



Effects of Changes in Reality Shock among New Nurses on Turnover Intention in South Korea

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Purpose: This study aimed to investigate the changes in reality shock among new nurses and their influencing factors to identify turnover reduction methods. **Methods:** A total of 146 new nurses from 6 general hospitals participated in the survey. The survey data were collected from August 5 to November 10, 2015. **Results:** The mean scores for factors related to turn over were 2.75 for nurse practice environment, 2.84 (4point scale) for reality shock, and 3.08 (5point scale) for turnover intention. A significant difference in the impact of reality shock was observed depending on whether the nurses selected their work unit ($F=6.24, p=.003$) and whether they could take the possibility of holiday on the desired day at will ($t=-2.57, p=.013$). Changes in reality shock correlated with turnover intention, with the 'increased reality shock' group demonstrating an odds ratio of 2.37 (CI: 1.41~3.98) for turnover intention. **Conclusion:** The current findings indicate the need for lowering reality shock and turnover intention by considering nurses' work-related characteristics and improving their practice environments. To further study the changes in reality shock new nurses experienced, additional research is warranted while homogenizing the participants in terms of preceptorship duration and timing of independence.

Key Words: Reality shock; Turnover; Intention

INTRODUCTION

Various changes in the medical environment have recently occurred due to the diversification of medical consumers, the opening of the medical market, improved resources, and payment system change. Amid these changes, hospital organizations recognize the importance of effective financial management, qualitative workforce management, and achievement of organizational goals (Kim & Kwon, 2014). The high turnover rate among nurses, which creates increased workload and stress in incumbent nurses, increased turnover of other nurses and decreased quality of nursing care, has been considered a serious concern in the continuity and expertise of the nursing profession. Moreover, the high cost of hiring new nurses can create considerable financial losses to the hospital.

According to the "Investigation on the Status of Hospital Nursing Personnel Placement" survey conducted by the Hospital Nursing Society in 2015, the average nurse turnover rate is 12.6%, with such rates decreasing as hospital bed size increases. Moreover, the main causes for job changes in senior hospitals include marriage, childbirth,

and child-rearing (17.7%), maladaptation and stress (12.4%), and transition to other occupations (11.6%). In contrast, the main reason for the same in general and other hospitals is turnover (21.05%). In particular, among 13,779 new nurses in 2014, 4,612 (33.5%) terminated their occupation. The timing of job change occurred before on-site training (14.4%), after regular issuance (10.6%), during temporary work (5.6%), and during on-site training (2.8%) (Hospital Nurses Association, 2015). Meanwhile, reports in the United States have shown that 35% to 60% of new nurses leave within a year of employment (Halfer & Graf, 2006). Although new nurses inevitably experience shock and hardship with the organizational process of joining a hospital, a turnover intention exceeding 60% among new nurses is a cause for concern Lavoie-Tremblay, O'Brien-Pallas, Gelinias, Desforages, & Marchionni, 2008). Understanding the difficulties new nurses face at the hospital organizational level during their first year, including preceding factors for turnover, and providing institutional support for new nurses to develop as members of the organization consistently, is imperative.

New nurses enter the hospital working environment

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thinking that the curriculum taught in school will be effective. Therefore, they have high expectations for such an environment and believe they can provide high-quality nursing services within their working environment (Kramer, Brewer, & Maguire, 2013). However, the actual nursing work environment within a hospital is vastly different from that expected by new nurses, causing them to experience reality shock. A hospital is a special environment that requires meticulous interdependent work and has a complex structure involving several professional occupations and various personnel, with horizontal and vertical relationships existing simultaneously (Kang & Che, 2013). Although hospital nurses take charge of most primary treatments and rehabilitations, they have relatively poor hospital organizational culture and work area characteristics (Sin, Kwon, & Kim, 2014). Such a hospital working environment may intensify the reality shock experienced by new nurses.

Most of the previous studies on new nurses have shown that some of them exhibit lack of knowledge and skills, stress, and poor job satisfaction, conflict in human relations during the adaptation process, and factors related to turn over or turnover intentions, such as job satisfaction and organization commitment, stress, and burnout. Given that reality shock is a concept representing the difficulties experienced while transitioning from students to actual nurses, understanding the degree of reality shock among new nurses and identifying related factors may be meaningful.

