

# Experiences of Registered Nurses in the Transition to Healthcare Professionals: A Study from Military and Civilian Hospitals in Saudi Arabia

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## Abstract

Registered nurses (RNs) often experience substantial job dissatisfaction and stress during the transition from a student to a healthcare professional. However, multicenter studies in this area are limited, and little is known whether the transition experience of RNs in a military hospital (MH) is different from that in civilian hospitals (CH). This study presents a multicenter survey on the transition experiences of RNs and compares of transition experiences of RNs in CH and MH. A multicenter survey was conducted in military and civilian hospitals in Saudi Arabia, using a modified version of the validated Casey-Fink Graduate Nurse Experience Survey. In the survey, 278 RNs participated. Of these, 71.2% were under 25 years of age, and 56% were women. Approximately 36% of the respondents were from MH. A majority of RNs (89.9%) cited fears related to patients' safety as a difficulty in the successful transition. When compared with RNs from CH, a higher number of RNs from MH believed that improved orientation could be a support in transition (OR: 2.05, 95% CI 1.23-3.43,  $P=0.008$ ); conversely, a significantly lower number of respondents from MH believed that an improved work environment could be a support in transition (OR: 0.30, 95% CI 0.16-0.55,  $P=0.001$ ). Most RNs consider their fear for patients' safety as a difficult aspect of their transition experience. RNs in MH and CH have a different perception of the least satisfying aspect of their job.

**Keywords:** Transition experience, nurses, orientation, and work environment

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## 1. Introduction

The transition of nurses from a student to a healthcare professional presents several challenges (Chick, Afaf, & Meleis, 1985; Kumaran & Carney, 2014). Gaps in theory and practice, inadequate mentorship, workplace bullying, and high workload are factors that make the transition difficult (Dyess & Sherman, 2009; Spence Laschinger, Grau, Finegan, & Wilk, 2012). It is known that a large number of nurses experience high stress and job dissatisfaction during the transition phase, and a significant fraction of nurses leave practice much early in their careers (Buchan & Aiken, 2008). Considering the fact that the demand for nurses is increasing globally, and the functional requirements of practicing nurses are going to be more demanding, there is a need to understand the barriers/difficulties nurses experience during the transition (Ackerson & Stiles, 2018; Juraschek, Zhang, Ranganathan, & Lin, 2012).

The transition process from a student to a healthcare professional is multidimensional and is expected to induce some degree of stress as it generally involves (re)adjustments, unanticipated challenges (Adler & Castro, 2019), and new interactions. The "transition phase" generally involves a relatively short duration, but it plays a formative role. A stressful transition, particularly in healthcare settings, can induce a host of inefficiencies, adversely affecting job satisfaction, retention, and patient safety (Kim & Shin, 2020; Missen, McKenna, & Beauchamp, 2014). A great deal of attention is being paid to identify factors that facilitate the smooth transition to a practicing nurse (Beattie, 1998; Flott & Linden, 2016). At the professional level, in the transition period, registered nurses (RNs) feel inundated by myriad responsibilities, and the ambiguity, complexities, and stresses associated with a real healthcare setting make the transition further complex (Bakon et al., 2018; Beattie, 1998; Collard, Scammell, & Tee, 2020; Cox, 2019; Fowler, Twigg, Jacob, & Nattabi, 2018; Graf, Jacob, Twigg, & Nattabi, 2020; Hayes, Bonner, & Pryor, 2010). A phenomenological study on nurses' transition experiences revealed that nurses quickly adjust to the requirements of the new role (Delaney, 2003). This study also indicated that preceptors play a key role in the transition, and the sense of accomplishment in RNs is important for the successful transition. In the context of the difficulties observed during nurses' transition, the term "reality shock" is generally used (Graf et al., 2020; Sargis & Kramer, 1975). This term denotes the possible mismatch between the expectations that nurses had as a student and the reality they faced in nursing practice at a hospital, covering various aspects related to human psychology, functional competence, financial constraints, and interpersonal relations (Bakon et al., 2018; Davey, 2002; Duchscher, 2008; Pennington & Driscoll, 2019; Stulz, Francis, Pathrose, Sheehan, & Drayton, 2021).

