The effects of debate-based ethics education on the moral sensitivity and judgment of nursing students: A quasi-experimental study ☆

Wol-Ju Kim[a], Jin-Hee Park[b],*

[a] Department of Nursing Science, Kookje University, 56 Janganut-gil, Pyeongtaek, 17731, Republic of Korea
[b] College of Nursing, Research Institute of Nursing Science, Ajou University, 164 World cup-ro, Yeongtong-gu, Suwon 16499, Republic of Korea

ARTICLE INFO

ABSTRACT

Background: While ethics education in undergraduate nursing education can be developed using a variety of teaching and learning strategies, consensus on the content and teaching modules for these ethics courses has still not been established and the effect of ethics education has rarely been evaluated.
Objectives: The purpose of this study is to compare the effect of debate-based ethics education and lecture-style ethics education on the moral sensitivity and moral judgment of nursing students..
Methods: This was a pre-test and post-test quasi-experimental study with a control group. A total of 64 senior-year nursing students in Korea participated in the study (35 in the debate group and 29 in the lecture group). The debate-based ethics education lasted for eight weeks with one two-hour session per week. The debate-based ethics education consisted of 16 rounds of affirmative and negative sides. Each debate lasted a total of 40 min and consisted of the introduction, cross-examination, rebuttal, conclusion, operation time, and wrap-up. The outcomes were measured by moral sensitivity and moral judgment questionnaires.
Results: There was a significant improvement in idealistic moral judgment and realistic moral judgment in the debate group compared to the lecture group. However, no statistically significant difference was found for moral sensitivity between the two groups.
Conclusion: Based on this study's findings, it can be concluded that the debate-based ethics education for undergraduate nursing students is very effective in promoting moral judgment and the ability to take ethical decisions.

1. Introduction

An ethical dilemma is a situation in which a choice needs to be made between two or more conflicting ethical principles; in healthcare settings, nurses are often compelled to choose between two or more alternatives (Park and Yun, 2016; DeSimone, 2016). In clinical practice, nurses experience ethical dilemmas almost daily, such as meaningless life-sustaining care, violation of patients' rights and dignity, non-compliance with treatment and nursing standards, and inequitable nursing care provision (Park and Yun, 2016). In such situations, nurses must make responsible ethical decisions that best meet patients' needs (DeSimone, 2016).

As patient advocates, nurses should be able to sensitively perceive ethical situations and make decisions based on ethical principles. Moral sensitivity is a key component of ethical decision-making, and moral judgment is the ability to make a morally justifiable decision based on moral values and norms. Since moral sensitivity and moral judgment are not innate capabilities, but must be acquired and established through continuous education and training, ethics education should be firmly embedded in undergraduate nursing curricula in a manner that sensitizes nursing students to ethical issues and fosters their ability to make moral judgments and act ethically (Akca et al., 2017; Kim, 2015; Yeom et al., 2016).

With a growing emphasis on ethics education in nursing, an increasing number of nursing schools in Korea have begun offering courses in nursing ethics. In most colleges, however, ethics education is delivered in the form of a simple lecture (Yun and Kim, 2014). Lecture-based ethics education revolving around knowledge transfer cannot provide students with opportunities to seriously reflect on the rationale for ethical behavior in dilemma situations and has a limited effect on

---

sharpening their ethical judgment through ethical reasoning based on sensitive perception of ethical situations. Therefore, ethics education should not be implemented through simple memorization and mechanical learning, but requires the developing of critical and diversified thinking and reflection skills that can be applied to real cases (Alba, 2018; Akca et al., 2017).

To meet this objective, a range of learning methods have been explored in nursing ethics education, including case-based learning (Park and Park, 2015), role plays (Kim, 2013), videos (S.Y. Kim, 2014), and debate (M.S. Kim, 2014; S.Y. Kim, 2014; Yeom et al., 2016; Kim, 1999). Of these education methods, debate is an effective learning strategy requiring students to take a stance on a given topic, make judgments according to their own values to defend their position, and persuade students with opposite views. A debate allows students to explore and gain understanding of alternative viewpoints and develops communication, critical thinking, and argumentation skills (Kim, 2010).

