

NURSES' TURNOVER INTENTION A COMPARATIVE STUDY BETWEEN IRAN AND POLAND

Zahra Nikkhah-Farkhani¹, Andrzej Piotrowski²

¹ University of Bojnord, Bojnord, Iran
Business Management Department

² University of Gdańsk, Gdańsk, Poland
Institute of Psychology

ABSTRACT

Background: Turnover rates among nurses are much higher than in other professions. This poses a challenge for health managers in all countries. The purpose of this study was to investigate the factors affecting nurses' turnover and the differences in this area between Iran and Poland. **Material and Methods:** In this descriptive cross-sectional study, the population consisted of nurses working in state-owned hospitals in Poland (N = 165) and in Iran (N = 200). Data were collected using the *Turnover Intention Scale*, the *Job Satisfaction Scale*, the *Work–Family Conflict Scale* and the *Workplace Support Scale*. Use was made of the AMOS 24 and SPSS 22 software for data analysis. **Results:** The results showed that the predicted factors of nurses' turnover intention in Poland and Iran were different. Workplace support and job satisfaction can reduce turnover intention among Polish nurses while the work–family conflict influences nurses' turnover intention in Iran. **Conclusions:** Providing a flexible work plan in Iranian hospitals and enhancing teamwork and improving the spirit of cooperation in Polish hospitals could reduce nurses' turnover intention in these 2 countries. Med Pr. 2020;71(4):413–20

Key words: job satisfaction, nurses, employment, work–family conflict, turnover intention, workplace support

Corresponding author: Andrzej Piotrowski, University of Gdańsk, Institute of Psychology, Jana Bażyńskiego 4, 80-309 Gdańsk, Poland, e-mail: andrzej.piotrowski@ug.edu.pl
Received: November 4, 2019, accepted: February 10, 2020

INTRODUCTION

The nursing force crisis in healthcare systems affects disease prevention, health promotion and the quality of nursing services [1]. As the largest working group in hospitals, nurses make up more than 56% of hospital staff [2]. The shortage of nurses and their dismissal from work creates major problems in patient service [3], the quality of care [4] and medical costs [5]. The shortage of nurses is a global problem, and their turnover rates are much higher than in other professions [6]. In addition, the Royal College of Nursing believes that more than 22% of nurses will leave an organization if the working conditions are not favorable [7]. However, the cost of nurses leaving their profession is over USD 10 000 per registered nurse turnover [8]. These are costs related to education and training, re-recruitment and implementation of new employees who are not fully productive at the initial stage of work and require additional attention of other staff. In the event of ineffective or unsuccessful re-recruitment, the costs increase even further. Also, the projected shortage of nurses in Poland in 2020 is over

60 000 [9] by global standards, compared to 150 000 in Iran. The concerns about nurses leaving their profession pose a challenge for the healthcare system managers that adds to the importance of identifying the factors causing nurses to leave [9].

Job satisfaction is one of the factors that cause nurses' turnover intention. Academic definitions of job satisfaction include the components of evaluation and expectation. Locke defines job satisfaction as a pleasant emotion that comes from evaluating different aspects of the job [10]. Mottaz defines job satisfaction as the emotional response that comes from evaluating working conditions [11]. In another definition, job satisfaction is subject to rewards and job-related values. Most job satisfaction approaches are based on motivational theories developed by Herzberg, Maslow and Vroom [11]. Research indicates that nurses' job satisfaction has a significant impact on their quality of service [12]. Nurses job satisfaction has an effect on duties that are focused more on patients and their family than on administrative duties. Thus, systems should be adjusted to be simpler and more time-efficient [13].

According to existing research, perceived organizational support can, both in theory and practice, act as a factor in reducing job stress and weakening the link between this variable and the turnover intention [14]. Eisenberger et al. commented on how the perceived organizational support refers to the presence, participation, and contribution of employees throughout their lives [15]. When this attention and support is perceived by the employees, they feel reinforced, and their performance and civil-organizational behavior improve [14].

