

ORIGINAL ARTICLE

Predicting nurses' organizational and professional turnover intentions

Havva ARSLAN YÜRÜMEZOĞLU ¹, Gülseren KOCAMAN¹ and Semra MERT HAYDARI²¹Department of Nursing Management, Faculty of Nursing, Dokuz Eylul University and ²Department of Infection Control, Katip Celebi University Atatürk Training and Research Hospital, Izmir, Turkey

Abstract

Aim: Nursing shortages remain one of the most important problems in health care around the world. Existing nurses' turnover intention further exacerbates this problem. The aim of this study was to investigate the predictors of nurses' organizational and professional turnover intentions.

Methods: This study was conducted as a secondary analysis of existing data from the original cross-sectional study, which was conducted in three public hospitals between February, 2013 and May, 2013. Of the 1389 nurses who were working in these hospitals, 791 returned usable surveys. The data were collected by using a demographic and organizational characteristics form, an organizational and professional turnover intentions questionnaire, Organizational Commitment Scale, and Professional Commitment Scale. The data were analyzed with a stepwise logistic regression analysis.

Results: The common variables that predicted the organizational and professional turnover intentions were marital status, work shift, organizational affective and normative commitment, and professional affective commitment.

Conclusion: The relationship between the commitment and the turnover intention of the nurses was not completely consistent with the collectivist characteristics of Turkish society. The findings showed that the organizational affective and normative commitment and professional affective commitment play a significant role in influencing nurses' organizational and professional turnover intentions. It is important for organizations to recognize the significance of these variables, not only to retain their nursing workforce but also to attract new nurses.

Key words: nurses, organizational commitment, professional commitment, turnover intention.

INTRODUCTION

Nursing shortages remain as one of the most important issues in health care around the world (OECD, 2016). Nurses' unidentified turnover intention, either in the healthcare organizations they work in or their profession further exacerbates this problem (Flinkman, Laine,

Leino-Kilpi, Hasselhorn, & Salanterä, 2008). Most current studies that have been conducted in various countries show that the rate of organizational turnover intention among nurses is 21.9% in Italy (Cortese, 2012), 15% in Germany (Simon, Müller, & Hasselhorn, 2010), 49% in Greece, and 14% in the USA (Aiken *et al.*, 2012). By contrast, in Turkey, the organizational turnover intention is 52% among those who are working in public hospitals (Yaprak & Seren, 2010) and 64.4% among those who are working in private hospitals (Arslan Yurumezoglu & Kocaman, 2016). More interestingly, a study that was conducted by Aiken *et al.* (2013) in 12 European countries showed that organizational

Correspondence: Havva Arslan Yürümezoğlu, Department of Nursing Management, Faculty of Nursing, Dokuz Eylul University, Inciralti-Izmir 35330, Turkey. Email: havva.arslan@gmail.com

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turnover intention ranged between 19% and 49% and that professional turnover intention was between 5% and 17%. Similar findings were reported by Flinkman, Leino-Kilpi, and Salanterä (2010), in that 31 studies found that professional turnover intention ranged from 4% to a startling 54%. Several other studies corroborated the above reported findings: investigating this topic in 10 European countries, Heinen *et al.* (2013) found that while the professional turnover intention was 17% on average, the range was 5% to 17%. In contrast, in Turkey, the rate was 51.1% among those who were working in private hospitals (Arslan Yurumezoglu & Kocaman, 2016) and 15.4% among those who were working in public hospitals (Sabanciogullari & Dogan, 2015). The difference is quite striking. Numerous studies have demonstrated that organizational turnover intention and/or professional turnover intention negatively affect nursing outcomes and patient outcomes (Needleman *et al.*, 2011; Zhu *et al.*, 2012).

Theoretical framework

Turnover intention

Turnover intention is a multistep process that has emotional, cognitive, and behavioral components. Nurses' organizational turnover intention or professional turnover intention can be interpreted as a reaction to the negative aspects of the organization and/or the profession (Takase, 2010). Although actual withdrawal from the organization, or the profession, is an overt finality, the intent to do either or both, as an evolving thought process, is equally important. This is because research has shown that the intent is a significant predictor of the ultimate decision to leave the organization or the profession (Currie & Hill, 2012). For example, in nursing, the process starts with nurses leaving the clinical unit, then the organization, and finally the profession (Krausz, Koslowsky, Shalom, & Elyakim, 1995; Simon *et al.*, 2010).