Therefore, this study aimed to determine methods for reducing shock, which has been identified as a factor related to turn over or turnover intention among new nurses in previous studies, by identifying turnover intentions according to changes in reality shocks among new nurses, focusing on the nursing work environment. Moreover, the present study aims to promote effective nursing workforce management by providing basic data to develop interventions to reduce workforce turnover.

This study sought to provide basic data to help determine methods for lowering turnover intentions by identifying changes in reality shock among new nurses and associated factors. The specific aims of the current study are as follows: (1) identify changes in reality shock and turnover intention over time; and (2) determine the effects of changes in shock on turnover intention.

METHODS

1. Study Design

According to the working period, this exploratory re-

search study aimed to identify factors affecting reality shock and turnover intention. We repeatedly measured reality shock and intention to turn over a period of 3 to 7 months from the time new nurses were employed.

2. Research Subject

This study included new nurses from six general hospitals located in the Gyeonggi area who agreed to participate in the study and had been practicing for at least 2 months but fewer than 4 months. The target hospital was a general hospital with more than 400 beds, with one special corporation, three school corporations, and two medical corporations included as part of its establishments. Sample size calculation determined G*Power 3.1 that 107 samples were required to maintain a significance level of 0.05, the median effect size of 0.15, and the power of 80% for multiple regression analysis. After accounting for dropouts, a questionnaire was distributed to 150 individuals in the first survey, all of whom returned their questionnaire. In the second survey, however, four individuals were excluded, resulting in a total sample size of 146.

3. Research Instruments

1) Nursing practice environment

The current study utilized the Korean Version of Practice Environment Scale of Nursing Work Index (K-PES-NWI) developed by Lake and verified by Cho, Choi, & Kim et al. (2011) for reliability and validity.

This tool consists of 29 questions across 5 sub-areas: nurse participation in hospital operation, the foundation for quality nursing, nursing manager's ability, leadership, support for nurses, sufficient workforce and physical support, and cooperation between nurses and doctors.

Each question is measured on a 4-point Likert scale, with scores ranging from 29 to 116. Higher scores indicate a more positive perception of one's nursing work environment (Lake, 2002). Upon development, the PES-NWI had good reliability (Cronbach's $\alpha = .93$), with the same noted in the current study (Cronbach's $\alpha = .93$).

2) Reality shock

This study utilized the Environmental Reality Shock Instrument Issues and Concerns (ERS-RIC) developed by Kramer, Brewer, and Maguire to measure reality shock. To use this tool, the researcher translated the questionnaire into Korean after obtaining approval from the developer.

This tool consists of 22 questions that inquire regarding the issues and areas of interest related to new nurse's real-

ity shock. Each question is measured on a 4-point Likert scale ranging from "very concerned" (4 points) to "not at all concerned" (1 point), with possible scores ranging from 22 to 88 points. Higher scores indicate greater reality shock among new nurses. Shin et al. (2014) found that the ERS-RIC had a Cronbach's α of .89, while the current study showed that the same tool had a Cronbach's α of .88 and .86~.87 for each item.

3) Turnover intention

The present study utilized the turnover intention tool developed by Lawler (1983) and modified and supplemented by Park (2002) per the situation in Korea. This tool employed a 5-point Likert-type scale comprising four questions, with higher scores indicating a higher the turnover intention. Total scores can range from 4 to 20 points. Park (2002) study found that this tool had a Cronbach's α of .88, while our study found a Cronbach's α of .87.

4. Data Collection

Prior to data collection for this study, approval had been obtained from the research ethics committee (IRB No: NHIMC2015-07-006-001) of the hospital to which the researcher belongs. After visiting the hospital's nursing unit, explaining the research purpose and methodology, and obtaining permission, the first and second rounds of data collection were conducted from August 5 to 10, 2015, and November 15 to 11, 2015, respectively. Data for the same subject were collected until the 20th of each month.

5. Data Analysis

Collected data were analyzed using the SPSS 21.0 program. New nurses' general and work characteristics were analyzed using frequencies, percentages, averages, and standard deviations. The t-test and ANOVA were used to determine differences in reality shock according to new nurses' characteristics. A hierarchical multiple regression analysis was conducted to identify factors influencing turnover intention. The generalized estimating equation was used to estimate the effects of changes in reality shock over time on turnover difficulty.

