Original Article

Relationships between ethical decision-making and professional behavior in Iranian nursing students

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Abstract

Ethical decision-making and professional behavior are essential skills in nursing profession, hence educational programs should be designed to enable future nurses to tackle problems related to ethical decision-making.

This descriptive, correlational and analytical study aimed at determining the ability of Iranian nursing students to make ethical decisions as well as relationship between such decisions and professional behavior.

The present study used census to select 140 freshmen from the School of Nursing and Midwifery of Tabriz University of Medical Sciences, Tabriz, Iran. Data collection tools included a demographic questionnaire, the Nursing Dilemma Test (NDT) comprising two indices of "nurse's principled thinking" and "practical consideration", as well as the Nursing Students Professional Behaviors Scale (NSPBS).

The mean scores obtained were 41.3±5.7 for "nurse's principled thinking", 21.3±3.7 for "practical consideration", and 119.07±11.79 for professional behavior. Relationships of professional behavior with "nurse's principled thinking" and "practical consideration" were insignificant (P>0.05).

According to the present study's findings, nursing students' weakness in applying ethical concepts to decisions and professional behaviors was due to a gap between scientific material learned and clinical practice. Hence, novel training strategies and programs should be designed to reduce such theory-practice gap.

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***Received:** 27 Feb 2022*
***Accepted:** 28 May 2022*
***Published:** 10 Aug 2022*

Citation to this article:
Molaei Tavani F, Behshid M, Rahmani A, Mousavi S, Seif Farshad M, Rahmani P. Relationships between ethical decision-making and professional behavior in Iranian nursing students. J Med Ethics Hist Med. 2022; 15: 4.

Keywords: *Professionalism; Decision-making; Students; Nursing; Professional practice.*

Introduction

Advancements in science and technology have growingly made ethical patient care difficult (1). Compared to other professions, nursing profession faces more ethical challenges and problems (2). Properly managing these problems in patient care requires a proper understanding of ethical principles and ethical decision-making (3). Failing to comprehend these ethical challenges and situations can cause ethical distress (2). Creating and developing ethical decision-making skills in the nursing profession improve creative thinking and ensure the provision of care based on ethical principles (3). Ethical decision-making is defined as a logical process that involves making optimal ethical decisions through systematic reasoning in situations including contradictory choices. Nurses and nursing teachers constitute role models for nursing students in clinical activities and ethical decision-making in patient care (4). Research suggests that 97% of nursing students face at least one ethical and clinical challenge, and 48% experience unsolved ethical problems (5). In Turkey, ethical problems were reported for 46.7% of intensive care unit (ICU) nurses and unsolved problems for 35.7% (6). Timely ethical decision-making by nurses is essential for providing patients with necessary services (7) as well as can accelerate patient recovery and reduce healthcare costs (8); hence, failure in such decision-making results in unprofessional behavior and inadequate patient care (7).

Professionalism refers to measures and skills that reflect the habits, attitudes, beliefs and values defined by a profession. Ten principles of the professionalism charter include commitment to the following items: having professional competency, being honest with patients, preserving patient's confidentiality, maintaining appropriate relationship with patients, improving quality of care, enhancing access to care, distributing finite resources fairly, having scientific knowledge, maintaining trust by managing conflicts of interest and upholding professional responsibilities (9, 10). Commitment to the principles of nursing ethics and professional behavior encourages nurses to prioritize patient health by adhering to professional standards, to enhance their position from following the instructions of others to independent decision-making, and to promote their professional behavior (11). Nursing students must be aware of the principles of professional behavior and ethical theories, as acquiring knowledge of ethical codes,

principles and standards helps them make appropriate decisions and provide optimal care for patients (12).