On the other hand, perceived organizational support, which involves providing favorable psychological conditions for the staff, can constitute a platform for improving job satisfaction and reducing nurses' turnover intention [16]. The perceived support from one's supervisor was a distinct and unique construct in the perception of support from colleagues [15]. The perception of support from colleagues and supervisors can increase job satisfaction, productivity and commitment to work, as well as reduce turnover intention and result in less conflict and depression [17].

In the perceived organizational support theory, support from the organization, as a vital psychological resource, leads individuals to manage job stress more effectively [18]. According to the social exchange perspective, the exchange of trade between 2 parties usually transcends economic exchange and involves social interactions. Thus, employees who understand organizational social exchanges are more likely to offset organizational support through positive attitudes and desirable work behaviors. For this reason, existing research strongly recommends increasing organizational commitment and decreasing employee turnover intention [19].

Greenhaus and Beutell argue that when 2 or more roles are performed by 1 person, conflict within the role is created, and the work-family conflict is caused by the incompatibility of these roles. Their main assumption is that the time and energy that individuals devote to perform their work and family roles is scarce [20]. In other words, when the demands of the family and the demand of work are in opposition to each other, the work-family conflict is formed. Numerous studies have been conducted on the work-family conflict and turnover intention among employees [21]. The literature indicates that the work-family conflict is associated with a wide range of negative consequences such as decreased job satisfaction, burnout, and depressive symptoms, leading to poor performance and workplace errors in healthcare personnel [22]. Therefore, the work-family conflict can

be a potentially important factor in the deterioration of the quality of nursing care, consequently leading to improper patient care. Nurses need more support because of the nature of their occupation. Research indicates that working night shifts, which is common among nurses, leads to poor eating habits and, consequently, deteriorating health [23]. In particular, such activities as lifting and moving patients are the cause of many injuries of the musculoskeletal system and create a burden on nurses' health [24].

Research has shown the impact of nationality on job satisfaction, turnover intention and the work-family conflict. Each country has its own cultural context that impacts on nurses' behavior and decisions [25].

Since Poland's accession to the European Union in 2004, >17 000 Polish nurses and midwives have left the country to work in other EU member states, most often in England and the Scandinavian countries. In 2014, Beckford and Macfarlane reported that 2473 nurses from Poland were working in England, and they expected more nurses to be recruited. In addition, newly educated Polish nurses never begin work in Poland and are directly recruited by recruiting agencies [25].

In Iran, as in many other countries, the shortage of nurses is a major issue in healthcare organization. One important factor influencing that shortage in western countries is the decline in enrolments for registered nursing programs. However, in Iran, the average number of annual graduations from nursing schools is >6400, and the shortage is mainly caused by job dissatisfaction, organizational, and sociocultural factors. Iranian nurses work more than the maximum recommended shift of 192 h/month, with as many as 150 h of overtime work in some parts of the country. Iranian nurses perceive themselves as having a lower social status and poor public image, compared to that of other health professionals with similar educational backgrounds. They also have few opportunities for promotion compared to other health professionals [26]. Polish nurses also indicate that the prestige of their profession is low and still falling [27].

Accordingly, the present study examines whether turnover intention, job satisfaction, work-family conflict and workplace support among Polish and Iranian nurses is different, and whether that difference is statistically significant. Also, the purpose of this study is to determine the effect of nationality on the relationships among these variables. Finally, based on a review of the literature, the conceptual model of research is proposed in Figure 1.

