



A Cross-Sectional Study of the Factors Affecting on Turnover Intention of Nurses

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Abstract

Introduction: Nurses are the largest group of health care professionals in health care systems. One of the main challenges of health care systems is the shortage of qualified nurses and Nurses' intention to leave the profession is one of the key issues in nursing all over the world. The aim of this study was to investigate the factors affecting nurses' turnover in Iran.

Methods: This descriptive cross-sectional study was conducted in the School of Nursing and Midwifery, Tabriz, Iran, in 2018. In this study, 500 nurses were selected Convenience sampling method was used for recruitments of samples. Data were collected using Anticipated Turnover Scale (ATC) and Measurement of the intention to leave the profession in nurses and were analyzed using SPSS (version 16).

Results: The results showed that the overall score of the Anticipated Turnover Scale was 4.04 ± 0.53 . Factors affecting nurses intention to leave included organizational (3.42 ± 0.66), professional (3.05 ± 0.55), family-work conflict (3.52 ± 0.82) and economic (3.82 ± 0.80) factors. The results showed a significant differences between the mean score of turnover intention and the variables of nurses gender ($P=0.006$, $T=2.75$) and work experience ($P=0.001$, $F=5.54$).

Conclusions: Reduction of economic problems and conflict between family and work makenurses stay in the health care system. Also, nurse managers should consider the needs of nurses based on age, gender, work experience and cultural and social differences.

INTRODUCTION

Nurses are the largest group of health care professionals in health care systems [1]. One of the main challenges of health care systems is the shortage of qualified nurses,

which is more felt in critical situations [2, 3]. According to the literature review, nurses' health is more at risk in the workplace and they are always faced with a lot of

occupational stress [4]. Various factors contribute to nurses' job stress such as management requirements, poor relationships with patients, and family, ineffective communication among peers [5], heavy work load, lack of support, and dealing with death & dying [6-8]. These factors lead to nurses' job dissatisfaction and could leads to nurses' desire to leave the profession [9].

A high level of intention to leave the nursing profession has been reported in previous studies [10, 11]. There are numerous factors that contribute to the intention to leave the nursing profession [12]. Occupational factors such as nursing shortage, heavy workload, long shifts, family-work conflict, burnout, and lower job satisfaction associated with the intention to leave the profession [10, 13, 14]. In addition, individual and social characteristics such as nurses' age, marital status, education level affect the intention to leave the profession [9]. Tendency to leave the profession affects the nurse's ability to provide high quality care [9].

There are few studies on factors affecting nurses intention to leave (Organizational, professional, family and economic) [9, 15]. The results of previous studies showed that factors such as job satisfaction, salary, job safety [16], Organizational commitment, training opportunity [17], and individual factors associated with nurses' turnover. Studies conducted in Iran and other countries show that it is necessary to continuously monitor the factors affecting leaving the profession [15, 18-20] and the necessary actions should be done for making a balance between work and family conflicts [21].

Based on a review of the literature, understanding more about the interrelationships between various factors with turnover intent are important for encouraging nurses to stay in nursing profession [17, 22]. Therefore, the main aim of this study was to determine nurses' turnover and factors affecting their intention to leave the profession.

METHODS

Design of the study

This descriptive cross-sectional study was conducted to investigate the factors affecting nurses' turnover in Iran from June 2017–May 2018.

Setting and Participants

This study was conducted in the hospital setting of East Azerbaijan Province, Iran. The city of Tabriz is the center of East Azerbaijan province in northwestern of Iran. After receiving approval from the Ethics Committee of Tabriz University of Medical Sciences, Based on Tsu- Yin Wu's study, the sample size was calculated using G power software with a confidence level of 95% and a power of 80%, 500 nurses. The nurses working in 9 hospitals affiliated to Tabriz University of medical sciences participated in the present study. Convenience sampling method was used for

recruitments of samples. In this study, nurses who had at least one-year experience of working in nursing field (internal-surgical units, intensive care units, and emergency units) were included. Nurses working as part time or nurses who were working in jobs other than nursing were excluded from the study.