Specialized scientific resources have rarely addressed professional ethics in the field of nursing (13). Research on the professional behavior of nursing students and nurses suggests contradictory results, ranging from low (14, 15) to moderate (16) and high (17, 18) levels of professional behavior. Lack of studies on nursing students' ability to make ethical decisions and investigation of relationship between such decisions and professional behavior motivated the present study. Moreover, the likelihood of nursing students' weakness in making ethical decisions in clinical practice due to their lack of experience also made such investigation essential. Before teaching nursing ethics as a course, this investigation helps nursing teachers identify the existing educational gaps and assess students' ability to make ethical decisions. Moreover, designing effective programs can productively enhance their learning outcomes in professional nursing such as the ability to make ethical decisions. This study was conducted to determine the skill of ethical decision-making and its relationship with professional behavior in Iranian nursing students. In line with educational policies, the present findings can help create and develop appropriate educational programs as well as promote ethical decision-making and professional behavior in nursing students as future nurses.

Methods

The present descriptive, correlational and analytical study was conducted in 2021 to determine the ability to make ethical decisions and its relationship with professional behavior of nursing students in the northwest of Iran. The study population comprised of all the students of the School of Nursing and Midwifery of Tabriz University of Medical Sciences. The inclusion criteria were being a second-semester student of the aforementioned university and not passing the ethics course. The participants who completed the questionnaire more than once or returned incomplete questionnaires were excluded. After obtaining permission from the school officials and the Research Ethics Committee of Tabriz University of Medical Sciences (IR.TBZMED.REC.1398.1261), census was used to select 140 eligible candidates.

An online questionnaire was developed that included explanation about the study objectives and methods. Then, the students were provided with instructions on how to complete the

questionnaire and were asked to sign informed consents. The participants were ensured about the confidentiality of their data and their right to withdraw from the study. The questionnaires were distributed among the participants using Porsline as the data collection system. The data collection tools comprised a demographic questionnaire, the Nursing Dilemma Test (NDT) for measuring the ability to make ethical decisions and the Nursing Students Professional Behaviors Scale (NSPBS). Demographic details included age, gender, marital status, knowledge about the principles of nursing ethics and the resources used to gain information about professional ethics. The NDT was developed by Crisham through interviewing 130 graduate nurses at the University of Minnesota in 1981 based on Kohlberg's theory of moral development. The hypothetical scenarios of this questionnaire used to measure ethical dilemmas facing the nurses included newborn with anomalies, forcing medication, adults' request to die, new nurses' orientation, medication error, and terminally-ill adults. Three questions were asked at the end of each scenario, and the choices selected as the response to the first question on the nurse's reaction to the hypothetical situation comprised "right", "wrong" and "I do not know" options. The second question presented six common views on the scenario based on stage two to stage six of Kohlberg's theory of moral development. Two options in each scenario suggested principled thinking. The respondents selected these two options as their priorities received a score of six for one item and five for the other one. The total score of principled thinking ranged from 18 to 66 given that the maximum and minimum score of each scenario was 11 and 3, respectively. The higher the total score, the higher the ability to make ethical decisions. A score of one to six was also received from an option associated with clinical considerations depending on the priority given to this item by the respondent. The total score of clinical considerations in all the scenarios was therefore six to 36. This score negatively related to the ability to make ethical decisions. The third section measured the experience of similar situations on a Likert scale. Receiving a score of six to 17 from this section suggested the familiarity of the subjects with similar problems, and a score of 18 to 30 showed their unfamiliarity and lack of similar experience. The reliability of NDT was 95% using Cronbach's alpha test in a study by Zirak et al. in Tabriz University of Medical Sciences (19). Ten academic staff of Tabriz School of Nursing and Midwifery and experts in medical ethics at Tabriz University of Medical Sciences

confirmed the validity of this questionnaire based on the content validity index.

The 27 items of the NSPBS, used for measuring nursing students' professional behavior, were scored based on a five-point Likert scale (always: 5; often: 4; no comments: 3; sometimes: 2; never: 1). Scores of 27-63 were categorized as low, 64-100 as moderate and 101-135 as high (20). Heshmati Nabavi et al. confirmed the reliability of this questionnaire in Mashhad University of Medical Sciences by calculating a Cronbach's alpha of 0.76 (21). The validity of this tool was also approved by ten faculty members of Tabriz School of Nursing and Midwifery and experts in ethics in Tabriz University of Medical Sciences.

The data was analyzed in SPSS-25 using descriptive statistics, i.e. frequency, relative frequency, mean and standard deviation (SD), and analytical statistics such as the Pearson correlation coefficient. The level of statistical significance was adjusted at $P<0.05$.