RESULTS

1. Participants Characteristics

Table 1 shows the general characteristics of the included participants. Accordingly, participants had an average age

Table 1. General Characteristics of the Participants (N=146)

Variables	Categories	n (%) or M \pm SD
Age (year)		22.9 \pm 1.47
Gender	Men	10 (6.8)
	Women	136 (93.2)
Educational level	Associated degree	52 (35.6)
	Bachelor degree	94 (64.4)
Relocation of residence due to employment	Yes	85 (58.2)
	No	61 (41.8)
Monthly income (10,000 won)	< 200	19 (13.0)
	200~ < 250	79 (54.1)
	250~ < 300	41 (28.1)
	\geq 300	7 (4.8)
Present career (month)	2	13 (8.9)
	3	43 (29.5)
	4	90 (61.6)
		3.52 \pm 0.66
Working unit	General ward	89 (61.0)
	Special unit (ICU & OR)	31 (21.2)
	OPD & Others [†]	26 (17.8)
Experience the hospital present practice	Yes	48 (32.9)
	No	98 (67.1)
Whether the work unit was chosen	Wanted	70 (47.9)
	Not wanted but good	65 (44.5)
	Not wanted	11 (7.5)
The possibility of holiday on the desired day	Yes	37 (25.3)
	No	109 (74.7)
Period of preceptorship (week)	1~4	80 (54.8)
	5~8	55 (37.7)
	9~12	11 (7.5)
		5.45 \pm 2.21
Pre-education period (week)	\leq 1	87 (59.6)
	2~3	38 (26.0)
	4~6	21 (14.6)
		1.73 \pm 1.12
Work hours per week		49.98 \pm 7.90
Number of patient per registered nurses		12.40 \pm 8.29

[†] Children's ward, vip ward, delivery room.

of 22.9 \pm 1.47 years, with 10 males (6.8%) and 136 females (93.2%). Regarding educational background, 94 students (64.4%) graduated from a bachelor degree, whereas more than 52 (35.6%) graduated from associate degree. The average working period was 3.52 \pm 0.66 months, with 90 (61.6%), 43 (29.5%), and 13 (8.9%) subjects having worked for 4, 3, and 2 months, respectively. The most common

work unit was the general ward in 89 (61.0%) subjects, followed by special units in 31 (21.2%) and outpatients and other units in 26 (17.8%). Moreover, 48 (32.9%) participants stated that "the current place of work was a place where they practiced in college", while 98 (67.1%) answered that "the current place of work was a place where they did not practice in college". Furthermore, 70 (47.9%), 65 (44.5%), and 11 (7.5%) respondents expressed that their current unit matches the unit they wished to have been deployed, was "different from the desired unit but good", and "unit not desired", respectively. Meanwhile, 37 (25.3%) and 109 (74.7%) respondents answered "yes" and "no" to the possibility of holiday on the desired day.

New nurses had an average preceptorship period of 5.45 ± 2.21 weeks, with 80 (54.8%), 55 (37.7%), and 11 (7.5%) nurses having a preceptorship period lasting 1~4, 5~8, and 9~12 weeks, respectively. The average pre-education period before unit placement lasted for 1.73 ± 1.12 weeks, with 87 (59.6%) and 38 (25.5%) having a pre-education period within 1 week and 2~3 weeks, respectively. Also pre-education period in 4~6 week was 21(14.6%) nurses. New nurses had an average of 49.98 ± 7.90 working hours per week, with each nurse having an average number of 12.40 ± 8.29 patients.

2. Differences in the Degree of Reality Shock according to Participants Characteristics

After determining the degree of reality shock experienced by new nurses according to their general and work-related characteristics, significant differences in the availability of the desired unit the possibility of holiday on the desired day were noted. In other words, new nurses not currently assigned to their wanted unit ($F=6.24, p=.003$) and cannot avail of the possibility of holiday on the desired day ($t=-2.57, p=.013$) had higher reality shock compared to others.

Repeat survey 3 months after the basic survey showed that the degree of reality shock increased by 0.22 points on average to 3.05 ± 0.22 points after 2 months in present career. Moreover, an average increase of 0.03 points was observed after 3 months, with no change having been observed after 4 months. This is because the reality real shock of new nurses increases at 4 and 5 months after entering the company, which can be attributed to the period of independence after the preceptorship period. Furthermore, our data showed that longer preceptorship periods promoted lower reality shocks, although differences were not significant (Table 2).

