ORIGINAL ARTICLE

Development and Evaluation of an Education Program for Professional Palliative Care Nursing

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Purpose: This study aimed to develop a "Palliative Care Professional" education program and evaluate its effects on the recognition of good death, palliative care, and the meaning of life for nurses. **Methods:** It was developed based on the hospice care program for volunteers being used in the Hospice Palliative Care Research Center of S University in Seoul. It was also based on the studies which investigated the educational needs of nurses in palliative care. This program consisted of 5 sessions and 16 content items for 2 weeks. A non-equivalent control group non-synchronized design was utilized and participants were assigned to the experimental group (n = 42) or the control group (n = 44). **Results:** The recognition of a good death (F = 11.44, p = .001), palliative care (F = 4.15, p = .045), and the meaning of life (F = 5.12, p = .026) increased more significantly for participants in the experimental group than in the control group. Participants felt that they gained further knowledge in palliative patient management and refined their clinical practice. **Conclusion:** The results of the study indicate that this program could serve as a practical program for palliative care nursing in the nursing field and suggests that more attention should be directed to the diverse educational needs of nurses.

Key words: Hospice and palliative care nursing, Education, Nurses

INTRODUCTION

Having a respectful death is an important aspect of human need. Palliative care is an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual[1]. Some countries such as Great Britain, Australia, and New Zealand, have well-developed home care nursing services. The general practitioners and home care nurses are responsible for primary medical care while the hospice facilities in the community care for the emergency symptoms of the patients. On the other hand, in South Ko-

rea, many terminal patients are treated in the wards of the general hospitals by nurses who do not have professional education in palliative care[2].

The hospice care services in South Korea were started by the hospice "Mary's Little Sisters" established in the 1960s[3] and has been provided mainly by hospitals or organizations owned and/or run by religious groups. With the increased interest in the quality of life, the government has launched a medical project concerning cancer management. Palliative care is becoming an increasingly larger area for clinical practice. In the medical field, palliative care has not been established as a specialty, but in the nursing field, several institutions are providing professional palliative care education for nurses, and Master's degree programs for specialized nursing training. The scope of the patients who qualify for

palliative care is broad, however, not every nurse can afford to enroll in a six-month to one-year program for professional education, or in a Master's degree program. As such, a short palliative care professional education program is highly necessary.

Nurses represent the largest sector of the health care workforce and provide most of the formal palliative care[4]. The nurses who deliver palliative care should excel at providing physical, mental, and spiritual care to patients. They ought to provide symptom management and communicate with the patients to satisfy their needs, and help the patients to achieve a good death. The physical care that most hospitals offer cannot fulfill the requirements of the needs for palliative care professionally and efficiently[5]. Nurses, who have difficulties caring for patients with untreatable diseases, cannot be expected to help such patients and their families accept the prospect of death[2]. According to a study conducted on the nurses at general hospitals who had cared for terminal patients, 70% of those nurses did not have an education relating to palliative care, and the level of recognition of a good death was moderate in both the general nurses and the intensive care unit (ICU) nurses[6]. The necessity of palliative care education is great, because a study reported that the nurses with a higher recognition of a good death showed positive attitudes and much better performances in caring for terminal patients[7].

There have been some studies on palliative care education for the nurses in South Korea, including a study on the palliative care educational needs of nurses[7,8], which compared the recognition of a good death before enrolling in and after completing the hospice care program[9], and which investigated the effect of a hospice care program on the fear of and response to death[10]. These studies, however, were investigative researches or simple comparative studies. As yet, no studies have been conducted that developed the palliative care education program to positively improve the nurses' recognition of good death, palliative care, and the meaning of life, as well as to investigate the effects of the program,. Therefore this paper developed a palliative care professional education (PCPE) program for nurses and investigated the quantitative evaluation of findings on the nurses' recognition of a good death, palliative care, and the meaning of life from a series of educational sessions.

METHODS

1. Study design

This quasi-experimental study was designed as a non-equivalent con-

trol group non-synchronized study.

2. Participants

Subjects were registered nurses in PCPE program in S hospital which is located in Seoul, Korea. The purpose and procedures of this study and the contents of the program were explained to the director of nursing services of the hospital, and her consent was obtained. Nurses who understood the objective of this study were enrolled in the study. The purpose, contents, and procedures of this study were explained to the eligible nurses.

For the sample size, the G*Power program was used to estimate the required sample size for an independent t-test using the .05 significance level (α), .80 statistical power (1−β), and .80 effect size (f) based on the previous study[9]. The required number of nurses was 26, but 50 nurses per group were enrolled in consideration of the dropout rate. Excluding the eight incomplete questionnaire items in the pre- and post- investigation procedures and the six withdrawn subjects during the program, the data of 86 subjects were used for analysis. This number was regarded as sufficient for analysis considering the analysis conditions, .80 effect size, and .80 statistical power.

