

## **PREDICTING NURSES' TURNOVER INTENTIONS BY DEMOGRAPHIC CHARACTERISTICS, PERCEPTION OF HEALTH, QUALITY OF WORK, AND WORK ATTITUDES**

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### **Abstract:**

**Aim:** The purpose of this paper is to examine the impact of demographic variables, organizational commitment levels, perception of health, and quality of work on turnover intentions.

**Methods:** A self-reported cross-sectional survey design was used to collect data from Jordanian registered nurses who were working between June 2011 and November 2011.

**Results:** the findings showed strong effects of the quality of work, perception of health, and normative organizational commitments on turnover intentions.

**Conclusion:** This study sheds the light on the important work outcomes in healthcare organizations. Increasing nursing quality of work and normative organizational commitment are good strategies for reducing turnover intentions.

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**Key Words:** Nurses; Turnover Intentions; Work Attitudes

### **Introduction**

Nursing turnover is a major problem that makes management of nursing workforce a challenge for nursing leaders. The ultimate goal of nursing turnover research is to improve the quality of patient care, which is a major concern of healthcare administrators and policy makers. Turnover of healthcare staff negatively influence health care costs<sup>1</sup>. It was estimated that minimum cost of healthcare staff turnover loss of more than five percent of the total annual operating budget including hiring, training, and productivity loss<sup>1</sup>.

As many other countries, Jordan experienced a national nursing shortage<sup>2,3</sup>. Al-Maaitah and Shokeh<sup>2</sup> estimated a projected nursing shortage of female registered nurses (RNs) of 2,572 in 2012, while there will be a surplus of male RNs of 2,026 in the same year. On the other hand, Al-Maaitah and Shokeh<sup>2</sup> reported the calculated turnover rate from the years of 2003 to 2007 as of 32.1% among nurses with PhD, MSN, BSC, Midwifery, and Associate Degree. The highest nursing turnover of the five degrees was reported for BSN nurses (35.9%). Other researchers<sup>4</sup> studied 21 Jordanian hospitals to identify RNs turnover rate. Out of the total sample of 2126 RNs 779 nurses (36.6) left their positions during study period.

The situation of nursing shortage in Jordan would be worsening especially if the trend of nursing turnover rate continues as before. So, there is a need to identify factors that affects turnover and turnover intentions. Identifying such factors may help nursing administrators and policy makers to retain nursing staff. Critical review of Jordanian nursing literature revealed a lack of research studies concerning nursing turnover especially in identifying factors that may lead nurses to leave their positions.

Turnover intention seems to be affected by a number of variables. Several studies examined the effect of demographic characteristics such as age, gender, and marital status on nurses' intention

to leave their organizations. Younger nurses were found to have higher level of turnover intention<sup>5-9</sup>. Other researchers reported higher level of turnover intention among specific age groups such as 25-44<sup>10</sup>, and 30-44<sup>11</sup>. Also, literature suggests different demographic characteristics among nurses who were planning to leave their organizations including male nurses<sup>5, 11, 12</sup>, single nurses<sup>5</sup>, and highly educated nurses<sup>9</sup>. Mrayyan<sup>13</sup> examined the predictors of nurses' intent to stay in Jordanian hospitals. Mrayyan<sup>13</sup> found age to be positively associated with nurses' intent to stay ( $P < 0.001$ ).

For decades, the concept of commitment was the area of research interest for many researchers in the field of organizational behaviors. Morrow<sup>14</sup> described organizational commitment as one of the different forms of work commitment. Other researchers described organizational commitment as a complex and multifaceted construct, and conceptualized it into three components including; affective, continuance, and normative commitment<sup>15, 16-17</sup>

Meyer, Stanley, Herscovitch, and Topolnytsky<sup>17</sup> conducted a meta-analysis to assess the relationships of the three components of commitment, affective, continuance, and normative with different work related behaviors. Meyer et al. found that the three components of organizational commitment were negatively associated with turnover intentions. In addition, one of the recommendations of the meta-analysis conducted by Meyer et al. is the need to examine the concept of organizational commitment across cultures to get in depth understanding of the concept globally.

