

The Relationship between Organizational Citizenship Behavior and Professional Behavior Mediated by Nurses' Physical Health

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ABSTRACT

BACKGROUND AND OBJECTIVE: Organizational citizenship behavior is a performance beyond job duties that can lead to professional behavior and improve the performance of the organization and the quality of services. Considering that the physical health of nurses is one of the requirements for the quality of their performance, this study was conducted to investigate the relationship between organizational citizenship behavior and professional behavior mediated by nurses' physical health.

METHODS: This cross-sectional study was performed in 2019 among 350 nurses working in Amirkola Children's Hospital, and Yahyanejad, Shahid Beheshti and Ayatollah Rouhani Hospitals affiliated to Babol University of Medical Sciences. Using a four-section questionnaire, including Demographic Characteristics Questionnaire, Podsakoff Organizational Citizenship Behavior Scale (24 items with a score range of 24-120), Goz Nursing Professional Behavior Scale (27 items with a score range of 27-135) and Physical Health Questionnaire (14 items with a score range of 14-98), the required data were collected and evaluated.

FINDINGS: There were 245 female nurses (70%) and 105 male nurses (30%). The age of 59.4% of subjects was in the range of 30-39 years. The mean value of organizational citizenship behavior was 75.77 ± 17.93 and the mean value of professional behavior was 102.30 ± 18.27 . The relationship between organizational citizenship behavior and professional behavior was direct and significant (path coefficient=0.481, $p < 0.001$). The mean value of physical health was 47.17 ± 10.80 and physical health played a mediating role in the relationship between organizational citizenship behavior and professional behavior ($p < 0.05$).

CONCLUSION: The results of the study showed that there was a direct relationship between organizational citizenship behavior and professional behavior and the mediating role of nurses' physical health in this regard was confirmed.

KEY WORDS: Nurse, Hospital, Organizational Citizenship Behavior, Professional Behavior, Physical Health.

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Introduction

In today's modern societies, organizations have been developed in different areas to meet the needs. Hospitals, as one of these organizations, are responsible for providing health services and the health system will be able to fulfill the mission of providing, maintaining and promoting health (1). Hospitals are part of social organizations and human resources play a major role in them. Nurses are the biggest group of specialized people working in hospitals and their job sensitivity is very high due to direct contact with patients, execution of medical orders and working in different shifts (2). Furthermore, the performance of nurses directly affects the quality of care provided to patients (3, 4).

Organizational citizenship behavior is one of the factors determining the level of performance of employees, including nurses (5). The total behavior of employees can be divided into two groups: in-role behaviors and extra-role behaviors. Organizational citizenship behavior refers to the group of behaviors that go beyond the defined job tasks (6). Organizational citizenship behavior affects the quality of services provided by nurses and increases patient satisfaction (4). The occurrence of such behaviors increases the job satisfaction of nurses and can pave the way for the progress and development of the organization (7).

A study on nurses in Hamedan teaching and medical hospitals by Sadeghi et al. showed that the status of organizational citizenship behavior was at a relatively favorable level (8). Furthermore, a study on 384 nurses in Egypt by Metwally et al. showed an average status for organizational citizenship behavior (9). Nursing profession as one of the sensitive occupations in the health system requires nurses who accept their profession and develop professional characteristics in themselves (10). Professional behavior is one of the basic concepts in nursing and refers to the observance of special behavioral standards in the provision of nursing care to improve performance (11). Professional behavior is one of the requirements for proper accomplishment of duties for nurses and is therefore directly related to their performance and patient outcomes (12).

Khajavi et al. reported a strong level of professional behavior of nurses in teaching and medical hospitals of Mazandaran (13). Since organizational citizenship behavior involves actions beyond job duties, professional behavior is highly likely to occur in nurses who have a desirable level of citizenship behavior. In other words, people who are inclined to organizational citizenship behavior will be more likely to follow

professional behavior (14). However, there are several other factors that can affect the behavior and performance of hospital nurses. One of these factors is the physical health status of nurses, which affects their willingness and ability to adopt any action and behavior. The level of physical health is related to the motivation and performance of nurses (15). However, the nursing profession makes a person vulnerable to various diseases due to a lot of psychological stress, work shifts and also the possibility of occupational injuries (16).

The emergence of organizational citizenship behavior by nurses can have positive consequences for nurses, patients and hospital performance and increase the likelihood of adhering to professional behavior. Having physical health is essential to playing an effective nursing role. Accordingly, the present study was conducted to determine the relationship between organizational citizenship behavior and professional behavior, and the mediating role of nurses' physical health.