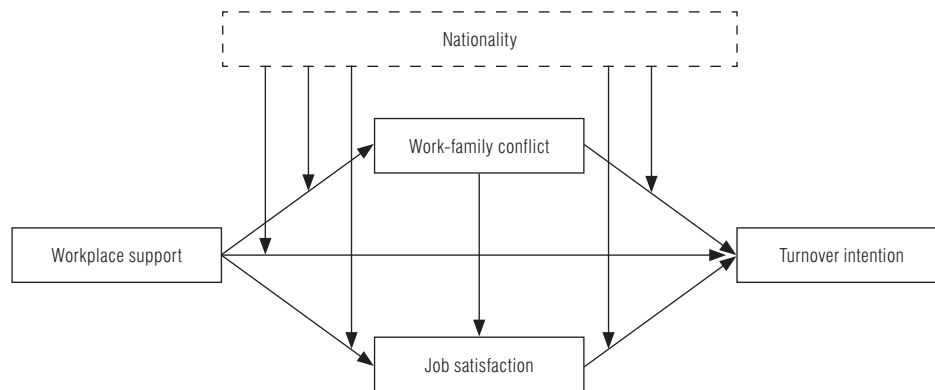


Figure 1. Conceptual research model

MATERIAL AND METHODS

In this descriptive cross-sectional study, the population consisted of nurses working in state-owned hospitals in Poland ($N = 165$) and in Iran ($N = 200$). The mean age of the Polish nurses was 42.31 ($SD = 12.04$) and of the Iranian nurses 33.6 ($SD = 9.45$). The Polish sample was comprised of 96.4% of women and 3.6% of men, while the Iranian sample was comprised of 86.5% of women and 13.5% of men. Measure scores are expressed as mean values, standard deviations (SD), and ranges. Their normal distribution was assessed by the Shapiro-Wilk test. The reliability of the scores was evaluated by Cronbach's α . To explain the conceptual model, a confirmatory factor analysis was performed. In addition, construct validity, convergent validity and the estimation of the parameters of a probability distribution were assessed using the maximum likelihood. A correlation coefficient and the Mann-Whitney U test were also used to analyze the relationship between nationality and turnover intention, job satisfaction, workplace support and work-family conflict. All the analyses were performed using the Statistical Package for Social Sciences (SPSS 22) and the Analysis of Moment Structures (AMOS version 24) software. Data collection was performed with a joint questionnaire. The following instruments were utilized, all based on a 5-pts Likert scale, with 1 – "I strongly disagree" and 5 – "I strongly agree":

- the 4-item *Turnover Intention Scale* [28] (the sample item was: "I intend to ask people about new job opportunities," and Cronbach's α was 0.83 in Iran and 0.94 in Poland),
- the 15-item *Job Satisfaction Scale* [29] (the sample item was: "I am satisfied from the physical condi-

tions in which I work," and Cronbach's α was 0.59 in Iran and 0.91 in Poland),

- the 22-item *Work-Family Conflict Scale* [29] (the sample item was: "The time I spend on family responsibilities often interfere with my work responsibilities," and Cronbach's α was 0.73 in Iran and 0.90 in Poland),
- the 11-item *Workplace Support Scale* [30] (the sample item was: "I am thinking supervisor pays attention me," and Cronbach's α was 0.58 in Iran and 0.85 in Poland).

RESULTS

Descriptive statistics

The study involved 365 nurses in Poland and Iran. Almost 51% of the respondents were aged 31–46 (20% were aged 31–38, and almost 31% were aged 39–46). The Iranian nurses taking part in the study were younger than the Polish nurses (68% of the Iranian nurses and 31% of the Polish nurses were aged 31–46), but only 19% of the nurses taking part in the study were aged <31 years. Almost 4% of the nurses did not respond to the age question and all of them were Polish. Almost 91% of the respondents were females and only 9% were males. As regards education, 6% of the respondents in the Polish sample had an associate's degree, 72% had a bachelor's degree and 22% had a master's degree. All of the Iranian nurses had a bachelor's degree.

Effect of nationality on the measured variables

Turnover intention was different between Polish and Iranian nurses. The Mann-Whitney U test revealed that the mean turnover intention score among Polish nurses was

3.23 out of 5, and among Iranian nurses 2.78 out of 5, and this difference was statistically significant ($p = 0.001$).

The mean value of job satisfaction among Polish nurses was 3.06, and among Iranian nurses – 3.16. However, the Mann-Whitney U test showed that this result was not significant ($p = 0.076$). The perception of the work–family conflict was higher among Polish nurses than among Iranian nurses ($M = 3.64$ vs. 2.85) and this difference was significant ($p = 0.001$). The perception of workplace support among Iranian nurses ($M = 3.17$) was higher than among Polish nurses ($M = 3.07$) and this difference was also significant ($p = 0.004$).

