

## Relationship between Professional Collaboration and Quality of Nursing Care in the Nurses' Viewpoint

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### Abstract

**Aims:** The present study aims to investigate the relationship between professional collaboration and the quality of nursing care.

**Instrument & Methods:** This cross-sectional was conducted from May 2021 to March 2022 on 330 nurses from large teaching hospitals affiliated with Shiraz University of Medical Sciences. The subjects were selected by available sampling. Data were collected using the Professional Collaboration and Cambodian Nursing Care Quality scales. The collected data were analyzed using descriptive and inferential statistics in SPSS 22 software.

**Findings:** The means of the nurses' ages and work experience were  $28.5 \pm 4.54$  and  $7.99 \pm 6.51$  years, respectively. The nurses' mean score for the professional collaboration subscale was  $20.47 \pm 5.04$ ; their quality of nursing care mean score was  $135.94 \pm 18.20$ . The results showed a significant direct correlation between the variables of professional collaboration and the quality of nursing care ( $r=0.44$ ;  $p<0.001$ ). However, the professional collaboration did not correlate with the nurses' demographic characteristics ( $p>0.05$ ).

**Conclusion:** There is a positive correlation between professional collaboration and quality of nursing care.

### Keywords

Professional [<https://www.ncbi.nlm.nih.gov/mesh/68011364>];  
Collaboration [<https://www.ncbi.nlm.nih.gov/mesh/2016263>];  
Quality of Care [<https://www.ncbi.nlm.nih.gov/mesh/68011787>];  
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## Introduction

Today, despite rapid advances in science and technology, modern healthcare systems in all countries are faced with a variety of issues, including medical errors [1] and job dissatisfaction among caregivers, including nurses, which lead to burnout in nurses, nurses' inclination to quit their jobs, decline in the quality of care, and negative consequences for patients [2]. Many factors contribute to these issues, but many studies refer to poor collaboration among caregivers as one of the main culprits [3].

Professional collaboration is defined as healthcare professionals' ability to play their part in the team, participate in teamwork, and share responsibilities for problem-solving and decision-making in developing care plans for patients [4]. This process is a dynamic, interactive, and mutual relationship among team members which is designed to achieve common goals based on communication, trust, respect for values, commitment, having a sense of responsibility, understanding each other's roles, exchanging data, equality of power, making decisions as a team, mental and practical collaboration based on expert knowledge and experience, and solving problems [5, 6].

In inter-professional collaboration, the performance of professionals with different expertise is interactive and patient-centered [7]. This type of performance is a powerful strategy for achieving healthcare objectives [5]; it is an essential, informed, and committed approach to providing quality nursing care and results in better communication and decision-making [3]. Effective teamwork and professional collaboration create a supportive care environment and empower the members of healthcare teams to work together [8]. The basis of professional collaboration is patient-centered care, open communication, mutual trust, sharing decision-making, responsiveness, and mutual respect [9]. Inter-professional collaboration increases the collective consciousness of doctors, nurses, and other members of medical teams about using each other's expert knowledge and skills [4].

One of the qualitative needs in nursing care is interdisciplinary training [10] because the development of professional collaboration improves the quality of healthcare by incorporating the knowledge and skills of healthcare professionals [11]. Also, professional collaboration is accompanied by positive financial and social outcomes: proper use of experts helps improve communication between healthcare professionals, facilitates access to healthcare services, reduces medical errors, and, ultimately, cuts the human and financial costs of errors [7]. Moreover, professional collaboration predicts job satisfaction [2]. There is a correlation between nurses' job satisfaction and patient satisfaction [12] and an increase in the quality of nursing care [13]. On the other hand, ineffective

interaction and lack of collaboration between doctors and nurses lead to job dissatisfaction, higher quit rates [14], a decline in competence [15], and increased burnout [16]. Collaboration among the members of healthcare teams is essential to providing high-quality and safe care to patients, and studies have stressed the significance of education in developing inter-professional collaboration [3]. Yet, there is little evidence supporting the efficacy of professional collaboration in improving patient care outcomes and perceived quality of care [17].

Therefore, the present study investigated the relationship between professional collaboration and the quality of nursing care nurses in the teaching hospitals affiliated with Shiraz University of Medical Sciences.

## Instrument and Methods

This cross-sectional, multi-centered design study was conducted from May 2021 to March 2022. According to the population study (N=1980), the sample size was calculated using Cochran's formula, considering the possibility of an attrition rate of 10%. 330 nurses were selected by available sampling from qualified nurses practicing in intensive care, internal, and surgical units of 4 teaching hospitals (Namazi, Shahid Faghihi, Emtiaz, Chamran) affiliated with Shiraz University of Medical Sciences. The inclusion criteria were: having at least one year's experience of practice as a nurse, having a bachelor's degree or above in nursing, being willing to participate in the study, and not being fatigued due to work overload. The questionnaires which were not fully completed were excluded from the study.

