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Original Article

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The Effects of a Death Preparation Education Program on Death Anxiety, Death Attitudes, and Attitudes toward End-of-Life Care among Nurses in Convalescent Hospitals

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Purpose: The purpose of this study was to examine the effects of a death preparation education program for nurses working in convalescent hospitals on death anxiety, death attitudes, and attitudes toward end-of-life care. **Methods:** This was a quasi-experimental study with a non-equivalent control group, pre-test and post-test design. Among 53 participants, 26 were assigned to the non-equivalent experimental group and 27 to the control group. The program was performed in the formats of lectures, video-watching, group discussions, and sharing, and consisted of 10 sessions held twice a week, for 5 weeks (90 minutes per session). Data were analyzed using descriptive statistics, the t-test, and the chi-square test in SPSS version 21.0. **Results:** Significant differences between the experimental and control groups were observed in death anxiety ($t=7.62$, $P<0.001$), death attitudes ($t=-7.58$, $P<0.001$), and attitudes to end-of-life care ($t=-10.30$, $P<0.001$). **Conclusion:** It was confirmed that the death preparation education program reduced death anxiety and had a positive effect on death attitudes and attitudes toward end-of-life care. Based on the results of this study, it is expected that specialized and systematic education that can increase the implementation and stability of death preparation education in various fields, including nursing, will have a positive effect on both hospice patients and members of society more broadly.

Key Words: Education, Convalescent hospitals, Nurses, Death, Anxiety, Attitude to death, Terminal care

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INTRODUCTION

1. Background

With the modernization of society, due to changes in family type and women's increasing participation in social and economic activities, the low fertility rate and trend toward the nuclear family have become prominent. Due to this trend, it has become more common for both older adults and patients with chronic diseases to receive care at convalescent hospitals [1]. It was recently found that 79.9% of older adult patients (65 years or older) in Korea faced their last moments at medical institutions, including convalescent hospitals, rather than at home [2]. The trend shows that the burden of managing death and the last moments are shifting from patients' families to medical institutions and health professionals [3]. As patients undergo the end of life, they gradually become completely reliant on nurses, who form a close relationship with them

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through nursing interventions and spending extended periods with patients [4].

Older adult patients admitted to convalescent hospitals often want to spend their last moments surrounded by their friends and family at home, but in many cases, their deathbeds tend to be at a place other than their homes [2]. Thus, it has been reported that patients retain an unfavorable attitude toward being a passive object of horror, fear, and loneliness with severed ties to their homes and families, and have a higher degree of fear and anxiety toward death than they would when struggling against disease at home [4]. As such, nurses should aid patients to accept and face their death calmly, necessitating a deeper understanding of death.

Death anxiety is a negative emotional response to the process of death and others' deaths that a patient has personally experienced. While most people are aware that they will eventually die, they tend to avoid death instinctively, and experience vague anxiety regarding death [5]. Health professionals, who are more frequently exposed to the death and dying process, become more conscious of their own deaths, with elevated anxiety and discomfort [6]. Hence, health professionals who encounter patients at the end of life frequently might experience death anxiety more frequently than the general public [7]. Working in an environment where they frequently encounter patients in the end of life, nurses in convalescent hospitals may experience elevated death anxiety, since their work environment makes them more conscious of their own deaths. Such emotions directly and adversely influence patient care [3].

Death attitudes encompass personal emotions, awareness, and beliefs regarding death. Individuals' attitudes are formed consciously or unconsciously due to people with whom they are in close contact, socio-cultural factors, or their philosophical belief system [8], and attitudes shape behavior after they are integrated with emotions [9]. Nurses' attitudes toward death may impact treatment and nursing care for end-of-life patients. Since patients near the end of life could exhibit psychological responses such as phobic reactions, despondency, grief, and evasiveness, nurses need to acquire systematic knowledge about death and establish firm attitudes toward their own lives and deaths [9].