3. Factors influencing reality shock and turnover intention

Hierarchical multiple regression analysis was conducted to control the order at which a series of independent variables are input to understand the effects of reality shock on the turnover intention of new nurses. Prior to analysis, multicollinearity was confirmed. Accordingly, the tolerance range was 0.45~0.86, which was 0.1 or more, while the Variance Inflation Factor value was 1.25~3.15, which did not exceed the standard value of 10, thereby confirming no multicollinearity problems.

Table 3 summarizes the factors influencing new nurse's shock and turnover intention. When the work-related characteristics were initially input into the survey (Model 1), the explanatory power was 2.0%. When the nursing work environment characteristics were subsequently added to Model 1 (Model 2), the explanatory power increased to 20.0%. Finally, when reality shock was added to Model 2 (Model 3), the explanatory power increased by 11.7% to 31.7%. In Model 3, factors that influenced turnover intention included nurse practice environment ($\beta=-.84, p<.001$) and reality shock ($\beta=.77, p<.001$).

4. Changes in the Actual Shock and Intention to Turnover by the Subject's Lapse of Time

Table 4 shows the results of analyzing the relationship between the subject's actual shock difference and the change in turnover intention over time.

As for the turnover intention of new nurses, after 3 months, the turnover intention score of the group with high reality shock showed a significant interaction between the group with no change and the group that decreased ($F=5.46, p=.005$).

In the group with increased reality shock, the new nurse's turnover intention score increased significantly from an average of 2.99 ± 0.77 points to an average of 3.40 ± 0.84 points when evaluated after 3 months ($t=-4.88, p<.001$). In the mean of 2.95 ± 0.65 points, the average of 3.55 ± 0.64 points at re-irradiation after 3 months increased significantly ($t=-2.84, p=.020$), and there was no significant change in the decreasing group ($t=0.37, p=.715$).

5. The Effect of Changes in the Participant's Reality Shock on Turnover Intention

Table 5 shows the results of applying the Generalized Estimating Equation (GEE) in consideration of the characteristics of data repeatedly measured for reality shock and

Table 2. Difference of Reality Shock according to Characteristics of Participants

Variables	Categories	Baseline (n=146)		3mth later (n=146)	
		M±SD	t or F (p) Scheffé	M±SD	t or F (p)
Gender	Men	2.65±0.31	-1.58	2.73±0.35	-1.24
	Women	2.85±0.39	(.116)	2.87±0.35	(.217)
Educational level	Associated degree	2.81±0.37	-0.70	2.83±0.36	-1.00
	Bachelor degree	2.86±0.39	(.488)	2.89±0.35	(.318)
Relocation of residence due to employment	Yes	2.87±0.37	0.89	2.85±0.37	-0.57
	No	2.80±0.42	(.376)	2.89±0.34	(.570)
Conditions of employment	Permanent	2.85±0.38	0.59	2.88±0.37	0.52
	Temporary	2.81±0.41	(.559)	2.84±0.31	(.601)
Monthly income (10,000 won)	< 200	2.67±0.44	2.62	2.83±0.28	1.36
	200~< 250	2.84±0.38	(.053)	2.92±0.38	(.259)
	250~< 300	2.86±0.37		2.80±0.32	
	≥ 300	3.13±0.30		2.74±0.31	
Present career (month)	2	2.83±0.61	0.01	3.05±0.22	2.08
	3	2.84±0.33	(.997)	2.87±0.32	(.129)
	4	2.84±0.38		2.84±0.38	
Working unit	General ward	2.86±0.42	0.27	2.89±0.35	1.01
	Special unit (ICU & OR)	2.81±0.32	(.764)	2.79±0.32	(.365)
	OPD & Others	2.81±0.35		2.86±0.39	
Experience the hospital present practice	Yes	2.90±0.34	1.34	2.89±0.28	0.58
	No	2.81±0.41	(.183)	2.85±0.39	(.562)
Whether the work unit was chosen	Wanted ^a	2.78±0.39	6.24	2.82±0.35	1.59
	Not wanted but good ^b	2.83±0.36	(.003)	2.90±0.36	(.208)
	Not wanted ^c	3.20±0.40	a, b < c	2.99±0.32	
The possibility of holiday on the desired day	Yes	2.68±0.45	-2.57	2.92±0.34	1.09
	No	2.89±0.35	(.013)	2.85±0.36	(.279)
Period of preceptorship (week)	1~4	2.81±0.42	0.76	2.82±0.36	1.80
	5~8	2.87±0.36	(.471)	2.93±0.34	(.169)
	9~12	2.94±0.28		2.78±0.34	
University hospital	Yes	2.91±0.35	1.75	2.89±0.37	0.59
	No	2.79±0.41	(.083)	2.85±0.35	(.557)