The data collection instruments were a demographics survey and the professional collaboration scale (6 items), taken from a literature review and its content validity tested by the authors. The total reliability of the instrument equaled a Cronbach's alpha of 0.82. The quality of nursing care was measured with the Persian version of the Cambodian Nursing Care Quality Scale (CNCQS), developed by Koy *et al.* in 2017. The face and construct validity, internal consistency, and test-retest reliability of the translated version of CNCQS were measured. Exploratory factor analysis resulted in 35 items which fell into six dimensions, namely patient outcomes (9 items), ethics-oriented activities (7 items), nurses' task requirements (7 items), nurses' characteristics (6 items), development of nursing process (3 items), and physical environment (3 items), which explained 60.76% of the total variance. The items are scored on a five-point Likert scale, ranging from "strongly agree" (5) to "strongly disagree" (1). The internal consistency of the entire scale is 0.94. The internal consistency of each subscale was as follows: patient outcomes=0.88, ethics-oriented activities=0.87, nurses' task requirements=0.81, nurses' characteristics=0.84,

development of the nursing process=0.76, and physical environment=0.76 [19].

The collected data were analyzed in SPSS 22 using descriptive and inferential statistics (Pearson correlation coefficient, linear regression, and ANOVA). The significance level was considered 0.05.

## Findings

Analysis of the data collected from 310 nurses who were practicing in intensive care, internal, and surgical units of one of the teaching hospitals in Shiraz yielded the following results: the mean age of the nurses was 28.5±4.54 years, with the range being 25 to 54 years, the mean of their work experience was 7.99±6.51 years, and the majority (73.2%) were female (Table 1).

**Table 1.** Demographic characteristics of the participants (n=330)

Parameter		Frequency	Percentage
Gender	Male	103	26.8
	Female	227	73.2
Age group	<24	67	30.4
	25-29	126	35.3
	30-34	50	12.4
	35-39	51	12.5
	40-44	25	6.9
	45-50	9	1.6
	>50	2	0.9
Marital status	Married	142	53.8
	Unmarried	188	46.2
Educational level	Bachelor	303	78.3
	Master	27	21.7
Ward	Intensive care	155	46.4
	Internal	43	8.2
	Surgical	132	45.4
Employment status	Trainee	113	36.5
	Contractual	127	34.5
	Permanent	90	29
Professional position	Nurse	318	91.4
	Head nurse	8	6.2
	Supervisor	4	2.4
Shift	Fixed	56	9.69
	Rotating	274	90.31

Pearson correlation coefficients showed a significant direct relationship between the dimensions of professional collaboration and the quality of nursing care ( $r=0.44$ ;  $p<0.001$ ). Also, there were significant direct correlations between professional collaboration and patient outcomes ( $r=0.36$ ;  $p<0.001$ ), ethics-oriented activities ( $r=0.37$ ;  $p<0.001$ ), nurses' task requirements ( $r=0.34$ ;  $p<0.001$ ), nurses' characteristics ( $r=0.31$ ;  $p<0.001$ ), development of nursing process ( $r=0.27$ ;  $p<0.001$ ), and physical environment ( $r=0.34$ ;  $p<0.001$ ). The nurses' mean scores for the professional collaboration subscale and quality of nursing care were 20.47±5.04 and 135.94±18.20, respectively (Table 2).

The linear regression results showed that all the dimensions of the quality of nursing care explained

0.21 of professional collaboration. Compared to the other dimensions of nursing care quality, ethics-oriented activities were more prominent in predicting inter-professional collaboration ( $\beta=0.383$ ;  $t=0.69$ ;  $p=0.48$ ). There was no significant correlation between professional collaboration and demographic characteristics ( $p>0.05$ ).

**Table 2.** The relationship between professional collaboration and quality of nursing care (all cases were significant at  $p<0.001$ )

Dimension	Mean	SD	r
Patient outcomes	35.48	5.37	0.36
Ethics-oriented activities	27.44	4.89	0.37
Nurses' task requirement	27.36	4.39	0.34
Nurses' characteristics	28.18	4.16	0.31
Development of nursing process	11.92	1.97	0.27
Physical environment	9.63	2.97	0.34

## Discussion

The results of the present study showed that the nurses' inter-professional collaboration and quality of nursing care mean scores were relatively good and that there was a moderate correlation between the two variables. Among the dimensions of quality of nursing care, ethics-oriented activities were more prominent in predicting the nurses' professional collaboration.

In the present study, the nurses' perception of professional collaboration was relatively good. The results of a study by Vatn & Dahl showed that the doctors and nurses in the surgical unit of a hospital in Norway were willing to have more inter-professional collaboration. Still, organizational restrictions and work overload precluded effective inter-professional collaboration. The participants believed that experience-based hierarchies, better communication, trust building, and mutual respect contribute to inter-professional collaboration and improve the quality of care [20]. In another study, the nurses and midwives positively perceived their inter-professional collaboration with the doctors: most participants had satisfactory inter-professional collaboration and communication with the doctors [21]. According to a study by Gittel et al., nurses' and doctors' personal beliefs about inter-professional collaboration affect their communication patterns and, by extension, their professional identity and the organizational culture [22]. In another study, the participating nurses were willing to participate in the decision-making processes for the patients' care plans and help doctors develop care plans. They expected doctors to respect their opinions and decisions regarding patient care and trust their sense of responsibility in caring for patients [23].