Nurses' attitudes toward end-of-life care exert an immense influence on handling the lives and deaths of end-of-life patients and their families with humanity and dignity [10]. As supported by a previous study [11] showing that nurses who exhibited positive attitudes toward end-of-life care tended to provide higher-quality hospice and palliative care, nurses need to recognize their attitudes toward the death and dying process [12]. In addition, educational preparation is necessary for nurses to help patients accept their deaths as a part of life and provide end-of-life care confidently, without undue pressure [13].

Death preparation education is designed to prepare people to overcome death anxiety by helping them accept their lives in the present as more precious, and leading a meaningful life with a proper understanding of life and death [10,14,15]. For nurses working in convalescent hospitals who care for dying patients at their end of life, it is critical to foster an appropriate and positive attitude toward the care practice, without anxiety or fear, while developing a deeper understanding of the dying process. Therefore, regular and intensive education on death is required. Thus, providing death preparation education and understanding its effect on death anxiety, death attitudes, and attitudes toward end-of-life care are considered an important and timely research project.

According to a recent meta-analysis on the effectiveness of death preparation education, the substantial majority of individuals (68.2%) who received death preparation education were middle-aged and older adults [15]. Although many studies have been conducted among older adults, adults, and nursing students—such as a study on an educational program for cancer patients [16], a study on the development of audiovisual educational materials for hospice patients and their families [1], and a study on the effect of death anxiety and attitudes toward end-of-life care on nursing students [17]—there have not been sufficient studies on the effects of death preparation education for nurses. Therefore, this study aimed to identify the effects of conducting death preparation education on death anxiety, death attitudes, and attitudes toward end-of-life care among nurses in convalescent hospitals, and to contribute to the development and activate implementation of educational programs for nurses.

2. Purpose

The purposes of this study were as follows:

1) To identify the effect of a death preparation education program on death anxiety among nurses working in convalescent hospitals.

2) To Identify the effect of a death preparation education program on death attitudes among nurses working in convalescent hospitals.

3) To identify the effect of a death preparation education program on the attitudes toward end-of-life care among nurses working in convalescent hospitals.

METHODS

1. Study design

This is a quasi-experimental study based on a nonequivalent control group, pretest-posttest design investigating the effect of a death preparation education program on death anxiety, death attitudes, and attitudes toward end-of-life care among nurses working in convalescent hospitals.

2. Participants

The participants of the study were nurses working in convalescent hospitals located in C city who volunteered to participate in a death preparation education program. The detailed selection criteria included nurses who had worked for 3 months or longer in a convalescent hospital, understood the purpose of the study, and provided written consents. In order to select participants, the researchers randomly selected six convalescent hospitals with similar staffing grades for nurses and doctors and similar distributions of main diagnoses. A number was drawn for each hospital, and the institutions with odd numbers drawn were designated as the experimental group, whereas the facilities with even numbers drawn were designated as the control group.

The number of participants was calculated using G*Power 3.1.0 program with a statistical power ($1-\beta$) of 0.80, level of significance (α) of 0.05, and effect size (d) of 0.5 in paired-sample t-test analysis, yielding a required sample size of 52 participants (26 participants in each group). Considering a 10% dropout rate, the initial total of participants was 60 (30 participants in each group). After the dropout of four participants in the experimental group and three in the control group, a total of 53 participants (26 in the experimental group and 27 in the control group) were included in the study.

3. Data collection and ethical considerations

This study was approved by the Institutional Review Board of C University (CSIRB-R2018010) and was conducted from July 2, 2018 to August 11, 2018. With consent of the chiefs and heads of the institutions and departments, the purpose and procedures of the study were explained directly to participants, and only those who voluntarily agreed to participate were selected. The participants were also notified that any resources obtained from the study would not be used for purposes other than the study with the guarantee of anonymity and confidentiality. The participants were also notified that they could withdraw consent at any time, and it took about 10 to 15 minutes to complete the questionnaire. Explanations of the security protocols were also given, stating that collected questionnaires would be stored in a locked location with access limited to the researchers, and they would be completely destroyed with a shredder 3 years after completion of the research. The pre-test surveys were conducted from July 2 to July 3, 2018 among the 30 participants in the control group. The 30 participants in the experimental group completed a self-reported survey on the first day of the death preparation education program. The post-test survey data were collected from the control group when the intervention for the experimental group ended, on August 10 and August 11, 2018.

