

## Original Article

**Organizational commitment, job satisfaction, organizational justice and self-efficacy among nurses**Zahra Chegini<sup>1,2\*</sup>, Ali Janati<sup>3,4</sup>, Mohammad Asghari-Jafarabadi<sup>5,6</sup>, Omid Khosravizadeh<sup>2</sup><sup>1</sup> Students' Research Committee, School of Management and Medical Informatics, Tabriz University of Medical Sciences, Tabriz, Iran<sup>2</sup> Social Determinants of Health Research Center, Qazvin University of Medical Sciences, Qazvin, Iran<sup>3</sup> Iranian Center of Excellence in Health Management, School of Management and Medical Informatics, Tabriz University of Medical Sciences, Tabriz, Iran<sup>4</sup> Tabriz Health Services Management Research Center, Tabriz, Iran<sup>5</sup> Road Traffic Injury Research Center, Tabriz University of Medical Sciences, Tabriz, Iran<sup>6</sup> Department of Statistics and Epidemiology, School of Health, Tabriz University of Medical Sciences, Tabriz, Iran

## ARTICLE INFO

Received 26 November 2018  
Accepted 17 February 2019  
Published 06 April 2019

Available online at:  
<http://npt.tums.ac.ir>

**Key words:**

organizational commitment;  
organizational justice;  
job satisfaction;  
self-efficacy;  
nursing;  
Iran

## ABSTRACT

**Background & Aim:** Nursing shortage is a growing global challenge in healthcare organizations. Promoting nurses' organizational commitment may help alleviate nursing shortage. This study sought to evaluate the relationships between organizational commitment, job satisfaction, organizational justice, and self-efficacy among nurses.

**Materials & Methods:** This cross-sectional study was conducted on 401 Iranian nurses randomly selected through two-stage cluster sampling. Data were collected using self-administered questionnaires and analyzed using the SPSS (v.17.0) and the Amos (v.17.0) software.

**Results:** The goodness of fit indices were as the following:  $\chi^2/df=2.76$  ( $P<0.001$ ),  $GFI=0.93$ ;  $AGFI=0.87$ ,  $NFI=0.96$ ,  $RMSEA=0.068$ , and  $CFI=0.95$ . Organizational commitment had significant positive relationships with self-efficacy ( $\beta_3=0.28$ ,  $P<0.001$ ) and job satisfaction ( $\gamma_3=0.73$ ,  $P<0.001$ ), while organizational justice had significant positive relationship with job satisfaction ( $\gamma_2=0.89$ ,  $P<0.001$ ). Moreover, job satisfaction had a mediating role in the relationship of organizational justice with organizational commitment.

**Conclusion:** Hospital managers can promote nurses' organizational commitment through employing strategies to enhance their perceived organizational justice and thereby, improving their job satisfaction.

**Introduction**

Currently, the aging population is rapidly growing and the public expectations of healthcare systems are progressively increasing, resulting in serious challenges for healthcare organizations (1). Effective fulfillment of the public expectations of healthcare systems needs qualified workforce, including nurses. Nurses play key roles in the delivery of quality care in hospital settings (2). However, a review

study into the nursing profession in Iran reported job dissatisfaction and nursing shortage as two main challenges in the Iranian nursing system (3).

Promotion of nurses' organizational commitment is an effective strategy to minimize the challenges of workforce management in nursing (4). Organizational commitment gives a sense of organizational belonging to employees and fuels their desire for continued employment in their organizations (5). It includes three main components, namely affective, normative, and continuance commitment (6). Studies reported the significant positive relationships of nurses' organizational commitment with

\*Corresponding Author: Zahra Chegini, Postal Address: School of Management and Medical Informatics, Tabriz University of Medical Science, Tabriz, Iran. Email: z.cheginy@gmail.com

their professional performance (7) and job satisfaction (5).

Job satisfaction is a main factor behind organizational commitment. Employees with greater job satisfaction are more loyal to their organizations (5) and dedicate more serious effort to achieve organizational aims (5, 34). Nurses' job satisfaction is affected by different factors, including organizational justice (8).

Organizational justice refers to individuals' perception of fairness in their organizations and also to their behavioral responses to this perception (9). Organizational justice includes three main types, namely distributive, procedural, and interactional justice (9).

