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The Relationship of Perceptions of Hospice and Palliative Care With Emotional Intelligence and Cognitive Empathy in Nursing Students

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This study aimed to identify the relationships of perception of hospice and palliative care with emotional intelligence and cognitive empathy in nursing students. The participants were 458 nursing students. Data were collected using structured questionnaires and analyzed with Pearson correlation coefficients, independent-samples *t* test, and binary logistic regression. Perception of hospice and palliative care was significantly and positively correlated with emotional intelligence ($r = 0.224$, $P < .001$) and cognitive empathy ($r = 0.311$, $P < .001$). Mean score differences of perception of hospice and palliative care by emotional intelligence and cognitive empathy were statistically significant ($t = -3.973$, $P < .001$; $t = -4.109$, $P < .001$, respectively). Logistic regression yielded an odds ratio of 1.860 ($P < .001$; 95% confidence interval, 1.283-2.698) between the perception of hospice and palliative care and emotional intelligence and an odds ratio of 2.028 ($P < .001$; 95% confidence interval, 1.394–2.951) between the perception of hospice and palliative care and cognitive empathy. Emotional intelligence and cognitive empathy should be cultivated to raise nursing students' perception of hospice and palliative care and must be included when developing related curricula and extracurricular programs.

KEY WORDS

cognitive empathy, emotional intelligence, hospice and palliative, perception

In Korea, policies for hospice and palliative care have changed drastically over the past 5 years. In 2013, the Ministry of Health and Welfare announced the Hospice–Palliative Care Activation Measures, and health insurance coverage for hospice–palliative care was applied in 2015.[1] Moreover, the Hospice, Palliative Care, and Life-Sustaining Treatment Decision-Making Act, which deals with the conditions and procedures for discontinuing life support measures for medically ill patients who are unlikely to recover, has been in force since February 2018. Therefore, in the clinical setting, patients are currently considered for discontinuation of life support measures and should be informed of procedures surrounding death and dignified death. This can be achieved by providing an explanation of the process and giving them the option to provide their consent to withdraw life-sustaining treatment for specific situations, such as "cardiopulmonary resuscitation, hemodialysis, chemotherapy, or ventilators."[2,3] In addition, hospice and palliative care services, which had been limited to terminal cancer patients, were extended to all patients at the end of life in 2018.[4]

However, there were 78,194 cancer deaths in Korea during 2017, with hospice and palliative care used by 13,662 new patients (17.5%),[5] a lower proportion than in other countries. One reason for this is the lack of hospice and palliative care perception among the general public.[6]

Nursing Students' Perception of Palliative Care

Hospice and palliative care is a specialized medical service that improves quality of life by alleviating the pain, physical, psychological, social, and spiritual suffering of patients with terminal illnesses or those with conditions that are difficult to treat and their families.[1] Nurses need comprehensive knowledge of hospice and palliative care to deal with a variety of situations involving the protection of the patient's right to life, as well as with their deaths.[7] Lack of perception in understanding what hospice and palliative care entail can cause great difficulty in caring for patients who are dying. Therefore, nurses' perceptions of hospice and palliative care should be formed during their nursing education[8] with a curriculum advocating favorable attitudes toward hospice and palliative care. The American Association of Colleges of Nursing published 17 palliative care competencies for use in the education of nursing students to develop their hospice and palliative care competencies, emphasizing the awareness of palliative care.[9]

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Emotional Intelligence in Nursing

The emotional intelligence that emerges as an essential element of the interpersonal and professional competence of nurses is the ability to recognize and understand the emotions of oneself and others and to control and utilize one's emotions.[10] In particular, emotional intelligence helps prevent the exhaustion of team members and improves job commitment and patient satisfaction in medical fields where interdisciplinary teamwork is important.[10,11] For this reason, emotional intelligence in hospice nursing is considered a factor in maintaining a positive relationship with patients, even in difficult situations.[12] Therefore, nursing students require emotional intelligence to help regulate their attitudes toward death and understand the emotions of patients who are about to die and the emotions of the patient's family. This entails a closer investigation of the relationship between emotional intelligence and perception of hospice and palliative care.