To minimize the potential disadvantage to the control group due to not receiving the experimental treatment program, a brief introduction and leaflet on the death preparation education program were provided once after the experiment ended. All participants were provided with a small gift as compensation. This study could cause psychological stress by participating in a death preparation education program due to the sensitive nature of the subject of death. Therefore, relaxation therapy was implemented after each educational session was completed.

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4. Study tools

1) Death anxiety

Death anxiety was measured using the tool modified and translated by Suh [18] based on the Fear of Death and Dying Scale (FDDS) developed by Collett and Lester [19]. The subscales of the FDDS include death of self, death of others, dying of self, and dying of others, with 28 items in total. Each item was assessed using a 5-point Likert scale, with a higher score indicating higher death anxiety. Cronbach's α was 0.89 at the time of tool development and 0.94 in this study.

2) Death attitudes

Items about death attitudes were developed using the tool by Ko et al. [20], which was developed based on the Fear of Death Scale (FODS) developed by Collett and Lester [19] and data from Kim and Lee [17]. The validity of items was verified by two hospice and nursing professors, and the questionnaire comprised 17 items in total. Each question was assessed using a 5-point Likert scale, with a higher score indicating a more positive attitude toward death. Cronbach's α was 0.71 in the study of Kim and Lee [17] and 0.73 in this study.

3) Attitudes toward end-of-life care

Attitudes toward end-of-life care were measured by a tool translated by Joe and Kim [21] based on the Frommelt Attitudes toward Nursing Care of Dying Scale (FATCOD) developed by Frommelt [22]. The FATCOD is an instrument for palliative and support care involving the provision of physical, emotional, social, and spiritual nursing to dying patients and their families, and is composed of 30 items (20 about nurses' attitudes toward dying patients, and the other 10 about nurses' attitudes toward the patients' families). Each item was measured using a 4-point Likert scale, and a higher score indicates a more positive attitude toward end-of-life care. Cronbach's α value was at 0.94 at the time of development, 0.86 in the study by Joe and Kim [21], and 0.89 in this study.

5. Procedures

1) Development of the program

The death preparation education program comprised content appropriate for nurses working in convalescent hospitals, which was developed by designing and assessing the content, methods, time, and number of sessions based on the previous studies and literature by researchers who had clinical experience in hospice nursing care, as well as the standard educational curriculum for hospice nurses. In addition, the validity of the composition and content of the curriculum was ensured through consultation with a chief of a nursing department and a head nurse who had more than 25 years of clinical experience and at least 5 years of experience related to hospice care, as well as two nursing professors who held licenses for hospice-specialized nursing and had completed the standard education of hospice and palliative care. In light of advice that a stronger emphasis on sharing each other's experiences may be more helpful than lectures, each session was designed to have 10 minutes of lecture and 40 minutes of group discussion and sharing. The program was named "Beautiful Journeys" and consisted of two 90-minute sessions per week for 5 weeks, with a total of 10 sessions.

2) Experimental treatment

The death preparation education program, "Beautiful Journeys", consisted of 10 sessions (Table 1). The participants were divided into four groups of seven to eight participants each, considering the effectiveness of group education programs, and the supervising researcher conducted each session at a conference room in each hospital. Each session was structured as an introduction, lecture or video, group discussion and feelings-sharing exercise, and wrap-up. In the first session, an overall introduction to the death preparation education program was provided, and then the participants watched a documentary titled "Death" and shared their feelings in group discussions. The theme of the second session was 'Understanding life and death – suicide and euthanasia', and the participants were provided a lecture on the definition of life and death, the concept of suicide and euthanasia, and watched a video related to suicide and euthanasia. The theme of the third session was "Understanding life and death – the mystery of life". Audio-visual materials on topics such as the "mysteries of life" and "stillbirth" were provided to raise awareness of the philosophical concept of life and death and the mysteries of birth, life, and their values. The theme of the fourth session was "The meaning of life". After watching a video on the topic of a "good

Table 1. Content of the Death Preparation Education Program.