Up to our knowledge, there is no literature evidenced the effects of organizational commitment on turnover intentions among Jordanian nurses. Researchers examined the effects of organizational commitment on nurses' turnover intentions in different countries such as United States<sup>8, 18</sup>, Canada<sup>19</sup>, Taiwan<sup>20, 21</sup>, and Australia<sup>22</sup>. The consistent negative relationship between organizational commitment and nurses' turnover intention was evidenced through those studies<sup>8, 18-22</sup>.

A well state of physical and psychological health of nurses is a prerequisite for providing a quality of nursing care. Several studies examined the effect of aspects of employees' physical health on turnover (low back pain and disability) were significant predictors of elderly healthcare professionals' turnover in Denmark<sup>23</sup>, and nurses who reported higher levels of musculoskeletal problems of the neck/ shoulder or knees, were more expected to leave nursing in Sweden<sup>24</sup>. In addition, studies from different countries reported that higher levels of nursing turnover intention was associated with higher level of stress<sup>25-27</sup>, nurse burnout<sup>11</sup>, and emotional exhaustion<sup>28</sup>. In Jordan, researchers examined the effects of job stress on nurses' intent to stay at work in 206 nurses<sup>29</sup>. Abualrub and Al-Zaru<sup>29</sup> found that job stress was negatively associated with nurses' intent to stay.

Underpayment of nurses is a major cause of Jordanian nurses' migration especially to Arab Gulf region. This was evidenced by the continuous claims by Jordanian Nursing Council to improve nursing work conditions and to increase nurses' salary. In her discussion regarding nursing shortage in Jordan, AbuAlRub<sup>3</sup> emphasized that one of the causes of moving students away from nursing is the lower social status of nursing evidenced by low salary. Internationally, inconsistent results were found regarding the relationship between pay and nursing turnover intentions. Several studies reported direct or indirect negative effects of pay on nurses' intention in different countries such as China<sup>10</sup>, UK<sup>12, 30</sup>, and Canada<sup>19</sup>. In contrast, other research studies highlighted that pay had not a significant relationship with nursing turnover intention in Singapore<sup>25</sup> and Australia<sup>26</sup>.

Nursing quality of work is a complex phenomenon<sup>31</sup>. Researchers found quality of work to be a factor that can helps in decreasing nursing turnover intention<sup>6, 22, 27, 32-36</sup>. Other researchers reported significant negative relationships between nursing turnover intention and different areas of nurses' quality of work such as satisfaction with control and responsibility, scheduling, extrinsic rewards<sup>5</sup>, supervision<sup>9</sup>, and workload, extent to which the nurses liked to work, and colleagues<sup>18</sup>

Reviewing Jordanian nursing literature revealed a dearth of literature regarding the relationship between satisfaction of work related issues and turnover intention. Abu AlRub, Omari, and Al-Zaru<sup>37</sup> examined the relationships between social support, quality of work and intent to stay among Jordanian nurses. The results revealed that nurses with higher level of quality of work, reported higher levels of intent to stay at work. On other hand, Al-Ma'aitah, et al.<sup>38</sup> found that negative predictors of turnover intentions among female nurses regarding satisfaction work related issues were kind of work they did, physical work conditions, and career future, while negative predictors of turnover intentions among male nurses were satisfaction with hospital identification and career future.

**Purpose**

The purpose of this paper is to examine the impact of demographic variables, organizational commitment levels, perception of health, and quality of work on nursing turnover intentions.

**Research Question**

What are the multiple correlations between a set of five predictors (age, quality of work, perception of health, organizational commitment, and pay) and the outcome, the nurses' turnover intentions?