Cognitive Empathy in Nursing

In nursing, empathy is the ability of individual nurses to have a genuine understanding of each patient's emotional and physical needs and recognized as their capability to reduce difficulties that patients experience and help them heal.[13] In the clinical setting, nurse empathy means that nurses can identify and respond to patients' needs with appropriate care based on an understanding of their physical, mental, and emotional difficulties.[14] Hospice and palliative care patients and families desire respect as humans and require empathetic care.[15] Among the elements of empathy, cognitive empathy is the ability to recognize and understand the suffering of others by understanding their point of view.[16] Thus, "cognitive efforts" such as educational intervention[17] could improve empathy and positively affect nursing students' perception of hospice and palliative care.

Hospice and Palliative Care Education in Nursing Programs

In Korea, several studies of hospice and palliative care perception investigated gender and age differences in hospice perception[18] and relationships with variables such as spirituality, meaning of life, end-of-life nursing, and organ donation.[19] Additionally, intervention studies[6,20] assessed the development and effectiveness of educational programs to improve perceptions of hospice and palliative care.

However, studies on the use of psychosocial variables to improve hospice and palliative care perception are scarce. An awareness of hospice and palliative care, formed over a long period, is essential for the formation of values for life and death and should significantly influence the role of hospice nursing providers when students become nurses. Although knowledge of hospice nursing among Korean nursing students[19] has been investigated, the research had limited scope. Therefore, we propose a conceptual framework (Figure) and seek to determine how the psychosocial variables of emotional intelligence and cognitive empathy are related to the perception of hospice–palliative care among nursing students. This study will help in the development of regular hospice-related curricula for nursing students, such as university program prerequisite or elective subjects, and nonregular programs (eg, extra programs taken after regular classes).

Study Aims and Objectives

This study aims to identify the relationships of perception of hospice and palliative care with emotional intelligence and cognitive empathy among nursing students and provide preliminary data to improve hospice and palliative care perception.

The specific objectives of this study are as follows:

1. To identify the perceptions of hospice and palliative care, emotional intelligence, and cognitive empathy in nursing students (Figure).
2. To identify the relationships between the perception of hospice and palliative care, emotional intelligence, and cognitive empathy in nursing students.
3. To identify the influence of emotional intelligence and cognitive empathy on the perception of hospice and palliative care in nursing students.

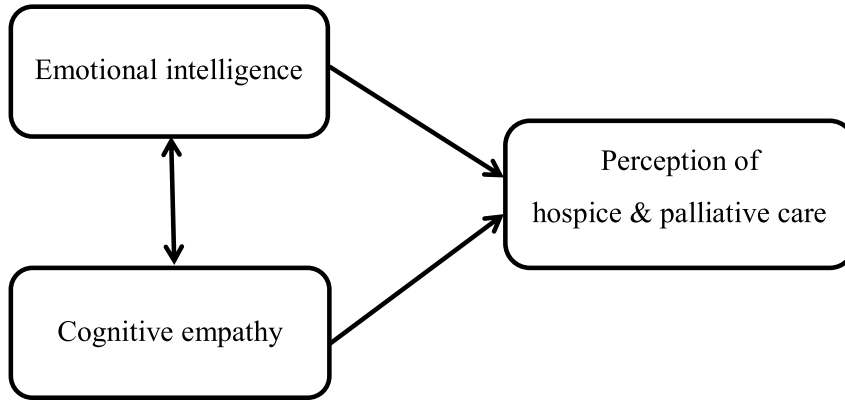

FIGURE. The hypothesized model.

METHODS

Study Design

This study was a descriptive study, incorporating both a descriptive correlational and comparative design,[21] to identify the relationships of the perception of hospice and palliative care with emotional intelligence and cognitive empathy among nursing students.