Organizational commitment

Organizational commitment (OC) as a psychological state is an important variable in predicting whether or not a working person decides to stay in the organization where she or he works (Meyer & Allen, 1991). Conversely, OC is also considered as a predictor that reduces a worker's voluntary turnover intention. Meyer and Allen's three-component theoretical framework on OC has been the basis of most research on this topic. The three components of this model are affective, continuance, and normative commitment. Organizational affective commitment is described as the emotional attachment to the organization

that stems from positive work experiences and suggests that employees remain in the organization because they like it. Organizational continuance commitment, the monetary concerns associated with leaving the organization, is a result of perceiving alternatives to the current organization as inferior; hence, staying in the current organization is unavoidable. Organizational normative commitment is tied to the perceived obligation to stay with the organization (Meyer & Allen, 1991).

Professional commitment

Meyer, Allen, and Smith (1993) adopted the three-model approach of OC to the concept of professional commitment (PC). Accordingly, professional affective commitment is linked to one's emotional commitment to the profession. Those with strong professional affective commitment remain in the profession because they wish to do so. Similarly, professional continuance commitment results from the perceived monetary cost of leaving the profession. Professional normative commitment, which is a result of an obligation to stay in the profession, develops during socialization to the profession. Those with a strong professional normative commitment remain in the profession because they feel obliged to do so. Similarly, those with a strong PC strive to improve their standing in the profession; hence, they have little intention to leave it (Lee, Carswell, & Allen, 2000; Meyer *et al.*, 1993). It was shown that there was an inverse correlation between these three commitment types and professional turnover intention (Meyer *et al.*, 1993).

Predictors of nurses' turnover intention

Nurses' turnover intention in either the organization or the profession is influenced by the individual and organizational factors. Therefore, investigators have studied the impact of age, marital status, education, and tenure in the organization and in the profession on organizational turnover intention and professional turnover intention (Arslan Yurumezoglu & Kocaman, 2016; Chan, Luk, Leong, Yeung, & Van, 2009; Cortese, 2012; Nogueras, 2006; Simon *et al.*, 2010).

Turnover intention is also influenced by individual and institutional factors. Several studies have been carried out to investigate the effect of age, sex, marital status, education level, and tenure in the organization or profession on the intention to leave the organization or the profession. Recent studies have shown that age is one of the important predictors of nurses' intention to leave their current job (Chan *et al.*, 2009; Cortese, 2012). A study by Simon *et al.* (2010) demonstrated that there was a negative association

between age and intention to leave both the organization and the profession. In a study conducted in Turkey, Generation Y nurses' intention to leave the organization and profession was higher than that of Generation X nurses (Mert Haydari, Kocaman, & Alus Tokat, 2016).

Studies have shown that nurses' education level affects their intention to change their current job (Cortese, 2012) or their intention to leave the nursing profession (Nogueras, 2006). In a study by Chan *et al.* (2009), no relationship was determined between the educational level and intention to leave or stay in the current job. Work experience (Chan *et al.*, 2009; Cortese; Nogueras, 2006) and the workplace (Chan *et al.*, 2009) have been shown to be the important predictors of nurses' intention to leave their current job. In their study that was conducted to investigate the intention to leave the organization and profession among nurses who were working in private hospitals in Turkey, Arslan Yurumezoglu and Kocaman (2016) showed that the tenure in the organization and profession were the important predictors of an intention to leave the organization and profession, respectively.

It has been shown that OC, along with PC, are the two major conceptual issues that are related to leaving the organization or the profession. In their meta-analysis, Meyer, Stanley, Herscovitch, and Topolnysky (2002) found that, of the three dimensions, affective commitment had the strongest inverse correlation with organizational turnover intention. However, the strongest correlation was found between affective commitment and the organizational turnover intention, followed by normative and continuance commitment. Taiwanese researchers found that organizational normative commitment was strong and that this commitment negatively correlated with the organizational turnover intention (Chang, Chi, & Miao, 2007). Investigating PC, Flinkman *et al.* (2008), Lee *et al.* (2000), Nogueras (2006), and Parry (2008) reported that PC, particularly professional affective commitment, was a strong predictor of the professional turnover intention. Most studies that explain organizational turnover intention ignore those factors that are related to the professional variables. Yet, the need to integrate the PC and professional turnover intention variables into organizational turnover models often has been argued. This is because professional turnover intention, ultimately, would contribute to the organizational turnover. That is, if a nurse leaves the profession, she or he inevitably will have to leave the organization too (Lee *et al.*, 2000).

A breadth of international studies evaluated the relationship between organizational turnover intention and professional turnover intention by integrating the

variables that are related to OC and PC. A study in Finland found that a low OC and a low PC both strongly contributed to the organizational turnover intention and professional turnover intention (Community Research and Development Information Service, 2006). Simon *et al.* (2010) found that organizational turnover intention and professional turnover intention were related to PC. Although professional turnover intention has been related to the work-home interface, organizational turnover intention is related to organizational leadership and the local context. For example, in research with Taiwanese nurses, Lu, Lin, Wu, Hsieh, and Chang (2002) found that PC was a stronger predictor of professional turnover intention than organizational turnover intention. Moreover, Chang *et al.* (2007) found that professional turnover intention mediated the relationship between professional affective commitment and the organizational turnover intention. Turkish investigators found that nurses' organizational turnover intention and professional turnover intention were strongly related to the three dimensions of OC and PC (Simsek & Aslan, 2012).

