



The Relationship Between Safe Nursing Care and Professional Commitment of Nurses in Iranian Educational-Therapeutic Hospitals

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Abstract

Background: Safe nursing care and professional commitment are known as two important components influencing the nursing service quality.

Objectives: The present study aimed to assess the relationship between safe nursing care and nurses' professional commitment.

Methods: In the present cross-sectional correlational research, 263 nurses were selected from the intensive care unit/cardiac care unit (ICU/CCU), internal, surgery, pediatrics, gynecology and obstetrics, oncology, burn, orthopedics, infectious, and neurology wards of educational-therapeutic hospitals affiliated with Qazvin University of Medical Sciences by quota sampling method between May 2022 and September 2022. Data collection was performed using the nurses' professional commitment scale (NPCS) and the assessment of safe nursing care (ASNC) questionnaire. Nurses were selected using a convenience sampling method. The collected data were analyzed using descriptive and inferential statistical tests (*t*-test, Pearson's correlation, and one-way analysis of variance (ANOVA)) by SPSS software version 16.

Results: The mean scores of nurses' professional commitment and safe nursing care were 86.16 ± 4.92 and 134.57 ± 16.15 , respectively. Pearson's correlation test showed a significant relationship between nurses' professional commitment and safe nursing care ($r = 0.345$, $P \leq 0.001$). Also, the test results indicated that the level of nurses' professional commitment varied among individuals with different employment types ($P = 0.008$).

Conclusions: According to this study, safe nursing care and nurses' professional commitment are two important components influencing each other. Therefore, these results have important implications for policymakers and healthcare systems involved in promoting the level of safe nursing care and nurses' professional commitment.

Keywords: Nursing, Professional Commitment, Safe Care

1. Background

Suitable and correct employee performance is one of the basic requirements for achieving organizational goals, which is especially important in service organizations such as hospitals (1). One of the biggest groups playing a significant role in the treatment service process is the nurse group (2). Therefore, as a main care and treatment team member, nurses play an important role in improving and promoting society's health (3). The utilization of specialized nursing roles in health systems promotes patient health, reduces hospitalization length, increases patient satisfaction, and reduces re-hospitalizations (4). Hence, nurses have different roles, including providing

care, defending the patient's rights, and supporting the patient, along with educational, caring, supportive, communicative roles, etc. (5, 6), and, subsequently, different tasks (7).

One of the nurses' most important professional tasks is to provide care and implement nursing interventions (8). Therefore, it can be said that the basis of nursing is to create a suitable care environment for patient recovery (9). Although the patient's benefit is taken into consideration in the care system, it sometimes causes harm to patients (2). According to statistics, approximately one in every ten patients receiving health care in a high-tech hospital is damaged (10). Therefore, in order to reduce incidents, nurses need to use safety science in nursing care (11).

According to the definition by the World Health Organization (WHO), patient safety aims to prevent and reduce risks, errors, and harm that occur to patients during healthcare provision, which is one of the vital aspects in promoting care quality and a determining factor of their health (2). Furthermore, determining what safe care is and how nursing care affects patient safety is a starting point in promoting nursing care (12). According to a study conducted at Harvard University, lack of patient safety causes 42.7 million incidents worldwide (13). Incidents caused by unsafe care cause the death of 48,000 to 98,000 people in the United States and impose a cost of more than 5 million dollars on American educational hospitals (11). It is also estimated that 5-10% of health-related costs are caused by unsafe clinical services (14). Therefore, nurses play a considerable role in ensuring patient safety due to their special ability to report safety problems (12). One of the factors that help nurses report safety-related incidents correctly is professional commitment (15).

Professional commitment can be defined as wholehearted satisfaction and practical obligation to the duties assigned to a person under the condition that individuals can perform their duties in the best possible way without any regulatory system (2). In the nursing profession, professional commitment can be defined as a nurse's honesty and conscientiousness (16). A nurse's professional commitment positively affects compliance with patient safety indicators, including delays in care provision, and promotes the patient's understanding of care quality (2). Many factors cause different levels of commitment in different individuals. Several studies have been conducted in this field, and factors such as religious beliefs, ethics, culture, sense of belonging, economic status, educational degree, personality traits, work justice, etc., have been recognized to be involved in the individuals' level of commitment (17).

The findings of a study show that professional commitment increases the patient's understanding of the care quality provided to him/her, so a decrease in nurses' professional commitment can reduce care quality (2). Since research has indicated a significant relationship between a nurse's professional commitment and a patient's safety indicators (15), and nurses with high professional commitment have more responsibilities for providing care to patients (18), and also patient safety is one of the most important dimensions of care quality (19), nurses play a positive role in protecting patient safety (15).

