurses who submitted their written consent to participate in the study, with an understanding of its purpose, were selected for participation.

The number of subjects was determined through G*Power Ver.3.1.2, a calculation program, with the level of significance at .05, power at .80, and effect size at .25, using 8 independent variables as standards; there were 109 participants per group and 218 in total [11]. In total, 253 questionnaires were distributed, with the elimination rate under consideration; 223 questionnaires were collected, indicating a response rate of 88.3%. The final number of subjects for analysis was 219.

3) Data Collection

Data collection took place between December 1, 2013 and January 10, 2014, and was carried out following approval by the nursing departments at the participating hospitals. Prior to data collection, the purpose of the study was explained to the participating nurses; they also gave their written consent.

4) Tools

This study utilized a structured questionnaire consisting of 11 questions on general characteristics, 44 on job stress, 33 on work satisfaction, and 3 on turnover intention.

• Level of Work Satisfaction

Work satisfaction refers to a favorable attitude towards one's job and is a psychological state signifying a positive attitude towards one's professional life [12]. Work satisfaction was measured using the Index of Work Satisfaction developed by Slavitt, Stamps, Piedomont, and Hasse [12], translated by Kim [13]. The index consists of questions on a four-point Likert-scale, including 33 questions and 6 sub-sections. The sub-sections include 7 questions on "remuneration and promotion", 6 on "work hours", 4 on "autonomy", 5 on "work satisfaction", 5 on "workplace relationships", and 6 on "organizational operating method"; higher scores indicate higher work satisfaction levels. In the study conducted by Kim [13], a Cronbach's alpha of .87, indicating reliability, was obtained; in this study, $\alpha = .85$.

• Job Stress

Job stress was measured through a tool developed by Kim and Gu [14], which consisted of 9 sub-sections, with 43 questions. Respectively, the sub-sections consisted of 6 questions "related to nursing practice," 4 on "internal conflict regarding role as a specialist," 5 on "the lack of professional knowledge and expertise," 4 on "conflict with the patients," 5 on "conflicts with the doctor," 4 on "relationships with other staff in the workplace," 4 on "limitations of medical practice," 5 on "the treatment of nurses," and 5 on "work schedule."

Each question was on a 4-point Likert scale, with 1 = “hardly felt” and 4 = “severely felt”; higher scores indicated higher job stress levels. The Cronbach's alpha, indicating reliability, was .95 during the tool's development by Kim and Gu [14]; in this study, $\alpha = .95$.

• Turnover Intention

Turnover intention was measured through a tool consisting of 3 questions, developed by Weisman et al. [15] and adapted by Park [16]. Each question was on a 4-point Likert scale ranging from “never” (1) to “always” (4); higher scores indicated higher turnover intention. In the study conducted by Park [16], a Cronbach's alpha of .95, indicating reliability, was obtained; in the current study, $\alpha = .84$.

5) Data Analysis

The collected data were analyzed using the SPSS Ver. 21 program, as described below. To identify the subjects' general characteristics, job stress levels, work satisfaction levels, and turnover intention were analyzed in terms of percentages, means, and standard deviations. To determine disparities in work satisfaction, job stress, and turnover intention between hospitals, an independent t-test was utilized. The correlations between work satisfaction, organizational commitment, and turnover intention were determined through Pearson's correlation coefficient.

An independent t-test was used to determine the work satisfaction, job stress, and turnover intention levels in each ward. The correlations between work satisfaction, organizational commitment, and turnover intention were determined through Pearson's correlation coefficient. Multiple linear regression was used to determine the influence of the nurses' work satisfaction and job stress levels on their turnover intention.

3. Results

1) General Characteristics

The general characteristics of the nurses working in the General ward are shown in <Table 1>.

The largest age bracket was 25–29 in both groups and “nursing vocational college” was the most common, highest level of education completed. With regard to marital status, most of the participants were single. With regard to employment period, the period most frequently cited in the General ward was 1–3 years, by 44 nurses (49.6%), and that in the Comprehensive Nursing Service ward was less than 1 year, by 50 nurses. With regard to employment period in the current department, the most common category was 1–2 years for both groups. With regard to the level of work satisfaction in the current ward, “average” made up the largest category, and “satisfactory” made up a larger category, as compared to “unsatisfactory.” The largest category with regard to wages was “more than 30 million won” in both groups.