Theme	Content	Time (min)
1. Orientation	• Introduction (motivation & ice-breaking)	5
	- Introduce the content and process of the program	10
	• Topic: death preparation education program introduction	
	- Watching a video entitled "Death"	40
	- Sharing feelings about death among participants	30
	• Wrap-up	5
2. Understanding life and death - suicide and euthanasia	• Introduction (motivation & ice-breaking)	5
	• Topic: Understanding life and death/suicide and euthanasia	
	- Lecture on the meaning of life and death	10
	- Lecture and video on suicide and euthanasia	40
	- Sharing about suicide and euthanasia with participants	30
	• Wrap-up	5
3. Understanding life and death - the mystery of life	• Introduction (motivation & ice-breaking)	5
	• Topic: Understanding life and death/the mystery of life	
	- Watching a video related to the mystery of life entitled "Stillbirth"	40
	- Sharing one's birth with participants	40
	• Wrap-up	5
4. The meaning of life	• Introduction (motivation & ice-breaking)	5
	• Topic: retrospection on life/value of my life	
	- Watching a movie related to looking back on one's life titled "The Last Lecture" (by Randy Pausch)	30
	- Creating a bucket list and sharing it with participants	50
	• Wrap-up	5
5. The meaning of death	• Introduction (motivation & ice-breaking)	5
	• Topic: knowledge of hospice/a good death	
	- Watching a video regarding hospice care and a good death (40 min)	40
	- Discussing and sharing "A hospice care and a death with dignity" with participants	40
	• Wrap-up	5
6. Preparing for death	• Introduction (motivation & ice-breaking)	5
	• Topic: understanding the course of death	
	- Watching a video regarding "a beautiful gravestone"	10
	- Writing the epitaph for one's own gravestone	20
	- Sharing your gravestone including one's life and the value thereof, with participants	50
	• Wrap-up	5
7. Experiencing death	• Introduction (motivation & ice-breaking)	5
	• Topic: death experience	
	- Indirect experience of the mortuary	40
	- Writing a will and testament and sharing it with participants	40
	• Wrap-up	5
8. Sorrow and loss	• Introduction (motivation & ice-breaking)	5
	• Topic: overcoming grief and loss	
	- Watching a video related to sorrow and loss entitled "Tuesdays with Morrie"	40
	- Sharing with participants	40
	• Wrap-up	5
9. A life of fullness	• Introduction (motivation & ice-breaking)	5
	• Topic: A life of fullness	
	- Watching a video related to a life of sharing (organ donation, body donation, voluntary service, etc.)	80
	• Wrap-up	5

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Table 1. Continued.

Theme	Content	Time (min)
10. Change in life	• Introduction (motivation & ice-breaking)	10
	• Topic: a changed life	
	- Planning for a new life	20
	- Sharing feelings with each other	50
	• Wrap-up	10

death", participants were asked to make bucket lists of their own and share them during the group discussion. The fifth session explored "the meaning of death" and attempted to establish the concept of a good death to which a life converges, as well as the concept of dying in hospice care. After watching videos about "dying amidst medical instruments in an intensive care unit", and "dying while in hospice care", the participants shared their opinions. The session 6 dealt with "preparing for death". In order to provide an opportunity to be objectively aware and prepare for their own deaths, participants were asked to draft their own epitaphs that expressed their values in life and shared their opinions after watching a video on beautiful epitaphs. The seventh session, "experiencing death", was structured to help participants recognize their mortality—as a phenomenon that will eventually occur—through indirect experiences of their own deaths. In an effort to help participants realize that death is just a process, the same as life, each participant drafted their will and lay in a coffin, after which group discussions were held. The theme of the eighth session was "sorrow and loss", and the participants watched a video entitled "Tuesdays with Morrie" and participated in group discussions to improve their competency to overcome the grief and loss that would arise from their own death. The ninth session was about "a life of fullness". In order to share the philosophical concept of immortality through sharing one's entire being by donating one's organs and cadaver, participants watched a video about organ donation and shared their opinions. The theme of the last session was "change in life", and participants shared their feelings about new life plans based on the changes they experienced related to death after completing the program.