Nurses are the most important part of the healthcare team. Since caring is an essential duty, paying attention to safe nursing care has a special place in promoting care quality and raising patient health levels. With regard to

the role and importance of professional commitment in the nursing profession and patient safety, and considering the limited number of studies conducted in this field, the present study was carried out.

2. Objectives

This study aimed to determine the relationship between safe nursing care and nurses' professional commitment.

3. Methods

3.1. Study Design

The present research is a cross-sectional correlational study conducted on 263 nurses working in educational-therapeutic centers, including Shahid Rajaei, Bu-Ali Sina, Velayat, Kowsar, and Ghods, in the city of Qazvin, Iran, between May and September 2022.

3.2. Study Setting and Participants

The study population consisted of nurses working in emergency, intensive care unit/cardiac care unit (ICU/CCU), internal, surgery, pediatrics, gynecology and obstetrics, oncology, burn, orthopedics, infectious, and neurology wards of the mentioned educational-therapeutic centers in the city of Qazvin.

Inclusion criteria included willingness to participate in the study and having more than 6 months of work experience in the mentioned wards. The only exclusion criterion was incomplete questionnaires.

A study entitled "Investigation of the relationship between delay in providing care to patients and professional commitment" by Shali et al. (2) was used to estimate sample size, in which the correlation coefficient was estimated as $r = -0.15$; so, at the level of type I error $\alpha = 0.12$ (confidence level of 0.88) and type II error $\beta = 0.2$ (test power of 80%), the sample size was calculated as 263 people by the following relation and MedCalc software:

$$\begin{aligned} n &= \frac{\left(z_{1-\frac{\alpha}{2}} + z_{1-\beta}\right)^2}{w^2} + 3 \\ &= \frac{(1.56 + 0.84)^2}{-0.15^2} + 3 \\ &\approx 263 \end{aligned} \quad (1)$$

$$\begin{aligned} w &= \frac{1}{2} \ln \frac{1+r}{1-r} \\ &= -0.15 \end{aligned} \quad (2)$$

$$z_{1-\frac{\alpha}{2}} = 1.56, z_{1-\beta} = 0.84$$

In this study, sampling was made by the quota method. All qualified nurses were included in the study between May and September 2022.

In the current study, after obtaining an official letter of introduction from the Deputy of Research of Qazvin University of Medical Sciences, the researchers went to the five educational-therapeutic centers (Shahid Rajaei, Bu-Ali Sina, Velayat, Kawsar, and Ghods) in Qazvin, selected individuals according to the inclusion criteria using the convenience sampling method, and invited them to participate in the research. In order to collect data, they attended the selected hospitals on day and night shifts on all weekdays and started sampling. After explaining the study purpose and obtaining written consent, the questionnaires were given to the subjects, and they were asked to answer all questions completely while emphasizing confidentiality.

3.3. Data Collection and Measurement

The demographic characteristics checklist, the nurses' professional commitment scale (NPCS), and the assessment of safe nursing care (ASNC) questionnaire were used to collect demographic data and to investigate nurses' professional commitment and the level of safe nursing care, respectively.

This checklist, developed by the researcher, included age, gender, marital status, educational degree, employment status, usual work shift, work unit, work experience in nursing, and work experience in the current ward.

The NPCS is formulated in two parts: Professional commitment and work environment index. Of the 26 items in the first part, six items are about understanding nursing, four items are about satisfaction with the nursing profession, six items are about involvement in the nursing profession, and ten items are about devotion to nursing. The questionnaire is scored on a five-point Likert scale (strongly disagree, disagree, neutral, strongly agree, and agree). The total score obtained by a nurse is between 26 and 130, so a higher score indicates the nurse's higher professional commitment. This questionnaire was first designed by Lachman and Aranya (1960) with a reliability of 0.86 (20), and it was translated into Persian by Joolae et al. in 2014 (16). In a study conducted in Iran, the validity and reliability of this questionnaire were reported as 0.84 and 0.93, respectively (21).