Factor analysis

The exploratory factor analysis along with a principal component factor analysis (Varimax rotation) based on eigenvalues >1 was used to test the data structure. The sampling adequacy was desirable (Kaiser-Meyer-Olkin measure of sampling adequacy = 0.851, Bartlett's test of sphericity: $\chi^2 = 9684.825$; $p < 0.0001$). The confirmatory factor analysis was used to test the conceptual model. The model fitness was evaluated based on indicators such as the χ^2 test, the root mean square of approximation (RMSEA < 0.08), the normed fit index (NFI), the comparative fit index (CFI > 0.90), the goodness

of fit index (GFI > 0.90), the adjusted goodness of fit index (AGFI > 0.90), and the incremental fit index (IFI > 0.90). In the first analysis, the model fit index was not acceptable. Part of the items with factor loadings < 0.4 were deleted to improve the model. The fit indicators for the improved model included: RMSEA = 0.049, CFI = 0.903, TLI = 0.900, NFI = 0.904 and $\chi^2/df = 1.884$. The improved model was thus acceptable. Then, construct validity, convergent validity, discriminant validity, composite reliability (CR) and average variance extract (AVE) were assessed. The CR and AVE for turnover intention were CR = 0.917 and AVE = 0.735, respectively; for workplace support CR = 0.795 and AVE = 0.499, respectively, for job satisfaction CR = 0.672 and AVE = 0.488, respectively, and for work-family conflict CR = 0.897 and AVE = 0.502, respectively. Average variance extracted must be > 0.5 but the value of 0.4 can be accepted as per Fornell and Larcker [31] who stated that if AVE is < 0.5 , but composite reliability is > 0.6 , the convergent validity of the construct is still adequate. The t-test values and path coefficients of the validated model for the Iranian and Polish samples, and for both countries together, are shown in Figures 2 and 3.

Z-scores were used to analyze the effect of nationality. Results showed that nationality had a significant

Table 1. Descriptive statistics of the analyzed variables among Iranian and Polish nurses in state-owned hospitals

| Variable | Participants (N = 365) | | | | | | t | p |
|----------------------|---------------------------|------|---------------------|------|-------|------|-------|-------|
| | Iran (N = 200) | | Poland (N = 165) | | total | | | |
| | M | SD | M | SD | M | SD | | |
| Turnover intention | 2.78 | 1.35 | 3.23 | 0.95 | 2.98 | 1.20 | 3.60 | 0.000 |
| Job satisfaction | 3.16 | 0.62 | 3.06 | 0.44 | 3.12 | 0.55 | 1.61 | 0.106 |
| Work–family conflict | 2.85 | 0.84 | 3.64 | 0.52 | 3.21 | 0.82 | 10.54 | 0.000 |
| Workplace support | 3.35 | 0.81 | 3.15 | 0.57 | 3.26 | 0.72 | 2.72 | 0.007 |

Table 2. Mann-Whitney U test results for the effect of nationality on variables

| Variable | Mean rank | | U | P |
|----------------------|-------------------|---------------------|-------|-------|
| | Iran (N = 200) | Poland (N = 165) | | |
| Turnover intention | 166.48 | 203.02 | 13.20 | 0.001 |
| Job satisfaction | 190.10 | 147.40 | 17.92 | 0.076 |
| Work–family conflict | 138.81 | 236.57 | 7.66 | 0.000 |
| Workplace support | 196.03 | 167.20 | 19.11 | 0.004 |