Of the 1533 hospitals in Turkey, 935 (61%) are public hospitals, including those affiliated to the universities. Of the 152,803 nurses in Turkey, a great majority, 124,248, or 81%, is employed by these hospitals (Ministry of Health, Republic of Turkey, 2015). Those who work in public hospitals have a high level of employment security; that is, working until retirement age without any concern for being dismissed, while those who work in private hospitals work on a contractual basis. In spite of this, several Turkish studies show that a significant proportion of nurses who are working in public hospitals consider leaving both the organization and their profession (Mert Haydari *et al.*, 2016; Sen Bezirci & Kocaman, 2013). However, according to OECD (2016), Turkey has the lowest ratio of nurses to population: 1.9 nurses per 1000 individuals. Thus, both nurses' organizational turnover intention or professional turnover intention and the low ratio of nurses to the general population lead to problems in the provision of health care in the country. Hence, it is important to investigate the factors that influence Turkish nurses' organizational turnover intention and their professional turnover intention through a broad-base theoretical framework, such as the one proposed by Meyer and Allen's (1991) three-component theoretical framework.

Normative commitment has been stated to be the best variable that affects job outcomes in collectivist cultures (Meyer & Allen, 1997). In their meta-analysis that investigated workers' OC in different cultures, Fischer and Mansell (2009) emphasized that although the relationship between affective commitment and turnover

intention was stronger in individualist cultures, the relationship between normative commitment and turnover intention was stronger in collectivist cultures. As the sample sizes in the aforementioned studies were small, it is suggested to carry out further studies to investigate the cultural influence in larger samples. Hofstede (2001), a well-known sociologist in many countries for his intercultural comparative studies, defines Turkey as a country where a collectivist culture prevails. According to Wasti (2002), Turkey is a country with a predominantly collectivist culture, compared to Canada and the USA, where individualist cultural characteristics dominate decisions. Hence, in addition to investigating the relationship between commitment and turnover intention among nurses in Turkey, this study also contributes to intercultural comparative research on this topic.

METHODS

Aim

The aim of the study was to investigate the predictors of Turkish nurses' organizational turnover intention and professional turnover intention. The research questions of the study are as follows:

- What is the contribution of the three components (affective, normative, continuance) of OC and PC and demographic factors in the prediction of the organizational turnover intention of nurses?
- What is the contribution of the three components (affective, normative, continuance) of OC and PC and demographic factors in the prediction of the professional turnover intention of nurses?

Design and procedure

This study was conducted as a secondary analysis of the preexisting survey data that were collected as part of a cross-sectional study. The previous research had analyzed the organizational turnover intention and/or the professional turnover intention and their association with OC and PC across generations X and Y (Mert Haydari *et al.*, 2016). The current analysis, however, focuses on the predictors of organizational turnover intention and professional turnover intention.

Setting and sample

This study was conducted in three public hospitals that reflected the features of public hospitals in Turkey. Of these three hospitals, two were government hospitals

and one was a public university hospital. The number of nurses who were working in these public hospitals was 255, 378, and 756, respectively (total: 1389). A convenience sample of nurses was recruited. The inclusion criteria were as follows: participating in direct patient care and volunteering to participate in the study. Those who were working in outpatient clinics were excluded from the study. Of the 1389 nurses, 828 (59.6%) volunteered to participate in the study. The response rate was 56.1% and 68.3% at the two government hospitals and 56.8% at the university hospital. Of the 828 nurses who volunteered for the study, 791 (56.9%) returned usable surveys. As a result of the missing values in the categorical variables, 764 (55%) surveys were used in the regression analyses.

Ethical approval

All the participants received written letters that informed them about the objectives of the research, anonymity of the survey data, the findings, and that participation was voluntary. In addition, permission to conduct the research was obtained from the three hospital administrations and there was approval of the study by the Regional Ethics Committee (Ref. no: 876-GOA; 2013/04-14).

Post-hoc statistical power analysis

A post-hoc power analysis was conducted with the G*Power Software Package Program (Faul, Erdfelder, Buchner, & Lang, 2009). The statistical power of the present study that included 764 nurses was 100% with $\alpha = 0.05$ and an effect size of 0.35.

Data collection

The data that were used in this study were collected by one of the authors between February, 2013 and May, 2013 via face-to-face interviews. The data collection instruments were: (i) demographics and organizational characteristics form; (ii) organizational turnover intention and professional turnover intention questionnaire; (iii) Organizational Commitment Scale; and (iv) Professional Commitment Scale.