Participants and Data Collection

The participants were 458 nursing students from 2 universities of Busan and Ulsan cities in South Korea. Data collection was conducted from April to July 2018. The data collection used structured printed questionnaires and took approximately 15 minutes to complete.

Ethical Considerations of Participation

This study was approved by the ethical review committee of the research institute at U university where participants were recruited. To ensure voluntary participation in line with ethical research with human participants, the purpose of the study was explained, and written consent was obtained before the printed copies of the questionnaire were distributed.

Measurement

Demographic Information

Participants were asked to provide their age, gender, current university year, clinical practice experience, whether they are religious, and their attitude toward death (positive, moderate, negative) at the end of the survey.

Perception of Hospice and Palliative Care

To measure the perception of hospice and palliative care, the tool developed by Kim[22] and modified and supplemented by Kim et al[23] was used. This tool consists of 20 items and 6 subfactors: 4 "hospice definition and philosophy" items, 2 "hospice clients" items, 8 "hospice service" items, 4 "hospice ethics and psychology" items, and 2 "notice and education of hospice" items. Each item is measured on a 4-point Likert scale scored from "very strongly" (4 points) to "not at all" (1 point). Higher scores reflect higher perception of hospice and palliative care, and 2 inverse questions are included. The instrument has shown good reliability (0.840).[23] In our study, reliability was indicated by a Cronbach α value of .771.

Emotional Intelligence

In order to measure emotional intelligence, the instrument of Choi,[24] which adapted the Wong Law Emotional Intelligence Scale developed by Wong and Law,[25] was used. This instrument consists of a total of 16 items and 4 subfactors: 4 "self-emotional understanding" items, 4 "others' emotional understanding" items, 4 "emotional regulation" items, and 4 "use of emotion" items. Each item is scored on a 7-point Likert scale ranging from "not at all" '(1 point) to "very much" (7 points). The higher the score, the higher the emotional intelligence. The reliability of the instrument was indicated by a value of 0.908 for Cronbach α. This was similar to the reliability of 0.900 in Choi's[24] study.

Cognitive Empathy

As a measure of cognitive empathy, the instrument by Jeon,[26] which reconstructed the scales of Mehrabian and Epstein,[27] Davis,[28] and Bryant,[29] was used; it comprises measures of "cognitive empathy" and "emotional empathy." In this study, 15 items for cognitive empathy were used. Each item is scored on a 5-point Likert scale ranging from "not at all" (1 point) to "very much" (5 points)," and the higher the score, the greater the degree of cognitive empathy. Three reverse items are included. A value of .789 for

TABLE 1 General Characteristics of Participants (N = 458)

Variables	n (%)[a]
Age, mean (SD), y	20.3 (1.97)
Gender	
Female	402 (87.8)
Male	56 (12.2)
Grade	
Freshman (first)	142 (31.0)
Sophomore (second)	127 (27.7)
Junior (third)	83 (18.1)
Senior (fourth)	106 (23.1)
Clinical practice experience	
Yes	189 (41.3)
No	269 (58.7)
Religion	
Yes	134 (29.3)
No	32.4 (70.7)
Attitude toward death	
Positive	134 (29.2)
Moderate	227 (49.6)
Negative	97 (21.2)

[a]*Except missing data.*

TABLE 2 Score of Perception of Hospice and Palliative Care, Emotional Intelligence, and Cognitive Empathy

Variables	Mean (SD)
Perception of hospice palliative care (range, min1-max4)	3.10 (0.29) (min, 2.35-4.00)
Emotional intelligence (range, min1-max7)	4.94 (0.78) (min, 2.63-7.00)
Cognitive empathy (range, min1-max5)	3.60 (0.43) (min, 2.33-5.00)

Cronbach α was obtained for this instrument, slightly lower than that of .832 obtained in the study of Jeon.[26]

Data Analysis

The collected data were analyzed using the IBM SPSS Statistics version 23.0 (IBM Inc, Armonk, NY). The significance level was set at .05, and the specific method of analysis is as follows:

(1) Descriptive statistics (frequency, percentage, mean, SD, minimum value, maximum value) were used to summarize the characteristics of the subjects and the perception of hospice and palliative care, emotional intelligence, and cognitive empathy.