**Study Design**

A self-reported cross-sectional survey design was used to collect data from Jordanian registered nurses who were working between June 2011 and November 2011. The use of self-reported questionnaire eliminates the effect of a researcher on participants which allows them more freedom to answer the questions honestly and openly<sup>39</sup>.

**Setting and Population**

Jordan healthcare system is divided into governmental, military, university, and private institutions. In the governmental sector, the Ministry of Health operates 27 hospitals, accounting for 37% of all hospital beds; the Military Royal Medical Services run 11 hospitals, providing 24% of all beds; the University Hospitals account for 3% of total beds; and the Private Sector provides 36% of all hospital beds, distributed among 60 hospitals. Only those hospitals with a capacity of 300 beds and above and having medical, surgical, emergency room, and critical care units were approached. Therefore, 11 hospitals including; 6 governmental, 2 university, and 2 private were eligible settings for the current study.

**Sample**

Participants were randomly selected from eight hospitals in three clusters of Jordanian hospitals that are stratified as governmental, university, and private hospitals using simple random sampling technique. Two hundred and thirteen registered nurses (RN) accepted to participate out of three hundred RNs invited in the study. Participants were recruited from the population of RNs' who met the eligibility criteria. The eligible subjects were RNs from both genders who have acquired a Bachelor, or Master's degree in nursing with at least one year of experience in acute healthcare settings.

**Power Calculation**

The statistical software G\*Power V.3<sup>40</sup> showed that the required sample size was 159 nurses. This figure was arrived at by using compromised  $\beta = 0.80$ ,  $\alpha = 0.05$  (2-tailed) and effect size = 0.3 (medium effect). Although these figures were needed, more numbers included (213) to produce significant and reliable findings and to compensate for incomplete questionnaires.

**Instrument**

A self-administered questionnaire was used in English language to collect the data about Jordanian nurses' turnover intention. Questionnaire of 57 items was subjected to validation process by researchers and expert nurses (n=15) that assessed the level of comprehensiveness, clarity, avoidance of ambiguity, and content validity. This involved circulating the draft items until there was consensus on content, order, and wording. As a result, four items were modified as not properly understood by three evaluators.

A pilot study was then conducted using this questionnaire among a sample of 20 nurses after an access to nurses was sought from the director of nursing in university hospitals. Fifteen completed questionnaires were received. Some items were re-worded to add more clarity and then the questionnaire was revised to combine similar items and to remove misleading or repeated items. Thus, the questionnaire was produced whose content validity was assessed by expert panel consists of four expert nurses who are nurses managers and having 5 years of experience in nursing; two PhD holders who have published work on management and leadership. The reliability of the final questionnaire was assessed using internal consistency (Cronbach's alpha test) ( $\alpha = 0.87, 0.76, 0.74, 0.90, 82$ , respectively for organizational commitment, perception of health, perception of feeling regarding pay, quality of work, intention to leave the organization). The nurses who have been involved in the pilot study had reported no corrections with the wording, length, and format of the questionnaire and they were not included as part of the main study.

The questionnaire was divided into six parts: Part one included professional and situational related characteristics such as; gender, age, marital status, years of experience, yearly income, and

working area. Age, years of experience, and yearly incomes were measured as ratio variables. However, gender, marital status, and working area were measured as dichotomous variables. Part two measured organizational commitment by a 23 item index called Organizational Commitment Questionnaire (OCQ) developed by Meyer, Allen, and Smith<sup>41</sup> with an estimated Cronbach's alpha .85<sup>42</sup>. The participants were asked to indicate their agreement on a seven Likert scale from strongly disagree to strongly agree. Part three measured nurses' perception of health by two items taken from the health related items used by Dalton and Mesch<sup>43</sup>. These items are: "The job I have now probably affect my physical health." "The job I have now probably affects my mental health." The scales ranged from 1 = very badly, to 5 = very positively.