Instruments

Demographics and organizational characteristics form

The data were collected by using a demographic and organizational characteristics form that included nine

questions regarding descriptive demographic and organizational descriptive variables.

Organizational turnover intention and professional turnover intention questionnaire

Organizational turnover intention and professional turnover intention were evaluated by the answers to two questions: (i) How often during the course of the past year have you thought about leaving the organization?; and (ii) How often during the course of the past year have you thought about leaving the nursing? The options, and the corresponding scores, were: (i) “never”; (ii) “a few times a year”; (iii) “a few times a month”; (iv) “a few times a week”; and (v) “every day.” Organizational turnover intention and professional turnover intention were coded as dichotomous data. If the response was leaving a few times a month or more often and was coded as a “frequently considered turnover intention,” it was coded “Yes”; if the response was thinking about leaving a few times a year, or never, and they were coded as “not considering turnover intention,” it was coded “No” (Flinkman *et al.*, 2008).

Organizational Commitment Scale

The Organizational Commitment Scale (OCS) that was developed by Meyer and Allen (1991) measures the level of commitment by staff nurses to their workplace or the organization. This instrument was adapted into Turkish by Wasti (2000). The OCS is made up of three subdimensions: affective, normative, and continuance commitments. In total, 18 questions are scored on a scale ranging from 1 (“strongly disagree”) to 7 (“strongly agree”). The Cronbach’s alpha values for the affective, normative, and continuance commitments were 0.76, 0.80, and 0.77, respectively.

Professional Commitment Scale

The Professional Commitment Scale (PCS) that was developed by Meyer *et al.* (1993) was tested for reliability and validity in Turkey by Tak and Ciftcioglu (2009). The Turkish version of the PCS was used in the current research to measure the level of PC among the staff nurses in the hospitals. The PCS has three subdimensions: affective, normative, and continuance. In total, 18 questions were scored on a scale ranging from 1 (“strongly disagree”) to 7 (“strongly agree”). The Cronbach’s alpha values for the affective, normative and continuance commitment dimensions were 0.77, 0.75, and 0.75, respectively.

Data analysis

In this study, before a regression model was developed, the commitment dimensions were evaluated via a confirmatory factor analysis (CFA) by using the LISREL 8.54 statistical program (Scientific Software International, Lincolnwood, IL.). For the OCS, models with one factor, two factors, three factors, and finally four factors were tested. The three-factor model fitted the data better than the other models (goodness-of-fit index [GFI] = 0.90, adjusted goodness-of-fit index [AGFI] = 0.87, root mean square error of approximation [RMSEA] = 0.08, non-normed fit index [NNFI] = 0.93, and comparative fit index [CFI] = 0.94).

Three different CFAs were conducted for the PCS: one factor, two factors, and three factors. In comparing these models, it was found that the three-factor CFA yielded the best-fit index (GFI = 0.90, AGFI = 0.87, RMSEA = 0.08, NNFI = 0.91, and CFI = 0.93). Based on the CFA results, the regressions with these three factors were run for the OCS and the PCS.

Following the CFA, a stepwise (backward) logistic regression analysis was used to analyze the data. Missing values for the tenure in the profession and the tenure at the hospital were assigned average values. The regressions were run by converting the categorical variables into dummy variables. The standardized residual was examined for the variables, along with the multicollinearity among the independent variables, before the establishment of the regression model (Hair, Black, Babin, & Anderson, 2010). The independent variables that were to be included in the regression analyses were identified via two steps: in the first step, a univariate regression analysis was conducted for each independent variable. Those that revealed statistical significance were included in the logistic regression analysis. Then, the demographic and organizational characteristics were entered into the initial regression analysis first (Model 1). Subsequently, the OC and PC subdimension values were entered into the models (Model 2). Those variables that predicted organizational turnover intention and professional turnover intention made up the final model.

RESULTS

Sample characteristics

Table 1 presents the descriptive statistics and the values for the sample characteristics and the OCS and PCS. The mean age was 33.16 years (standard