Results

Out of 140 freshmen with a mean age of 20.32±1.77 years included as undergraduate nursing students at Tabriz University of Medical Sciences; 50% (n=70) were female, and 96.7% were single. From 140 freshmen, 56.4% (n=79) admitted their familiarity with the principles of nursing ethics through experiences at school and educational centers (25.1%), reading books (22.6%) and using media (16.2%). Table 1 presents the demographic characteristics of the students.

Table 1: Demographic characteristics of nursing students

demographic information		Frequency	Percentage
Gender	Male	70	50
	Female	70	50
Marital status	Single	137	97.9
	Married	3	2.1
Familiarity with ethics	Yes	79	56.4
	No	61	43.6
Resources used to gain information about professional ethics	Book	81	22.6
	Co-worker	40	11.1
	Participate in conferences	12	3.3
	Media	58	16.2
	Regulations	21	5.8
	Educational centers	90	25.1
	Personal reasoning	57	15.9

Table 2 presents the results of analyzing the students' responses to the first section of NDT, suggesting that the highest frequency of correct responses (90.7%) pertained to medication error and the lowest (26.4%) to terminally-ill adults and new nurse's orientation.

Table 2: Nursing student's responses to section A of NDT (n=140)

Dilemmas	'What should nurse do?'	N	%
Newborn with anomalies	Should resuscitate the newborn	58	41.4
	Cannot decide	27	19.3
	Should not resuscitate the newborn	55	39.3
Forcing medication	Should forcefully give the medication	86	61.4
	Cannot decide	13	9.3
	Should not forcefully give the medication	41	29.3
Adults' request to die	Should provide assistance for artificial respiration	121	86.4
	Cannot decide	13	9.3
	Should not provide assistance for artificial respiration	6	4.3
New nurse's orientation	Should allocate time for orientation of the nurse	37	26.4
	Cannot decide	28	20.0
	Should not allocate time for orientation of the nurse	75	53.6
Medication error	Should report the medication error now	127	90.7
	Cannot decide	10	7.1
	Should not report the medication error now	3	2.1
Terminally-ill adults	Should answer the patient's questions	37	26.4
	Cannot decide	22	15.7
	Should not answer the patient's questions	81	57.9

According to Table 3, the mean score of the professional behavior of the nursing students was 119.07±11.79, and high levels of professional behavior were observed in 94.3% of the cases as per the Likert scale. Moreover, the scores of nurse's principled thinking and practical consideration were obtained as 30-65 and 13-30 with mean levels of 41.3±5.7 and 21.3±3.7, respectively.

Table 3: Nursing students' minimum, maximum, mean and SD in professional behavior and NDT

Variable	Minimum	Maximum	Mean±SD
Professional Behavior	77.0	135.0	119.07±11.79
Principled Thinking	30	65	41.3±5.7
Practical Consideration	13	30	21.3±3.7

According to the Pearson correlation coefficient, the relationships of the total scores of nurse's principled thinking and practical consideration with the score of the professional behavior of the students were statistically insignificant (P>0.05) (Table 4).

Table 4: Relationship between NDT and nursing students' professional behavior

Variables	Professional Behavior	
	p-value	R
Principled Thinking	0.89	0.01
Practical Consideration	0.06	-0.15

Investigating the relationship of demographic characteristics with the main variables showed that gender, knowledge about the principles of nursing ethics and facing ethical challenges were not significantly related to professional behavior and ethical decision-making (P>0.05). The mean scores of professional behavior and nurse's principled thinking were, however, higher in the females and those familiar with the principles of nursing ethics or with the experiences of facing ethical challenges.