Part four measured perception of feeling regarding pay by two items from Eisenberger et al.'s<sup>44</sup> Survey of Perceived Organizational Support" (SPOS) scale. This 36-item instrument was developed to measure employees' perceptions of organizational support. The two-selected items are specifically designed to explore employees' perceptions of their feelings regarding fairness in pay and measured on a seven-point Likert scale (1 = strongly disagree, to 7 = strongly agree).

Part five, the quality of work was measured by a 20 item index called Minnesota Satisfaction Questionnaire (MSQ) short-form, developed by Weiss et al.<sup>45</sup> with an estimated Cronbach's alpha .91<sup>46-49</sup>. The MSQ, a self-reported instrument consists of 20 items that sample job satisfaction on 20 scale areas, is an often used and widely researched job satisfaction measure. It was derived from the Minnesota Studies in Vocational Rehabilitation and measured on a on a seven-point Likert scale (1 = strongly dissatisfied, to 7 = strongly satisfied). Part six, the dependent variable, intention to leave the organization was measured by three items following Mobley et al.<sup>50</sup> definition. The respondents were asked to indicate their agreement with the following three items on a seven-point scale: "I think a lot about leaving the organizations." "I am actively searching for an alternative to this organization." "As soon as it is possible, I will leave the organizations."

### ***Ethical considerations***

Ethical approval was sought and granted from the Research and Ethics Committee at Faculty of Nursing/ University of Jordan and the research and Ethics Committee at each hospital involved in the study. Furthermore, detailed information about the objectives of the study was contained through the questionnaire cover letter, and returning the questionnaire was considered an implied consent. Participants were instructed that participation is voluntary and information provided will be kept anonymous, that is, no names or other identifiers will be collected on any of the instruments used. Data will be kept in the researchers' office for five years under lock and key. After this period of time, all data will be shredded.

### ***Data collection methods***

A detailed explanation of the aims and procedure of the study was given to the nurse administrators, head nurses, and charge nurses at participating hospitals. A list of an estimated number of available nurses was prepared from the selected hospitals one day before hospital visit. At the time of data collection, questionnaires were distributed and handed to nurses by the researchers and by assistance of the departments' managers and the charge nurses at all shifts. Each questionnaire had a cover letter explaining the nature of the study, aims, the way of completion, and a return envelop. Self completed questionnaires were then handed over together in a large envelope to the researchers.

### ***Data analysis***

Based on a 57-item questionnaire, nurses' responses were summed up in total scores of the organizational commitment, perception to health, perceptions of feelings regarding pay, quality of work, and turnover intention, where then calculated in mean scores and standard deviations. Furthermore, correlation between items was measured using Pearson's test. Additionally, hierarchical multiple regression analysis was used to estimate the probability of recorded variables. All statistical procedures was performed using the Statistical Package for the Social Sciences (SPSS-17) and produced at  $\alpha=0.05$  significance level (2-tailed).

### ***Results***

Of the original sample (300), 213 participants returned the questionnaires giving a response rate of 71%. The study population ranged from 22 to 52 years old, 57.7% females (n = 123) and 42.3% males (n = 90). For the purpose of describing the years of nursing experience for the study sample it was recoded from continuous into categorical variable and varied from less than two years (25%), between 2-6 years (50%), and more than 6 years (25%). The majority of the study sample

(82%) was employed at the baccalaureate level and 18% were employed at the masteral level. Among the respondents, 53.1% (n = 113) were single, 45.5% (n = 97) were married, and 1.4% (n = 3) were divorced.

Table 1 presents correlations of the study variables. Correlations between turnover intention and normative commitment and quality of work were significantly negative ( $r = -0.200, p \leq .01$ ;  $r = -0.193, p \leq .01$ , respectively). However, the correlations between turnover intention and age, experience, income, affective commitment, continuous commitment, income, and pay were not statistically significant. On the other hand, the perception of pay and age, experience, income, affective commitment, continuous commitment, normative commitment, quality of work, and perception of health was all significantly positive (table 1). Moreover, the quality of work and the levels of organizational commitment were strongly significantly positive.