In the present study, the quality of nursing care and its subscales were relatively good from the nurses' perspective. In a study by Pourzanjani & Mashouf, the nurses perceived the quality of nursing care as satisfactory but did not meet the patients' expectations in some areas [24]. Similarly, Ebrahimi et al., reported that most of their study subjects found

the quality of care satisfactory in the physical and communication domains [25].

In a study by Holmes *et al.*, the quality of care for patients with prostate cancer was high [26]. The primary responsibilities of nurses include assessing their patients' basic needs by communicating with them, making psychological, social, physical, and interactive interventions, and assisting patients in their treatment. Therefore, reevaluation of care quality standards in the three domains of structure, process, and outcome from nurses' and patients' points of view, measures to enhance effective clinical communication between nurses and patients, and consideration for patients' psychological and social needs are recommended [24]. There is an urgent need for continuous education about the indexes of the quality of nursing care to improve nurses' awareness and practice [27].

The present study's findings showed a significant positive correlation between inter-professional collaboration and quality of nursing care. In a study by Urisman *et al.*, inter-professional clinical rounds were used to increase collaboration between nurses and surgeons in intensive care units. After the intervention, the extent of inter-professional collaboration increased, the rate of falls and unplanned extubation in patients decreased, and there was a general increase in the quality of nursing care [28].

In a study by Milton *et al.*, following an organizational intervention, including changes in the safety climate and work conditions and stress recognition, the nurses' and doctors' perceptions of safety climate and teamwork improved significantly [29]. A study by Black showed that interventions based on inter-professional collaboration improved the quality of nursing care [30]. On a similar note, the results of a study by Nishiguchi *et al.* showed that the higher the awareness of healthcare professionals (nurses, care managers, and other members of healthcare teams) about inter-professional collaboration, the better the quality of hospice care in nursing homes [31].

In a study conducted by Celik *et al.*, there was a significant direct correlation between nurses' perception of teamwork and high-quality care and their care behaviors. The nurses had a positive attitude toward the significance of collaboration among the members of healthcare teams in providing quality care [32]. According to a study by Ghezaljah *et al.*, better teamwork among emergency room nurses correlated with lower rates of missed nursing care [33]. One of the main components of inter-professional collaboration is teamwork. Poor perception of teamwork and lack of competence are a main cause of medical errors and reduced patient safety. A nurse cannot provide patients with all the necessary care on his/her own. The medical team members should view their jobs and tasks as a responsibility of the entire team and reduce the incidence of missed

nursing care by dividing tasks and making timely decisions [34].

It is essential that theoretical training courses are developed, and workshops are arranged to increase the competence of healthcare professionals in inter-professional collaboration.

In the present study, 0.21 of professional collaboration was predicted by the dimensions of quality of nursing care, and the dimension of ethics-oriented activities was the most prominent part. It appears that more factors impact professional collaboration and should be explored in future research. In a study by Schluter *et al.*, the nurses took good care of the patients, considered their colleagues' and patients' opinions and preferences, and tried to promote teamwork [35]. In another study, the doctors, nurses, and family caregivers believed that creating a peaceful environment, treating patients with respect, and providing comprehensive care showed respect for the dignity of hospitalized patients, which is essential to improving the quality of patient care. From the participants' perspective, respect for the patient's beliefs, confidentiality and privacy, patient participation, and avoiding discrimination in treatment and care were among the principles of professional ethics that caregivers must follow [36]. The results of a systematic review showed that feeling responsible for the members of the healthcare team and patients, teamwork spirit, patient participation, humanistic communication, mutual trust, patient privacy, cooperation with the treatment team, and altruism are ethical values that impact the quality of care [37]. According to Zagheri Tafreshi, doctors, nurses, patients, and companions believe that quality care is characterized by showing respect, teamwork, a sense of responsibility, and patient support [38]. Thus, educational workshops designed to raise caregivers' awareness of teamwork and inter-professional collaboration can increase the preservation of ethical values and, in turn, improve the quality of nursing care.

One of the limitations of the present study is that the views of other members of healthcare teams were not taken into account. Another limitation is that the data were collected on a self-report basis. However, by explaining the study's objectives to the participants, the researchers tried to encourage them to give honest answers to the questionnaire items. The healthcare system needs nurses who can successfully interact with interdisciplinary team members, as patient treatment and health improvement require teamwork. Inter-professional collaboration is a way to ensure patient safety and the provision of high-quality patient-centered care. It is suggested that future studies explore the perceptions of other members of healthcare teams and investigate the impact of educational interventions centered around inter-professional collaboration on the quality of care.

## Conclusion

There is a positive correlation between professional collaboration and quality of nursing care.

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