Self-efficacy is another factor which may have relationships with organizational commitment, organizational justice, and job satisfaction. Self-efficacy is a personality trait and a controlling mechanism which plays significant roles in dealing with daily tasks and achieving goals (14). As the ability of an individual to successfully perform his/her tasks, self-efficacy allows nurses to establish meaningful relationships at work and promotes their commitment to their organizations (15).

Although several studies evaluated the relationships among organizational commitment, organizational justice, and job satisfaction in healthcare systems (8, 10–13), there are limited data about the relationships of these variables with self-efficacy. Thus, this study sought to evaluate the relationships among nurses' organizational commitment, job satisfaction, organizational justice, and self-efficacy. The five main hypotheses of the study were:

1. Nurses' self-efficacy has a positive relationship with job satisfaction.
2. Nurses' organizational commitment has a positive relationship with self-efficacy.
3. Nurses' organizational justice has a positive relationship with job satisfaction.

4. Nurses' organizational commitment has a positive relationship with organizational justice.
5. Nurses' organizational commitment has a positive relationship with job satisfaction.

## Methods

As a cross-sectional survey, this study was conducted in October–December 2017. Study population comprised all nurses in public hospitals with 200–600 beds in Tabriz, Iran. Participants were selected through two-stage cluster sampling. In the first stage, five hospitals were randomly selected using a table of random numbers. In total, 1640 nurses were working in the selected hospitals. In the second stage, a proportionate random sample of eligible nurses was selected from each of the five selected hospitals. The inclusion criterion was a work experience of more than six months in all work shifts.

With a correlation coefficient of 0.2 between organizational commitment and organizational justice (12), a confidence level of 95%, and a power of 95%, sample size was calculated to be 263. However, considering a design effect of 1.5 and an attrition rate of 5%, sample size was increased to 420. Sample size calculation was performed using the STATA (v. 14.0).

Data were collected using the following five instruments.

*A demographic questionnaire:* This instrument included items on participants' age, gender, work experience, educational level, and employment type.

*The New General Self-Efficacy Scale:* This eight-item scale was developed by Chen et al. (16) and translated into Persian and used in hospital settings in Iran by Vatankhah et al. (17). The Cronbach's alpha of the scale was 0.86 in a former study (16) and 0.91 in the present study.

*The Organizational Justice Scale:* Developed by Niehoff and Moorman (19), this scale contains twenty items in the three dimensions of distributive, procedural, and

interactional justice. Naami and Shekarkan translated this scale into Persian and adapted it for the context of Iran (18).

The Cronbach's alpha values of the scale and all its dimensions were reported to be above 0.90 (19). Its Cronbach's alpha in the present study was 0.92.

*The Organizational Commitment Questionnaire:* This 24-item questionnaire was developed by Meyer and Allen. It includes three eight-item dimensions, namely affective, normative, and continuance commitment. The Cronbach's alpha of the questionnaire was reported to be 0.83 (6). Jazayeri et al. translated this questionnaire into Persian and confirmed its validity and reliability (20). The Cronbach's alpha of the questionnaire in our study was 0.85.

*The Job Descriptive Index:* Developed by Smith et al. (21), this index is widely used for job satisfaction assessment. It includes 26 items in the five dimensions of work, supervision, payment, promotion, and coworkers. Its validity and reliability were confirmed in two previous studies (21, 22). The Cronbach's alpha of the index in the present study was 0.90.

Previous studies reported the acceptable validity of the four main instruments used in the study (17, 18, 20, 22, 23). Yet, we asked five experts in healthcare management and behavioral sciences to assess the content validity of these instruments and then, revised them according to their comments. All items of these four instruments were responded and scored on a five-point Likert-type scale from 1 ("Strongly disagree") to 5 ("Strongly agree").

Data analysis was performed using the Statistical Package for Social Sciences (SPSS v.17.0; SPSS Inc., Chicago, IL, USA) and the Amos software (v.17.0). Structural equation modeling was used to evaluate the

relationships among the study main variables. Its results were interpreted through the indices of Klein (24), namely the Chi-square ratio ( $\chi^2/df < 3$ ), Comparative Fit Index (GFI > 0.9), Goodness of Fit Index (GFI > 0.9), Adjusted GFI (AGFI > 0.8), Normal Fit Index (NFI > 0.9), Parsimony Normed Fit Index (PNFI > 0.6), and Root Mean Square Error of Approximation (RMSEA < 0.08).