(2) The relationships between the perception of hospice and palliative care, emotional intelligence, and cognitive empathy were analyzed using Pearson correlation coefficients.

(3) The difference between emotional intelligence and the perception of hospice and palliative care, as well as cognitive empathy and perception of hospice and palliative care, was analyzed with an independent-samples *t* test.

(4) To predict the perception of hospice and palliative care based on emotional intelligence and cognitive empathy, data were analyzed using logistic regression analysis.

RESULTS

Characteristics of Participants

The average age of the participants was 20.3 years, and women made up 87.8% of the sample. By grade, first-year students made up 31.0%; second-year, 27.7%; third-year, 18.1%; and fourth-year, 23.1%. A large proportion of the participants (41.3%) had experience in clinical practice, 29.3% indicated some degree of religiosity, and 29.2% were positive about death (Table 1).

Perception of Hospice and Palliative Care, Emotional Intelligence, and Cognitive Empathy of Participants

Table 2 shows the scores of the participants for the perception of hospice and palliative care, emotional intelligence, and cognitive empathy.

The participants' mean scores were as follows: perception of hospice and palliative care, 3.10 points (out of 4 points); emotional intelligence, 4.94 points (out of 7 points); and cognitive empathy, 3.60 points (out of 5 points).

Relationships of Perception of Hospice and Palliative Care With Emotional Intelligence and Cognitive Empathy of Participants

The relationship among perception of hospice and palliative care, emotional intelligence, and cognitive empathy is presented in Table 3. A statistically significant positive correlation was found between perception of hospice and palliative care and emotional intelligence (r = 0.224, P < .001), between perception of hospice and palliative care and cognitive empathy (r = 0.311, P < .001), and between emotional intelligence and cognitive empathy (r = 0.452, P < .001).

Effects of Emotional Intelligence and Cognitive Empathy on Perception of Hospice and Palliative Care

The emotional intelligence and cognitive empathy scores were divided based on their means into an upper group with scores of 50% or greater and a lower group with scores of less than 50%. The resulting high and low groups for the emotional intelligence and cognitive empathy variables were used to (1) determine whether differences exist between groups regarding the perception of hospice and palliative care and (2) to predict the perception of hospice and palliative care based on emotional intelligence and cognitive empathy scores. The score of perception of hospice and palliative care was significantly higher in the high emotional intelligence (3.05 [SD, 0.27] > 3.15 [SD, 0.30], t = −3.973, P < .001) and cognitive empathy (3.04 [SD,

TABLE 3 Correlations of Perception of Hospice and Palliative Care, Emotional Intelligence, and Cognitive Empathy

	Perception of Hospice and Palliative Care	Emotional Intelligence	Cognitive Empathy
Perception of hospice and palliative care	1		
Emotional intelligence	0.224 (P < .001)	1	
Cognitive empathy	0.311 (P < .001)	0.452 (P < .001)	1

TABLE 4 Differences in Scores for Perception of Hospice and Palliative Care by Emotional Intelligence and Cognitive Empathy

Variables	Group	Perception of Hospice and Palliative Care	
		Mean (SD) (Range, 1-4)	*t* (*P*)
Emotional intelligence	Lower score group (n = 226 [49.5%])	3.05 ± 0.27	–3.973 (*P* < .001)
	Upper score group (n = 231 [50.5%])	3.15 ± 0.30	
Cognitive empathy	Lower score group (n = 212 [46.5%])	3.04 ± 0.28	–4.109 (*P* < .001)
	Upper score group (n = 244 [53.5%])	3.15 ± 0.28	

0.28] < 3.15 [SD, 0.28], $t = -4.109$, $P < .001$) groups than in the respective low group (Table 4).