Discussion

Reaction to the hypothetical dilemmas, nurse's principled thinking and practical consideration were used based on the NDT to evaluate the ability to make ethical decisions in the nursing students. Selection of "wrong" or "cannot decide" response options to the majority of scenarios in the first question of the NDT indicated nursing students' inability to make right ethical decision, and hence, they were unable of making ethical decisions. The highest frequency of correct responses was related to "medication error"; the lowest to "new nurse's orientation" and "terminally-ill adults". The low frequency of correct responses to "new nurse's orientation" can be explained by heavy workload, stressful environment and patients' poor health status. Furthermore, the low frequency of correct responses to "terminally-ill adults" can be explained by the unwillingness of the nursing students to inform the patients of their disease status and progress to prevent their psychological damage, as requested by the physicians or patients' family. According to Sari et al., most students preferred to use the physician paternalism model to preserve the patients' well-being, autonomy and quality of life. This model introduced the physician as the sole decision-maker on the treatment process (4).

As an indicator of steps five to six of Kohlberg's ethical level (22), the mean score of nurse's principled thinking derived from the NDT was estimated at 41.3±5.7, which was below the average of 42. Similarly, Koohi et al. reported this score as 40.81±6.72 in nurses (23). In contrast, above average scores were reported in literature for nurse's principled thinking in nursing students (4, 24) and nurses (25, 26). Zirak et al. reported the

mean score of nurse's principled thinking in nursing students (48.9±6.5) that significantly exceed that of nurses (46.6±6.7) (27). Given the major responsibility of nurses and the key role of their decisions, laying foundations for their ethical development and principled thinking is crucial. The lower-than-average score of nurse's principled thinking in the majority of the nursing students suggested their inability to make ethical decisions. The discrepancy observed in the score of nurse's principled thinking between the present research and other studies can be explained by differences in culture, workplace atmosphere, as well as knowledge of ethical problems, level of education in ethics, and type of study groups.

Practical consideration reflected the importance of environmental factors, including the numbers of patients and available resources, institutional policies, nurses' perceptions of governmental support, and supervision by physicians when deciding on ethical problems (22). The higher-than-average score of practical consideration obtained in the present study (21) was inconsistent with literature reports associated with nursing students (4, 28) and nurses (22, 26, 29). This finding suggests the effect of environmental factors on the nursing students when making decisions on ethical problems. Crisham found nurses to be stressed in the face of ethical dilemmas that required ethical decisions under environmental conditions such as organizational policies in conflict with the concepts of justice in nurses, obeying physicians, time constraints, conscientiousness, loyalty to the nursing profession, patients and hospital, uncertain professional responsibilities, information overload and difficulty in finding the most efficient way of benefiting from this information (22).

The lower score of principled thinking than that of practical consideration can be explained by students' unfamiliarity with similar ethical challenges and problems. Familiarity with ethical challenges helps students discuss and select optimal solutions to ethical dilemmas and make ethical decisions. Unfamiliarity with ethical dilemmas makes ethical decision-making difficult and causes nursing students to use practical consideration rather than principled thinking (4).

In line with the results obtained by Fattahi-Bafghi and Barkhordari-Sharifabad (18), Khajavi et al.(17), Mousaviasl et al. (12) and Khachian et al. (30), the present findings suggested high levels of professional behavior in the nursing students with a mean score of 119.07 out of 135. In contrast, Dikmen et al. (31), Çelik and Hisar (32), Demir and Yildirim (33), Koştu and Arslan (34) and Cerit

and Dinc (14) reported low levels of professional behavior among nurses. This discrepancy in the professionalism of nurses can be explained by differences in the education levels of nurses and community's perception of nursing as a profession, as well as the hierarchical structure of hospitals, heavy workload, long working hours, lack of staff and equipment, job insecurity, low income and weak organizational workforce (31). Tanaka et al. (35) and Hisar et al. (36) reported higher mean scores for the professional behavior of nurses with postgraduate education and more work experience than those of other nurses.