In a constructivist learning environment, learning occurs when the inner structure is changed or constructed by the process of assimilation or control arising from the experience of cognitive conflict. The focus of debates, whose underlying theory is constructivism, is not to find textbook solutions to problems, but to recognize the discrepancy between the knowledge required to cope with a new situation, the current body of knowledge, and new knowledge systems based on cognitive restructuring (Kim, 2010). Furthermore, in debate education using dilemma scenarios, students perceive and interpret the problems associated with a realistic and unstructured real-life situation involving a dilemma thereby experiencing the complex reasoning process of judging what ethical behavior actually is in their interactions with colleagues (Kim and Kim, 2011). In this process, they are put in a state of non-peace and undergo cognitive restructuring in an attempt to regain peace, thereby constructing higher-order ethical knowledge and thought, which has the effect of sharpening moral sensitivity and moral judgment.

Previous studies have presented a positive picture of debate: It develops critical thinking and problem-solving skills (Hall, 2011; Wason and Southall, 2016), improves communication skills (Hartin et al., 2017), and enhances presentation, teamwork, and decision-making skills (Omelicheva, 2007). In nursing ethics education, it has been assessed as effective in improving ethical knowledge, values, and skills, as well as problem-solving skills (Omelicheva, 2007; Jung et al., 2012). However, most previous studies on the effectiveness of debate as a teaching strategy in nursing ethics education (Jung et al., 2012; Choe et al., 2014) have been conducted with freshman or sophomore students lacking clinical experience. Considering nursing students show varying degrees of moral sensitivity depending on their age, clinical experience, and prior exposure to ethical dilemmas (Kim, 2015), debate-based ethics education should be offered to senior-year students who have confronted ethical dilemmas in the clinical learning environment. This will enable students to respond more actively to ethical dilemmas in the classroom and enable them to develop the capacity necessary to make sound ethical nursing decisions after graduation. This study was conducted to compare the effect of debate-based ethics education and lecture-style ethics education on the moral sensitivity and moral judgment of senior-year nursing students.

2. Methods

2.1. Study design

This study evaluated the effectiveness of debate-based ethics education using a quasi-experimental design based on the non-equivalent control group pre-test/post-test method.

2.2. Participants

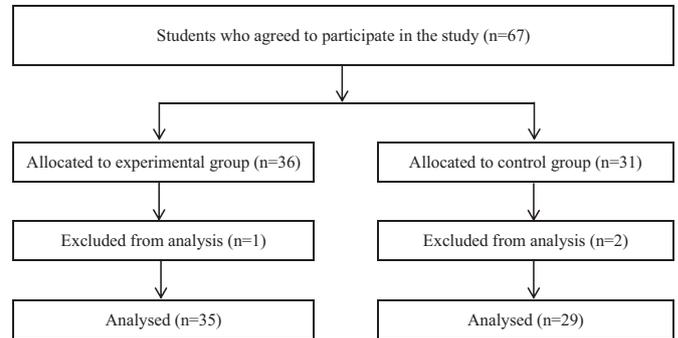Participants were recruited from among senior-year nursing

Fig. 1. Flow diagram of study participants.

students attending two universities with similar syllabi: The participants for the experimental group were recruited from University A, the control group from University B. A total of 67 senior-year nursing students (debate group: 36, lecture group: 31) were enrolled after the study purpose was explained to them and they signed the consent form voluntarily. One debate group student and two lecture group students were excluded from the analysis because they did not participate in the post-test or had missing survey responses (See Fig. 1). The sample size was calculated using the G*Power program (Faul et al., 2007). The effect size was 0.8 (Cohen, 1988) when the significance level and power were set at 0.05 and 0.80 respectively, and an analysis of covariance (ANCOVA) was applied.

2.3. Ethical considerations

Prior to conducting the study, the study protocol was approved by the institutional review board (IRB) of university hospital A (approval number: AJIRB-SBR-SUR-17-044). Students were informed about the study's aims and methods. They were told that their participation must be voluntary and that they could withdraw from the study at any time. Those who agreed to participate signed the informed consent form. The researcher was not involved in the data collection process, and the research assistant kept personal information (e.g., cell phone numbers) on an encrypted PC. The participants were given a gift certificate as a token of appreciation.