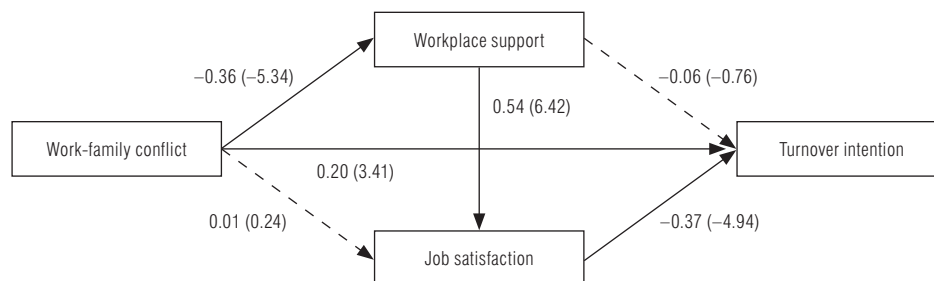


Figure 2. Results of hypothesis testing for combined data set in groups of Iranian and Polish nurses working in state-owned hospitals from March to May 2019

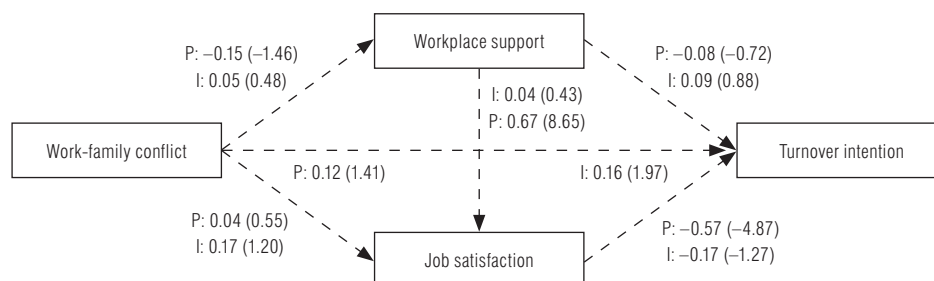


Figure 3. Effect of nationality on relationships between variables in Iranian and Polish nurses working in state-owned hospitals from March to May 2019

Table 3. Effect of nationality on relationships between variables in Iranian and Polish nurses working in state-owned hospitals from March to May 2019

| Relationships between variables | Nationality | | | | Z-score |
|---|-------------------|-------|------------------|-------|---------|
| | Iranian (N = 200) | | Polish (N = 165) | | |
| | estimate | p | estimate | p | |
| Work-family conflict ← workplace support | 0.067 | 0.628 | -0.053 | 0.143 | -0.844 |
| Job satisfaction ← work-family conflict | 0.040 | 0.227 | -0.124 | 0.576 | -0.730 |
| Job satisfaction ← workplace support | 0.015 | 0.665 | 0.745 | 0.000 | 7.429 |
| Turnover intention ← workplace support | -0.210 | 0.375 | 0.097 | 0.471 | 1.126 |
| Turnover intention ← work-family conflict | 0.266 | 0.048 | 0.414 | 0.157 | 0.460 |
| Turnover intention ← job satisfaction | -1.204 | 0.203 | -0.659 | 0.000 | 0.570 |

effect on the relationship between job satisfaction and turnover intention in the sample of Polish nurses, though not among the Iranian nurses.

DISCUSSION

This study aimed to investigate the factors affecting Polish and Iranian nurses' turnover intention. The results showed that Polish nurses have more turnover intention

than Iranian nurses. Polish nurses have more prospects to find a job abroad, which potentially increases their turnover intention [25].

On the other hand, in Iran, the supply of nursing workforce is higher than the demand for nurses, and employment in public hospitals is hardly reduced [26], which potentially reduces the Iranian nurses' turnover intention. Also, the unemployment rate in Iran was 12% in 2019, compared to 3.8% in Poland.

Research shows that when the employment rate rises, people are free to choose their jobs and are able to think of alternative jobs, which increases their turnover intention [32].

Although all previous studies reported dissatisfaction among Iranian and Polish nurses [25,26], there were no significant differences in job satisfaction between these two groups.

Polish nurses reported more work–family conflict than Iranian nurses, and this difference was significant. However, the work–family conflict had a positive and significant effect on the Iranian nurses' turnover intention, while it was not a predictor of turnover intention for Polish nurses. Long working hours and long shifts in Iran can be among the most important factors influencing this result. Also, 80% of the respondents were female nurses. Working outside and inside the house has formed 2 of the most central domains in women's lives. Women are working out of home in Iran today, but the traditional perception of domestic work did not change much [26]. Iranian women are solely responsible for domestic duties, and they have to bear both home and work responsibilities. Also, in recent decades, Iranian women who already have a traditional role as housewives have been forced to assume additional responsibilities as employees [1,33].