Investigating the relationships of demographic factors with the indicators of ethical decision-making and professional behavior in the participants showed insignificant associations of the total scores of professional behavior, nurse's principled thinking and practical consideration with age, gender, knowledge about the principles of nursing ethics and experience of facing ethical challenges. Similarly, Zirak et al. (25), Koohi et al. (23) and Ham (37) reported insignificant relationships of nurse's principled thinking with education level, age and gender. These scores were, however, higher in the nurses familiar with the principles of nursing ethics and females, which is consistent with the findings of Khajavi et al. (17) and Jahanbazi and Lotfizadeh (16). Higher sensitivity of females to ethical issues than that of males helps females make more rational decisions in the face of ethical challenges. In line with the present findings, Khajavi et al. (17) and Heshmati Nabavi et al. (21) observed the insignificant relationships of in-service training courses and knowledge about the patients' rights charter with the scores of professional behavior and ability to make ethical decisions (23). Despite the key roles of teaching ethics and familiarity with and experience of ethical challenges in ethical development and making appropriate decisions in the face of ethical challenges, the gap between scientific material learned and clinical practice can counteract the effect of ethical concepts on the decisions and professional behavior of nursing students. Moreover, professional regulations, norms and responsibilities prevent nursing students from independently making ethical decisions during their education based on their own principles and practice.

Professional behavior was found to insignificantly relate to practical consideration and nurse's principled thinking (P>0.05). To the best of the authors' knowledge, Cerit and Dinc were the only researchers who investigated ethical decision-making and professional behavior in nurses, and

they reported insignificant and positive relationships between professional behavior and nurse's principled thinking (14). In line with the present study, Lim and Kim reported a gap between thinking and practice in ethical decision-making, as well as failures to direct thinking toward ethical practice given the obstacles to the implementation of ethical decisions despite the continuity of ethical decision-making (38).

According to Ashuri, ethical reasoning and moral behavior positively and significantly relate to ethical metacognition. Furthermore, positive and significant relationships were observed between moral reasoning and moral behavior. That is, the stronger the reasoning, the greater the ability to thoroughly and accurately examine ethical challenges and make ethical decisions. Improving this ability, therefore, promotes ethical metacognitive skills and moral behavior (39). Ethical reasoning is required for making ethical decisions in nurses (23). Amiri et al. reported positive relationships of ethical reasoning with caring and professional behaviors in nurses (40). Despite the indirect associations of the cited results with the present findings, the discrepancy in results can be explained by differences in individual characteristics, communication challenges, research setting, and educational systems. Given the need for integrating academic education into nursing practice, laying foundations for turning ethical decisions into ethical and professional behavior is essential for providing ethical and professional care. The gap between theory and practice causes crises in nursing care and lack of appropriate professional behaviors in the face of ethical dilemmas. Eliminating this gap, thus, enables nurses of making more appropriate ethical decisions and ultimately improves their professional performance. The present study's limitations included the use of self-report tools for the variables of ethical decision-making and professional behavior, which might have affected the responses of the participants and the results.

Conclusion

The findings obtained, respectively, showed lower-than-average and higher-than-average scores of 42 and 21 for nurse's principled thinking and practical consideration in the nursing students, whose professional behavior was also high. The insignificant relationship between ethical decision-making and professional behavior suggested the effect of environmental factors on the students in the face of ethical challenges, their weakness in turning ethical decisions into professional actions and behaviors, and their uncertainty about their

ability to provide quality care. The gap between theoretical and practical education should be bridged by laying accurate educational plans, adopting modern educational strategies, synchronizing clinical education with recurring ethical dilemmas and simulating the clinical environment. Comprehensive training programs should also be designed to help students improve and enhance their ethical decision-making ability both theoretically and practically, and direct their ethical decision-making toward professional behaviors.

Authors' contribution

Fatemeh Molaei Tavani and Parvin Rahmani collected the data. Saeid Mousavi provided and analyzed the data. Mozhgan Behshid and Fatemeh Molaei Tavani provided the data and prepared the manuscript. Mozhgan Behshid, Azad Rahmani and Mehran Seif Farshad conceived the study' idea, prepared the manuscript, and edited the final version of the manuscript.

Funding

The Deputy of Research and Technology of Tabriz University of Medical Sciences financially supported this study.

Acknowledgements

This article was extracted from a master's dissertation and a project approved by the Ethics Committee of Tabriz University of Medical Sciences (IR.TBZMED.REC.1398.1261). The authors would like to express their gratitude to the authorities of School of Nursing and Midwifery and the participating students.

Conflict of Interests

The authors declared no conflicts of interest regarding the publication of the present article.

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