6. Data analysis

The collected data were analyzed as follows using SPSS for Windows version 21.0 (IBM Corp., Armonk, NY, USA).

1) General characteristics of the participants were analyzed through frequency analysis and descriptive statistics.

2) The homogeneity of general characteristics between the experimental group and the control group was analyzed with the chi-square test and Fisher exact test.

3) The independent t-test was used to analyze the homogeneity of dependent variables in the pretest.

4) The normality of data distribution for the experimental group and the control group was analyzed using the Shapiro-Wilk test.

5) The effectiveness of the program was analyzed using the paired t-test. The hypothesis regarding differences between the experimental group and the control group was analyzed using the independent t-test.

RESULTS

1. General characteristics of the experimental group and the control group, and homogeneity of dependent variables

Homogeneity between the experimental group and the control group was confirmed, as there were no significant differences in the general characteristics of the participants, such as sex, age, marital status, education, religion, the importance of religion, overall clinical experience, career experience in convalescent hospitals, experience of patients' deaths in their clinical careers, whether they had lost a family member or a friend within a year, or experience of receiving terminal care

education (8 hours) (Table 2). In addition, homogeneity in death anxiety, death attitudes, and attitudes toward end-of-life care, was verified using the t-test, which showed no statistically significant differences between the two groups (Table 3).

2. Effects of the hospice palliative education program

The experimental group showed a statistically significant decrease in death anxiety (pretest: 3.75±0.46 points, posttest: 2.40±0.49 points) compared to the control group (t=7.62, P<0.001), and significant decreases were also confirmed in the subscales (death of self, death of others, dying of self, and dying of others). The experimental group showed a statistically significant increase in death attitudes (pretest: 3.18±0.29 points, posttest: 4.13±0.3 points) compared to the control group (t=−7.58, P<0.001). Attitudes toward end-of-life care in the experimental group showed a significant change,

Table 2. Homogeneity Testing of Participants' General Characteristics (N= 53).

Characteristics	Categories	Exp. (n=26)	Cont. (n=27)	χ^2/t	P
		n (%)	n (%)		
Sex	Male	2 (7.7)	0 (0)		0.236*
	Female	24 (92.3)	27 (100)		
Age (yr)	≤35	9 (34.6)	6 (22.2)	1.00	0.317
	≥36	17 (65.4)	21 (77.8)		
Marital status	Unmarried	8 (30.8)	5 (18.5)	1.07	0.300
	Married	18 (69.2)	22 (81.5)		
Education	Diploma	16 (61.5)	19 (70.4)	0.46	0.497
	Bachelor	10 (38.5)	8 (29.6)		
Religion	Buddhism	9 (34.6)	6 (22.2)	1.31	0.520
	Christianity	8 (30.8)	8 (29.6)		
	None & others	9 (34.6)	13 (48.2)		
Religious importance	Important	14 (53.8)	17 (63.0)	0.45	0.501
	Unimportant	12 (46.2)	10 (37.0)		
Total working career (yr)	<10	12 (46.2)	6 (22.2)	3.40	0.182
	10~20	9 (34.6)	14 (51.8)		
	≥20	5 (19.2)	7 (26.0)		
Working career in convalescent hospitals (yr)	<3	11 (42.3)	9 (33.3)	1.71	0.426
	3~6	8 (30.8)	13 (48.2)		
	≥6	7 (26.9)	5 (18.5)		
Experience of patient's death	1~10	7 (27.0)	13 (48.1)	2.54	0.111
	≥10	19 (73.0)	14 (51.9)		
Lost a significant person within a year	Yes	11 (42.3)	7 (25.9)	1.59	0.254
	No	15 (57.7)	20 (74.1)		
Experience of receiving terminal care education	<8 hrs	19 (73.1)	24 (89.0)		0.175*
	≥8 hrs	7 (26.9)	3 (11.0)		

Exp.: experimental group, Cont.: control group.
*Fisher's exact probability test.