The Ethics Committee of Tabriz University of Medical Sciences, Tabriz, Iran, approved this study (code: IR.TBZMED.REC.1396.963). Participants were informed about the study aim as well as the voluntariness of participation in and withdrawal from the study. They were also asked to provide verbal informed consent at the beginning of the study.

## Results

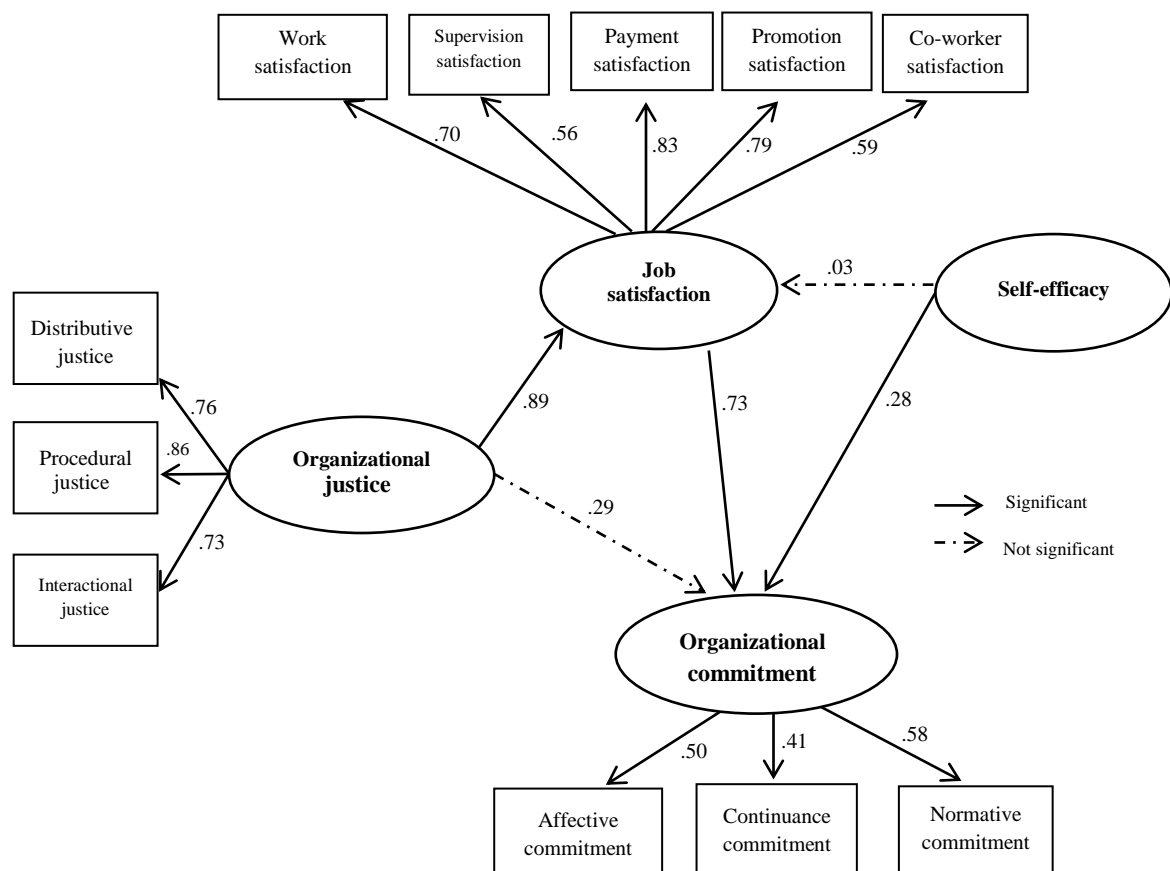
In total, 420 sets of questionnaires were distributed among 420 nurses. However, only 401 sets were completely filled out and included in the final analysis. As Table 1 shows, most participants were female (74.3%), aged less than forty (74.3%), held bachelor's degree (84%), and had a work experience of more than ten years (54.4%). The mean of their age was  $35.0 \pm 8.32$ .