Due to the adverse impact of negative transition experience on job satisfaction, attrition, functional competence, and patient safety, a significant amount of research has been conducted on understanding the transition experiences of RNs (Bakon et al., 2018; Butler & Hardin-Pierce, 2005; Collard et al., 2020; Flott & Linden, 2016; Stulz et al., 2021). However, most of the studies conducted on the transition experience of RNs were from civilian hospitals (CH), and the transition experience of RNs in military hospitals (MH) is not researched much (Cox, 2019; Moore, 2006); notably, though, the work environment and scope of practice are considerably different in MH and CH (Ma et al., 2020). Psychological factors, competence, and patient management also differ considerably between these two settings (Alarcon, 2011). To the best of the authors' knowledge, there is no multicenter study reported previously, wherein transition experiences of RNs in MH and CH have been investigated.

This study reports the transition experience of graduate nurses in fourteen MH and CH in Saudi Arabia. Factors related to perceived difficulties and the impact of support in the transition were analyzed. The most satisfying and the least satisfying aspects of the work environment and the effect of the preceptorship program were examined. Furthermore, the differences between the transition experiences of RNs in MH and CH were analyzed.

## 2. Methodology

### 2.1 Study Design and participants

This survey on the various aspects of transition experiences of Saudi nurses was conducted in fourteen hospitals across the Kingdom of Saudi Arabia, namely: Prince Sultan Medical City, Wadi Al Dawasser Hospital, Prince Sultan Airbase Hospital, King Khalid Hospital, AlEman Hospital, Yamama Hospital, King Saud Medical City, Zelfi Hospital, Mohammad Bin Abdulaziz Hospital, and Al Karj Armed Forces Hospital, King Saud Hospital in Qaseem; Dammam Medical Complex in Eastern Province; Qesoma Hospital in HafrAl-Baten; and Najran Armed Forces Hospital. The University Human Research Ethics Committee granted approval to conduct the study (Approval no. 2014001195).

A sample size of 218 participants was determined to estimate moderate size effects at a 5% significance level with 80% power.

### 2.2 Survey Instrument

A modified version of the validated Casey-Fink Graduate Nurse Experience Survey Tool was used (Casey, Fink, Krugman, & Propst, 2004). This study was focused on the fifth part of the survey, comprising five questions on nurses' subjective experiences during their transition from a nursing student to a registered nurse. These questions include difficulties in the transition from the role of student to that of the registered nurse, strategies required to feel more supported, aspects of the work environment that are most satisfying, aspects of the work environment that are least satisfying, and comments and concerns about the preceptorship program. Translation of the survey instrument into Arabic was unnecessary since the participants could read, write and understand English. No names or personal identifying information were written on the questionnaire. The demographic information was not linked to the participants' information. The inclusion criteria were: more than 20 years old; minimum of two years experience in the ED as a nurse; and ability to read and comprehend English. The sealed boxes were distributed to the ED secretaries in the ED head offices of the participating hospitals.

### 2.3 Statistical Analysis

Both descriptive statistics and inferential statistics were conducted using the Statistical Package for the Social Sciences SPSS, Version 22.0 for Windows (IBM Corp, 2013). The missing data were removed from the analysis. The demographic data were summarized using descriptive statistics. Continuous variables were summarized using central tendency measures, mean and median with standard deviation. Categorical variables were described by using frequencies and percentages. The Odds ratio with the MH as the reference group and the Fisher's Exact Test of the association was used for the difficulty in transition scores, transition support, and work environment satisfaction. A p-value of less than 0.05 was considered statistically significant.