2.4. Instruments

2.4.1. Moral sensitivity

Moral sensitivity was measured using the Korean version of the Moral Sensitivity Questionnaire (K-MSQ), originally developed by Lützén (1997) and translated into Korean by Han et al. (2010). The K-MSQ consists of five sub-domains, made up of patient-oriented care (5 items), professional responsibility (7 items), conflict (5 items), moral meaning (5 items), and benevolence (5 items). The K-MSQ is composed of 27 items; each item is scored on a 7-point Likert scale, ranging from 7 (totally disagree) to 1 (totally agree). A higher score indicates a higher level of moral sensitivity. The validity of the K-MSQ was 0.76 and the Cronbach's alpha was 0.76 for this study.

2.4.2. Moral judgment

Moral judgment was measured by the Judgments about Nursing Decisions (JAND) tool developed by Ketefian (1981), and translated and customized for the Korean context by Kim (1999). The JAND tool used in this study consists of six patient-care vignettes each containing moral or ethical implications. Each vignette is followed by a series of possible nursing actions. Aligned with each nursing action are two parts: Part A relates to idealistic moral judgment, showing ideal behaviors when there are no restrictions from within the organization. It demonstrates professionally ideal choices that a nurse could make if no constraining factors were present. Examples of such factors include

Table 1
Debate-based ethics education.

Process		Teaching and learning activities	Learning materials	Time
Introduction	• Learning atmosphere	• Attendance check • Learning objectives • Clarify the topic of debate	• Attendance book • PowerPoint	5 min
Deployment	• Topic selection • Positioning • Role sharing	• Topic selection(1 team, 2 teams) • Decide one's position • Pro side: 3 • Con side: 3 • Moderator: 1 • Jury: 6 (not participating in debate)	• Coin toss • Decide one's position	5 min
	• Academic debate	• Dilemma case 1 • Dilemma case 2	• Analysis of issues • Debate outline • Timer	80 min
Wrap-up	• Evaluation • Arrangement	• Debate evaluation (moderator, jury) • Debate report (jury)	• Debate report	10 min

organizational norms, autonomy, and feedback from supervisors and colleagues. Part B displays the realistic behaviors nurses would display or would be expected to display according to the given rules or restrictions operating in their organization. The responses to these questions are in terms of a choice being a realistic one that a nurse is most likely to make when considering the possible constraints.

These six cases have a total of 39 associated questions (there are six or seven questions for each case) concerning idealistic and realistic judgment: a proper moral judgment earns 1 point; an improper judgment scores 0. The criteria for determining a judgment's appropriateness are based on the codes of ethics of the International Council of Nurses and the American Nurses Association. The correct answers in part A are used to score idealistic moral judgment (if the nurse should or should not do something), and those in part B are for realistic moral judgment (whether the nurse is likely to do or not do something). The JAND is a self-administered, quantitative tool and the most frequently used instrument in nursing ethics studies (Goethals et al., 2010). In the study by Kim et al. (2007) Cronbach's alpha for idealistic moral judgment was 0.64 and for realistic moral judgment it was 0.58. Cronbach's alpha values for this study were 0.64 and 0.56 for idealistic and realistic moral judgment, respectively.

2.5. Intervention

We developed a debate-based ethics education program based on the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model (Seels and Richey, 1994). Ten dilemma cases were created using nursing ethics textbooks and 'Role-Playing in Nursing Ethics' published by the Korean Hospital Nurses Association. The ten dilemma cases were: 'human cloning,' 'conflict between confidentiality and nurses duties,' 'meaningless life-sustaining care,' 'organ transplantation from the brain-dead,' 'the right to know of terminally ill cancer patients,' 'use of physical restraint for treatment and nursing purposes,' 'diverging judgments between nurse and physician,' 'discordance between hospital policies and nurses views,' 'unprofessional and immoral nursing behavior of a fellow nurse,' and 'ethics of relationships between nurses and nursing students.' The dilemma cases' content validity was tested by an expert panel (three professors of nursing ethics and two general hospital nurses with over 10 years of clinical experience), and a content validity index of more than 0.9 was derived.