Table 1 Characteristics of the nursing sample and model variables

Variable	N (%)	Min.	Max.
Sex (missing data: 5)		1	2
Female	734 (92.8)		
Male	52 (6.6)		
Marriage (missing data: 2)		1	2
Married	507 (64.1)		
Single	282 (35.7)		
Education (missing data: 1)		1	4
Diploma	56 (7.1)		
Associate degree	128 (16.2)		
Bachelor degree	542 (68.5)		
Master's degree	64 (8.1)		
Organization		1	2
Public hospital	384 (48.5)		
University hospital	407 (51.5)		
Position in the organization (missing data: 5)		1	4
Staff nurse	380 (48.1)		
Operating room and intensive care	245 (31)		
Outpatient unit	120 (15.2)		
Manager	42 (5.3)		
Work shift (missing data: 24)		1	2
Day	146 (18.5)		
Day and night	621 (78.5)		
OrgTI (missing data: 1)		1	2
Yes	455 (57.5)		
No	335 (42.4)		
ProTI (missing data: 1)		1	2
Yes	442 (55.9)		
No	348 (44)		
Variable	Mean (SD)	Min.	Max.
Age (years)	33.16 (6.33)	19	47
Tenure at the hospital	8.27 (6.49)	0.6	30
Tenure in the profession	11.66 (7.02)	0.6	30
OCS		1	7
Affective commitment	3.10 (1.33)		
Normative commitment	2.99 (1.33)		
Continuance commitment	4.19 (1.40)		
PCS			
Affective commitment	3.97 (1.37)		
Normative commitment	3.62 (1.32)		
Continuance commitment	4.61 (1.31)		

OCS, Organizational Commitment Scale; OrgTI, organizational turnover intention; PCS, Professional Commitment Scale; ProTI, professional turnover intention.

deviation [SD] = 6.33), nearly all (92.8%) were female, with 64.1% being married. The majority (68.5%) had a bachelor degree. A little over half (51.5%) worked in

the university hospital. Close to half (48.1%) were staff nurses, 5.3% were managers, while the rest worked in specialty clinics. A great majority (78.5%) worked day and night shifts. The average tenure in nursing was 11.66 (SD = 7.02), while the tenure at the organization was 8.27 (SD = 6.49). Most importantly, the majority (57.5%) of nurses expressed organizational turnover intention, while 55.9% thought about professional turnover intention.

Correlations between the variables

As highly correlated variables can cause multicollinearity, hence unstable estimates, correlation analyses were conducted for organizational turnover intention (Table 2) and professional turnover intention (Table 3). The results showed that there was no multicollinearity among the study's variables.

Predictors of the nurses' organizational turnover intention

The results of the logistic regression analyses, conducted to identify the predictors of the nurses' organizational turnover intention, are presented in Table 4. The results showed that marital status and the work shift were the predictors for organizational turnover intention. These two variables together explained 7% of the variance of the organizational turnover intention. Model 2 (Table 4), which combined the dimensions of OCS and PCS, showed that marital status, work shift, organizational affective commitment, organizational normative commitment, and professional affective commitment all predicted the organizational turnover intention. More specifically, the married nurses had 44.1% less organizational turnover intention than the single nurses. The nurses who worked the day shift had 49.9% less organizational turnover intention, compared to those who rotated shifts. These results are strong as a one unit increase in organizational affective commitment corresponded to a 23.3% decrease in organizational turnover intention. Furthermore, a one unit increase in organizational normative commitment corresponded to a 17.5% decrease in organizational turnover intention, while a one unit increase in professional affective commitment corresponded to a 41.7% decrease in organizational turnover intention. The variables that were included in the model explained 30% of the variance.

Table 2 Correlations between the independent variables for organizational turnover intention (OrgTI)

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	1.000	–	–	–	–	–	–	–	–	–	–	–
2. Marriage [†]	–0.298	1.000	–	–	–	–	–	–	–	–	–	–
3. Education 1 [‡]	–0.086	0.011	1.000	–	–	–	–	–	–	–	–	–
4. Education 3 [§]	0.227	–0.122	–0.408	1.000	–	–	–	–	–	–	–	–
5. Work shift [¶]	–0.238	–0.048	0.022	–0.081	1.000	–	–	–	–	–	–	–
6. Position 1 ^{††}	0.013	0.004	0.019	–0.012	–0.262	1.000	–	–	–	–	–	–
7. Position 3 ^{‡‡}	–0.138	0.051	0.020	–0.070	0.434	–0.410	1.000	–	–	–	–	–
8. Organizational AC	–0.157	0.059	0.078	–0.061	0.220	–0.131	0.158	1.000	–	–	–	–
9. Organizational NC	–0.087	0.044	0.088	–0.026	0.184	–0.102	0.083	0.637	1.000	–	–	–
10. Professional AC	–0.040	0.044	0.074	–0.048	0.097	–0.040	0.031	0.423	0.389	1.000	–	–
11. Professional NC	–0.062	0.077	0.076	–0.055	0.074	–0.007	–0.050	0.398	0.547	0.482	1.000	–
Dependent variable												
12. OrgTI ^{§§}	0.119	0.137	0.072	–0.070	–0.191	–0.091	–0.116	–0.352	–0.329	–0.389	–0.284	1.000