## 3. Results

### 3.1 Demographics

The survey forms were distributed to 350 RNs in the ED of the participating hospitals. The final sample size was 278 (response rate: 79.4%); of these, 156 (56.1%) were women. The majority of participants were under 25 years of age ( $n=198$ , 71.2%). With respect to academic qualifications, 54% of the participants had a bachelor's degree in nursing, and the others had a diploma in nursing. A total of 216 (77.7%) participants had internship experience, 31 (11.2%) had worked as a nursing assistant, 27 (9.7%) worked as a volunteer, one (0.4%) was EMT before current employment as an RN. Most participants reported that their orientation period lasted for 9-12 weeks ( $n=245$ , 88.1%). Notably, 119 (42.8%) participants had four or more preceptors, and 71 (25.5%) participants had

zero to three preceptors.

### 3.2 Perceived difficulty in transition

In response to the question "What difficulties, if any, are you currently experiencing with the transition from the "student" role to the "RN" role?", an overwhelming number of respondents (n=250,89.9%) cited fears related to the patients' safety as the difficulty in the successful transition (Table 1). The second frequent point identified as difficulty was related to orientation issues such as unit familiarization, learning technology, relationship with multiple preceptors, and information overload (n=196, 70.8%). Interestingly, only 46 (16.6%) respondents identified a lack of confidence, and only 34 (12.3%) respondents mentioned role expectations such as autonomy as difficulties in transition. When the responses were analyzed in MH and CH separately, a significant difference in the responses was observed in workload and orientational issues. A significantly lower number of patients in the MH group than in the CH group identified workload as difficulty (OR: 0.44, 95%CI 0.26-0.75, P=0.003). Conversely, more respondents in the MH group than in the CH group reported orientation-related issues (OR: 2.00, 95%CI 1.22-3.31, P=0.008). There was no statistically significant difference between the MH and CH groups in terms of role expectations, lack of confidence, and fear of patient safety (Table 2).

### 3.3 Role of support in the transition

In response to the question "What could be done to help you feel more supported or integrated into the unit?", only 11.9% (n=33) of the respondents answered that unit socialization provided support during the transition. Increased support in the form of educator feedback and mentorship was identified by only 47(17.0%) RNs as help in feeling more supported in the transition period (Table 3). More than half of the respondents (n=158,57.0%), however, reported that improved orientation could help in feeling more supported in transition and 30.7% (n=85) of the respondents believed that an improved work environment could be a support. A higher number of respondents from MH than those from CH believed that improved orientation is support in transition (OR: 2.05, 95%CI 1.23-3.43, P=0.008); however, a significantly lower number of respondents from MH than those from CH believed that an improved work environment could be of support in transition (OR: 0.30, 95%CI 0.16-0.55, P<0.001, Table 4)

### 3.4 Satisfying aspects of the work environment in transition

For the query "What aspects of your work environment are most satisfying?", patients and families were identified as the most satisfying aspect of the work environment by 129(46.6%) respondents and the peer support by 106(38.3%) respondents (Table 5). Positive work environment, professional learning role, and ongoing learning were considered satisfying by 21(7.6%), 15(5.4%), and 35(12.6%) of the respondents, respectively. The majority of the participants believed the least satisfying aspect was the orientation that involved inconsistent preceptors and lack of feedback (n=164, 59.2%). Only 10.8% of respondents believed that the interpersonal relationship was the least satisfying aspect, whereas the system and nursing work environment were reported by 79(28.5%) and 46 (16.6%), respectively, as the least satisfying aspects. With respect to the most satisfying aspects of the transition, there was no significant difference between the respondents from MH and CH. However, a significantly lower number of respondents from MH than those from CH identified the system as the least satisfying aspect (OR: 0.25, 95%CI 0.13-0.49, P<0.001). There was also a significant difference in the respondents from MH and CH with respect to the perceived importance of orientation. More respondents in the MH group than in the CH group believed orientation as the least satisfying aspect of the work environment (OR: 2.38, 95%CI 1.40-4.02, P=0.001, Table 6).