turnover intention to analyze the effect of changes in the subject's reality shock on turnover intention. same. The reference group was selected as a group with a low degree of intention to turnover, and if there were multiple categories, the higher the rank value was given to the group known to have higher intention to turnover. According to the results, the degree of reality shock (OR=2.37, 95% CI: 1.41~3.98), the degree of nursing work environment (OR=2.76, 95% CI: 1.39~5.48), whether the clinical practice hospital and the current service hospital match (or not) (OR=0.44, 95% CI: 0.24~0.81) was a statistically significant variable. Compared to the low-impact group, the high group had a 2.37 times higher job turnover intention. In addition,

the turnover intention was 2.76 times higher in the low group than in the group with good nursing work environment (Table 5).

DISCUSSION

This study is a longitudinal and exploratory study to understand the impact of their level of reality shock on turnover intentions to provide basic data for effective manpower management of new nurses. 150 new nurses with more than 2 months and less than 4 months of experience working in 6 general hospitals located in Gyeonggi-do were targeted, but 4 were eliminated in the second sur-

Table 3. Factor of Affecting Turnover Intention at 3 mth Later

(N=146)

Variables	Model 1			Model 2			Model 3		
	Parameter estimate	t or F	p	Parameter estimate	t or F	p	Parameter estimate	t or F	p
(Intercept)	3.72	7.91	<.001	6.22	10.17	<.001	3.67	4.78	<.001
Monthly income		1.51	.214		0.97	.409		1.19	.317
< 1,800 won	0.00	-	-	0.00	-	-	0.00	-	-
1,800~<2,240 won	-0.14	-0.73	.466	0.00	0.03	.975	-0.05	-0.35	.728
2,240~<2,700 won	-0.22	-1.01	.314	0.00	0.04	.969	0.05	0.31	.758
≥ 2,700 won	-0.72	-2.07	.040	-0.46	-1.46	.146	-0.43	-1.47	.144
Experience the hospital present practice		3.40	.067		3.74	.055		2.58	.110
Yes	0.00	-	-	0.00	-	-	0.00	-	-
No	-0.25	-1.85	.067	-0.24	-1.93	.055	-0.18	-1.61	.110
Whether the work unit was chosen		2.11	.125		0.84	.431		0.55	.576
Wanted	0.00	-	-	0.00	-	-	0.00	-	-
Not wanted but good	0.28	2.04	.043	0.16	1.30	.196	0.07	0.62	.539
Not wanted	0.22	0.86	.392	0.08	0.36	.719	-0.13	-0.60	.552
The possibility of holiday on the desired day		0.07	.785		0.24	.628		0.01	.916
Yes	0.00	-	-	0.00	-	-	0.00	-	-
No	-0.04	-0.27	.785	-0.06	-0.49	.628	0.01	0.10	.916
Work hours per week	-0.00	-0.39	.700	-0.00	-0.98	.328	-0.00	-0.42	.672
Nurse practice environment	-	-	-	-0.88	-5.68	<.001	-0.84	-5.87	<.001
Reality shock	-	-	-	-	-	-	0.77	4.89	<.001
	R ² =.07, Adjusted R ² =.02 F=1.37, p=.213			R ² =.25, Adjusted R ² =.20 F=5.08, p<.001			R ² =.36, Adjusted R ² =.31 F=7.74, p<.001		

Table 4. Changes in Turnover Intention according to the Degree of the Reality Shock

(N=146)

Variables	Groups	Baseline	3mth later	Time effect by group*		Group×time effect [†]		
		M±SD	M±SD	t	p	F	p	d [‡]
Turnover intention	Increase (n=73)	2.99±0.77	3.40±0.84	-4.88	<.001	5.46	.005	0.28
	No change (n=10)	2.95±0.65	3.55±0.64	-2.84	.020			
	Decrease (n=63)	3.18±0.79	2.21±0.70	-0.37	.715			

*paired t-test; [†]by one-way repeated measured ANOVA; [‡]Effect size.

vey, and a total of 146 were targeted.