Methods

This cross-sectional study was conducted from June until October, 2019 after approval by the Ethics Committee of Tehran Islamic Azad University of Medical Sciences with the code ethics IR.IAU.TMU.REC.1398.032 while observing the confidentiality of participants' information, freedom of choice for participation in the study and obtaining informed consent.

The study population included all nurses working in Amirkola Children's Hospital (183 subjects), and Yahyanejad (278 subjects), Shahid Beheshti (420 subjects) and Ayatollah Rouhani (470) Hospitals affiliated to Babol University of Medical Sciences, having a total population of 1351 subjects. The sample size was estimated at 300 people based on 95% CI for estimating the mean value in a specific population and considering 0.05 error. Given the probability of sample drop off and receiving incomplete questionnaires by 20%, a total of 360 questionnaires were distributed.

Stratified random sampling method was used to distribute the questionnaires among the mentioned hospitals. Based on this, the sample size of each hospital was calculated in proportion to the share of the hospital in the total population (1351 people) and in each hospital, simple random sampling was performed. Inclusion criteria were willingness to participate in the

study, work experience of at least one year, employment in clinical departments and having a bachelor's degree or higher in nursing. Patients with physical illnesses under treatment as well as questionnaires with incomplete information were excluded from the study. Using a four-section questionnaire, including Demographic Characteristics Questionnaire, the Podsakoff Organizational Citizenship Behavior Scale, Goz Nursing Professional Behavior Scale and Physical Health Questionnaire, the required data were collected and examined.

The organizational citizenship behavior questionnaire has 24 items and 5 dimensions including conscientiousness (5 items), courtesy (5 items), altruism (5 items), sportsmanship (5 items) and civic virtue (4 items). Items are scored on a 5-point Likert scale from strongly disagree (1) to strongly agree (5), with an achievable score ranging from 24 to 120. Due to the unequal number of items in the dimensions of the questionnaire, the average dimensions were reported out of 5 points. Podsakoff et al. confirmed the validity of this questionnaire and the reliability of the whole scale was confirmed with Cronbach's alpha of 0.81% (17). The reliability of this questionnaire has been confirmed by calculating Cronbach's alpha coefficient to be 0.96 in the study of Egyptian nurses (9). In the study of Sadeghi et al., the validity of this scale was confirmed. Furthermore, its reliability was confirmed among nurses in Hamedan by test-retest method with a correlation coefficient of 0.956 (8).

The Nursing Professional Behavior Scale includes 27 items, and each of them is scored in a 5-point Likert scale from never (1) to always (5). The score obtained from this scale is in the range of 27 to 135, and a higher score indicates a more desirable level of professional behavior. Goz et al. confirmed its validity and reliability (Cronbach's alpha coefficient of 0.95) (18). Khachian et al., confirmed the validity and reliability this questionnaire (Cronbach's alpha of 0.76) in a study among nurses of Iran University of Medical Sciences (19).

The physical health questionnaire includes 14 items. Answering 11 items is based on the 7-point Likert Scale from never (1) to forever (7), and 3 items based on 7-point Likert Scale from never (1) to 7 times and more (7). Accordingly, the achievable score is in the range of 14 to 98 and a higher score indicates a more unsatisfactory physical health status (20). In the study of Gallagher et al., Cronbach's alpha coefficient for this scale was estimated to be 0.84 (21). In the study of

Abasi et al., the convergent validity and criterion validity were confirmed simultaneously with the SF-36 questionnaire and its reliability was confirmed by calculating the Cronbach's alpha coefficient from 0.61 to 0.81 (22).

The questionnaires were provided to the participants by referring to the hospitals where the subjects were selected and after providing sufficient explanations and obtaining informed consent. Data were analyzed using SPSS software version 22 and SmartPLS software using multivariate structural equation modeling (SEM) and $p < 0.05$ was considered significant.

Results

From a total of 360 distributed questionnaires, 350 complete questionnaires were collected (response percentage of 97.2). Most of the participants were female (70%) and married (66.6%), were in the age range of 30 to 39 years (59.4%), had less than 10 years of experience (70.6%) and had a bachelor's degree (86%) (Table 1).