Instruments

Data collection tools consisted of 4 instrument. The first tool is related to the demographic and job characteristics include age, gender, marital status, educational level, type of employment, work experience, workplace department, and monthly income.

The second tools was the Anticipated Turnover Scale that made by Hinshaw, which included 12 items on a 7-point Likert scale, ranging from strongly disagree [1] to strongly agree [7]. The overall score on this scale ranged from 12 to 84, with a higher score indicating a greater turnover intention [23, 24]. The instrument's items were related to an employee's intention to leave the profession and certainty of leaving the job. The total score was obtained by calculating the sum of all items in the scale divided by the number of items in the scale. Based on the willingness to leave the profession, each person's score was from 1 to 7 questions. Answers with an average score higher than 3.5 are a sign of a desire to leave the profession.

In the present study, the internal consistency (Cronbach's alpha coefficient) for this scale was 0.84.

The third scale were related to the factors affecting intention to leave tool, which have 34 items with a 5-point Likert scale. The answers ranged from strongly disagree (1) to strongly agree (5). This tool was made by Abasszadeh et al [15]. This scale consisted of four dimensions: organizational (6 items), work-family conflict (4 items), professional (18 items), and economic factors (6 items). Score of Factors affecting to leave was 1-5, and its average was 2.5, The higher the score, the greater the impact on leaving the profession. The questionnaire was given to 10 faculty members of the nursing faculty, to determine the validity and reliability of the questionnaire. After conducting a study on 20 nurses, the reliability of the questionnaire was determined to be 0.88 by using the internal consistency (Cronbach's alpha coefficient). To select the samples, a questionnaire was given by one of the researchers at the beginning of each shift (morning, evening and night) to the nurses who met the inclusion criteria. Filled questionnaires were collected in the same or subsequent shifts. In this study, the questionnaires in which more than 20% of the questions were not answered were excluded from the study. The response rate was 90%.

Ethical Considerations

This study was approved by the Regional Ethic Committee at Tabriz University of Medical Sciences (IR.TBZMED. REC. 1394.464). All participants were

informed of the study procedure and that participation in the study was voluntary. Participants were assured of confidentiality of data and that they had the right to withdraw from participation at any time without negative consequences. Informed written consent was obtained from the participants before data collection.

Data Analysis

The collected data were analyzed using descriptive and inferential statistics including chi-square and independent t-test using SPSS (version 16) software. P-value < 0.05 was considered as significant. The normality of data was assessed using the Shapiro–Wilk test ($p=0.09$, $df=168$), which reflected the normality of data.

RESULTS

A total of 450 nurses participated in the study with a response rate of 90%. Most of the participants (76.4%) were female, 64% were married, and 89.3% have a bachelor's degree in nursing. The mean (SD) age of nurses was 31.80 (6.87) years. The clinical experience of participants was 6.39 (SD 2.43) years. About 82.2% of nurses worked in rotating shifts. 56.6% of the nurses stated that their monthly income was somewhat satisfactory. Moreover, about 84% of them were working in other medical centers in addition to their

duty shifts; it shows the insufficient nurses' income (Table 1).

The results of this study showed that the overall score of the Anticipated Turnover Scale was 4.04 ± 0.53 . According to the result, the rate of anticipated turnover was higher in female nurses than males. Moreover, nurses with 11 to 20 years of experience reported a higher anticipated turnover than other nurses (Table 1). There was a significant relationship between gender and their work experience with anticipated turnover. However, there was no significant relationship between nurses' age, marital status, and educational level, type of employment, workplace and income level with turnover intention.) (Table 2).

The results showed that the overall scores of factors affecting intention to leave the profession was (3.22 ± 0.49). Among the different factors, economic (3.82 ± 0.80) and work-family (3.52 ± 0.82) conflict factors of intention to leave had a higher score than organizational (3.42 ± 0.66) and professional (3.05 ± 0.55) factors.