Workplace support showed a significant difference between Iranian and Polish nurses and although this difference was not high, Iranian nurses reported receiving more support in the workplace than did Polish nurses.

The results of the factor analysis indicated that the greater the nurses' perception of workplace support, the lower their work–family conflict perception, which is consistent with the existing research [25]. The results showed that nationality influenced this relationship; it was statistically significant for Polish nurses but not for Iranian nurses.

The results also indicated that job satisfaction had an impact on the nurses' turnover intention and this result is in line with previous studies [4,10]. However, the results of fitting the conceptual model based on nationality indicated that job satisfaction had an impact on the nurses' turnover intention in the Polish, but not in the Iranian sample.

Job satisfaction of Polish and Iranian nurses was at a similar level. Other intercultural studies indicate that Polish nurses have lower job satisfaction compared to Swedish nurses [34]. Nurses' intention to leave their job differs significantly based on nationality, even between

countries like the Czech Republic and Slovakia [35]. Therefore, research carried out in 1 country cannot be directly generalized onto other cultural conditions.

In future comparative research, the authors will analyze other organizational variables that may affect turnover intention, such as overwork, burnout, and chronic fatigue, in both Iran and Poland.

Limitations

The present study has several limitations. Nurses in the Polish sample were older than in the Iranian sample, which may have affected the level of their turnover intention [36]. Also, the reliability of the *Job Satisfaction Scale*, the *Work–Family Conflict Scale* and the *Workplace Support Scale* measured by the Cronbach's α coefficient was lower in the Iranian sample compared to the Polish sample. Most likely, the tools constructed in western cultures function quite differently in the Middle East, resulting in differing levels of reliability.

CONCLUSIONS

The aim of this research was to determine the effect of nationality on predictive variables of nurses' turnover intention. The results showed that although there was no significant difference in job satisfaction between Polish and Iranian nurses, the pattern of turnover intention for Iranian and Polish nurses was different. This difference was influenced by the nurses' working conditions in these 2 countries. Providing a flexible work plan in Iranian hospitals, enhancing teamwork, and improving the spirit of cooperation in Polish hospitals could reduce nurses' turnover intention in these countries.

REFERENCES

1. Hariri GR, Yaghmaei F, Zagheri Tafreshi M, Shakeri N. Assessment of some factors related to leave in nurses and their demographic character in educational hospitals of Shahid Beheshti University of Medical Sciences. *J Health Prom Manag.* 2012;1(3):17–27.
2. Dall TM, Chen YJ, Seifert RF, Maddox PJ, Hogan PF. The economic value of professional nursing. *Med Care.* 2009;47(1):97–104, <https://doi.org/10.1097/MLR.0b013e3181844da8>.
3. Clarke SP, Aiken LH. Failure to Rescue: Needless deaths are prime examples of the need for more nurses at the bedside. *Am J Nurs.* 2003;103(1):42–7.
4. Kash BA, Castle NG, Phillips CD. Nursing home spending, staffing, and turnover. *Health Care Manag Rev.* 2007;