**Table 1.** Participants' demographic characteristics

Characteristics		N	%
<b>Gender</b>	Male	103	25.7
	Female	298	74.3
<b>Educational level</b>	Associate	35	8.7
	Bachelor's	337	84
	Master's or higher	29	7.2
<b>Age (Year)</b>	<30	138	34.4
	31-40	160	39.9
	41-50	87	21.7
	>50	16	4
<b>Work experience (Year)</b>	<10	218	54.4
	10-20	134	33.4
	>20	49	12.2
<b>Type of employment</b>	Permanent	226	56.4
	Contractual	175	43.6

Organizational commitment had significant positive relationships with self-efficacy ( $\beta_3=0.28$ ,  $P<0.001$ ) and job satisfaction ( $\gamma_3=0.73$ ,  $P<0.001$ ). The strongest and the weakest relationships of organizational commitment with the dimensions of job satisfaction were respectively with the payment (path coefficient=0.83) and the supervision (path coefficient=0.56) dimensions. Moreover,

there was a significant positive relationship between organizational justice and job satisfaction ( $\gamma_2=0.89$ ,  $P<0.001$ ). The strongest and the weakest relationships of job satisfaction with organizational justice dimensions were respectively with the procedural justice (path coefficient=0.86) and interactional justice (path coefficient=0.73) (Figure 1).



**Figure 1.** The path diagram of conceptualized relationships among organizational justice, self-efficacy, job satisfaction, and organizational commitment

$\chi^2/df=2.76$ , GFI=0.93, AGFI=0.87, NFI=0.96, RMSEA=0.068, CFI: 0.95

GFI: Goodness of Fit Index; AGFI: Adjusted Goodness of Fit Index; NFI: Normal fit index; RMSEA: Root Mean Square Error of Approximation; CFI: Comparative Fit Index

The analysis of path coefficients rejected the mediating role of job satisfaction in the relationship of organizational commitment with self-efficacy but confirmed its mediating role in the relationship of organizational commitment with organizational justice. Job satisfaction, organizational justice, and self-

efficacy respectively explained 28%, 29%, and 73% of the total variance of organizational commitment.

In addition, self-efficacy and organizational justice respectively explained 3% and 89% of the total variance of job satisfaction (Table 2).

**Table 2.** The results of structural equation modeling

Parameter estimates among latent variables				
Path	Path name	Path coefficient	T value	
Self-efficacy ( $\xi_2$ )→Job Satisfaction ( $\eta_1$ ) (H1)	$\gamma_1$	0.03	0.667	
Self-efficacy ( $\xi_2$ )→Organizational Commitment ( $\eta_2$ ) (H2)	$\beta_2$	0.28	4.466**	
Organizational Justice ( $\xi_1$ )→ Job Satisfaction ( $\eta_1$ ) (H3)	$\gamma_2$	0.89	9.989**	
Organizational Justice ( $\xi_1$ )→Organizational Commitment ( $\eta_2$ ) (H4)	$\beta_1$	0.29	1.527	
Job Satisfaction ( $\eta_1$ )→Organizational Commitment ( $\eta_2$ ) (H5)	$\gamma_3$	0.73	3.555**	
Parameter estimates among latent variables and manifest variables				
Path	Path name	Path coefficient	T value	
Organizational Justice ( $\xi_1$ )→Distributive justice (x1)	$\lambda_1$	0.76	14.183	
Organizational Justice ( $\xi_1$ )→Procedural justice (x2)	$\lambda_2$	0.86	15.921	
Organizational Justice ( $\xi_1$ )→Interactional justice (x3)	$\lambda_3$	0.73	-	
Job Satisfaction ( $\eta_1$ )→ Work Satisfaction (y1)	$\lambda_4$	0.70	10.598	
Job Satisfaction ( $\eta_1$ )→ Supervision Satisfaction (y2)	$\lambda_5$	0.56	9.008	
Job Satisfaction ( $\eta_1$ )→Satisfaction of payment (y3)	$\lambda_6$	0.83	11.769	
Job Satisfaction ( $\eta_1$ )→ Promotion Satisfaction (y4)	$\lambda_7$	0.79	12.523	
Job Satisfaction ( $\eta_1$ )→ Co-worker Satisfaction (y5)	$\lambda_8$	0.59	-	
Organizational Commitment ( $\eta_2$ )→Affective Commitment (y6)	$\lambda_9$	0.50	-	
Organizational Commitment ( $\eta_2$ )→Continuous Commitment (y7)	$\lambda_{10}$	0.41	7.594	
Organizational Commitment ( $\eta_2$ )→Normative Commitment (y8)	$\lambda_{11}$	0.58	9.602	
Direct effect, indirect effect, and total effect among latent variables				
Independent variable	Dependent variable	Direct effect	Indirect effect	Total effect
Self-efficacy	Job satisfaction	0.029	0	0.290
	Organizational commitment	0.277	0.021	0.298
Organizational justice	Job satisfaction	0.893	0	0.893
	Organizational commitment	0.294	0.649	0.942
Job satisfaction	Organizational commitment	0.727	0	0.727