[†] Marriage was coded 1 = “married,” 0 = “single”;[‡] education 1 was dummy-coded 1 = “high school”; the graduate was the reference category;[§] education 3 was dummy-coded 1 = “undergraduate”; the graduate was the reference category;[¶] work shift was coded 1 = “day,” 0 = “day and night”;^{††} position 1 was dummy-coded 1 = “staff nurse”; the manager nurse was the reference category;^{‡‡} position 3 was dummy-coded 1 = “outpatient unit nurse”; the manager nurse was the reference category;^{§§} OrgTI was coded 1 = “Yes,” 0 = “No.” The correlations that were significant at $P < 0.05$ are in italics and bold. AC, Affective Commitment; NC, Normative Commitment.**Table 3** Correlations between the independent variables for professional turnover intention (ProTI)

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age	1.000	–	–	–	–	–	–	–	–	–	–
2. Marriage [†]	–0.298	1.000	–	–	–	–	–	–	–	–	–
3. Work shift [‡]	–0.238	0.048	1.000	–	–	–	–	–	–	–	–
4. Position 1 [§]	0.013	–0.004	–0.262	1.000	–	–	–	–	–	–	–
5. Position 3 [¶]	–0.138	0.051	0.434	–0.410	1.000	–	–	–	–	–	–
6. Organizational AC	–0.157	0.059	0.220	–0.131	–0.158	1.000	–	–	–	–	–
7. Organizational NC	–0.087	0.044	0.184	–0.102	0.083	0.637	1.000	–	–	–	–
8. Professional AC	–0.040	0.044	0.097	–0.040	0.031	0.423	0.389	1.000	–	–	–
9. Professional NC	–0.062	0.077	0.074	–0.007	–0.050	0.398	0.547	0.482	1.000	–	–
10. Years in the profession	–0.766	0.268	0.312	–0.046	0.192	0.164	0.077	0.062	0.570	1.000	–
Dependent variable											
11. ProTI ^{††}	–0.113	–0.097	–0.171	0.107	–0.115	–0.326	–0.321	–0.455	–0.275	–0.099	1.000

[†] Marriage was coded 1 = “married,” 0 = “single”;[‡] work shift was coded 1 = “day,” 0 = “day and night”;[§] position 1 was dummy-coded 1 = “staff nurse”; the manager nurse was the reference category;[¶] position 3 was dummy-coded 1 = “outpatient unit nurse”; the manager nurse was the reference category;^{††} ProTI was coded 1 = “Yes,” 0 = “No.” The correlations that were significant at $P < 0.05$ are in italics. AC, Affective Commitment; NC, Normative Commitment.

Predictors of the nurses' professional turnover intention

The results of the logistic regression analyses, conducted to identify the predictors of the nurses' professional turnover intention, are presented in Table 5. The results showed that marital status and the type of work shift were the predictors for the professional turnover intention. These two variables together explained 5% of the variance of the professional turnover intention. Table 5

presents the predictors of professional turnover intention, which were: marital status, work shift, organizational normative commitment, and professional affective commitment. In contrast to the single nurses, the married nurses had 30.4% less professional turnover intention. In contrast to those who worked a day and night rotation, the nurses' who worked the day shift had 48.9% less professional turnover intention. A one unit increase in the organizational normative commitment of nurses

Table 4 Logistics regression: Predictors of the nurses' organizational turnover intention (OrgTI)

Predictor	Model 1: OrgTI [†]					Model 2: OrgTI [†]				
	β	SE	P	Exp (β)	95% CI	β	SE	P	Exp (β)	95% CI
Marital status (married) (reference category: single)	−0.546	0.159	0.001	0.579	0.424–0.791	−0.582	0.177	0.001	0.559	0.395–0.790
Work shift (day) (reference category: day and night)	−0.969	0.192	0.000	0.379	0.261 0.552	−0.691	0.218	0.002	0.501	0.327 0.768
Organizational affective commitment	–	–	–	–	–	−0.266	0.085	0.002	0.767	0.649 0.905
Organizational normative commitment	–	–	–	–	–	−0.192	0.082	0.019	0.825	0.702 0.969
Professional affective commitment	–	–	–	–	–	−0.540	0.073	0.000	0.583	0.506 0.672
Constant	0.842	0.134	0.000	2.322	–	4.417	0.379	0.000	82.859	–

[†] “Turnover intention: No” is the reference category for OrgTI.

Model 1: Hosmer and Lemeshow test: $\chi^2 = 0.346$, $P = 0.841$, Nagelkerke $R^2 = 7\%$; Model 2: Hosmer and Lemeshow test: $\chi^2 = 3.847$, $P = 0.871$, Nagelkerke $R^2 = 30\%$. CI, confidence interval; SE, standard error.