The debate-based ethics education program was organized as follows: In session 1, students were introduced to the program and its modus operandi, and debate teams were constituted using the Myers-Briggs Type Indicator (MBTI) (Myers et al., 1985) for efficient debate learning. In session 2, ethical theories, principles, and rules were presented, consisting of utilitarianism and deontology, autonomy, non-

maleficence, beneficence, justice, honesty, fidelity, confidentiality, and privacy. Session 3 was dedicated to the moral decision-making process and codes of ethics for nurses. A lecture was given on the utilitarian decision-making model, the deontological decision-making model, the modified model of decision-making, and the Value-Be-Do decision-making model, as well as codes of ethics and guidelines. Additionally, students were introduced to the concept, procedures, and rules of academic debate.

In session 4, the two dilemma cases of 'human cloning' and 'conflict between confidentiality and nurses duties in nurse-patient relationships' were selected as the topics of academic debate. The dilemma cases for session 5 were 'meaningless life-sustaining care' and 'donation after brain-death (DBD),' and were intended to give students opportunities to reflect on the ethical problems related to patient death, their professional duties in such cases, and how to respond. 'The right to know of terminally ill cancer patients' and 'use of physical restraint for treatment and nursing purposes' were selected as the session 6 topics to help the students identify ethical problems related to the right to know, develop respect for patient autonomy, and reflect on changing healthcare environments. In session 7, 'diverging judgments between nurse and physician' and 'discordance between hospital policies and nurses views' were used as debate topics for students to reflect on ethical conflict problems that may arise between nurses and physicians and conflicting values between healthcare providers' professional obligations as employees and their duties to the patients. In session 8, 'unprofessional and immoral nursing behavior of a fellow nurse' and 'the ethics of relationships between nurses and nursing students' were the topics.

From sessions 4 to 8, two dilemma cases per session were used as debate topics, and those who would participate in the debate were instructed to plan how to present their arguments from the pro and con perspectives, and to submit argument analyses and debate outlines before the debate. They were also instructed to write a thesis analysis and discussion summary before the debate. Those who did not participate in the debate were instructed to write a debate report subsequently, describing both sides' arguments, and then describe whether their positions changed during the debate and their impressions following the debate (See Table 1).

2.6. Data collection procedure

After receiving the completed consent forms, the research assistant gave the questionnaire to the students and instructed them to fill it out. The data were collected between May 22 and July 28, 2017. The debate group participated in the debate-based ethics education eight times over an eight-week period, one two-hour session per week. In addition,

a lecture-style ethics education on the 10 dilemma cases was provided to the lecture group eight times over an eight-week period, one two-hour session per week. In the first three sessions, lectures were given on ethical principles and rules, the code of ethics for nurses, and moral decision-making processes with the same contents and dilemmas as the experimental group. For the lectures from session 4 through session 8, two dilemma cases per session were presented one week prior, and the students were instructed to compose and submit an executive summary prior to the lecture. During the lecture, they were instructed to present their summaries, and the researcher explained the decision-making processes of the pro and con sides for the dilemma case, then compared them with the moral decision-making processes shared by the students, and opened the floor to discussion.

The research assistant surveyed both the debate and lecture groups using the moral sensitivity and moral judgment questionnaires immediately after the end of the education program.

2.7. Data analysis

The collected data were analyzed using SPSS/WIN 20.0 software. Testing of the homogeneity of the participants' general characteristics and dependent variables was performed using an x^2-test, Fisher's exact test, and independent t-tests. An analysis of covariance was performed to test the effectiveness of the debate-based nursing ethics education program.

3. Results

3.1. Test of participant homogeneity

Students in the debate group had a mean age of 21.89 years, similar to that of the lecture group (M = 22.34). Most students in both groups had completed their clinical practicum. The test of homogeneity between the lecture and debate groups showed no significant differences between them. Moreover, the pre-test data showed no significant differences between the lecture and debate groups concerning moral sensitivity and moral judgment (See Table 2).