## 4. Discussion

Difficulties in the transition to clinical practice are major contributors to burnout and job dissatisfaction among graduate nurses during the early phase of their profession (Al Awaisi, Cooke, & Pryjmachuk, 2015; Bakon et al., 2018; Casey et al., 2004; Dames, 2019; Duchscher, 2008; Jasper, 1996; Michalec, Diefenbeck, & Mahoney, 2013; Phillips, Esterman, & Kenny, 2015; Tower, Cooke, Watson, Buys, & Wilson, 2015). This study was based on a multicentred survey in military and civilian hospitals in Saudi Arabia. Our study results indicated that most of the RNs did not identify the lack of confidence or role expectations as difficulties in the transition, and there were several critical differences between military and civilian RNs, with respect to their experiences in the transition to practice.

A majority of the RNs in this study acknowledged that their fear related to the safety of patients is a difficulty that adversely impacts the transition experience. Regarding this aspect, there was no significant difference between respondents from military and civilian hospitals. Military and civilian hospital settings are considerably different in terms of the scope of work and responsibilities (Elliott, Chargualaf, & Patterson, 2017). Our findings, therefore, indicate the generalizability of fear related to the patients' safety in the transition phase of RNs. One of the factors that can explain the fear related to patients' safety could be the limited applicability of the expertise gained during nursing education to the real-world clinical setting (Collard et al., 2020). Nursing schools, though aiming to present

a holistic knowledge of nursing, provide training in a relatively controlled environment under supervision (Flott & Linden, 2016; Whitehead et al., 2013). However, the real-life clinical situation involves a significantly high degree of clinical complexity, unpredictability, and multifaceted interactions with clinicians, patients, and patients' family members. As a result, during the transition, RNs are likely exposed to complex and critical assignments, exceeding their skill sets gained as nursing students (Casey et al., 2004). The fear for the patient's safety is, therefore, on the expected lines. Indeed, this point can also be explained in the light of a phenomenon defined as 'sheltered student life' (Willman, Bjuresater, & Nilsson, 2020; Woo & Newman, 2020), highlighting the differences between anticipated work profiles as a student and real experiences as an RN. The high workload is a known stressor, particularly in the transition period (Duchscher, 2008; Labrague & McEnroe-Petite, 2018). A significantly higher number of respondents in civilian hospitals than in military hospitals reported workload as a difficulty in transition in our survey. Conversely, a higher number of nurses from military hospitals than those from civilian hospitals reported orientation issues as difficulty in transition. There was no difference in responses related to lack of confidence between MH and CH groups.

Surprisingly, in our study unit, socialization and increased support from managers were identified as the support in transition by only a minority of respondents. Our results, therefore, do not support the assertion that RNs consider socializing into their new working environment and culture as a major factor in their transition experience (Vanderspank-Wright, Lalonde, Smith, Wong, & Bentz, 2019). Furthermore, factors related to improved work environment such as a gradual change in workload and assistance from unlicensed personals were identified by only 30% of respondents as supporting factors. When the responses were stratified in MH and CH groups, it was observed that a significantly lower number of respondents in MH believed that an improved work environment could support the transition. On the other hand, more respondents from the MH group claimed that improved orientation could support the transition. A minimal number of respondents revealed that factors related to ongoing learning, professional nursing role, and positive work environment are the most satisfying aspect of work. These findings indicated the role of workplace culture/environment as a source of stress and dissatisfaction (Butler & Hardin-Pierce, 2005; Davey, 2002; Shinnars, Africa, Deasy, & Franqueiro, 2018). Previous research also suggested that in the hostile work environment, RNs were reluctant to ask for support/clarification due to the possibility of embarrassment (Mooney, 2007).