The odds ratios among groups showed that the high emotional intelligence group and cognitive empathy group scored higher on perceptions of hospice and palliative care than did the respective low group, with odds ratios of 1.860 ($P < .001$; 95% confidence interval, 1.283-2.698) and 2.028 ($P < .001$; confidence interval, 1.365-2.973), respectively (Table 5).

DISCUSSION

The Level of Perception of Hospice and Palliative Care, Emotional Intelligence, and Cognitive Empathy

Hospice and palliative care perception scores were higher than the value of 2.94 in Sim and Park's[19] study on 308 nursing students in their third and fourth year, using the same instrument. Various individual characteristics of nursing students have been found to affect their perception of hospice and palliative care.[18] However, the enactment of the Hospice, Palliative Care, and Life-Sustaining Treatment Decision-Making Act in 2018 led to wide publicity in the mass media about lifetime treatment, affecting nursing students' hospice and palliative care perceptions.

The emotional intelligence score of the nursing students who participated in this study was higher than the score of 4.65 found in another study on hospice volunteers,[30] in which the average age of the participants was 50, suggesting that this difference in emotional intelligence scores was potentially due to age. Also, this score is likely to reflect the fact that students who select nursing science are highly social and tend to understand others. Emotional intelligence reduces frustration, allows synchrony and control, and nurtures positive attitudes.[31] Therefore, it is a necessary quality among nursing students who will work in clinical nursing, where there are increasingly complex and diverse human relationships. Further research is needed to assess the relationship between emotional intelligence and individual factors.

The score for cognitive empathy was similar to the value of 3.61 obtained by Hah and Park,[32] who administered the same instrument to 120 general college students receiving liberal arts classes. Approximately 58.7% of the participants were first- and second-year students without clinical practice and thus should reflect a level of cognitive empathy similar to that of general college students. Because cognitive empathy is also an important competency for nursing students, it is necessary to analyze the various variables (eg, major related characteristics) that may affect it.

TABLE 5 Logistic Regression of Perception of Hospice and Palliative Care Against Emotional Intelligence and Cognitive Empathy

Variables	Group	Perception of Hospice and Palliative Care[a]			
		B	*P*	Odds Ratio	95% Confidence Interval
Emotional intelligence	Lower score group (n = 226 [49.5%])	0.621	0.001	1	1.283-2.698
	Upper score group (n = 231 [50.5%])			1.860	
Cognitive empathy	Lower score group (n = 212 [46.5%])	0.707	<0.001	1	1.394-2.951
	Upper score group (n = 244 [53.5%])			2.028	

[a]*Perception of hospice and palliative care group: (1) base group: lower score group (n = 235 [51.5%]), (2) comparison group: upper score group (n = 221 [48.5%]).*

Relationship of Perception of Hospice and Palliative Care With Emotional Intelligence and Cognitive Empathy of Participants

There was a positive correlation between perception of hospice and palliative care and emotional intelligence. It is difficult to discuss this result because there have not been previous studies of hospice–palliative care perception and emotional intelligence in nursing students. However, a study on hospice volunteers[33] suggests that emotional intelligence is similar to a strong positive correlation between attitude toward death and meaning in life. Also, the similarity of the terms describing hospice–palliative care and the definition of emotional intelligence (eg, understanding, respect, and helping others) suggests that emotional intelligence positively influences the perception of hospice–palliative care. Therefore, in the development of a hospice and palliative care curriculum for nursing students, emotional intelligence can be an effective educational tool.

Our findings revealed a positive correlation between perception of hospice and palliative care and cognitive empathy. In one study of empathy ability and end-of-life nursing performance of clinical nurses,[15] nurses with high empathy were able to more readily observe changes in a patient to provide patient-centered care, and immediate action was taken where necessary. In another study[17] that assessed cognitive empathy enhancement by applying pain assessment computer programs to medical students, students' cognitive empathy increased significantly after the program. Thus, cognitive empathy influences the perception of hospice and palliative care.

Moreover, the correlation between perception of hospice and palliative care and cognitive empathy was higher than with emotional intelligence. Therefore, it is necessary to include content to improve cognitive empathy among nursing students when developing a program to improve perceptions of hospice and palliative care.