3.2. The effects of debate-based ethics education

At post-test, the moral sensitivity scores in the debate and lecture groups were 5.16 ± 0.36 and 5.13 ± 0.47, respectively, but the difference was not statistically significant ($F = 0.02$, $p = .884$), with the pre-test scores controlled as covariates.

The comparison of the post-test scores in idealistic moral judgment between the debate and lecture groups, with the pre-test scores controlled as covariates, revealed that the debate group scored higher than

the lecture group (0.77 [± 0.07] vs. 0.72 [± 0.08]) with a statistically significant difference ($F = 5.96$, $p = .018$). The comparison of the post-test scores in realistic moral judgment between the debate and lecture groups, with the pre-test scores controlled as covariates, revealed that the debate group scored higher than the lecture group (0.71 [± 0.08] vs. 0.65 [± 0.07]), again a statistically significant difference ($F = 6.00$, $p = .017$) (Table 3).

4. Discussion

In the present study, ethics education using debate was not effective in enhancing moral sensitivity. This is similar to M.S. Kim's (2014) and S.Y. Kim's (2014) findings, who reported no significant differences were found in moral sensitivity scores between the intervention and control groups after an eight-week ethics education using lectures, videos, and debates administered to junior nursing students. Yeom et al. (2016) also found no significant differences in moral sensitivity scores between the intervention and control groups after a seven-week ethics education program using lectures, analysis of dilemma cases, and debates administered to senior-year nursing students.

In contrast, in a study conducted by Jeong (2016), in which a 15-week biomedical ethics education program was administered to freshman nursing students, significant increases in moral sensitivity were reported. This difference is presumably attributable to the different academic years of the participants (i.e., freshmen vs. juniors/seniors). Given that moral sensitivity decreases with exposure to ethical dilemmas and experience in clinical practice (Kim, 2015), senior-year students are assumed to have lower moral sensitivity than freshmen. Given that moral sensitivity cannot be built in a short period of time (Kim et al., 2007), it is essential to identify personal and environmental factors that may influence moral sensitivity and provide freshman and sophomore nursing students with nursing ethics education to enhance their moral sensitivity (Baykara et al., 2015). However, undergraduate nursing curricula usually provide nursing ethics education to junior and senior students (Choe et al., 2013). It is therefore necessary to redesign nursing curricula to provide freshman and sophomore nursing students with ethics education. Moreover, continued research on pedagogical methodologies to enhance moral sensitivity is needed (Hoseini et al., 2018), as well as research on determining the optimal timing and duration of education for enhancing moral sensitivity.

Testing the effects of debate-based ethics education on nursing students' moral judgment found that the debate group did not show any pre-test/post-test differences in moral judgment scores, and the control group actually scored lower after the education. These findings are inconsistent with those of Kim (1999), who reported that the debate group scored lower in idealistic moral judgment after an ethics education using free and expert-supported debate. Idealistic moral

Table 2
Homogeneity test of general characteristics and dependent variables of the two groups.

Variables	Categories	Exp. ($n = 35$)	Cont. ($n = 29$)	t or χ^2	p
		n(%) or M ± SD	n(%) or M ± SD		
Age		21.89 ± 0.87	22.34 ± 1.40	−1.61	.113[a]
Gender	Male	0(0.0%)	6(20.7%)	8.00	.006[b]
	Female	35(100%)	23(79.3%)		
Satisfaction of clinical practice	Satisfaction	20(57.1%)	10(34.5%)	3.28	.191[b]
	Moderate	12(34.3%)	15(51.7%)		
	dissatisfaction	3(8.6%)	4(13.8%)		
Moral sensitivity		4.91 ± 0.38	4.86 ± 0.41	0.49	.625[a]
Moral judgment					
Idealistic moral judgment		0.77 ± 0.08	0.75 ± 0.09	1.27	.208[a]
Realistic moral judgment		0.67 ± 0.10	0.67 ± 0.99	−0.12	.988[a]

M = mean; SD = standard deviation; Exp. = experimental group; Cont. = control group.
[a] Two independent t-test.
[b] Fisher's exact test.