Realizing the adverse impact of the difficulties faced by nurses during their transition to practice, support programs are introduced in several hospitals (Duchscher, 2008; Flott & Linden, 2016; Muir et al., 2013; Thomas, Bertram, & Johnson, 2009). More than half of the respondents in our study claimed that factors related to an improved orientation such as preceptor support and consistency and unit-specific skills and practice support/help in the successful transition. These results echo the previous finding that improved orientation is an essential factor that favorably assists RNs in their transition (Ashley, Halcomb, Brown, & Peters, 2018). In several other studies, preceptors' positive effect on the RNs' transition experience has been reported (Irwin, Bliss, & Poole, 2018; Luhanga, Dickieson, & Mossey, 2010; Muir et al., 2013). Preceptoring can be broadly defined as an approach to facilitate the transition between various roles, enabling RNs to effectively develop the necessary skills and confidence to achieve their professional goals (Fowler et al., 2018; Luhanga, Billay, Grundy, Myrick, & Yonge, 2010; A. Ward & McComb, 2017; A. E. Ward & McComb, 2018). Interestingly, in our study, the least satisfying aspect was the improper orientation, i.e., inconsistent preceptors and lack of feedback. In previous studies, inconsistencies in preceptors' provision of support were reported to adversely affect the transition experience of RNs (Hayes et al., 2010; Irwin et al., 2018; Lewis & McGowan, 2015; Luhanga, Dickieson, et al., 2010).

In our survey, making a difference in patients' lives and receiving positive feedback was identified by almost 50% of the RNs as the most satisfying aspect. There was no statistically significant difference between MH and CH groups in terms of the most satisfying work environment. However, a significantly lower number of respondents in the MH group than in the CH group mentioned the system as the least satisfying aspect of the work environment. A higher number of respondents from the MH group identified orientation as the least satisfying aspect. This finding corroborates earlier studies wherein knowledge and skill deficit were reported to seriously impact the morale of RNs (Adlam, Dotchin, & Hayward, 2009; Clare & Loon, 2003; Dearmun, 2000; Willman et al., 2020).

## 5. Limitation

This multicenter study has identified several factors that affect the transition experience of RNs. The main limitation of our study is that all medical hospitals included in the work are from Saudi Arabia; therefore, RNs in countries with different demographics, economic, and healthcare structures may have different transition experiences. The study is based on the survey; conducting prospective studies in this area will help identify the barriers to the successful transition.

## 6. Conclusions

Patients' safety is a major concern that affects the transition experience of RNs. In several aspects, the transition

experiences of RNs in MH are different from those in CH, underscoring a need to improve the currently used approaches to integrate nursing graduates with healthcare practice. Making nursing education more relevant to hospitals' functional requirements and introducing a comprehensive induction program can smoothen nurses' transition from academics to practice. During the early phase of the career, a cautious effort should also be made on training RNs to handle the workload effectively and maintain a good emotional state under stressful and demanding situations.

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### Conflict of Interest

The author declares that they have no conflict of interest.

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Table 1. Perceived difficulties in the transition from student to registered nurse

Statement	Difficulty in transition		Total n (%)*
	Yes n (%)	No n (%)	
Role expectations (e.g., autonomy, more responsibility, being a preceptor or in charge)	34 (12.3)	243 (87.7)	277 (100)
Lack of confidence (e.g., MD/PT communication skills, delegation, knowledge deficit, critical thinking)	46 (16.6)	231 (83.4)	277 (100)
Workload (e.g., organizing, prioritizing, feeling overwhelmed, ratios, patient acuity)	105 (37.9)	172 (62.1)	277 (100)
Fears (e.g., patient safety)	250 (89.9)	27 (10.1)	277 (100)
Orientation issues (e.g., unit familiarization, learning technology, relationship with multiple preceptors, information overload)	196 (70.8)	81 (29.2)	277 (100)