Table 1. General Characteristics

Characteristics	Categories	General ward	Comprehensive nursing care ward
		n(%)	n(%)
Age	22~24	31(27.7)	41(38.3)
	25~29	56(50.0)	53(49.5)

	30~39	19(17.0)	10(9.3)
	over 40	6(5.4)	3(2.8)
Education level	College	74(66.1)	74(69.2)
	University	32(28.6)	31(29.0)
	Over graduate school	6(5.4)	2(1.9)
Marital status	Single	92(82.1)	95(88.8)
	Married	20(17.9)	12(11.2)
Total clinical Experiences (year)	Under 1	29(25.9)	50(46.7)
	1~3	44(39.3)	31(29.0)
	4~10	25(22.3)	19(17.8)
	Over 11	14(12.5)	7(6.5)
Experiences in present unit (year)	Under 1	12(10.7)	26(24.3)
	1 ~ 2	66(58.9)	57(53.3)
	3 ~ 4	21(18.8)	17(15.9)
	Over 5	13(11.6)	7(6.5)
Year salary (10,000won)	under 2,000	10(8.9)	12(11.2)
	2,000~2,500	29(25.9)	28(26.2)
	2,500~3,000	33(29.5)	31(29.0)
	over 3,000	40(35.7)	36(33.6)

2) Disparities between Ward Types in Turnover Intention and Work Satisfaction and Job Stress Levels

Results per ward type are shown in <Table 2>.

The General ward nurses obtained an average of 2.43 (0.27) for work satisfaction, and the Comprehensive Nursing Service ward nurses obtained that of 2.43 (0.25), indicating no significant disparity. The General ward nurses further obtained an average of 2.34 (0.52) for job stress, and the Comprehensive Nursing Service ward nurses obtained that of 2.41 (0.47), displaying no significant disparity. Only the sub-section on “the treatment of nurses” displayed a significant disparity; the Comprehensive Nursing Service ward nurses obtained a higher score ($t = -2.42, p = .017$). Moreover, the General ward nurses obtained an average of 2.60 (0.77) for turnover intention and the Comprehensive Nursing Service ward nurses obtained that of 2.56 (0.71), indicating no significant disparity.

Table 2. The Differences of Variable According to Ward Types

Variables	Categories	General ward	Comprehensive nursing care ward	t	p
		n=112	n=107		
		M(SD)	M(SD)		
Work	Salary & promotion	2.12(0.40)	2.18(0.36)	-1.13	.260
	Work hours	2.58(0.35)	2.58(0.28)	-0.11	.914

satisfaction	Autonomy	2.44(0.28)	2.41(0.29)	0.62	.536
	Job satisfaction	2.56(0.49)	2.48(0.49)	1.18	.241
	Inter personal relationship	2.60(0.37)	2.59(0.39)	0.30	.761
	Organizational operating method	2.27(0.51)	2.33(0.50)	-0.90	.368
	Total	2.43(0.27)	2.43(0.25)	-0.03	.978
Job	Nursing activities	2.11(0.50)	2.11(0.57)	0.02	.987
	Role conflict	2.35(0.60)	2.39(0.67)	-0.46	.646
	Expertise) skills shortages	2.44(0.69)	2.45(0.73)	-0.04	.968
	Conflict with patients	2.06(0.71)	2.10(0.75)	-0.44	.662
	Conflict with physicians	2.25(0.73)	2.26(0.75)	-0.12	.906
Stress	Other personal relationship	2.64(0.83)	2.76(0.79)	-1.07	.287
	Stress of limitations of medical treatment	2.48(0.61)	2.56(0.49)	-0.95	.345
	Treatment of nurses	2.58(0.63)	2.78(0.60)	-2.42	.017
	work schedule	2.15(0.70)	2.30(0.66)	-1.57	.119
	Total	2.34(0.52)	2.41(0.47)	-1.05	.297
Turnover Intention	Turnover Intention	2.60(0.77)	2.56(0.71)	0.46	.643

3) The Correlations between the Research Variables per Ward Type

The correlations between work satisfaction and job stress levels and turnover intention in the General and Comprehensive Nursing Service wards are shown in <Table 3>.