The ASNC questionnaire has 32 questions in four parts, in which items 1 to 16 are related to the assessment of nursing skills, items 17 to 20 are related to the assessment of mental safety, items 21 to 27 are related to the assessment of physical safety, and items 28 to 32 are related to the assessment of teamwork, which are scored on a five-point

Likert scale (always = 5, often = 4, sometimes = 3, rarely = 2, and never = 1). The score of each item is obtained by multiplying the item score based on the Likert scale by the item's weight. The questionnaire's minimum and maximum scores are 73 and 365, respectively. The validity and reliability of this questionnaire were confirmed by Rashvand et al., with Cronbach's alpha coefficient of 0.92 (22). A score of 73 to 170 indicates poor performance, 171 to 267 indicates average performance and 268 to 365 indicates good performance (23).

3.4. Data Analysis

The collected data were entered into SPSS software version 16 and were analyzed using descriptive (mean and standard deviation for quantitative variables and frequency and percentages for qualitative variables) and analytical (independent *t*-tests, one-way analysis of variance (ANOVA), and Pearson's correlation coefficients) statistical tests, and $P < 0.05$ was considered a significance level. Also, the confidence interval in this study was 0.95. The management of outliers was examined using the -quantile-quantile plot method, and no outliers were identified.

3.5. Ethical Considerations

The present study was approved by the Ethics Committee of Qazvin University of Medical Sciences (IR.QUMS.REC.1398.090). Written informed consent was obtained from the participants after explaining the study's purpose and ensuring their privacy and confidentiality.

4. Results

The descriptive analysis results showed that the mean and standard deviation of age and working hours (per month) were 31.9 ± 6.49 years and 201.1 ± 55.7 hours, respectively. Further information regarding the frequency distribution of demographic variables is given in Table 1.

The Pearson's correlation coefficient test was used to investigate the relationship between nurses' professional commitment and safe nursing care. The results of this test showed a positive and significant relationship between professional commitment and safe nursing care at a significance level of 0.05 ($r = 0.345$, $P \leq 0.001$).

The mean and standard deviation of nurses' professional commitment and safe nursing care in this study were 86.16 ± 4.92 and 134.57 ± 16.15 , respectively.

Pearson's correlation coefficient was used to investigate the relationship between demographic characteristics and the level of nursing care and the relationship between demographic characteristics and

Table 1. Frequency Distribution of Demographic Variables

Variables	No. (%)
Gender	
Male	201 (76.4)
Female	62 (23.6)
Marital status	
Single	97 (36.9)
Married	166 (63.1)
Employment status	
Project-based	65 (24.7)
Temporary to permanent	6 (2.3)
Contractual	41 (15.6)
Permanent	110 (41.8)
Corporate	40 (15.2)
Other	1 (0.4)
Educational degree	
Associate degree	1 (0.4)
Undergraduate	237 (90.1)
Postgraduate	25 (9.5)
Current ward	
Emergency	46 (17.5)
ICU/CCU	63 (24.0)
Internal	53 (20.2)
Surgery	33 (12.5)
Pediatrics	7 (2.7)
Oncology	4 (1.5)
Burn	5 (1.9)
Orthopedics	9 (3.4)
Infectious and neurology	43 (16.3)
Work shift	
Day	2 (0.8)
Afternoon	2 (0.8)
Night	5 (1.9)
Rotational	254 (96.6)

Abbreviation: ICU/CCU, intensive care unit/cardiac care unit.

nurses' professional commitment, as shown in Table 2. It should be noted that the degrees of the relationship of 0.10 to 0.29, 0.30 to 0.49, and 0.50 to 1 were considered low, moderate, and high, respectively (24).

As can be seen in Table 2, there is no significant relationship between a nurse's age and safe nursing care and between working hours and safe nursing care ($P > 0.05$). However, there is a positive and significant

relationship between nursing experience and the level of nursing care, and also between experience at the current ward and the level of nursing care ($P \leq 0.05$). Moreover, there is a significant relationship between a nurse's age, nursing experience, experience at the current ward, and professional commitment ($P \leq 0.05$). At the same time, the statistical analysis showed no significant relationship between nurses' working hours and professional commitment ($P > 0.05$).

The independent *t*-test was used to investigate the difference between the level of safe nursing care and professional commitment by the variables of gender and marital status. The test results indicated no statistically significant difference between the level of safe nursing care and gender ($P = 0.743$) and between the level of safe nursing care and marital status ($P = 0.445$); moreover, there was no statistically significant difference between professional commitment and gender ($P = 0.225$) and between professional commitment and marital status ($P = 0.134$).

One-way ANOVA was used to investigate differences in the level of safe nursing care and nurses' professional commitment at different wards of the investigated hospitals (i.e., Shahid Rajaei, Bu-Ali Sina, Velayat, Kowsar, and Ghods) and other demographic characteristics.