Summarizing the results of the study, the average age of the subjects was 22.88 years and the average career was 3.52 months. At the time of the basic survey of the subject, the actual shock was 2.84 out of 4 points, and at the re-examination after 3 months, it increased to 2.87 points, which was slightly higher than the middle. Kramer et al. (2013) measured 468 new nurses in the United States using the same tool. As indicated by dots, reality shock was somewhat lower than that of this study subject. In addition, the result of a measurement of 216 new nurses in gen-

eral hospitals less than one year by Sin et al. (2014). In the study of Kramer et al. (2013), it was found that the reality shock was high at 4 months after employment and slightly lowered at 8 months, which is a cultural difference between the environment and the culture. It is believed to have originated from, and it will be necessary to confirm this through the same study in the future. The nursing work environment perceived by the subject was 2.75 out of 4 points.

The participants of this study generally agreed that their nursing work environment was good, but the "suffi-

Table 5. Effect of Changes in the Reality Shock on Turnover Intention of Participants

(N=146)

Variables	β	SE	OR (95% CI)	<i>p</i>
Reality shock	0.86	0.26	2.37 (1.41~3.98)	< .001
Nurse practice environment	1.01	0.35	2.76 (1.39~5.48)	.004
Relocation of residence due to employment	-0.05	0.29	0.95 (0.53~1.70)	.854
Present career (month)	0.75	0.34	2.13 (1.09~4.14)	.059
Experience the hospital present practice	-0.82	0.31	0.44 (0.24~0.81)	.008
Whether the work unit was chosen	0.32	0.30	1.38 (0.76~2.52)	.295
The possibility of holiday on the desired day	0.28	0.33	1.33 (0.69~2.58)	.392
Period of preceptorship (week)	1.27	0.58	3.56 (1.12~11.31)	.098
Work hours per week	-0.14	0.32	0.86 (0.46~1.64)	.655

*Reality shock: low (standard), high/Nurse practice environment: good (standard), bad

Relocation of residence due to employment: no (standard), yes/Present career (month): 2 month (standard), 3 month, 4 month

Experience the hospital now practice: yes (standard), no/Whether the work unit was chosen: yes (standard), no the possibility of holiday on the desired day yes (standard), no

Period of preceptorship (week): 9~12 wks (standard), 5~8 wks, 1~4 wks

Work hours per week: < 45hr (standard), \geq 45hr

cient manpower and material support” area was found to be the worst with 2.27 points. This is similar to the lowest score of 2.15 in the “sufficient manpower and material support” field in the research results of Sin et al. (2014), which surveyed new nurses with the same tool. In addition, the research results of Anzai, Douglas, & Bonner (2014). Therefore, it is believed that efforts to secure sufficient nursing personnel, which are essential for qualitative nursing performance, are necessary.

Turnover intention recognized by the subjects was 3.07 points on average at the time of the basic survey, and increased to 3.33 points at the time of re-examination after 3 months, which was slightly higher than the middle.

This was slightly higher than the 2.94 points of Cho (2013), a previous study targeting new nurses, but lower than the 3.52 points, a study result of Yang & Kang (2013). On the other hand, as a result of Yoon & Kim (2010), an average of 3.57 points for career nurses who are employed in general hospitals in Seoul with more than 500 beds, and as a result of Kim & Lee (2014). The intention was an average of 3.45 points, indicating that the turnover intention was lower than that of the nurses who used the same tool, indicating that the new nurse had less thoughts about the turnover. On the other hand, this study showed that the new nurse's turnover intention score was significantly higher at the time of re-examination after 3 months because it was the period of independent independence after the end of the preceptorship period. It is believed to have been made.

It was found that the degree of reality shock of the sub-

jects assigned to the desired unit was lower than that of the nurses who did not. This was similar to Ji & Kim (2018) as a result of the previous study that the job stress of a new nurse was lower than that in the case where it was assigned to the desired unit. Positioning of working units is the most sensitive part to new nurses, and if they are deployed to the ward they want, the actual shock decreases, so the desired position of working units should be considered first. In addition, in this study, the degree of reality shock was high when there was no possibility of a holiday on the desired day. These results are consistent with the previous study to Ji & Kim (2018), which showed that the stress of the subjects who could not do it was significantly higher than those who could not take the desired day off. In a preceding study, Yoon & Kim (2010), which interviewed new nurses, experienced nurses were holiday on desired days, while new nurses were dissatisfied with their failure to do so. It is believed that by considering new nurses so that they can leave the day they want, it will be possible to reduce the shock of reality and lower the intention to turnover.

