The Relationship Between Safe Nursing Care and Nurses’ Professional Commitment in Educational-Therapeutic Hospitals Affiliated with Qazvin University of Medical Sciences

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Received 2023 August 01; Revised 2023 September 03; Accepted 2023 September 09.

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 ≤ 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. According to statistics, approximately one in every ten patients receiving health care in a high-tech hospital is damaged. Therefore, in order to reduce incidents, nurses need to use safety science in nursing care.

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. Furthermore, determining what safe care is and how nursing care affects patient safety is a starting point in promoting nursing care. According to a study conducted at Harvard University, lack of patient safety causes 42.7 million incidents worldwide. 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. It is also estimated that 5-10% of health-related costs are caused by unsafe clinical services. Therefore, nurses play a considerable role in ensuring patient safety due to their special ability to report safety problems. One of the factors that help nurses report safety-related incidents correctly is professional commitment.

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. In the nursing profession, professional commitment can be defined as a nurse’s honesty and conscientiousness. 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. 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.

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. Since research has indicated a significant relationship between a nurse’s professional commitment and a patient’s safety indicators, and nurses with high professional commitment have more responsibilities for providing care to patients, and also patient safety is one of the most important dimensions of care quality, nurses play a positive role in protecting patient safety.

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 Rajaee, 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. (2016) 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 \( \alpha = 0.1 \) (confidence level of 90%) 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:

\[
n = \frac{(z_{1-\alpha} + z_{1-\beta})^2}{\omega^2} + 3
\]

\[
= \frac{(1.28 + 0.84)^2}{-0.15^2} + 3
\]

\[
= 263
\]
and reliability of this questionnaire were reported as 0.84
and 0.93, respectively (21).

In a study conducted in Iran, the validity
of 0.86 (20), and it was translated into Persian by Joolaee
designed by Lachman and Aranya (1960) with a reliability
professional commitment. This questionnaire was first
26 and 130, so a higher score indicates the nurse's higher
agree). The total score obtained by a nurse is between
experienced 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 Joolaee
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. (2016), 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 ≤ 0.001).
Table 1. Frequency Distribution of Demographic Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>201 (76.4)</td>
</tr>
<tr>
<td>Female</td>
<td>62 (23.6)</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>97 (36.9)</td>
</tr>
<tr>
<td>Married</td>
<td>166 (63.1)</td>
</tr>
<tr>
<td><strong>Employment status</strong></td>
<td></td>
</tr>
<tr>
<td>Project-based</td>
<td>65 (24.2)</td>
</tr>
<tr>
<td>Temporary to permanent</td>
<td>6 (2.3)</td>
</tr>
<tr>
<td>Contractual</td>
<td>41 (15.6)</td>
</tr>
<tr>
<td>Permanent</td>
<td>110 (41.8)</td>
</tr>
<tr>
<td>Corporate</td>
<td>40 (15.2)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td><strong>Educational degree</strong></td>
<td></td>
</tr>
<tr>
<td>Associate degree</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>237 (90.1)</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>25 (9.5)</td>
</tr>
<tr>
<td><strong>Current ward</strong></td>
<td></td>
</tr>
<tr>
<td>Emergency</td>
<td>46 (17.5)</td>
</tr>
<tr>
<td>ICU/CCU</td>
<td>63 (24.0)</td>
</tr>
<tr>
<td>Internal</td>
<td>53 (20.2)</td>
</tr>
<tr>
<td>Surgery</td>
<td>33 (12.5)</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>7 (2.7)</td>
</tr>
<tr>
<td>Oncology</td>
<td>4 (1.5)</td>
</tr>
<tr>
<td>Burn</td>
<td>5 (1.9)</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>9 (3.4)</td>
</tr>
<tr>
<td>Infectious and neurology</td>
<td>43 (16.3)</td>
</tr>
<tr>
<td><strong>Work shift</strong></td>
<td></td>
</tr>
<tr>
<td>Day</td>
<td>2 (0.8)</td>
</tr>
<tr>
<td>Afternoon</td>
<td>2 (0.8)</td>
</tr>
<tr>
<td>Night</td>
<td>5 (1.9)</td>
</tr>
<tr>
<td>Rotational</td>
<td>254 (96.6)</td>
</tr>
</tbody>
</table>

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

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 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 ≤ 0.05). Moreover, there is a significant relationship between a nurse’s age, nursing experience, experience at the current ward, and professional commitment (P ≤ 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
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

<table>
<thead>
<tr>
<th>Variables</th>
<th>Correlation Coefficient (r)</th>
<th>Significance Level (P-Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment type</td>
<td>0.091</td>
<td>0.142</td>
</tr>
<tr>
<td>Educational degree</td>
<td>0.125</td>
<td>0.043</td>
</tr>
<tr>
<td>Work shift</td>
<td>0.136</td>
<td>0.028</td>
</tr>
<tr>
<td>Current ward</td>
<td>-0.095</td>
<td>0.124</td>
</tr>
<tr>
<td>Professional commitment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment type</td>
<td>0.218</td>
<td>0.001 &gt;</td>
</tr>
<tr>
<td>Educational degree</td>
<td>0.229</td>
<td>0.001 &gt;</td>
</tr>
<tr>
<td>Work shift</td>
<td>0.139</td>
<td>0.024</td>
</tr>
<tr>
<td>Current ward</td>
<td>0.017</td>
<td>0.785</td>
</tr>
</tbody>
</table>

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, 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. (2021), 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. (2021) 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 (2020) and Shali et al. (2016) 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 Joolaee et al.’s (2014) 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. (2022) showed that safe care was significantly related to age and work experience (28). However, Al-Hamdan et al. (2017) 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 (2017) study (29). Moreover, Teng et al. (2009) 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-Shlool et al.’s (2022) 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.

Acknowledgments

We would like to thank the respectable Vice President for Research at Qazvin University of Medical Sciences, the respectable staff in Qazvin Nursing and Midwifery Department and affiliated hospitals, dear nurses, and respectable colleagues.

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.REC1398.090).

Funding/Support: This study was supported by a grant from the Research Department of Qazvin University of Medical Sciences.

Informed Consent: Written informed consent was obtained from the participants after explaining the study's purpose and ensuring their privacy and confidentiality.

References