The one-way ANOVA results indicated that the level of nursing care had no significant relationship with employment type, work shift, and the current ward. In other words, there was no significant difference in the level of nursing care in individuals with different employment types, work shifts, and wards. In addition, the level of nurses' professional commitment was only different in terms of employment type and had no significant relationship with work shifts and the current ward. In other words, the professional commitment of individuals with different employment types is different. However, there is no significant difference between individuals on different shifts and at different wards.

5. Discussion

The present study was conducted to determine the relationship between safe nursing care and nurses' professional commitment in educational-therapeutic hospitals affiliated with Qazvin University of Medical Sciences. In the present study, nurses working in the investigated hospitals showed poor performance in providing safe nursing care by obtaining a mean score of 134.57 ± 16.15 . It seems that the lack of nursing staff, on the one hand, and not having enough motivation to continue the profession due to the unfavorable level of welfare and financial facilities, on the other hand,

Table 2. Investigation of the Relationship Between Demographic Characteristics and the Level of Nursing Care and the Relationship Between Demographic Characteristics and Nurses' Professional Commitment

Variables	Correlation Coefficient (r)	Significance Level (P-Value)
Nursing care		
Employment type	0.091	0.142
Educational degree	0.125	0.043
Work shift	0.136	0.028
Current ward	-0.095	0.124
Professional commitment		
Employment type	0.218	0.001 >
Educational degree	0.229	0.001 >
Work shift	0.139	0.024
Current ward	0.017	0.785

was not ineffective in obtaining the results. It should be noted that despite an extensive search, no studies were found to be consistent with this part of the present study. However, in a study by Khodaveisi et al., high levels of providing safe care for patients with coronavirus disease 2019 (COVID-19) were obtained (mean score = 298.53 ± 2.27) (25). In addition, Fotoohi et al. estimated safe nursing care at a good level (mean score 328.16 ± 34.52) (26). The difference in awareness and knowledge required by nurses to provide safe care is probably another factor causing the discrepancy in the obtained results.

In the present research, a mean professional commitment score of 86.16 ± 4.92 showed that nurses working in the investigated hospitals were at a relatively favorable level and above the average in terms of professional commitment. Similarly, Rafiee Vardanjani and Shali et al. reported the mean score of nurses' professional commitment as 85.65 ± 15.04 and 86 ± 8.61 , respectively, indicating the high mean score of nurses' professional commitment (15, 27). Moreover, the mean score of nurses' professional commitment was reported as 86.36 in Joolaei et al.'s study (16). In the above studies, high levels of moral sensitivity and altruism in the studied nurses to provide professional care had probably positive effects on obtaining such results.

In the present study, a significant relationship was observed between the demographic characteristics of nursing experience and experience at the current ward and safe nursing care and professional commitment. However, there was no significant relationship between age and safe care, while the results showed a significant relationship between age and the level of nurses' professional commitment. In this regard, Mohammadi et al. showed that safe care was significantly related to age and work experience (28). However, Al-Hamdan et

al. reported no significant relationship between patient safety and nurse's age and nursing experience, while nurses' professional commitment was influenced by nursing experience (29).

Finally, the present study showed a positive and significant relationship between safe nursing care and nurses' professional commitment. In this regard, the presence of a moderate and positive relationship between nurses' professional commitment and patient safety was confirmed in Al-Hamdan et al.'s study (29). Moreover, Teng et al. also showed the positive effect of nurses' professional commitment on overall patient safety (30). Although nurses' professional commitment is considered one of the effective factors in ensuring patient safety, the results of Al-Shloul et al.'s study confirm no significant relationship between nurses' professional commitment and patient safety (31). Different questionnaire types, samples, and procedures in the mentioned study compared to the current study seemingly justify the discrepancy in the obtained results.

5.1. Conclusions

The results of the current study suggest a positive and significant relationship between safe nursing care and nurses' professional commitment, implying that nurses who are highly committed to their profession provide safer nursing care to patients. It is recommended that nurses, as the care team members, always perform safe nursing care, which is considered a must for committed nurses, leading to better patient outcomes and improved quality of care.

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Footnotes

Authors' Contribution: R.F. & Z.F.: Conceiving and designing the evaluation and drafting the manuscript; R.F.: Participating in designing the evaluation, performing parts of the statistical analysis, and helping draft the manuscript; M.S.R., R.F., and Z.F.: Re-evaluating the clinical data, revising the manuscript, and performing the statistical analysis; K.H.A., M.S.R., and Z.F.: Collecting and interpreting the clinical data and revising the manuscript; M.S.R. & R.F.: Re-analyzing the clinical and statistical data and revising the manuscript. All authors read and approved the final manuscript.