Table 1. Frequency status and percentage of demographic variables of nurses

Variable	Number(%)
Gender	
Female	245(70.0)
Male	105(30.0)
Marital status	
Single	112(32.0)
Married	233(66.6)
Other	5(1.4)
Age (years)	
Less than 30	95(27.2)
30-39	208(59.4)
40-49	42(12.0)
50 and above	5(1.4)
Work experience (years)	
Less than 10	247(70.6)
10-19	78(22.3)
20 and above	25(7.1)
Academic degree	
Bachelor's degree	301(86.0)
Masters and higher	49(14.0)

The total mean value of organizational citizenship behavior was 75.77 ± 17.93 (out of 120 possible points) which indicates the favorable status of this variable. Among the five dimensions of citizenship behavior, the

highest and lowest mean values were related to the dimensions of courtesy (3.17 ± 0.68 out of 5 points) and civic virtue (3.12 ± 0.61 out of 5 points) (Table 2). The mean value of professional behavior of nurses was 102.30 ± 18.27 (out of 135 possible points). Moreover, the mean value of physical health of nurses was 47.17 ± 10.80 (out of 98 possible points).

Table 2. Mean and standard deviation of organizational citizenship behavior and its dimensions

Variable	Mean $\pm$ SD
Conscientiousness	3.15 $\pm$ 0.83
Courtesy	3.17 $\pm$ 0.68
Altruism	3.16 $\pm$ 0.78
Sportsmanship	3.16 $\pm$ 0.87
Civic virtue	3.12 $\pm$ 0.61
Organizational citizenship behavior	75.77 $\pm$ 17.93

In examining the relationship between organizational citizenship behavior and professional behavior, the path coefficient or standard beta was equal to 0.481 ($p < 0.001$). The t-statistic was 11.733, which is greater than the critical value of 1.96, which indicates a positive and significant effect of organizational citizenship behavior on professional behavior. Regarding the relationship between organizational citizenship behavior and physical health, the path coefficient was -0.199 ($p = 0.002$). The t-statistic in this path is equal to 3.192 which shows that organizational citizenship behavior has a negative and significant effect on physical health. Finally, the evaluation of the relationship between occupational behavior and physical health showed that the path coefficient was equal to 0.188 ($p = 0.011$). The t-statistic in this path was equal to 2.546, so it can be said that professional behavior has a positive and significant relationship with physical health.

Regarding the relationship between organizational citizenship behavior and professional behavior mediated by physical health, the findings showed that the indirect path of this relationship (organizational citizenship behavior and professional behavior through the path of physical health) had a coefficient of -0.037, and t-statistic was 2.080 ($p = 0.038$). As a result, physical health plays a mediating role in the relationship between organizational citizenship behavior and professional behavior. The total effect of organizational citizenship behavior on professional behavior mediated by physical health was equal to 0.452 and the value of t-statistic was equal to 11.060 ($p < 0.05$), which shows the total effect of organizational citizenship behavior on nurses' professional behavior.

Discussion

Findings of the study showed that the status of variables of organizational citizenship behavior and professional behavior was above average and at the desired level. The level of physical health of nurses was also estimated at a moderate level. According to the findings of the study, organizational citizenship behavior has a positive effect on professional behavior. The mediating effect of physical health on the relationship between organizational citizenship behavior and professional behavior was also confirmed. Organizational citizenship behavior among nurses affiliated to Babol University of Medical Sciences was at the desired level. Among the dimensions of organizational citizenship behavior, the dimension of courtesy had the highest mean value.

In this regard, the evaluation of organizational citizenship behavior among nurses in Hamedan teaching hospitals by Sadeghi et al. showed that the mean value of this variable was higher than average and at the desired level, which is consistent with the findings of the present study (8). The cultural and social conditions of the Iranian society are somewhat the same throughout the country and also the working conditions in the teaching hospitals of different provinces are almost the same and therefore, achieving similar results is not far from expectation. In this regard, the findings of the study of Metwally et al. in Egypt indicate a situation similar to the results of the present study (9).