Table 3. Homogeneity Testing of the Dependent Variables between Groups (N=53).

Variable	Exp. (n=26)	Cont. (n=27)	t	P
	M±SD	M±SD		
Death anxiety	3.75±0.46	3.50±0.47	-1.90	0.063
Death attitudes	3.18±0.29	3.35±0.33	1.98	0.052
Attitudes toward end-of-life care	3.00±0.30	2.91±0.18	-1.21	0.231

Exp.: experimental group, Cont.: control group.

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Table 4. Comparison of Death Anxiety, Death Attitudes, and Attitudes toward End-of-Life Care between the Experimental and Control Groups (N=53).

Variable	Experimental group (n=26)			Control group (n=27)			t	P
	Pre-test	Post-test	Difference	Pre-test	Post-test	Difference		
	M±SD	M±SD	M±SD	M±SD	M±SD	M±SD		
Death anxiety	3.75±0.46	2.40±0.49	1.35±0.57	3.50±0.47	3.48±0.53	0.29±0.21	7.62	<0.001
Death of self	3.29±0.78	2.25±0.51	1.03±0.63	3.07±0.72	2.97±0.86	0.10±0.58	3.65	<0.001
Dying of self	3.86±0.60	2.50±0.51	1.35±0.75	3.62±0.53	3.60±0.58	0.01±0.27	7.27	<0.001
Death of others	4.05±0.42	2.64±0.62	1.41±0.64	3.79±0.57	3.84±0.54	-0.04±0.29	7.46	<0.001
Dying of others	3.81±0.68	2.19±0.57	1.61±0.67	3.53±0.59	3.48±0.60	0.04±0.41	7.94	<0.001
Death attitudes	3.18±0.29	4.13±0.36	-0.94±0.42	3.35±0.33	3.37±0.36	-0.01±0.20	-7.58	<0.001
Attitudes toward end-of-life care	3.00±0.30	3.54±0.23	-0.54±0.28	2.91±0.18	2.91±0.20	-0.00±0.13	-10.30	<0.001
Nurse's attitudes towards patients	2.91±0.31	3.49±0.25	-0.57±0.29	2.84±0.20	2.83±0.22	0.01±0.17	-9.98	<0.001
Nurse's attitudes towards patients family	3.18±0.31	3.65±0.22	-0.46±0.28	3.07±0.29	3.07±0.31	0.01±0.16	-7.62	<0.001

increasing from 3.00±0.30 points in the pretest to 3.54±0.23 points in the posttest, unlike the control group (t=−10.30, P <0.001). A significant increase was also confirmed in the subscales (nurses' attitudes toward patients and nurses' attitudes toward patients' families) (Table 4).

DISCUSSION

This study investigated the effects of a death preparation education program on death anxiety, death attitude, and attitudes toward end-of-life care of nurses working in convalescent hospitals, and to contribute to development and activation of a program targeted for nurses. In this study, death anxiety referred to a psychological process involing pain, loneliness, separation, parting with loved ones, uncertainty surrounding the unknown, dependency, and the cold shoulder that people exhibit when facing death, and a higher score indicates a higher degree of death anxiety. The death anxiety score of the experimental group became lower than that of the control group (t=7.62, P<0.001). This result coincides with results from studies on older adults [23], middle-aged adults [14], and nursing students [24]. However, a study on death preparation education through death-related movies for nursing students [23] and a study that provided death preparation education for emergency medical professionals [25] showed no significant effects on death anxiety. These findings suggest that it is necessary to review the curriculum and methods of death preparation education programs to ensure that they reflect the characteristics of the target audience, since an educational program could either be effective in reducing death anxiety or have no effect depending on its method and audience.