There was a statistically significant, negative (-) correlation ($r = -.55, p < .001$) between work satisfaction and turnover intention among General ward nurses. Moreover, there was a statistically significant, negative (-) correlation ($r = -.43, p < .001$) between job stress and turnover intention.

There was a statistically significant, negative (-) correlation ($r = -.55, p < .001$) between work satisfaction and turnover intention in the Comprehensive Nursing Service ward. There was also a statistically significant, negative (-) correlation ($r = -.41, p < .001$) between job stress and turnover intention.

Table 3. The Correlations between Work Satisfaction and Job Stress Levels and Turnover Intention in the General and Comprehensive Nursing Service Wards

Ward Type	Variables	Work satisfaction	Job Stress	Turnover Intention
General ward	Work satisfaction	1		
	Job Stress	.37(<.001)	1	
	Turnover Intention	-.55(<.001)	-.43(<.001)	1
Comprehensive nursing care ward	Work satisfaction	1		
	Job Stress	.30(.002)	1	
	Turnover Intention	-.55(<.001)	-.41(<.001)	1

4) The Influence of General Ward Nurses' Work Satisfaction and Job Stress Levels on their Turnover Intention

Multiple linear regression was executed to determine the explanatory power of the independent variables on turnover intention. Prior to the analysis, several hypotheses regarding the multiple linear regression were confirmed. Firstly, they were confirmed through the evaluation of multicollinearity between the independent variables, and no multicollinearity was indicated, with the variance inflation factor (VIF) value at 1.161–1.161; all the values were below 10. The Durbin-Watson statistic value was 1,878–2.214, in proximity to the standard value, 2, and satisfied residual mutual independence, thus satisfying the assumptions of multiple regression analysis.

When multiple linear regression was carried out in the General ward, work satisfaction ($t = -5.50, p < .001$) and job stress ($t = -3.10, p = .002$) had significant influences on turnover intention, the dependent variable. This means that the higher the work satisfaction level ($B = -1.319$) and/or job stress level ($B = -.379$), the lower the turnover intention. The explanatory power of these variables, indicating the extent to which they accounted for the dependent variable, was 34.7% ($\text{adj}R^2 = .347$). Among the independent variables, the level of work satisfaction ($\beta = -.455$) had a greater influence (Table 4).

In the case of the Comprehensive Nursing Service ward, work satisfaction ($t = -5.76, p < .001$) and job stress ($t = -3.23, p = .002$) also had a significant influence on turnover intention, the dependent variable. This means that the higher the work satisfaction level ($B = -1.327$) and/or job stress level ($B = -.404$), the lower the turnover intention. The explanatory power of these variables, indicating the extent to which they accounted for the dependent variable, was 35.5% ($\text{adj}R^2 = .355$) <Table 4>. Among the independent variables, the level of work satisfaction ($\beta = -.471$) had a greater influence (Table 4).

Table 4. The Influence of Work Satisfaction and Job Stress on their Turnover Intention

Ward type	Variables	B	SE	β	t	p	VIF
General ward	(constant)	6.692	.547		12.22	<.001	
	Work satisfaction	-1.319	.240	-.455	-5.50	<.001	1.161

	Job Stress	-.379	.122	-.256	-3.10	.002	1.161
adjR ² =.347, F=30.52, p<.001							
	(constant)	6.752	.553		12.22	<.001	
Comprehensive nursing care ward	Work satisfaction	-1.327	.230	-.471	-5.76	<.001	1.099
	Job Stress	-.404	.125	-.264	-3.23	.002	1.099
adjR ² =.355, F=30.12, p<.001							

4. Discussion and Conclusion

This study was conducted with the aim of comparing and analyzing turnover intention and work satisfaction and job stress levels among clinical nurses who work in the General and Comprehensive Nursing Service wards, in an effort to provide baseline data for effective management of the nursing force.

The level of work satisfaction in both wards was 2.43; it was slightly lower than that of nurse practitioners, at 2.61, and that of nurse anesthetists, at 2.56 [17]. However, in the study conducted by Lee [18] on neurosurgery nurses, the score was 2.43, similar to that in this study.