## Discussion

This study evaluated the relationships among nurses' organizational commitment, job satisfaction, organizational justice, and self-efficacy. Findings revealed that while nurses had high levels of organizational commitment and self-efficacy, their organizational justice and job satisfaction were moderate. Similarly, an earlier study in public hospitals in South Korea reported a moderate-level self-efficacy among 134 nurses (7). However, a study in a general hospital in South Korea reported low levels of organizational justice among nurses (12) and two other studies found moderate-level organizational commitment among nurses in Turkey (10) and Taiwan (25). These contradictory results can be due to the differences in the populations, settings, and contexts of the studies.

Our findings revealed no significant relationship between self-efficacy and job satisfaction and hence, the first study hypothesis is rejected. However, we found a significant positive relationship between self-efficacy and organizational commitment, confirming the second hypothesis of the study. This finding is in line with the findings of two earlier studies (7, 26) and contradicts the findings of another study (27). Self-efficacy denotes that in addition to having the necessary skills for task performance, staff need to believe in their ability to perform their tasks (28). Thus, hospital managers need to develop and use different strategies to develop hospital nurses' self-efficacy.

Study findings also showed the significant positive relationship of organizational justice with job satisfaction.

Thereby, the third study hypothesis is confirmed. Two earlier studies also reported the same finding (29, 30). Fair staff treatment and a workplace environment which provides the opportunity for personal growth and goal achievement can improve nurses' job satisfaction. Our findings revealed that among the dimensions of organizational justice, procedural justice had the strongest relationship with job satisfaction. This finding implies that fair judgment, consistent and proper application of organizational guidelines and standards, and provision of constructive feedbacks can significantly improve nurses' job satisfaction. However, our findings revealed that organizational justice had no significant relationship with organizational commitment and hence, the fourth study hypothesis is rejected.

Study findings also indicated that although there was no significant relationship between organizational commitment and justice, job satisfaction had a mediating role in this relationship. This is in disagreement with the findings of two earlier studies (31, 32). Another study also reported that not only justice has a significant relationship with organizational commitment, but also indirectly affects organizational commitment through psychological mechanisms (11).

A study also found that distributive and interpersonal justice had negative relationships with emotional exhaustion, while emotional exhaustion had a negative relationship with organizational commitment (33). Moreover, another study reported the mediating role of organizational commitment in the significant positive relationship of adequate human and supportive resources with patient care quality (28).

Study findings also showed a significant positive relationship between job satisfaction and organizational commitment, so that nurses with higher job satisfaction had higher organizational commitment. This finding confirms the fifth study hypothesis and agrees with the findings of two former studies (5, 10).

Moreover, we found that among the dimensions of organizational commitment,

normative commitment had the strongest relationship with job satisfaction. This is contrary to the findings of a previous study which found that the lowest relationship of job satisfaction with organizational commitment dimensions was with normative commitment (5). This contradiction is attributable to the differences in the populations and the data collection tools of the studies.