The analysis showed a significant relationship between nurses' work shifts and work-family conflict factors with nurse's turnover intention ($P = 0.002$, $F = 4.347$). Moreover, nurses who worked at night shifts had a higher turnover intention score (3.82 ± 0.51) than nurses worked in the morning shifts (3.15 ± 0.70).

Table 1. Mean scores for importance of Factors affecting to leave and Turnover intention

Variable	N (%)	Turnover Intention Score (1-7) Mean ± SD (4.04 ± 0.53)	Subscales of Factors Affecting to Leave Score (1-5) Mean ± SD (3.22 ± 0.49)			
			Organizational (3.42 ± 0.66)	Professional (3.05 ± 0.55)	Family (3.52 ± 0.82)	Economic (3.82 ± 0.80)
Gender						
Male	106(23.6)	3.91 ± 0.64	3.24 ± 0.75	3.06 ± 0.57	3.42 ± 0.88	3.74 ± 0.89
Female	344(76.4)	4.10 ± 0.49	3.48 ± 0.66	3.04 ± 0.54	3.55 ± 0.80	3.85± 0.80
Age						
18-30 year	226(50.2)	4.04 ± 0.50	3.41 ± 0.66	3.08 ± 0.58	3.48 ± 0.84	3.81 ± 0.84
31-40 year	173(38.4)	4.03 ± 0.54	3.49 ± 0.65	3.03 ± 0.52	3.59 ± 0.81	3.93 ± 0.75
41-52 year	51(11.3)	4.05 ± 0.66	3.23 ± 0.68	2.96 ± 0.54	3.41 ± 0.74	3.51 ± 0.87
Marital status						
Married	288(64)	4.04 ± 0.57	3.44 ± 0.66	3.05± 0.58	3.58 ± 0.82	3.85 ± 0.84
Single	162(36)	4.03 ± 0.47	3.41 ± 0.63	3.03± 0.51	3.41 ± 0.81	3.77 ± 0.81
Level of Education						
Bachelor	402(89.3)	4.04 ± 0.53	3.43 ± 0.65	3.07 ± 0.55	3.53 ± 0.83	3.84 ± 0.83
Master	48(10.7)	4.08 ± 0.46	3.26 ± 0.75	3.02 ± 0.53	3.37 ± 0.75	3.69 ± 0.73
Work experience						
1-10 year	136(30.2)	3.97 ± 0.51	3.31 ± 0.68	3.03 ± 0.53	3.45 ± 0.83	3.73 ± 0.88
11-20 year	155(34.5)	4.14 ± 0.48	3.44 ± 0.67	3.10 ± 0.68	3.56 ± 0.78	3.82 ± 0.75
21-25 year	159(35.3)	4.01 ± 0.59	3.50 ± 0.63	3.02 ± 0.53	3.55 ± 0.80	3.91 ± 0.83
Type of hospital ward						
Public unit	252(56.3)	4.09 ± 0.38	3.28 ± 0.58	2.88 ± 0.44	3.38 ± 0.90	3.62 ± 0.72
Emergency	113(24.8)	4.05 ± 0.55	3.43 ± 0.67	3.05± 0.58	3.51 ± 0.82	3.83± 0.80
Intensive unit	85(18.9)	4.01 ± 0.53	3.44 ± 0.68	3.07 ± 0.52	3.54 ± 0.81	3.82 ± 0.84
Type of work shift						
Morning	62(13.8)	4.06 ± 0.55	3.25± 0.79	3.01± 0.59	3.27 ± 0.70	3.60 ± 0.84
Evening	8(1.8)	3.87 ± 0.67	3.35 ± 0.92	3.25± 0.97	3.78 ± 0.99	3.91± 1.16
Night	10(2.3)	4.10 ± 0.35	3.50 ± 0.65	2.28 ± 0.52	3.82 ± 0.50	4.26 ± 0.89
Rotational	370(82.2)	4.04 ± 0.52	3.46± 0.62	3.06 ± 0.53	3.56± 0.83	3.86 ± 0.79
Income						
Absolutely Adequate	2(0.4)	3.29 ± 1.01	2.33 ± 0.01	1.94 ± 0.01	2.87 ± 1.23	2.00 ± 0.47
Adequate	57(12.6)	4.03 ± 0.76	3.21 ± 0.84	3.07 ± 0.67	3.51 ± 0.86	3.59 ± 0.89
Relatively adequate	253(56.6)	4.06 ± 0.47	3.45 ± 0.61	3.04 ± 0.51	3.49 ± 0.76	3.73 ± 0.74
Not adequate	138(30.4)	4.01 ± 0.51	3.48 ± 0.66	3.06± 0.56	3.58 ± 0.90	4.11 ± 0.84