Table 3
Comparison of dependent variables between two groups.

Variables	Group	Pre-test		Post-test		Adjusted score		F[a]	P	Partial eta^2
		M	SD	M	SD	M	SE			
Moral sensitivity	Exp. (n = 35)	4.91	0.38	5.16	0.36	5.15	0.07	0.02	.884	0.000
	Cont. (n = 29)	4.86	0.41	5.13	0.47	5.14	0.07			
Moral judgment										
Idealistic moral judgment	Exp. (n = 35)	0.77	0.08	0.77	0.07	0.76	0.01	5.96	.018	0.089
	Cont. (n = 29)	0.75	0.09	0.72	0.08	0.72	0.01			
Realistic moral judgment	Exp. (n = 35)	0.67	0.10	0.71	0.08	0.70	0.01	6.00	.017	0.089
	Cont. (n = 29)	0.67	0.99	0.65	0.07	0.66	0.01			

M = Mean; SD = standard deviation; Exp. = experimental group; Cont. = control group.

[a] Analysis of Covariance with pre-test score as covariate.

judgment is the choice of an ideal action by a professional in the absence of organizational constraints (Kim et al., 2001), and is influenced by personal experience, knowledge, and communication skills (Nora et al., 2016). Faced with a dilemma situation with conflicting ethical values, students usually have trouble making idealistic moral judgments if their moral reasoning system has been shaken. However, while participating in academic debates, students learn reflective reasoning skills to solve cognitive conflicts through argumentation and can maintain their idealistic judgment by concentrating on the essence of problems and building knowledge contributing to decision-making while engaging in interactive and cooperative communication (Kim, 2010). Idealistic moral judgment, responsibly selecting the right and necessary option as a professional, plays a pivotal role in making moral judgments in dilemma situations. Therefore, clinical nurses should be continuously provided with education to enhance their idealistic moral judgment skills.

In this study, while the debate group's realistic moral judgment scores increased after the intervention, those of the lecture group actually fell. Although it is difficult to compare this result with other studies, few having used the JAND tool to measure the effects of moral judgment, it is consistent with the study results reported by M.S. Kim (2014) and S.Y. Kim (2014), in which junior nursing students scored higher in realistic moral judgment after an eight-session ethics education program using lectures, videos, and debates.

In addition, the debate group students were able to build a new knowledge system while collecting, analyzing, and systematizing various data related to dilemmas to narrow the gap between their current knowledge base and the clinical context (Kim, 2010), presumably obtaining high-order ethical knowledge and reasoning skills in this process, which contributed to attaining higher scores. Since the realistic aspect of moral judgment is an important element of moral decision-making in accordance with the code of ethics and ethical principles in real-life ethical dilemmas (Kim et al., 2001), education to strengthen nursing students' abilities to make realistic moral judgments is vital. However, this is not achieved by merely providing philosophical and ethical knowledge in a lecture format. Nursing students require a form of nursing ethics education designed to sharpen realistic judgment by learning to make morally viable choices through debate about ethical problems that arise in healthcare settings.

Compared to the pre-test, both the debate and lecture groups scored higher in idealistic moral judgment. Realistic moral judgment may be affected by various institutional and legal constraints when facing dilemma situations in clinical practice, even if nurses have made idealistic judgments based on their values and convictions (Kim, 1999), which may explain the lower scores in realistic moral judgment. This highlights the need for a realistic nursing ethics education program that considers the undergraduate course and prior clinical experience of or the lack thereof, focusing on ethical behavior or experience, not on the related thinking process. This can be done by providing undergraduate nursing students with opportunities to directly experience ethical dilemmas so they can make correct moral decisions when faced with dilemmas in clinical settings after graduation.

This study explored and demonstrated the feasibility of implementing a debate-based ethics education program for university nursing students. Debate-based ethics education is expected to enhance nursing students' moral judgment capacity and help them make sound moral decisions maximizing benefits to patients when faced with ethical dilemmas. Although this study identified a significantly improved learning outcome for debate-based ethics education, there were some limitations that can be resolved in future studies. Given the small sample size and short follow-up duration, this result cannot be generalized and confirm the sustainability of the intervention. A future study with a larger sample size and a longer follow-up duration can address these issues. Although JAND and MSQ are popular tools in nursing ethics research, moral sensitivity and moral judgment measurement tools with high validity and reliability tailored to the Korean healthcare environment need to be developed.