The last finding of the study was that among the dimensions of job satisfaction, satisfaction with payment had the strongest relationship with organizational commitment. This finding denotes that due to the difficult working conditions of nurses, raising their salaries may be the most effective strategy to improve their job satisfaction. However, a study reported that satisfaction with work had the strongest effects on job satisfaction and organizational commitment (5). This discrepancy may be due to the differences between the studies in terms of their settings and contexts.

This study showed that higher level of perceived organizational justice is associated with greater job satisfaction for nurses. Moreover, nurses' greater self-efficacy and job satisfaction are associated with greater organizational commitment. Job satisfaction has a mediating role in the relationship of organizational commitment with organizational justice. Therefore, performance-based financial rewards can be used to improve nurses' job satisfaction and organizational commitment.

Hospital managers are recommended to treat their nurses more fairly so that they feel they would get more rewards and would be more successful in achieving their goals if they work harder. Moreover, performance evaluation procedures and processes should be so clear that nurses can easily understand the level of their success in achieving organizational goals.

Using self-report instruments may be a limitation of the present study. Moreover, study sample exclusively consisted of nurses and hence, findings should cautiously be generalized to other healthcare providers. In

addition, as this study was conducted in public hospitals, its findings may not easily be generalizable to other hospitals. Future studies are recommended to explore the effects of other potential mediators on organizational commitment and performance-related indicators.

### **Acknowledgement**

We would like to thank the Health Service Management Research Center of Tabriz University of Medical Sciences, Tabriz, Iran, for approving and supporting this research (approval code: 1396.963). Moreover, we are thankful to all nurses who participated in the study.

### **Conflicts of Interest**

The authors declare that there are no conflicts of interest regarding the publication of this paper.

### **References**

1. Marier P, Van Pevenage I. Three competing interpretations of policy problems: tame and wicked problems through the lenses of population aging. *Policy and Society*. 2017;36(3):430-45.
2. Kempainen V, Tossavainen K, Turunen H. Nurses' roles in health promotion practice: an integrative review. *Health Promotion International*. 2013;28(4):490-501.
3. Farsi Z, Dehghan-Nayeri N, Negarandeh R, Broomand S. Nursing profession in Iran: an overview of opportunities and challenges. *Japan journal of nursing science*. 2010;7(1):9-18.
4. Lee SP, Chitpakdee B, Chontawan R. Factors predicting organizational commitment among nurses in state hospital Malaysia. 2011.
5. Chang C-S. Moderating effects of nurses' organizational support on the relationship between job satisfaction and organizational commitment. *Western journal of nursing research*. 2015;37(6):724-45.
6. Allen NJ, Meyer JP. The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of occupational and organizational psychology*. 1990;63(1):1-18.
7. Oh HS, Wee H. Self efficacy, organizational commitment, customer orientation and nursing performance of nurses in local public hospitals. *Journal of Korean Academy of Nursing Administration*. 2016;22(5):507-17.
8. Chen S-Y, Wu W-C, Chang C-S, Lin C-T, Kung J-Y, Weng H-C, et al. Organizational justice, trust, and identification and their effects on organizational commitment in hospital nursing staff. *BMC health services research*. 2015;15(1):363.
9. Köse A. The effect of employees' perceptions of organizational justice on organizational citizenship behavior: an application in Turkish Public Hospital. *J Hum Resour*. 2014;2:129-48.
10. Top M, Akdere M, Tarcan M. Examining transformational leadership, job satisfaction, organizational commitment and organizational trust in Turkish hospitals: public servants versus private sector employees. *The International Journal of Human Resource Management*. 2015;26(9):1259-82.
11. Kaul S, Singh A. Organizational Justice as an Enhancer of Organizational Commitment. *The International Journal of Indian Psychology*, Volume 4, Issue 2, No 89. 2017:52.
12. Lee KE, Kim JH, Kim MJ. Influence of Perceived Organizational Justice on Empowerment, Organizational Commitment and Turnover Intention in the Hospital Nurses. *Indian Journal of Science and Technology*. 2016;9(20).
13. Fu W, Deshpande SP. The impact of caring climate, job satisfaction, and organizational commitment on job performance of employees in a China's insurance company. *Journal of Business Ethics*. 2014;124(2):339-49.
14. Hoffman AJ. Enhancing self-efficacy for optimized patient outcomes through the theory of symptom self-management. *Cancer nursing*. 2013;36(1):E16.
15. Osei HV, Osei-Kwame D, Osei Amaniampong L. The effects of individual mechanisms on work self-efficacy of nurses: the mediating role of organisational commitment. *International Journal of Healthcare Management*. 2017;10(4):219-37.
16. Chen G, Gully SM, Eden D. Validation of a new general self-efficacy scale. *Organizational research methods*. 2001;4(1):62-83.
17. Vatankhah S, Bastani P, Bimoon Nejad A, Hamidi H. Justice diamond model and its