- 32(3):253–62, <https://doi.org/10.1097/01.HMR.0000281625.20740.13>.
5. Yeh MC, Yu S. Job stress and intention to quit in newly-graduated nurses during the first three months of work in Taiwan. *J Clinical Nurs*. 2009;18(24):3450–60, <https://doi.org/10.1111/j.1365-2702.2009.02941.x>.
 6. Lee H, Kim MS, Yoon JA. Role of internal marketing, organizational commitment, and job stress in discerning the turnover intention of Korean nurses. *Japan J Nurs Sci*. 2011;8(1):87–94, <https://doi.org/10.1111/j.1742-7924.2010.00162.x>.
 7. Douglas MK, Rosenkoetter M, Pacquiao DF, Callister LC, Hattar-Pollara M, Lauderdale J, et al. Guidelines for implementing culturally competent nursing care. *J Transcul Nurs*. 2014; 25(2):109–21, <https://doi.org/10.1177/1043659614520998>.
 8. Jones CB, Gates M. The costs and benefits of nurse turnover: A business case for nurse retention. *Online J Issues Nurs*. 2007;12(3), <https://doi.org/10.3912/OJIN.Vol12No-03Man04>.
 9. Kilańska D, Gaworska-Krzemińska A, Karolczak A, Szynkiewicz P, Greber M. Work patterns and a tendency among Polish nurses to leave their job. *Med Pr*. 2019;70(2):145–53, <https://doi.org/10.13075/mp.5893.00727>.
 10. De Simone S, Planta A, Cicotto G. The role of job satisfaction, work engagement, self-efficacy and agentic capacities on nurses' turnover intention and patient satisfaction. *App Nurs Res*. 2018;39:130–40, <https://doi.org/10.1016/j.apnr.2017.11.004>.
 11. Lu H, Barriball KL, Zhang X, While AE. Job satisfaction among hospital nurses revisited: a systematic review. *Inter J Nurs Stud*. 2012;1:49(8):1017–38, <https://doi.org/10.1016/j.ijnurstu.2011.11.009>.
 12. Kadir AR, Kamariah N, Saleh A. The effect of role stress, job satisfaction, self-efficacy and nurses' adaptability on service quality in public hospitals of Wajo. *Int J Qual Service Sci*. 2017;9(2):184–202, <https://doi.org/10.1108/IJQSS-10-2016-0074>.
 13. Serafin L, Bjerså K, Doboszyńska A. Nurse job satisfaction at a surgical ward – a comparative study between Sweden and Poland. *Med Pr*. 2019;70(2):155–67, <https://doi.org/10.13075/mp.5893.00768>.
 14. Jain AK, Giga SI, Cooper CL. Perceived organizational support as a moderator in the relationship between organisational stressors and organizational citizenship behaviors. *Inter J Org Anal*. 2013;21(3):313–34, <https://doi.org/10.1108/IJOA-Mar-2012-0574>.
 15. Eisenberger R, Fasolo P, Davis-LaMastro V. Perceived organizational support and employee diligence, commitment, and innovation. *J App Psych*. 1990;75(1):51–9, <https://doi.org/10.1037/0021-9010.75.1.51>.
 16. Baranik LE, Roling EA, Eby LT. Why does mentoring work? The role of perceived organizational support. *J Vocat Beh*. 2010;76(3):366–73, <https://doi.org/10.1016/j.jvb.2009.07.004>.
 17. Shanock LR, Eisenberger R. When supervisors feel supported: Relationships with subordinates' perceived supervisor support, perceived organizational support, and performance. *J App Psych*. 2006;91(3):689–95, <https://doi.org/10.1037/0021-9010.91.3.689>.
 18. Tromp D, van Rheed A, Blomme R. The relationships between psychological strain, organizational support, affective commitment and turnover intentions of highly educated hospitality employees. In: Chen J. editor. *Advances in Hospitality and Leisure*. Bingley: Emerald Group Publishing Limited; 2010. p. 117–34.
 19. Nuhn HF, Wald A. Antecedents of team turnover intentions in temporary organizations: Development of a research model. *Inter J Manag Projects Bus*. 2016;9(1):194–213, <https://doi.org/10.1108/IJMPB-10-2014-0067>.
 20. Peters P, Den Dulk L, van der Lippe T. The effects of time-spatial flexibility and new working conditions on employees' work-life balance: The Dutch case. *Community Work Family*. 2009;12(3):279–97, <https://doi.org/10.1080/13668800902968907>.
 21. Thanacoody PR, Bartram T, Casimir G. The effects of burn-out and supervisory social support on the relationship between work-family conflict and intention to leave: A study of Australian cancer workers. *J Health Organ Manag*. 2009; 23(1):53–69, <https://doi.org/10.1108/14777260910942551>.
 22. Zhou ZE, Meier LL, Spector PE. The spillover effects of coworker, supervisor, and outsider workplace incivility on work-to-family conflict: A weekly diary design. *J Organ Behav*. 2019;40(9–10):1–13, <https://doi.org/10.1002/job.2401>.
 23. Peplowska B, Nowak P, Trafalska E. The association between night shift work and nutrition patterns among nurses: a literature review. *Med Pr*. 2019;70(3):363–76, <https://doi.org/10.13075/mp.5893.00816>.
 24. Sierakowska M, Doroszkiewicz H, Kondzior D, Klimaszewska K, Jemieljańczuk Z, Dolińska C. Prevention of the musculoskeletal system's dysfunction based on the example of Prevention Program of Spinal Pain Syndrome in Nursing Staff. *Med Pr*. 2019;70(2):189–99, <https://doi.org/10.13075/mp.5893.00801>.
 25. Dąderman AM, Basinska BA. The work-family interface: Job demands, work engagement and turnover intentions of Polish nurses. University West; 2016.
 26. Zarea K, Negarandeh R, Dehghan-Nayeri N, Rezaei-Adaryani M. Nursing staff shortages and job satisfaction in Iran: Issues and challenges. *Nurs Health Sci*. 2009;11(3):326–31, <https://doi.org/10.1111/j.1442-2018.2009.00466.x>.