Death attitudes denote a multidimensional concept, involving a mixture of anxiety, discomfort, an understanding of fear, and the meaning of death. A higher score indicates a more positive attitude toward death, meaning that an individual accepts death. The experimental group that received death preparation education showed higher scores for death attitudes than the control group, with a statistically significant difference (t=−7.58, P<0.001). This result aligns with the studies of Kim et al. [26], who provided a death preparation education program for college students for 6 hours a day in 5 consecutive days, and Kang [27], who conducted a 10-week death preparation edu-

cation for adults. However, there was no significant difference in death attitudes between the experimental group and control group after the intervention in the study of a 5-week death preparation education for college students by Kim and Lee [17]. The study of Ham et al. [28], who conducted a 15-week death preparation education for nursing students, also showed no significant differences in death attitudes. On the one hand, such results may indicate that multiple variables affect changes in death attitudes. On the other hand, while Kim and Lee [17] conducted 5 sessions once a week for a total of 800 minutes with five themes, this study spanned 10 sessions (two sessions a week) for a total of 900 minutes with 10 themes. This point is supported by a meta-analysis of death preparation education [15], which suggested that the most effective format of education is 10~16 sessions held twice a week, and the curriculum of Kim and Lee [17] might have been insufficient to lead to changes in participants' attitudes. Ham et al. [28] conducted a hospice education program including death preparation education. However, this program focused more on theory-based lectures, primarily for palliative nursing, to alleviate the symptoms of terminal patients. Although the study showed significant differences in awareness of death and attitudes toward end-of-life care, it might not have had an effect on the death attitudes of individuals themselves. Since death attitudes include the strong fear that arises psychologically, rather than a rational response [20], theory-based education programs can be effective in enhancing knowledge and awareness, but ineffective in changing individuals' attitudes, which include psychological and emotional components. Therefore, further research is necessary to develop distinctive and systemic programs by adjusting the number of sessions, content, and education methods according to the characteristics and age of participants.

Attitudes toward end-of-life care refer to a complex set of attitudes through which individuals consistently express favorable or non-favorable responses through palliative and support services that provide physical, emotional, social, and spiritual nursing to terminal patients and their families. A higher score indicates that nurses' attitudes toward end-of-life care are more positive. The experimental group, which received death preparation education, showed higher scores for attitudes toward end-of-life care than the control group ($t=-10.30$, $P<0.001$). This result aligns with a study of nursing students [21] and the study of Frommelt [22], which applied death preparation education programs for nurses based on lectures and role-playing. Moreover, the study of Noh et al. [11], which analyzed factors that influenced nurses' attitudes toward end-of-life care, also reported that nurses showed more positive attitudes toward end-of-life care when they had more experience of hospice education. As death preparation education promotes positive perceptions and has a positive effect on attitudes toward end-of-life care, further expansion of death preparation programs on a variety of subjects may be necessary.

Taking into account the fact that since 2020, deaths exceed births in Korea [29], healthcare professionals and nurses experience more deaths than the joy of new births in various clinical fields. Hence, developing and implementing death preparation education programs to prevent burnout from end-of-life care is more important than ever. Therefore, regular operation and improvement of death preparation education programs reflecting the needs of healthcare professionals will alleviate the anxiety toward death, and lead to positive changes in attitudes toward death and end-of-life care, allowing healthcare professionals to provide terminal patients and their families with high-quality holistic care encompassing physical, psychological, social, and spiritual aspects.

This study has significance in confirming that a death preparation education program alleviated nurses' death anxiety and brought positive changes in death attitudes and attitudes toward end-of-life care. Furthermore, this study presented specific intervention methods. However, a limitation of this study is that the participants were limited to nurses working in convalescent hospitals in a single region; thus, the results of this study are not generalizable to all nurses.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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AUTHOR'S CONTRIBUTIONS

Conception or design of the work: EC, SJ. Data collection: EC. Data analysis and interpretation: EC, SJ. Drafting the article: EC, SJ. Critical revision of the article: SJ. Final approval of the version to be published: EC, SJ.

SUPPLEMENTARY MATERIALS

Supplementary materials can be found via https://doi.org/10.14475/jhpc.2021.24.3.154.

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