relationship with self efficiency. *Razi Journal of Medical Sciences*. 2013;20(108):19-28.

18. Naami A, SHEkarkan H. The Study of the Simple and complex relationship between organizational justice and job satisfaction in Staff Members of industry company. *Journal of Education and Psychology (Ahvaz SHahid Chamran University)*. 2004;3(11):55-70.

19. Niehoff BP, Moorman RH. Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. *Academy of Management journal*. 1993;36(3):527-56.

20. Jazayeri Sz, Naami A, Shokrkon H, Taghi Pm. An investigation of simple and multiple relationships between personality traits and professional commitment among nurses in some ahvaz hospitals. 2006.

21. Smith PC, Kendall L, Hulin C. The measurement of satisfaction in work and behavior. Chicago: Raud McNally. 1969.

22. Bastani P, Mostafae D, Sadeghifar J, Karimi S, Hamidi H. The Effective Factors on Staffs` Satisfaction in Accordance with SmithKendall-Hullin model in Teaching Hospitals: A Case Study *Journal of Health Based Research* 2015;1(2):167-76.

23. Janati A, Chegini Z, Gholizadeh M, Naseri N, Ahmadi Z. The Relationship between Organizational Justice Perception and Self-efficacy in Staff of a Selected Educational Hospital: a case study. *Health-Based Research*. 2017;3(2):127-39.

24. Markus KA. Principles and Practice of Structural Equation Modeling by Rex B. Kline. *Structural Equation Modeling: A Multidisciplinary Journal*. 2012;19(3):509-12.

25. Tsai Y. Learning organizations, internal marketing, and organizational commitment in hospitals. *BMC Health Services Research*. 2014;1(14):1-8.

26. Moon Y-S, Han S-J. Impact of self-efficacy and nursing professionalism on organizational commitment in nurses. *The Journal of Korean*

*Academic Society of Nursing Education*. 2011;17(1):72-9.

27. Kim Y, Kang Y. Effects of Self-efficacy, Career Plateau, Job Embeddedness, and Organizational Commitment on the Turnover Intention of Nurses. *Journal of Korean Academy of Nursing Administration*. 2015;21(5):530-41.

28. Baird KM, Tung A, Yu Y. Employee organizational commitment and hospital performance. *Health care management review*. 2017.

29. Al-Zu'bi HA. A study of relationship between organizational justice and job satisfaction. *International Journal of Business and Management*. 2010;5(12):102.

30. Mahmoudi S, Hassani M, Aghlmand S. The Relationship between Organizational Justice and Organizational Citizenship Behavior among Nurses (Examining the Mediating Role of Organizational Commitment, Organizational Trust, and Job Satisfaction. *Journal of Patient Safety & Quality Improvement*. 2017;5(2):513-20.

31. Saadati M, Saadati A, Asghari A, Bidgoli MG, Ghodsi A, Bidgoli AG. The relationship between perceived organizational justice, organizational commitment and job satisfaction. *Health, Spirituality & Medical Ethics Journal*. 2016;3(1):10-7.

32. Ali N, Jan S. Relationship between organizational justice and organizational commitment and turnover intentions amongst medical representatives of pharmaceuticals companies of Pakistan. *Journal of Managerial Sciences*. 2012;6:202-12.

33. Cole MS, Bernerth JB, Walter F, Holt DT. Organizational justice and individuals' withdrawal: Unlocking the influence of emotional exhaustion. *Journal of Management Studies*. 2010;47(3):367-90.

34. Lowe G. How employee engagement matters for hospital performance. *Healthcare Quarterly*. 2012;15(2):29-3.