Table 2. Factors associated with turnover intention of Nurses in Tabriz hospitals of Iran

Variable	N (%)	Factors Affecting to Leave, Score (1-5)	Subscales of Factors Affecting to Leave, Score (1-5) Mean ± SD (3.22 ± 0.49)				Turnover IntentionScore (1- 7)
		Mean ± SD(3.22 ± 0.49)	Organizational(3.42 ± 0.66)	Professional (3.05 ± 0.55)	Family(3.52 ± 0.82)	Economic (3.82 ± 0.80)	Mean ± SD(4.04 ± 0.53)
Gender							
Male	106(23.6)	T= -2.75	T= -3.15	T= 0.249	T= -1.34	T= -1.06	T= 2.75
female	344(76.4)	P= 0.018	P= 0.003	P= 0.808	P= 0.180	P= 0.289	P= 0.006
Age							
		F = 2.65 P= 0.072	F = 3.21 P= 0.041	F = 1.126 P= 0.325	F = 1.319 P= 0.269	F = 5.144 P= 0.006	F = 0.023 P= 0.977
18-30 year	226(50.2)						
31-40 year	173(38.4)						
41-52 year	51(11.3)						
Marital status							
		T= - 1.08 P=0.280	T= 0.558 P=0.577	T= 0.391 P=0.686	T= 2.182 P=0.028	T= 0.939 P=0.347	T= 0.422 P=0.738
Married	288(64)						
Single	162(36)						
Level of Education							
		T= 1.258 P=0.209	T= 1.826 P=0.107	T= 0.390 P=0.697	T= 1.268 P=0.175	T= 1.17 P=0.242	T= 0.503 P=0.605
Bachelor	402(89.3)						
Master	48(10.7)						
Work experience							
		F = 0.877 P=0.477	F = 1.61 P=0.170	F = 0.668 P=0.614	F = 1.50 P=0.198	F = 1.387 P=0.274	F = 5.54 P=0.001
1-10 year	136(30.2)						
11-20 year	155(34.5)						
21-25 year	159(35.3)						
Type of hospital ward							
		F = 1.488 P=0.227	F = 0.649 P=0.523	F = 0.1291 p= 0.276	F = 0.436 P=0.647	F = 0.799 P=0.451	F = 0.518 p= 0.596
Public unit	252(56.3)						
Emergency	113(24.8)						
Intensive unit	85(18.9)						
Type of work shift							
		F= 2.499 P=0.042	F= 0.2397 P=0.050	F= 0.759 P=0.559	F= 4.34 P=0.002	F= 3.37 P=0.010	F= 0.578 P=0.925
Morning	62(13.8)						
Evening	8(1.8)						
Night	10(2.3)						
Rotational	370(82.2)						
Income							
		F= 5.210 P= 0.002	F= 4.181 P= 0.006	F= 2.795 P= 0.040	F= 0.782 P= 0.505	F= 12.20 P= 0.000	F= 1.64 P= 0.179
Adequacy	2(0.4)						
Adequate	57(12.6)						
Relatively adequate	253(56.6)						
Not adequate	138(30.4)						
Turnover intention	(4.04 ± 0.53)	F = 3.53 P=0.000	F = 2.34 P=0.000	F = 3.382 P=0.000	F = 1.98 P=0.001	F = 1.55 P=0.022	

The results showed that nurses income was significantly associated with economic ($P = 0.000$) and organizational factors ($P = 0.006$). According to the results, the organizational and economic factors was the factors that facilitated the nurses' intention to leave the profession.