**Table 1. Pearson Correlations of Turnover Intention (N= 213)**

	Age	Exp	Inco	Affect	Cont	Norm	Qua	Heal	Pay	Turn
Age	1									
Experience	.92**	1								
Income	.69**	.77**	1							
Affective	.45**	.46**	.38**	1						
Continuous	.50**	.50**	.40**	.59**	1					
Normative	.44**	.46**	.40**	.63**	.69**	1				
Quality of Work	.44**	.43**	.31**	.50**	.47**	.62**	1			
Perception of Health	.16*	.14*	.06	.27**	.17*	.27**	.28**	1		
Perception of Pay	.23**	.22**	.14*	.23**	.33**	.48**	.41**	.28**	1	
Turnover Intention	-.05	-.06	-.01	-.03	-.10	-.20**	-.19**	-.134	-.11	1

\* Correlation is significant at  $\alpha=0.05$  (2-tailed), \*\* Correlation is significant at  $\alpha=0.01$  (2-tailed)

The demographic variables (income, age, and years of experience) were entered in the first model, and  $R^2$  change was 0.01, which was not significant ( $p = 0.570$ ). The addition of the affective commitment and continuous commitment did not make any significant changes ( $R^2= 0.01, P= 0.99, R^2= 0.017, P= 0.41$ , respectively). In the fourth model, the addition of the normative commitment added 4% to the variance. Also, the single variables in model five and model seven added 4% and 0.2%, respectively, to the variance. Thus, the only statistically significant variables were normative commitment, perception of health, and quality of work (Table 2).

**Table 2 Seven-step multiple hierarchal regression analysis of predictors of turnover**

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
Model 7 Variables	$\beta$	p-value	$\beta$	p-value	$\beta$	p-value	$\beta$	p-value	$\beta$	p-value	$\beta$	p-value
Age	.067	.710	.067	.712	.085	.641	.068	.701	.044	.803	.048	.786
.623												
Experience	-.213	.298	-.213	.302	-.195	.344	-.166	.413	-.166	.803	-.167	.404
.623												
Income	.106	.333	.106	.335	.107	.559	.121	.262	.123	.162	.147	.171
.237												
Affective Commitment			.000	.999	.052	.211	.159	.093	.048	.192	.050	.220
.117												
Continues Commitment					-.115	.211	.029	.778	.048	.632	.050	.623
.591												

Normative Commitment									
.019									
Perception of Health									
.003									
Perception of Pay									
.919									
Quality of Work									
.031									
R <sup>2</sup>	.010 <0.570	.010 <0.999	.017 <0.211	.059 <0.003	.093 <0.006	.094	<0.648		
.111 <0.31									
Adjusted R <sup>2</sup>									
.075									
R <sup>2</sup> Change									
0.02	0.00	.00	.01	.04	.03		.00		

### Discussion

It was found in the literature that younger nurses had higher level of turnover intention<sup>5-9</sup>. On the other hand, Mrayyan<sup>13</sup> found age to be positively associated with nurses' intent to stay. The findings of this study were inconsistent with previous research reports. It was expected that nurses throughout their years should have higher salaries and promotions that prevent them to leave their jobs. In contrast, the present study found that age had no effects on turnover intention and this could be related to study sample. The study sample did not include older nurses (22-52 years old) compared to previous studies. For instance nurses' age ranged from 20-65 years old in Simon et al. study<sup>6</sup>, and 22-61 years old in Delobelle et al. study<sup>9</sup>.

The present study showed that the quality of work is the clearest and most consistent determinant of turnover intention. The findings here thus support the notion that quality of work plays a critical role in the employee's decision to leave the organization<sup>51</sup>. Although nurses' perceptions of health was not found to be associated with turnover intention in this study, it showed a predictive power to turnover intention when it was entered in regression analysis with other independent variables. Study findings showed the positive perception of health to be a predictor of increased level of turnover intention. One explanation might be that when nurses perceive their health positively, they will be more able to obtain better job offers and leave their organizations.