Table 5 Logistics regression: Predictors of the nurses' professional turnover intention (ProTI)

Predictor	Model 1: ProTI [†]					Model 2: ProTI [†]				
	β	SE	P	Exp (β)	95% CI	β	SE	P	Exp (β)	95% CI
Marital status (married) (reference category: single)	−0.355	0.156	0.023	0.701	0.5170.952	−0.362	0.178	0.041	0.696	0.4920.986
Work shift (day) (reference category: day and night)	−0.856	0.190	0.000	0.425	0.2930.616	−0.671	0.221	0.002	0.511	0.3310.789
Organizational normative commitment	–	–	–	–	–	−0.291	0.070	0.000	0.748	0.6520.858
Professional affective commitment	–	–	–	–	–	−0.759	0.077	0.000	0.468	0.4030.544
Constant	0.635	0.130	0.000	1.887	–	4.687	0.384	0.000	95.794	–

[†] “Turnover intention: No” is the reference category for ProTI.

Model 1: Hosmer and Lemeshow test: $\chi^2 = 0.641$, $P = 0.726$, Nagelkerke $R^2 = 5\%$; Model 2: Hosmer and Lemeshow test: $\chi^2 = 4.140$, $P = 0.844$, Nagelkerke $R^2 = 33\%$. CI, confidence interval; SE, standard error.

resulted in a 25.2% decrease, while a one unit increase in the professional affective commitment resulted in a 53.2% decrease in the professional turnover intention. All the variables in the professional turnover intention model explained 33% of the variance.

In both models, the demographic variables accounted for only a small part (5–7%) of the organizational turnover intention and professional turnover intention; however, the rate increased to 30–33% when the commitment dimensions were added to the model. These results revealed that the commitment variables affected the nurses' turnover intention more than did the demographic and work variables.

DISCUSSION

In the models that were tested, theoretical implications were proposed by Meyer and Allen (1991) and Meyer, Allen, and Smith (1993) in their three-component model. In this study, the common variables that

predicted organizational turnover intention or the professional turnover intention were marital status, work shift, organizational affective commitment, organizational normative commitment, and professional affective commitment.

According to the results of the meta-analysis by Meyer *et al.* (2012), three forms of the OC showed a negative relationship with the organizational turnover and the strongest relationship was associated with the organizational affective commitment, followed by the normative commitment. The results that were related to the organizational turnover intention model in the present study also demonstrated that organizational affective and normative commitment predicted the organizational turnover intention. Fischer and Mansell (2009), in their meta-analysis, showed that although the relationship between organizational affective commitment and turnover intention was stronger in individualist cultures, the relationship between normative commitment and turnover intention was stronger in collectivist cultures in studies that had been conducted in

Jordan. In studies that had been conducted in Jordan (Al-Hussami, Darawad, Saleh, & Hayajneh, 2014) and Taiwan (Chang *et al.*, 2007), both of which have a collectivist structure, normative commitment was predicted to be the most effective commitment dimension that predicted nurses' organizational turnover intention. Hofstede (2001) defined Turkey as a country where the collectivist culture prevails and the power distance is high. In Turkey, where the collectivist culture prevails, however, organizational affective commitment, which is thought to be dominant in individualist cultures, accounts for the organizational turnover intention more than does the normative commitment. Currently, the multicultural nature of Turkey makes collectivism and individualism co-exist. However, the trend has been moving away from a collectivist, towards an individualistic, culture. Therefore, even though there is a collectivist cultural orientation, the results in this study showed that nurses' decision-making was based on individual considerations. The findings of this study are important as they could guide administrators to consider the effects of both affective and normative commitment in order to develop strategies for the retention of nurses in the organization and hence in the profession.

Furthermore, these results, which show that professional affective commitment was an important predictor for professional turnover intention, were consistent with the results of a study by Parry (2008) that was conducted with Australian nurses. As Parry emphasized, as a result of their professional affective commitment, professionals can be committed to their organization. However, managers should not consider that nurses' professional affective commitment would automatically result in a commitment to their organization. For example, as the study's findings confirm, nurses' professional affective commitment predicted their organizational turnover intention and professional turnover intention, which is consistent with the results of similar studies (Chang *et al.*, 2007; Lu *et al.*, 2002). Moreover, these findings showed that the role of professional affective commitment is stronger than that of organizational affective commitment, confirming that professional affective commitment is a more important predictor of employees' turnover intention. These results suggest that, in selecting a profession, professionals are less influenced by normative factors, but rather by the factors that are more individualistic that are consistent with their own values (Chang *et al.*, 2007; Hofstede, 2001).

This study's results, which also supported the meta-analysis by Lee *et al.* (2000), showed that the PC had an

indirect effect on organizational turnover intention because of its effect on professional turnover intention and emphasized that attitudes towards the profession were potentially important in the organizational turnover process. These findings showed that organizational normative commitment and professional affective commitment had an effect on organizational turnover intention and professional turnover intention. These results can be explained by the fact that the individualist and collectivist traits are influential in Turkish society. In intercultural studies, it is emphasized that the cultural tendencies of the individuals in a country can vary from one person to another (Triandis, 1995). Turkey is in the process of going through a rapid cultural change; that is, from being traditional and transitioning towards a modern, or more Western, culture. Currently, however, these two cultures co-exist. Therefore, not all individuals in Turkey can be classified strictly as collectivist or individualistic (Wasti & Erdil, 2007). The study's results showed that, in collectivist cultures, normative commitment plays a significant role in predicting the organizational turnover intention or the professional turnover intention. The current finding that affective commitment is a predictor for organizational turnover intention or professional turnover intention can be explained by the cultural change that Turkey is experiencing, which has been indicated by Wasti and Erdil (2007).