5. Conclusions

This quasi-experimental study evaluated the effect of debate-based ethics education on the moral sensitivity and moral judgment of senior-year nursing students. The results revealed that the debate-based education program that took place over eight weeks was effective in enhancing nursing students' moral judgment but did not have any significant effect on their moral sensitivity. The aim of ethics education is to provide nursing students with the understanding needed to make independent ethical decisions. While further investigations of the effectiveness of the debate method in nursing education are required, the results of this study clearly show that inclusion of a debate-based approach would be effective in achieving this goal.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

Akca, N.K., Simsek, N., Arslan, D.E., Senturk, S., Akca, D., 2017. Moral sensitivity among senior nursing students in Turkey. Int. J. Caring Sci. 10 (2), 1031–1039.

Alba, B., 2018. Factors that impact on emergency nurses' ethical decision-making ability. Nurs. Ethics 25 (7), 855–866. https://doi.org/10.1177/0969733016674769.

Baykara, Z.G., Demir, S.G., Yaman, S., 2015. The effect of ethics training on students recognizing ethical violations and developing moral sensitivity. Nurs. Ethics 22 (6), 661–675. https://doi.org/10.1177/0969733014542673.

Choe, K., Kang, Y., Lee, W.Y., 2013. Bioethics education of nursing curriculum in Korea: a national study. Nurs. Ethics 20 (4), 401–412. https://doi.org/10.1177/0969733012466003.

Choe, K.S., Park, S.H., Yoo, S.Y., 2014. Effects of constructivist teaching methods on bioethics education for nursing students: a quasi-experimental study. Nurse Educ. Today 34 (5), 848–853. https://doi.org/10.1016/j.nedt.2013.09.012.

Cohen, J., 1988. Statistical Power Analysis for the Behavioral Sciences, 2nd ed. Lawrence Erlbaum Associates, Hillsdale, NJ.

DeSimone, B.B., 2016. Curriculum design to promote the ethical decision-making competence of accelerated bachelor's degree nursing students. SAGE Open 6 (1), 1–10. https://doi.org/10.1177/2158244016632285.

Faul, F., Erdfelder, E., Lang, A.G., Buchner, A., 2007. G*Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. Behav. Res. Methods 39 (2), 175–191.

Goethals, S., Gastmans, C., Dierckx de Casterle, B., 2010. Nurses' ethical reasoning and behaviour: a literature review. Int. J. Nurs. Stud. 47, 635–650.

Hall, D., 2011. Debate: innovative teaching to enhance critical thinking and communication skills in healthcare professionals. The Internet Journal of Allied Health Sciences and Practice 9 (3), 1–8.

Han, S.S., Kim, J.H., Kim, Y.S., Ahn, S.H., 2010. Validation of a Korean version of the Moral Sensitivity Questionnaire. Nurs. Ethics 17 (1), 99–105. https://doi.org/10.1177/0969733009349993.

Hartin, P., Birks, M., Bodak, M., Woods, C., Hitchins, M., 2017. A debate about the merits of debate in nurse education. Nurse Educ. Pract. 26, 118–120. https://doi.org/10.1016/j.nepr.2017.08.005.

Hoseini, M., Evadi, M., Farsi, Z., 2018. The effect of moral motivation training on moral sensitivity in the nurses of military hospitals. Military Caring Sciences 4 (4), 249–257.

Jeong, G.S., 2016. The effect of biomedical ethics education program for nursing students freshman. J.Korean Acad. Soc. Nurs. Educ. 22 (3), 376–386. https://doi.org/10.5977/jkasne.2016.22.3.376.

Jung, H.J., Park, H.J., Jang, I.S., 2012. Effects of nursing ethics education based upon CEDA debates on moral judgment and ethical values. J.Korean Acad. Soc. Nurs. Educ. 18 (2), 248–252. https://doi.org/10.5977/jkasne.2012.18.2.248.