A hierarchical multiple regression analysis was conducted to understand the effect of the shock of reality on the intention to turnover. As a result, it was found that under the control of the subject's characteristics and the nursing work environment, the shock of reality explained the intention to turnover by 10.2%. In other words, the more the new nurse perceived that the nursing work environment was poor, the higher the shock of reality and the higher the intention to turnover. This is consistent with the

results of previous studies that show that new nurses in a nursing work environment requiring improvement have a higher degree of reality shock than new nurses in a non-working environment. New nurses have high expectations for a nursing work environment at the time of employment, and I think that they will provide high-quality patient services in such work environment. Through strategies to improve the nursing work environment, the shock of new nurses should be reduced and they should remain in the hospital for a longer period of time.

As a result of analyzing the degree of reality shock and turnover intention according to the time difference of the subjects, the average score at the basic survey for 2~4 months of reality shock was 2.84 ± 0.39 points, and increased to 2.87 ± 0.35 points at the time of re-examination for 5~7 months. As for the intention to turnover, the average score was 3.07 ± 0.78 points during the basic survey and increased to 3.33 ± 0.77 points during the reexamination. At the time of re-examination, it is presumed that there are many subjects at the time when new nurses become independent after the preceptorship period ends, and this is different from previous studies Kramer et al. (2013) and Sin et al. (2014), which may have cultural differences.

The actual shock according to the clinical experience tended to increase at an average of 2.84 ± 0.38 points in 4 months subjects in the basic investigation, and 3.05 ± 0.22 points in the average 2 months after 3 months in repeated investigations. At the time of 2 months, since the preceptorship period was in progress, the reality shock was low, whereas at 4 months and 5 months after joining, the reality shock was considered to be high because the preceptorship period was over and independent. It seems that there is no change in the degree of reality shock at the time of 7 months, which is a month later, and as the independence period increases, the degree of reality shock is felt weaker as the person becomes more proficient at work. Although it is a new nurse with less than 7 months of experience in the current unit, it can be seen that the unit experience is a variable that has a certain influence on the shock and turnover intention, and this shows that there is a demand for training plans and programs tailored for each career for new nurses.

As a result of analyzing the effect of changes in reality shock on turnover intention by applying a generalized estimation equation model, three variables of reality shock, nursing work environment, and whether the clinical practice hospital and the current working hospital are consistent with the current working hospital are in turnover intention. It had an effect, and it was shown as the degree

of reality shock (OR=2.37, 95% CI: 1.41~3.98). In the end, the turnover intention was 2.37 times higher in the high group compared to the low reality shock group. The difference in the degree of reality shock is a factor that influences turnover intention that cannot be controlled at the individual level, and it is judged that it will be difficult to resolve it only by returning it to the individual level. In addition, the turnover intention was 2.76 times higher in the low group compared to the group with good nursing work environment. As the career progresses, the nursing work environment affects turnover intention, so it seems that the focus on improving the nursing work environment in terms of manpower management is expected.

Based on the above results, it is believed that it is necessary to improve work efficiency and efficient manpower management by preventing early turnover of new nurses who challenge new environments by setting up customized internal marketing strategies for each clinical career that lowers the shock of the new nurses' reality.

CONCLUSION

Variables influencing the intention to turnover were whether the clinical practice hospital and the current working hospital were matched, whether or not the desired unit was assigned, the nursing work environment, and the reality shock, but the explanatory power was 32%. The new nurse's intention to turn over was related to the work-related characteristics, the nursing work environment, and the shock of reality, and these results showed a significant positive correlation in the placement of the desired unit and those eligible for vacation on the desired day. Therefore, it is important to help new nurses adapt early to challenge new environments by setting up a customized workforce management strategy to reduce the impact of reality by considering the desired unit when assigning units in consideration of work-related characteristics and improving the nursing work environment. It can be seen that it is an efficient strategy.

This study attempted to explain the effect of changes in reality shock on turnover intention, but failed to reflect the period of independence according to the presence or absence of preceptorship period. Therefore, it is expected that further research is needed to secure the homogeneity of the subjects by conducting research on new nurses considering the period of preceptorship and independence in the study of changes in reality shock in the future.

CONFLICTS OF INTEREST

The authors declared no conflicts of interest.

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