A study on nurses working in Taiwan hospitals by Yu et al. showed that the status of organizational citizenship behavior was above average and was consistent with the findings of the present study (23). These findings show that most nurses are conscientious, have a high work conscience, and due to the sense of altruism in relation to patients, observe courtesy and display behaviors beyond job duties to improve their situation. Findings of the study showed that the mean value of professional behavior of nurses was above average and at the desired level. In this regard, the study of Jahanbazi et al. among nurses of Shahrekord teaching hospitals showed that the score of nurses' professional behavior was above average and was desirable (24). These findings are consistent with the results of the present study and show that professionalism is common among nurses and the reason for this may be related to the sensitivity of the nursing profession. However, the findings of a study by Tanaka et al. on nurses working in Japanese hospitals showed that the status of citizenship behavior was below average and at a low

level (25). The findings of the study in Japan indicate a lower level of professional behavior than the present study and is not consistent with the situation of hospitals in Babol. The reason for this difference may be due to differences in research scales. Moreover, cultural and social differences and differences in performance standards between different countries can be the reason for this lack of agreement.

According to the results, nurses in hospitals affiliated to Babol University of Medical Sciences were in moderate to low physical status. Findings of the study by Rahimi Pordanjani et al. in Bojnurd teaching hospitals showed that the physical health status of nurses was moderate and low (26) and was consistent with the findings of the present study in this respect. These findings indicate that the nursing profession and its characteristics make a person vulnerable to physical illness. One of these issues is the shift work of nursing staff, which can cause many problems by affecting the quality of sleep, physical ability and also creating work-family conflict (27).

In this regard, the findings of the study of Giorji et al. in Italian hospitals showed that working shifts directly affects the quality of sleep and job burnout and indirectly affects the working performance of nurses (28). Regarding the mediating role of physical health in the relationship between organizational citizenship behavior and professional behavior, the findings showed that physical health plays a mediating role in this regard. Taqvaei Yazdi in his study showed that with

increase in mental health, the level of professional ethics of nurses increases. In addition, with the increase of organizational citizenship behavior, the level of professional ethics increases in individuals (29).

The findings of this study showed that there is a relationship between organizational citizenship behavior and nurses' professional behavior and their physical health plays a mediating role in this relationship. Considering the importance of organizational citizenship behavior and professional behavior regarding nurses' performance and patients' outcomes, taking the necessary measures to promote physical health and thus improve organizational citizenship behavior and professional behavior is highly recommended. The findings of this study can be used as a guide for hospital officials, including nursing managers. However, this research has some limitations. The most important limitation is conducting the study among nurses of teaching and medical hospitals in one province, and generalizing the results to other provinces and nurses working in other hospitals (private, social security, etc.) should be done with caution.