Ketefian, S., 1981. Moral reasoning and moral behavior among selected groups of practicing nurses. Nurs. Res. 30 (3), 171–176.

Kim, Y.S., 1999. Effect of Ethics Education on Nurse's Moral Judgment [PhD Dissertation]. Yonsei University, Seoul.

Kim, M.H., 2010. Application of Academic Debate on Ethics Class and Its Methodology [Master's Dissertation]. Korea National University of Education, Cheongju.

Kim, M.A., 2013. Two teaching methods to improve nursing students' moral intelligence, moral sensitivity and moral judgment: theatre of situations and pro-con debate. Korean Journal of Medical Ethics 16 (3), 376–390.

Kim, M.S., 2014a. Effects of Nursing Ethics Education on Moral Development of Nursing Students [PhD Dissertation]. Catholic University, Seoul.

Kim, S.Y., 2014b. Effects of biomedical ethics education using movies on biomedical ethics awareness of nursing students. The Journal of the Korea Contents Association 14 (7), 281–290.

Kim, M.S., 2015. Influence of moral sensitivity and ethical values on biomedical ethics awareness of nursing students. J.Korean Acad. Soc. Nurs. Educ. 21 (3), 382–392. https://doi.org/10.5977/jkasne.2015.21.3.382.

Kim, J.E., Kim, Y.W., 2011. An exploratory study on the determinants of ethical decision-making. Korean Corruption Studies Review 16 (4), 25–48.

Kim, Y.S., Park, J.W., Bang, K.S., 2001. A study on the persistence of nursing ethics education for nurses' ethical decision making. J. Korean Acad. Nurs. Adm. 7 (2), 253–263.

Kim, Y.S., Park, J.H., Han, S.S., 2007. Differences in moral judgment between nursing students and qualified nurses. Nurs. Ethics 14 (3), 309–319. https://doi.org/10.1177/0969733007075865.

Lützén, K., 1997. Nursing ethics into the next millennium: a context-sensitive approach for nursing ethics. Nurs. Ethics 4 (3), 218–226. https://doi.org/10.1177/096973309700400306.

Myers, I. B., McCaulley, M. H., Most, R., 1985. Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator (vol. 1985). Palo Alto, CA: Consulting Psychologists Press.

Nora, C.R.D., Deodato, S., Vieira, M.M.D.S., Zoboli, E.L.P., 2016. Elements and strategies for ethical decision-making in nursing. Texto & Contexto - Enfermagem 25 (2). https://doi.org/10.1590/0104-07072016004500014.

Omelicheva, M.Y., 2007. Resolved: academic debate should be a part of political science curricula. Journal of Political Science Education 3 (2), 161–175. https://doi.org/10.1080/15512160701338320.

Park, E.J., Park, M., 2015. Effectiveness of a case-based computer program on students' ethical decision making. J. Nurs. Educ. 54 (11), 633–640. https://doi.org/10.3928/01484834-20151016-04.

Park, M.O., Yun, H.J., 2016. Nurse's experience dealing with ethical dilemma in intensive care unit. Asia Pac. J Multimed. Serv. Converg. Art Humanit. Sociol. 6 (8), 81–93. https://doi.org/10.14257/AJMAHS.2016.08.36.

Seels, B., Richey, R.C., 1994. Instructional Technology. Association for Educational Communications and Technology, Bloomington, IN.

Wason, H., Southall, J., 2016. Using innovative assessment to enhance student engagement and develop critical thinking skills: the case of the big debate. Student Engagement in Higher Education Journal 1 (1), 1–9.

Yeom, H.A., Ahn, S.H., Kim, S.J., 2016. Effects of ethics education on moral sensitivity of nursing students. Nurs. Ethics 24 (6), 644–652. https://doi.org/10.1177/0969733015622060.

Yun, S.Y., Kim, M.S., 2014. A study on the relevance among self efficacy, major satisfaction, nursing ethics values in nursing students before clinical practice. Journal of Digital Convergence 12 (2), 363–372. https://doi.org/10.14400/JDC.2014.12.2.363.