\* One participant did not answer this section

Table 2. Perceived difficulties in transition by hospital types

Statement	Difficulty in transition	MH n(%)	CH n(%)	Total n(%)	OR <sup>a</sup> (95% CI)	P-value <sup>b</sup>
Role expectation	Yes	7 (7)	27 (15.3)	34 (12.3)	0.42 (0.18, 1.00)	0.056
	No	93 (93)	150 (84.7)	243 (87.7)		
	Total	100 (100)	177(100)	277(100)		
Lack confidence of	Yes	18(18)	28 (15.8)	46 (16.6)	1.17 (0.61, 2.24)	0.737
	No	82(82)	149 (84.2)	231 (83.4)		
	Total	100 (100)	177(100)	277(100)		
Workload	Yes	26(26)	79(44.6)	105 (37.9)	0.44 (0.26, 0.75)	0.003
	No	74(74)	98(55.4)	172 (62.1)		
	Total	100 (100)	177(100)	177(100)		
Fears	Yes	13(13)	14 (7.9)	27 (9.7)	1.74 (0.78, 3.89)	0.206
	No	87(87)	163 (92.1)	250 (90.3)		
	Total	100 (100)	177 (100)	277(100)		
Orientation issues	Yes	102(87.0)	94(58.0)	196 (70.8)	2.00 (1.22, 3.31)	0.008
	No	15(12.0)	66(41.0)	81(29.2)		
	Total	117(100)	160 (100)	277(100)		

<sup>a</sup> OR: Odds ratio, MH is the reference group

<sup>b</sup> Fisher's exact test of association is considered statistically significant if the p-value is less than 0.05, MH: Military hospital, CH: Community hospital

Table 3. Potential activities helping RNs to feel more supported

Statement:	Yes n (%)	No n (%)	Total n (%)*
Support Improved orientation (e.g., preceptor support and consistency, orientation extension, unit specific skills practice)	158 (57.0)	119 (43.0)	277 (100)
Increased support (e.g., manager, RN and educator feedback and support, mentorship)	47 (17.0)	230 (83.0)	277 (100)
Unit socialization (e.g., being introduced to staff and MDs, opportunities for staff socialization)	33 (11.9)	244 (88.1)	277 (100)
Improved work environment (e.g., gradual ratio changes, more assistance from unlicensed personnel, involvement in schedule and committee work)	85 (30.7)	192 (69.3)	277 (100)

\* One participant did not answer this section



Table 4. Transition support factor by hospital types

Statement	Difficulty in transition	MH n(%)	CH n(%)	Total n(%)	OR <sup>a</sup> (95% CI)	P-value <sup>b</sup>
Improved orientation	Yes	68 (68)	90 (50.8)	158 (57)	2.05(1.23, 3.43)	0.008
	No	32 (32)	87 (49.2)	119 (43)		
	Total	100 (100)	177 (100)	277 (100)		
Increased support	Yes	11 (11)	36 (20.3)	47 (17.0)	0.48(0.23, 1.00)	0.066
	No	89 (89)	141 (79.7)	230 (83.0)		
	Total	100 (100)	177 (10)	277 (100)		
Unit socialization	Yes	16 (16)	17 (9.6)	33 (11.9)	1.79 (0.86, 3.73)	0.084
	No	84 (84)	160 (90.4)	244 (88.1)		
	Total	100 (100)	177 (100)	277 (100)		
Improved work environment	Yes	16 (16)	69 (39)	85 (30.7)	0.30 (0.16, 0.55)	<0.001
	No	84 (84)	108 (61)	192 (69.3)		
	Total	100 (100)	177 (100)	277 (100)		

<sup>a</sup> OR: Odds ratio, MH is the reference group

<sup>b</sup> Fisher's exact test of association is considered statistically significant if the p-value is less than 0.05 MIH: Military hospital, MH: Military hospital, CH: Community hospital