It should be emphasized that the continuance commitment is defined as the awareness of the costs that are associated with turnover (Meyer & Allen, 1991) and therefore the relationship between continuance commitment and turnover intention would be stronger in individualist cultures but weaker in collectivist cultures (Fischer & Mansell, 2009). It was found that the organizational and professional continuance commitments were not the predictors of nurses' organizational turnover intention and professional turnover intention. These findings support the proposal that the relationship between continuance commitment and turnover intention is weak in collectivist cultures. Studies that were conducted with nurses who were working in collectivist cultures have shown that a continuance commitment is not a predictor of turnover intention (Al-Hussami *et al.*, 2014; Chang *et al.*, 2007; Guntur, Haerani, & Hasan, 2012). In a study that was conducted in Canada, where the individualistic culture prevails, the organizational continuance commitment was determined as the predictor of the intention to leave the organization (Fernet, Trépanier, Demers, & Austin, 2017). In Australia, where the individualistic culture prevails too, nurses' turnover intention was determined to have

the highest correlation with the continuance commitment dimension (Christopher, Fethney, Chiarella, & Waters, 2017). In contrast, the continuance commitment also indicates that employees' alternatives are limited and they work because they have to work. In other words, the weak relationship between continuance commitment and turnover intention is also influenced not only by the culture of the community but also by the employment opportunities of the community. It should be kept in mind that the nurses who comprised the sample of this study had permanent employment security. As the cost of giving up this employment security was higher, their continuance commitment was not found to be a predictor of turnover intention.

In the literature review by Hayes *et al.* (2012), it was emphasized that the research results regarding the impact of demographic- and work-related factors on nurses' organizational turnover intention and professional turnover intention were not consistent. There are studies supporting this study's findings that the other two demographic factors, marital status (Engeda, Birhanu, & Alene, 2014; Mazurenko, Gupte, & Shan, 2015) and satisfaction with the work shift (El-Jardali, Dimassi, Dumit, Jamal, & Mouro, 2009; Engeda *et al.*, 2014), are the predictors of staying in the profession and turnover intention. These findings are important as they draw attention to the universality and importance of the work–home life balance of nurses.

Limitations of the study

An important limitation of the study is that it is cross-sectional, rather than longitudinal, as the latter can better investigate the actual turnover rather than the intent. Another limitation of the study is that it is based on self-reports that have a potential for bias and also that the respondents deliberately, or unconsciously, might have misrepresented the phenomena under investigation.

CONCLUSION

In conclusion, in this study it was identified, that of the variance, 30% was for the organizational turnover intention and 33% was for the professional turnover intention. More specifically, the results showed that nurses' organizational turnover intention and professional turnover intention were strongly influenced by their organizational affective and normative commitment and professional affective commitment. Those with a strong professional affective commitment remained at the organization, and also in the profession,

because they wished to do so. This finding suggests that administrators should make it a priority to support and strengthen nurses' professional affective commitment. For example, orientation and career development programs can offer incentives that support affective OC and PC. Moreover, to support the two types of commitments, in-house programs can be developed, as well as supporting participation in educational and professional activities outside the organization. Moreover, based on these results, it is suggested that it is important that nurse managers be flexible with work shifts and, when needed, adjustments should be made, particularly for those with families. In addition, in order to minimize turnover, administrators should periodically assess nurses' organizational turnover intention, paying particular attention to those at risk: that is, those with a low organizational normative commitment and those with a low professional affective commitment.

The assumption that the relationship between affective commitment and turnover intention is stronger in individualist cultures and that the relationship between normative commitment and turnover intention is stronger in collectivist cultures has not been confirmed. This result might be related to the fact that Turkish society is going through a rapid societal change; hence, the country has a combination of both individualist and collectivist characteristics. It should be taken into account that countries like Turkey, which are expected to exhibit the characteristics of a collectivist society but are in a process of rapid transformation because they are developing countries, also might be affected by the individualist social structure.

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DISCLOSURE

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

H. A. Y., S. M. H., and G. K. all contributed to the study's conception and design; S. M. H. collected the data; H. A. Y. and G. K. analyzed and interpreted the data; H. A. Y., S. M. H., and G. K. discussed the findings; H. A. Y. drafted the manuscript; and H. A. Y., S. M. H., and G. K. revised it critically.

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