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References

1. Daneshkohan A, Zarei E, Ahmadi-Kashkoli S. Health system responsiveness: a comparison between public and private hospitals in Iran. *Int J Healthc Manag.* 2020;13(Sup1):296-301.
2. While AE, Webley-Brown C. General practice nursing: who is cherishing this workforce?. *London J Prim Care (Abingdon).* 2017;9(1):10-3.
3. Zaghini F, Fiorini J, Piredda M, Fida R, Sili A. The relationship between nurse managers' leadership style and patients' perception of the quality of the care provided by nurses: Cross sectional survey. *Int J Nurs Stud.* 2020;101:103446.
4. Labrague LJ, De los Santos JAA, Tsaras K, Galabay JR, Falguera CC, Rosales RA, et al. The association of nurse caring behaviours on missed nursing care, adverse patient events and perceived quality of care: A cross-sectional study. *J Nurs Manag.* 2020;28(8):2257-65.
5. Kılınç E, Ulusoy H. Investigation of organizational citizenship behavior, organizational silence and employee performance at physicians and nurses, and the relationship among them. *Busin Manage Dynam.* 2014;3(11):25-34.
6. Torlak NG, Kuzey C, Sait Dinç M, Budur T. Links connecting nurses' planned behavior, burnout, job satisfaction, and organizational citizenship behavior. *J Workplace Behav Health.* 2021;36(1):77-103.
7. Biagioli V, Prandi C, Nyatanga B, Fida R. The role of professional competency in influencing job satisfaction and organizational citizenship behavior among palliative care nurses. *J Hosp Palliat Nurs.* 2018;20(4):377-84.
8. Sadeghi A, Maleki Jamasbi M, Azami H, Karami M, Hassanian ZM. Survey of the Relationship Between Demographic Characteristics and Organizational Citizenship Behavior in Nurses in Hamadan Educational Centers. *Avicenna J Nurs Midwifery Care.* 2019;27(5):326-34. [In Persian]
9. Metwally FG, Ata AA, Ahmed AK. Organizational justice, organizational citizenship behavior and turnover intention among nurses: The mediating effect of transformational leadership. *Am J Nurs Res.* 2018;6(6):576-85.
10. Dikmen Y, Karataş H, Arslan GG, Ak B. The level of professionalism of nurses working in a hospital in Turkey. *J Caring Sci.* 2016;5(2):95-102.
11. Afshar L, Ebadi A, Akbari Farmad S, Azemian A. Factors Affecting the Professional Behavior of Iranian Nurses: A Qualitative Study. *J Complement Med Res.* 2020;11(3):106-17.
12. Jiang L, Broome ME, Ning C. The performance and professionalism of nurses in the fight against the new outbreak of COVID-19 epidemic is laudable. *Int J Nurs Stud.* 2020;107:103578.
13. Khajavi Z, Vaezzadeh N, Mousavinasab SN, Azimi Lolaty H. Relationship between Ethical Intelligence and Professional Behavior in Nurses. *J Mazandaran Univ Med Sci.* 2020;30(185):86-95. [In Persian]
14. Yoo M-R, Yoo J-A, Kim Y-M. Study for professionalism, organizational citizenship behavior, psychological ownership of nurse officers. *J Korean Acad Nurs Adm.* 2012;18(3):290-300.
15. Nejati A, Rodiek S, Shepley M. The implications of high-quality staff break areas for nurses' health, performance, job satisfaction and retention. *J Nurs Manag.* 2016;24(4):512-23.
16. Elbejjani M, Al Ahad MA, Simon M, Ausserhofer D, Dumit N, Huijter HA-S, et al. Work environment-related factors and nurses' health outcomes: a cross-sectional study in Lebanese hospitals. *BMC Nurs.* 2020;19:95.
17. Podsakoff PM, MacKenzie SB, Moorman RH, Fetter R. Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *Leadership Quart.* 1990;1(2):107-42.
18. Goz F, Geckil E. Nursing students professional behaviors scale (NSPBS) validity and reliability. *Pak J Med Sci.* 2010;26(4):938-41.
19. Khachian A, Ashghali Farahani M, Haghani H, Ahmadi Tameh M. Evaluation nurses' professional behavior and its relationship with organizational culture and commitment in 2015. *Int J Med Res Health Sci.* 2016;5(12):247-52.
20. Schat AC, Kelloway EK, Desmarais S. The Physical Health Questionnaire (PHQ): construct validation of a self-report scale of somatic symptoms. *J Occup Health Psych.* 2005;10(4):363-81.
21. Gallagher S, Whiteley J. The association between stress and physical health in parents caring for children with intellectual disabilities is moderated by children's challenging behaviours. *J Health Psychol.* 2013;18(9):1220-31.
22. Abasi F, Kimiaei SA, Safariyan Tosi M, Abedi MR. Psychometric properties of the Persian version of physical health questionnaire. *Res Med.* 2018;41(4):275-81. [In Persian]

23. Yu H-Y, Lou J-H, Eng C-J, Yang C-I, Lee L-H. Organizational citizenship behaviour of men in nursing professions: Career stage perspectives. *Collegian*. 2018;25(1):19-26.
24. Jahanbazi R, Lotfizadeh M. Investigation the Relationship between Professional Behavior and Job Well- Being among Nurses in Shahrekord's Educational Hospitals. *J Hosp*. 2019;18(1): 43-53. [In Persian]
25. Tanaka M, Yonemitsu Y, Kawamoto R. Nursing professionalism: a national survey of professionalism among Japanese nurses. *Int J Nurs Pract*. 2014;20(6):579-87.
26. Rahimi Pordanjani T, Mohamadzade Ebrahimi A. The Mediating Role of Sleep Quality in Relationship between Workload and Physical and Mental Health among Nurses. *Iran J Ergon*. 2017;5(2):34-42. [In Persian]
27. Ferri P, Guadi M, Marcheselli L, Balduzzi S, Magnani D, Di Lorenzo R. The impact of shift work on the psychological and physical health of nurses in a general hospital: a comparison between rotating night shifts and day shifts. *Risk Manag Healthc Policy*. 2016;9:203-11.
28. Giorgi F, Mattei A, Notarnicola I, Petrucci C, Lancia L. Can sleep quality and burnout affect the job performance of shift-work nurses? A hospital cross-sectional study. *J Adv Nurs*. 2018;74(3):698-708.
29. Taqvaei Yazdi M. Relation professional ethics to mental health And organizational citizenship behavior. *J Educ Admin Res Quart*. 2016;7(4):51-66. [In Persian]