The low level of work satisfaction found in this study might be attributable to the fact that the hospitals under study were public hospitals and that the Comprehensive Nursing Service ward is a new government project and, therefore, prone to maladjustment to the administrative system. This necessitates further research on this issue. The low work satisfaction level could further be explained by the fact that, in previous studies, the subjects were advanced-practice nurses who, compared to the general nurses in this study, performed more specialized and professional work and had a higher level of pride in their jobs, as a result.

The job stress level was 2.34, and that in the Comprehensive Nursing Service ward was 2.14. This figure is lower than that obtained in the study on clinical nurses, at 2.80 [19] or that in the study on emergency room nurses, at 2.67 [20]. Such results may be due to the fact that with the introduction of the Comprehensive Nursing Service, responsibilities previously carried by the patients' guardians were transferred onto the nurses in the ward, where the workforce was insufficiently prepared for the increase in workload. Thus, to reduce job stress, a close analysis of the workload of attending nurses is deemed necessary. Moreover, based on the analysis, the workforce must be properly managed.

The average turnover intention score obtained for the General ward was 2.60, and that obtained for the Comprehensive Nursing Service ward was 2.56. In the study conducted by Park [21] on general hospital nurses, a score of 2.46 was obtained, displaying a similar result. This trend seems to reflect the gloomy economic climate throughout society and the consequent lack of jobs for individuals to take up.

Upon testing for differences in the manifestation of the research variables between the two wards, turnover intention and work satisfaction and job stress levels did not significantly differ between the nurses in the General ward and those in the Comprehensive Nursing Service ward. However, in "the treatment of nurses" category, one of the sub-sections of job stress, a higher score was obtained in the Comprehensive Nursing Service ward, compared to that in the General ward. The Operation of the Comprehensive Nursing Service ward is a system in which the nursing and caring of patients are, in their entirety, the responsibility of nurses, with no involvement of guardians or caregivers. This places a heavy workload on the nurses. In contrast, the

General ward system enables guardians or personally hired caregivers to take up residence and take full responsibility for or assist in patients' nursing, as has been done traditionally. Thus, this disparity may be attributed to operational differences; however, further examination is necessary, as there may be other reasons.

There was a negative correlation between work satisfaction and turnover intention in both the General ward and the Comprehensive Nursing Service ward, indicating that, the higher the work satisfaction, the lower the turnover intention. In the study conducted by Yang [22], work satisfaction and turnover intention reportedly yielded a significant negative correlation; the result is similar to that obtained in this study. Previous studies [23] have shown that, the lower the salary, the higher the turnover intention, thereby indicating that the comparatively high workload that nurses assume following the introduction of a new service, coupled with continuous care provision to patients, without salary increases, makes them more prone to turnover, as opposed to adapting to the system. Therefore, to prevent turnover among skilled nurses, the implementation of a sliding salary scale for experienced or special ward nurses could be a possible solution. Lowering the turnover rate can reduce the financial loss incurred in the hiring and training of new nurses. In addition, since working while having turnover intention can have a negative influence on the efficiency of the institution, a hospital-wide management strategy aimed at reducing nurses' turnover intention is crucial.

Analysis of the influence of work satisfaction and job stress, respectively, on turnover intention indicates that in wards, higher work satisfaction or job stress results in lower turnover intention. In particular, institutional remedial measures aimed at preventing the nurses in the Comprehensive Nursing Service ward from transferring are crucial; this would increase the explanatory power of the Comprehensive Nursing Service ward and ensure that the newly introduced system becomes well-established.

It transpired that, among the two variables of this study, work satisfaction level had a higher influence on turnover intention. Previous studies [24] have also shown that severe emotional labor causes job stress and lowers work satisfaction, directly affecting the level of turnover intention. According to Koh [25], the reduction of nurses' emotional labor should take the highest priority, in order to reduce their turnover intention. The survey also revealed that nurses' level of emotional labor was above average and that higher levels of emotional labor led to higher turnover intention.

In conclusion, the Comprehensive Nursing Service ward is a pilot project preceding the implementation of a new system. The system is not yet well-established, and neither have the nurses adequately adapted, meaning that there are opportunities for mutual enhancement. For the system to be implemented as an effective healthcare management system for future patients, nurses' work satisfaction and job stress must be taken into account and the system should be developed in a way that can satisfy patients, their families, and the nurses.

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