Effects of Emotional Intelligence and Cognitive Empathy on Perception of Hospice and Palliative Care

In accordance with correlation results, the odds ratios of logistic regression suggest that cognitive empathy has a greater impact than emotional intelligence on perceptions of hospice and palliative care. These results are similar to findings that positive emotions positively affect human cognitive domains and attitudes.[34]

The American Association of Colleges of Nursing[9] has focused on nursing students concerning hospice and palliative care capabilities. Nonetheless, in the Korean nursing education curriculum, hospice-related subjects are still offered only as basic or elective courses. In recent years, emotional education has been studied in psychology, cognitive science, and various educational fields to examine the links between the emotions and learning of students. Therefore, the development of nursing education programs cultivating emotional factors such as emotional intelligence and cognitive empathy of nursing students is essential. In particular, programs related to hospice and palliative care nursing would benefit from improving the perceptions of hospice and palliative care and developing positive attitudes of nursing students.

Study Limitations

The results of this study are not directly generalizable as it applied to a limited sample of nursing students. Further studies should embark on an investigation of the relationship among perception of hospice and palliative care and other psychosocial variables related to demographic characteristics. As a follow-up study, we suggest that nursing students engage in experimental studies that assess if using emotional intelligence and cognitive empathy could improve hospice and palliative care perception.

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References

1. Hospice and Palliative Care System Status and Development Plan. Health Insurance Review and Assessment Service of Korea. https://www.hira.or.kr/bbsDummy.do?pgmid=HIRAA030096000000. Published 2016. Accessed January 18, 2019.
2. Hospice, palliative care, and life-sustaining treatment decision-making act. National Law Information Center of Korea. http://www.law.go.kr/. Published 2018. Accessed January 16, 2019.
3. Act on Hospice & Palliative Care and Dying Patient Determination of Life Sustaining Treatments. Ministry of Government Legislation of Korea. http://moleg.go.kr/main.html. Published 2018. Accessed January 16, 2019.
4. Chang YJ. Understanding of changes to hospice and palliative care brought by the enforcement of the act on hospice and palliative care and dying patient determination of life sustaining treatments. *Korean J Hosp Palliat Care*. 2017;20(3):173-176.
5. Hospice and palliative care status and statistics. National Cancer Center of Korea. http://hospice.go.kr/square/stat.do?menu_no=443&brd_mgrno=. Published 2019. Accessed January 18, 2019.
6. Choi GH, Kwon SH. The effects of a hospice and palliative education program on perception of hospice, attitude to death, and meaning of life in adults. *Korean J Hosp Palliat Care*. 2018;21(1):14-22.
7. Achora S, Labrague LJ. An integrative review on knowledge and attitudes of nurses toward palliative care: implications for practice. *J Hosp Palliat Nurs*. 2019;21(1):29-37.
8. Carmack JN, Kemery S. Teaching methodologies for end-of-life care in undergraduate nursing students. *J Nurs Educ*. 2018;57(2):96-100.
9. Competencies and Recommendations for Educating Undergraduate Nursing Students (CARES): preparing nurses to care for the seriously ill and their families. American Association of Colleges of Nursing (AACN). http://www.aacn.nche.edu/elnec/New-Palliative-Care-Competencies.pdf. Published 2016. Accessed January 16, 2019.
10. Powell KR, Mabry JL, Mixer SJ. Emotional intelligence: a critical evaluation of the literature with implications for mental health