Commitment levels are considered the main predictor of turnover intention. Sage<sup>52</sup> found in that regard organizational commitment was strongly related to the aggregated duration of voluntary absence. According to the literature<sup>53, 54</sup> the work-related commitments can increase performance, reduce turnover, and benefit both the employee and the organization. Among the three components of commitment, findings showed that normative commitment was the only negative predictor of nurses' turnover intention. Since normative commitment reflects an individual's feeling of responsibility to remain in the organization<sup>16</sup>, this is considered a logical finding. In this study, normative commitment had the least predictive power of turnover intention among the significant predictors of turnover intentions. Despite that organizational commitment is considered an important factor related to turnover intention<sup>8, 17-22</sup>, the findings of the present study did not show a relationship between affective neither continuous commitment and turnover intention.

Pay was found not a significant predictor of turnover intention evidenced by study data. The relationship between pay and turnover intention is not apparent and that is supported by inconsistent findings of previous literature<sup>10, 12, 19, 25, 26, 30</sup>. Based on the findings of this study, it seems that pay is not a motivator for Jordanian nurses to leave their organizations.

A few limitations of this study should be noted. First, all variables in this study were measured with self-reports, thus the problem of common method was unable to recall events happened in the past. Concerning the condition of nurses during the data collection procedure, nurses were found to be very busy during their shifts, and the data collectors reported the need to visit the same unit many times to find nurses who are able to get 20 minutes to answer the questions of the study instruments.

It is true that this study is not the first study to address turnover intentions. Though, it is the first to address the relationship of work attitudes with turnover intention in Jordan. The gained

knowledge of this study is more relevant to nursing because the study asked nurses themselves to state their perception from different views. Also, this study asked the nurses to report their turnover intentions, unlike most of the nursing turnover studies that only report the official turnover rates. Doing so should give nursing administrators an insight about nurses' future decisions, and respite them sometime to take steps before nurses' turnover intention develops to be actions toward leaving nursing.

This study came to fill out a significant gap in the nursing literature regarding the nurses' turnover intention particularly in countries other than the western countries. Measuring turnover intentions among the Jordanian nurses was identified as another gap in the nursing literature that needed to be filled out. Also, this study filled out the gap and evaluated the turnover intentions among Jordanian nurses in the three healthcare sectors.

To expand the current findings, there are some possible moderators for future research. For example, Lee and colleagues'<sup>55</sup> meta-analysis found negative relationship between commitment levels and turnover intention. Employees are more likely to leave their work because of lower professional identity or family support. Furthermore, it is recommended to replicate this study among nurses in Jordan and other developing countries but with a larger sample size.

### ***Implications for Practice***

Nursing administrators are highly required to set the policies that are capable to accomplish nurses' desires of more contribution, and particularly when it comes to their quality of work and work attitudes. Setting job motivations seemed to be the most important step for the nursing administrators to start with as many nurses may leave their organizations. Healthcare policy makers, particularly in Jordan, need to know that without immediate actions, more nurses will be leaving the profession, and the previous turnover rates will be dangerously replaced. More respect to nurses' desires of contributing to the work attitudes and quality of work, more incentives and other retaining strategies, and obtaining a periodic feedback from the nurses are only examples of those immediate actions that are required with necessity.

### ***Conclusion***

The findings of this study shed lights on the important work outcomes in healthcare organizations. Increasing nursing quality of work and organizational commitment are good strategies for reducing turnover intentions. This paper illustrated the usefulness of such research as well as proposing directions for future work.

### ***Acknowledgements***

The authors express their appreciation to all registered nurses who participated in this study. Also thanks extended to the University of Jordan for funding this research.

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