Conflict of Interests: There is no conflict of interest.

Data Reproducibility: The dataset presented in the study is available on request from the corresponding author during submission or after publication. The data are not publicly available due to restrictions on privacy.

Ethical Approval: This study was approved by the Ethics Committee at Qazvin University of Medical Sciences (IR.QUMS.REC.1398.090).

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References

- Hassani M, JodatKordlar L. The study of relationship between perception of organizational justice with turnover intention, job satisfaction and organizational citizenship behavior of medical staff of Urmia Imam Reza Hospital. *Nurs Midwifery J.* 2012;**10**(3):0. Persian.
- Shali M, Joolae S, Hooshmand A, Sepehrinia M, Haghani H. The relationship between incidence of delay in offering care to the patient and nurses professional commitment. *Prev Care Nurs Midwifery J.* 2016;**6**(2):72-81. Persian.
- Hashemi M, Garshad A. Assessment of job stress in nursing personal in selected educational hospitals of North Khorasan University of Medical Sciences 2008. *J N Khorasan Univ Med Sci.* 2012;**4**(1):95-102. <https://doi.org/10.29252/jnkums.4.1.95>.
- Khezerloo S, Salehmoghaddam AR, Mazloom S R. Assessment of nurses professional roles in hospitals affiliated to Mashhad university of medical sciences. *Hakim Res J.* 2013;**15**:346-51.
- Bagherian B, Nematollahi M, Sabzevari SS, Nouhi E. Nursing managers views of the educational hospitals of Kerman university of medical sciences regarding barriers of nurses' roles performance. *J Urmia Nurs Midwifery.* 2015;**13**(8):655-65. Persian.
- KalantarZadeh M, Safavi M, Mahmoodi M. The effect of nursing roles on the nurses' knowledge and attitude toward nursing care of the patients with Parkinson. *J Res Dev Nurs Midwifery.* 2013;**9**(2):27-35. Persian.
- Rashidi K, Kalhor M, Berjandi M. The knowledge of nurses on standards of job description at the intensive care units of Broujerd hospitals, 2016. *Iran J Nurs Res.* 2017;**12**(4):32-40. <https://doi.org/10.21859/ijnr-12045>.
- Hossieni SF, Soltani F. The relationship between emotional stability with job conscience and professional commitment. *Iran J Nurs Res.* 2018;**13**(1):33-9. <https://doi.org/10.21859/ijnr-13015>.
- Mosadeghrad AM, Mojbafan A. Conflict management styles of nurse managers in hospitals affiliated to Tehran university of medical sciences: 2015. *Iran J Nurs.* 2017;**30**(107):62-73. <https://doi.org/10.29252/ijn.30.107.62>.
- Bayatmanesh H, Zagheri Tafreshi H, Mnoochehri H, Akbarzadeh Baghban A. Evaluation of patient-related nursing care with standards in intensive care unit (icu). *Armaghane Danesh.* 2017;**22**(3):375-89. Persian.
- Hemmati Maslarpak M; Habib Zadeh H; Khalil zadeh H. Managers and nurses function of safe patients' care from the nurses Perspective. *J Health Promot Manag.* 2012;**1**(2):7-14. Persian.
- Rashvand F, Salsali M, Ebadi A, Vaismoradi M, Jordan S, Griffiths P. Iranian nurses perspectives on assessment of safe care: an exploratory study. *J Nurs Manag.* 2016;**24**(3):417-26. [PubMed ID: 26462457]. <https://doi.org/10.1111/jonm.12338>.
- Francolin L, Gabriel CS, Bernardes A, Silva AE, Brito Mde F, Machado JP. [Patient safety management from the perspective of nurses]. *Rev Esc Enferm USP.* 2015;**49**(2):277-83. [PubMed ID: 25992827]. <https://doi.org/10.1590/S0080-623420150000200013>.
- Asefzadeh S, Kalhor R, Tir M. Patient safety culture and job stress among nurses in Mazandaran, Iran. *Electron Physician.* 2017;**9**(12):6010-6. [PubMed ID: 29560154]. [PubMed Central ID: PMC5843428]. <https://doi.org/10.19082/6010>.
- Shali M, Joolae S, Hooshmand A, Haghani H, Masoumi H. The relationship between incidence of patient falls and nurses' professional commitment. *J Hayat.* 2016;**22**(1):27-37. Persian.
- Jolae S, Shalie M, Houshmand A, Haqqani H. The relationship between incidence of medication errors and nurse's professional commitment. *Med Ethics J.* 2014;**7**(28):101-19. Persian.
- Moradi M, Khatouni M, Zayghami R, JahaniHashemi H, Mohammad Reza S. The study of the relationship between professional commitment and job satisfaction of nurses in governmental hospitals affiliated to Gazvin university of medical sciences. *Med Ethics J.* 2012;**7**(24). Persian.
- Jafaragae F, Parvizi S, Mehrdad N, Rafii F. Concept analysis of professional commitment in Iranian nurses. *Iran J Nurs Midwifery Res.* 2012;**17**(7):472-9. [PubMed ID: 23922592]. [PubMed Central ID: PMC3730449].
- Asefzade S, Mehrabian F, Nikpey A, Kianmehr SH. Assessment of patient safety based on standards of patient safety friendly hospitals in education and treatment centers of Rasht city in 2013. *Res Med Educ.* 2013;**5**(1):36-44. <https://doi.org/10.18869/acadpub.rme.5.1.36>.
- Lachman R, Aranya N. Job attitudes and turnover intentions among professionals in different work settings. *Organ Stud.* 2016;**7**(3):279-93. <https://doi.org/10.1177/017084068600700305>.
- Akbari O, Vagharseyyedin SA, Farajzadeh Z. The Relationship of organizational justice with nurses' professional commitment. *Mod Care J.* 2015;**12**(1).
- Rashvand F, Ebadi A, Vaismoradi M, Salsali M, Yekaninejad MS, Griffiths P, et al. The assessment of safe nursing care: development and psychometric evaluation. *J Nurs Manag.* 2017;**25**(1):22-36. [PubMed ID: 27550414]. <https://doi.org/10.1111/jonm.12424>.