nursing leadership. *Issues Ment Health Nurs*. 2015;36(5):346-356.
11. Cox KM. Use of emotional intelligence to enhance advanced practice registered nursing competencies. *J Nurs Educ*. 2018;57(11):648-654.
12. Kim KO, Yoo MS. The relationships among emotional intelligence, resilience to burnout, and meaning in life of hospice volunteers. *J Korean Acad Soc Home Care Nurs*. 2018;25(1):78-86.
13. Day H. The meaning of compassion. *Br J Nurs*. 2015;24(6):342-343.
14. Kim HY, Nam KH, Kwon SH. Mediating effects of empathy and resilience on the relationship between terminal care stress and performance for nurses in a tertiary hospital. *Korean J Hosp Palliat Care*. 2017;20(4):253-263.
15. Jo KH, Park AR, Lee JJ, Choi SJ. The effect of suffering experience, empathy ability, caring behaviors on terminal care performance of clinical nurses. *Korean J Hosp Palliat Care*. 2015;18(4):276-284.
16. Kang I, Kee SW, Kim SE, et al. Reliability and validity of the Korean-version of interpersonal reactivity index. *J Korean Neuropsychiatr Assoc*. 2009;48:352-358.
17. Lee SK, Chun KJ, Chang CH, Kim SS. The effects of repeated pain measurement to injury pictures on cognitive and affective empathy in medical students. *J Korea Content Assoc*. 2017;17(1):402-411.
18. Lee YE, Kim MK, Choi EA, Im MS. Factors influencing perception of hospice and palliative care in high school students in Korea. *Korean J Hosp Palliat Care*. 2016;19(3):222-232.
19. Sim MK, Park JM. The influence of spirituality, meaning in life and hospice perception on attitudes towards terminal care in nursing students. *J Korea Acad Industr Coop Soc*. 2017;18(7):290-299.
20. Tsung PL, Lee YJ, Kim SY, et al. Effects of death preparation education on awareness of hospice and palliative are and withdrawing life sustaining treatment in city dwellers. *Korean J Hosp Palliat Care*. 2015;18(3):227-234.
21. Burns N, Grove SK, Gray J. *Understanding Nursing Research: Building an Evidence-Based Practice*. 6th ed. St Louis, MO: Elsevier; 2013.
22. Kim JH. *A Study of Attitudes Toward Death and Hospices of Medical Professionals* [master's thesis]. Seoul, South Korea: Hanyang University; 1990.
23. Kim MS, Lee CS, Kim HC. The effect of hospice volunteer education program on perceptions about hospice and the meaning of life. *Asian Oncol Nurs*. 2007;7(2):131-139.
24. Choi JH. *The Relationship Between Nurses' Emotional Intelligence, Communication Competency, and Organizational Commitment* [master's thesis]. Suwon, South Korea: Ajou University; 2010.
25. Wong CS, Law KS. The effects of leader and follower emotional intelligence on performance and attitude: an exploratory study. *Leadersh Q*. 2002;13:243-274.
26. Jeon BS. *The Relationship Between Empathy and Altruistic Behavior* [master's thesis]. Daejeon, South Korea: Chungnam University; 2003.
27. Mehrabian A, Epstein N. A measure of emotional empathy. *J Pers*. 1972;40(4):525-543.
28. Davis MH. A multidimensional approach to individual difference in empathy. *JSAS Cat Sel Doc Psychol*. 1980;10:85.
29. Bryant B. An index of empathy for children and adolescents. *Child Dev*. 1982;53:413-425.
30. Kim YH, Kim MJ. Occupational stress and emotional intelligence in hospice volunteers. *Korean J Hosp Palliat Care*. 2015;18(2):112-119.
31. Szczygiel DD, Mikolajczak M. Emotional intelligence buffers the effects of negative emotions on job burnout in nursing. *Front Psychol*. 2018;9:2649. doi:10.3389/fpsyg.2018.02649 eCollection 2018.
32. Hah JH, Park EH. Relationship between empathy, independent judgement and creative personality. *J Creat Educ*. 2016;16(4):91-102.
33. Yoo MS. The influence of death attitudes and emotional intelligence on hospice volunteers' perception on life as meaningful. *J Korean Acad Soc Home Care Nurs*. 2016;23(1):90-99.
34. Magdalena G, María SD, Rosario G. Education, emotions and health: emotional education in nursing. *Procedia Soc Behav Sci*. 2017;237:492-498.