Table 5. Most satisfying and least satisfying aspects of the work environment

	Statement of most/least satisfying aspects of work environment	Yes n (%)	No n (%)	Total n(%)*
Most satisfying aspects of the work environment	Peer support (e.g., belonging, team approach, helpful and friendly staff)	106 (38.3)	171 (61.7)	277 (100)
	Patients and families (e.g., making a difference, positive feedback, patient satisfaction, patient interaction)	129 (46.6)	148 (53.4)	277 (100)
	Ongoing learning (e.g., preceptors, unit role models, mentorship)	35 (12.6)	242 (87.4)	277 (100)
Least satisfying aspects of the work environment	Professional nursing role (e.g., challenge, benefits, fast pace, critical thinking, empowerment)	15 (5.4)	262 (94.2)	277 (100)
	Positive work environment (e.g., good ratios, available resources, great facility, up-to-date technology)	21 (7.6)	256 (92.4)	277 (100)
	Nursing work environment (e.g., unrealistic ratios, tough schedule, futility of care)	46 (16.6)	231 (83.4)	277 (100)
	System (e.g., outdated facilities and equipment, small workspace, charting, paperwork)	79 (28.5)	198 (71.5)	
	Interpersonal relationships (e.g., gossip, lack of recognition, lack of teamwork, politics)	30 (10.8)	247 (89.2)	277 (100)
	Orientation (inconsistent preceptors, lack of feedback)	164 (59.2)	113 (40.8)	277 (100)

\* One participant did not answer this section

Table 6. Most/least satisfying aspects of work environment by hospital types

Transition aspect	Statement	MH (%)	CH (%)	Total (%)	OR <sup>a</sup> (95% CI)	P-value <sup>b</sup>
<b>Work environment (most satisfied)</b>						
Peer support	Yes	35(35)	71 (40.1)	106 (38.3)	0.80 (0.48, 1.33)	0.441
	No	65(65)	106 (59.9)	171 (61.7)		
	Total	100 (100)	177 (100)	277 (100)		
Patients and families	Yes	44(44)	85(48)	129 (46.6)	0.85 (0.52, 1.39)	0.533
	No	56(56)	92(52)	148 (53.4)		
	Total	100 (100)	177 (100)	277 (100)		
Ongoing learning	Yes				1.58 (0.77, 3.24)	0.258
	No	16(16)	19 (10.7)	35 (12.6)		
	Total	84(84)	158 (89.3)	242 (87.4)		
Professional nursing role	Yes				2.82 (0.97, 8.17)	0.056
	No	9 (9)	6 (3.4)	15 (5.4)		
	Total	91 (91)	171 (96.6)	262 (94.6)		
Positive work environment	Yes				0.87 (0.34, 2.25)	0.820
	No	7 (7)	14 (7.9)	21 (7.6)		
	Total	93 (93)	163 (92.1)	256 (92.4)		
<b>Work environment (least satisfied)</b>						
Nursing work environment	Yes	12(12)	34 (19.2)	46 (16.6)	0.57 (0.28, 1.17)	0.133
	No	88(88)	143 (80.8)	321 (83.4)		
	Total	100 (100)	177 (100)	277 (100)		
System	Yes	13(13)	66 (37.3)	79 (28.5)	0.25 (0.13, 0.49)	<0.001
	No	87(87)	111 (62.7)	198 (71.05)		
	Total	100 (100)	177 (100)	277 (100)		
Interpersonal relationships	Yes				1.90 (0.89, 4.09)	0.109
	No	15(15)	15 (8.5)	30 (10.8)		
	Total	85(85)	162 (91.5)	247 (89.8)		
Orientation	Yes	72 (72)	92 (52)	164 (59.2)	2.38 (1.40, 4.02)	0.001
	No	28 (28)	85 (48)	113 (40.8)		
	Total	100 (100)	177 (100)	277 (100)		

<sup>a</sup> OR: Odds ratio, MH is the reference group

<sup>b</sup> Fisher's exact test of association is considered statistically significant if the p-value is less than 0.05

MH: Military hospital, CH: Community hospital