23. Moghadam F, Pazokian M, AbbasZadeh A, FaghiehZadeh E. The relationship between moral distress and safe nursing care in emergency wards nurses. *J Nurs Educ.* 2020;**9**(4):11-21. Persian.
24. Sarmad Z, Bazargan A, Hejazi E. *Research methods in behavioral sciences.* 1. Tehran: Agah Publication; 2004. Persian.
25. Khodaveisi M, Oshvandi K, Bashirian S, Khazaei S, Gillespie M, Masoumi SZ, et al. Moral courage, moral sensitivity and safe nursing care in nurses caring of patients with COVID-19. *Nurs Open.* 2021;**8**(6):3538-46. [PubMed ID: 33945666]. [PubMed Central ID: PMC8242869]. <https://doi.org/10.1002/nop2.903>.
26. Fotoohi M, Jafar Jalal E, Haghani H. The correlation of safe nursing care with the quality of work life of nurses. *Iran J Nurs.* 2021;**33**(128):1-14. <https://doi.org/10.52547/ijn.33.128.1>.
27. Rafiee Vardanjani L. The relationship between professional commitment and patient safety culture in educational hospitals of Shahrekord university of medical sciences. *J Health Care.* 2019;**21**(4):344-52. <https://doi.org/10.29252/jhc.21.4.344>.
28. Mohammadi F, Tehranineshat B, Ghasemi A, Bijani M. A study of how moral courage and moral sensitivity correlate with safe care in special care nursing. *Sci World J.* 2022;**2022**:9097995. [PubMed ID: 35874846]. [PubMed Central ID: PMC9300363]. <https://doi.org/10.1155/2022/9097995>.
29. Al-Hamdan ZM, Dalky H, Al-Ramadneh J. Nurses' professional commitment and its effect on patient safety. *Glob J Health Sci.* 2017;**10**(1). <https://doi.org/10.5539/gjhs.v10n1p111>.
30. Teng CI, Dai YT, Shyu YI, Wong MK, Chu TL, Tsai YH. Professional commitment, patient safety, and patient-perceived care quality. *J Nurs Scholarsh.* 2009;**41**(3):301-9. [PubMed ID: 19723279]. <https://doi.org/10.1111/j.1547-5069.2009.01289.x>.
31. Al-shloul S, Embong H, Otoum R, Pereira DJ, Al-Hamdan Z, Kin W, et al. The relationship of nurses' professional commitment with patient safety and patient satisfaction at a Malaysian university teaching hospital. *Mal J Med Health Sci.* 2022;**18**(2):50-7.