27. Janus E, Filar-Mierzwa K. Prestige of selected medical professions in the opinion of representatives of these professions. *Med Pr.* 2019;70(5):587–95, <https://doi.org/10.13075/mp.5893.00863>.
28. Kelloway EK, Gottlieb BH, Barham L. The source, nature, and direction of work and family conflict: A longitudinal investigation. *J Occup Health Psych.* 1999;4(4):337–46, <https://doi.org/10.1037/1076-8998.4.4.337>.
29. Lu H, While AE, Barriball KL. Job satisfaction and its related factors: a questionnaire survey of hospital nurses in Mainland China. *Inter J Nurs Stud.* 2007;44(4):574–88, <https://doi.org/10.1016/j.ijnurstu.2006.07.007>.
30. Karasek R, Brisson C, Kawakami N, Houtman I, Bongers P, Amick B. The Job Content Questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics. *J Occup Health Psych.* 1998; 3(4):322–55, [https://doi.org/1076-8998/98/\\$3.00](https://doi.org/1076-8998/98/$3.00).
31. Fornell C, Larcker DF. Structural equation models with unobservable variables and measurement error: Algebra and statistics. Los Angeles, CA: SAGE Publications Sage CA; 1981, <https://doi.org/10.1177/002224378101800313>.
32. Akgunduz Y, Eryilmaz G. Does turnover intention mediate the effects of job insecurity and co-worker support on social loafing? *Intern J Hosp Manag.* 2018;68:41–9, <https://doi.org/10.1016/j.ijhm.2017.09.010>.
33. Karimi L. Do female and male employees in Iran experience similar work–family interference, job, and life satisfaction? *J Fam Issues.* 2009;30(1):124–42, <https://doi.org/10.1177/0192513X08324973>.
34. Serafin L, Bjerså K, Doboszyńska A. Nurse job satisfaction at a surgical ward – a comparative study between Sweden and Poland. *Med Pr.* 2019;70(2):155–67, <https://doi.org/10.13075/mp.5893.00768>.
35. Gurková E, Soósová MS, Haroková S, Žiaková K, Šerfelová R, Zamboriová M. Job satisfaction and leaving intentions of Slovak and Czech nurses. *Inter Nursing Rev.* 2013; 60(1):112–21, <https://doi.org/10.1111/j.1466-7657.2012.01030.x>.
36. Worku N, Feleke A, Debie A, Nigusie A. Magnitude of Intention to Leave and Associated Factors among Health Workers Working at Primary Hospitals of North Gondar Zone, Northwest Ethiopia: Mixed Methods. *BioMed Res Inter.* 2019:1–9, <https://doi.org/10.1155/2019/7092964>.