DISCUSSION

The results of this study showed that the score of Turnover Intention in nurses was higher than the average. This result is in line with that of other studies conducted in in Saudi Arabia [10], Chinese [25] and Philippines [26]. In a review of the literature, the reasons for these results are the psychological stress, job burnout, Job dissatisfaction [26], lack of perceived organizational support, workplace violence [25],

emotional labor, role conflict [27], and work-family conflict [20, 27].

The results of this study showed a significant relationship between nurses' gender and turnover intention, so that leaving the profession was higher in femal nurses. This finding are consistent with the result of studies from china [25] and Philippines [11]. They reported that female nurses were more likely to leave the profession than male nurses. However, the results of a study in Jordan [28], showed that male nurses were more likely to leave the profession than female nurses. It seems that in addition to the gender variable, other factors such as cultural and social factors could play a role in the intention to leave the profession, which needs further investigation.

Kaddourah [10] reported that participants with the age group of 6-10 years had the highest intention to leave the

profession. A study in Philippines [11] showed that the nurses with low experience have more intention to leave the profession. The results of this study showed that nurses with 11 to 20 years of experience were more likely to leave the profession than other age groups. In general the findings of this study and other studies in this area reveal the importance of work experience in turnover intention. The reasons for this difference are the needs, expectations and individual and social conditions of nurses based on the different age groups.

The findings of this study and other studies in this area reveal the importance of factors affecting intention to leave the profession in nursing [9, 20, 29]. In this study, the remarkable results were that work-family conflict and economic factors of intention to leave had a higher score than organizational and professional factors. Leodoro from Oman [20] reported the organizational and professional factors as a contributing factors of nurses' turnover intention.

According to the literature review, work-family conflict is an important predictor of turnover intention among nurses [30, 31]. In our study, the effects of job-related fatigue, working in night shifts and working in holidays are work-family conflict factors of nurses' intention to leave the profession. This finding is consistent with the result of a study conducted by Kim [32] in Korea. He reported that the turnover intention was positively correlated with nurses' fatigue. In this study, insufficient nurses' income as compared with physicians were perceived as financial injustice between physicians and nurses and the mismatch of workload with salary were reported as important economic factors to leave the nursing profession. A study in Jordan reported that one of the reasons of nursing students leaving the profession is the lower social status of nursing evidenced by low salary [33]. Another study showed that the nurses' turnover intention had a negative correlation with nurses income [28]. This showed that economic and work-family conflict factors have a greater impact on nurse's turnover intention.

Identifying the factors affecting nurses' intention to leave the profession could help to develop strategies to reduce their turnover intention. Economic factors affecting to leave the profession can be reduced by building a financial justice between physicians and nurses and adjusting the workload and with salary.

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Family factors affecting their intention to leave the profession can be improved by balancing work shifts with nurses' living needs. Nursing managers should also consider the needs of nurses in nursing programs based on age, gender, work experience and cultural and social differences. In addition, hospital managers need to improve the organizational and professional factors influencing the nurses' intention to leave the profession. Health care managers should develop and apply appropriate policies and strategies to reduce the actors affecting to nurses' turnover intention

This study is limited by the location studied, that was conducted at nine hospitals in Tabriz city of Iran. Secondly, the uncontrollable limitations of this study is the self-report of nurses who may, in some cases, have refused to state the facts or low mood and anxiety.

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AUTHORS CONTRIBUTION

Abbas Dadashzadeh: Study concept and design, acquisition of data, analysis. Farzad Ebrahimzadeh, interpretation of data, and statistical analysis. Javad Dehghannezhad: Administrative, technical. Mozghan Behshid: material support, study supervision. Azad Rahman: and Hadi Hassankhani: Critical revision of the manuscript for important intellectual content. Fariba Valizadeh: material support and technical

ETHICAL CONSIDERATION

Ethical permission was obtained from the Research Ethics Committee of Tabriz University of Medical Sciences (Code IR.TBZMED.REC.1394.464).

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

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