3. Intervention: PCPE program

The PCPE program was developed based on the hospice care program for volunteers being used in Hospice Palliative Care Research Center of S University in Seoul, South Korea. It was also based on the studies that investigated the educational needs of nurses in palliative care[7,8]. The study[7] that surveyed the educational needs of nurses suggested that general contents related to palliative care, including the positive recognition of death, seeking the meaning of life for terminal patients, symptom management, and the handling of newly raised ethical dilemmas with regard to the development of medicines. Another study[8] reported that the courses that were the most highly needed for palliative care education were management of the pain and symptoms of terminal patients, terminal care, communication and counseling, physical-symptom management, and stress management for palliative care providers. The program used in this study attempted to cover most of the contents suggested in the previous studies and included foot massage practice etc., as more practical contents were also covered. The developed program was completed after being reviewed for content validity (content validity index = .88) by a professional group consisting of

two nursing professors, one professional hospice nurse, and one nursing manager of a hospice center.

The PCPE program consisted of 5 sessions and 16 contents items. Each session had three to four content items and lasted for four to five hours. Total spending time was 1,340 minutes (23.3 hours). The first session covered topics including the understanding of life and death, understanding palliative care, spiritual care of patients, and ethical palliative care. The second session covered topics including nutrition management, mental and emotional caring, and therapeutic communication. The third session covered topics including pain and symptom management, social care, and preparation for a respectful death. The fourth session was about cancer and nursing, the proper attitudes and role of a palliative care provider, stress management, and theory and practical instruction about foot massage. The fifth and final session consisted of visiting a hospice center and having a conference. The lectures and conference were conducted by nursing professors, a theological professor, a chaplain, a nutritionist, a professional hospice nurse, a social welfare worker, a foot massage therapist, and a nursing manager of a hospice center. The conference was either clinical or psychological and offered to groups of five or six nurses. It focused on detailed case studies of hospice patients. The detail contents of the program were recorded on the Table 1.

4. Measurements

1) Recognition of a good death

A good death is free from avoidable pain and suffering for patients, families and caregivers in general in accordance with the patients' and families' wishes[11]. The good death recognition tool[12] was used in this study to evaluate the subjects' recognition of a good death. This tool consists of 21 questions. Each question was graded on a scale of 1~5 points, 1 meaning "not important at all" and 5 meaning "very important". The lowest possible score is 21, and the highest possible score is 105. A higher score means a higher recognition of a good death. The reliability was represented as Cronbach's $\alpha = .86$ upon its development, and was Cronbach's $\alpha = .84$ in this study.

2) Recognition of palliative care

Palliative care is a holistic, multi-disciplinary care to improve the quality of life of patients who have a serious or life-threatening disease[13]. The modified palliative care tool[14] was used in this study to evaluate the subjects' recognition of palliative care. This tool consists of 22 items.

Each item was graded on a scale of 1~4 points, 1 meaning "totally disagree" and 4 meaning "totally agree". The lowest possible score is 22, and the highest is 88. A higher score means a higher recognition of the importance of palliative care. The reliability was Cronbach's $\alpha = .84$ upon its modification, and that of this study was Cronbach's $\alpha = .87$.

3) Recognition of the meaning of life

The meaning of life is a philosophical question concerning the significance of life or existence in general. It can also be expressed in different forms, such as "why are we here?", "what is life all about?", "What is the purpose of existence?" It has been the subject of much philosophical, scientific and theological speculation throughout history[15]. The translated meaning of life tool[16] was used in this study to evaluate the subjects' recognition of the meaning of life. The validity and reliability of this tool have been proven. Each item is scored on a scale of 1~4 points, 1 meaning "totally disagree" and 4 meaning "totally agree". The lowest possible score is 20, and the highest is 80. A higher score means a higher recognition of the meaning of life. The reliability in the precedent study[16] was Cronbach's $\alpha = .83$, and that of this study was Cronbach's $\alpha = .89$.

5. Procedure

This project was granted ethical clearance by the institutional review board of the S hospital (SYMC IRB 1310-01) and undertaken in compliance with Helsinki Declaration. The participants were assured of confidentiality and anonymity. They signed an informed-consent form if they sufficiently understood the details of the study and volunteered to participate in the study. And also, we assigned individual code at a computer file, in order to keep secret the individual's identity and deleted all indicated discriminable information. The data collection for this study was conducted from November 22, 2013 to January 27, 2014. The participants were assigned to either the experimental group or the control group using block randomization (block size: 4; 1:1 ratio). In the statistical theory of the design of experiments, blocking is the arranging of experimental units in groups (blocks) that are similar to one another. Typically, a blocking factor is a source of variability that is not of primary interest to the experimenter. To prevent the disclosure of the contents of the education program to the control group, a non-synchronized study design was used, and the data from the control group were collected first. A pre-investigation procedure was performed in the control group on November 22, 2013, and the post-investigation procedure, a week later. The pre-in-

Table 1. Contents Covered in PCPE Program

S.	Objectives	Contents items	Detailed contents	Time (min)	Meth.	Lec.
1	To acquire knowledge on the principles, history, and standards of palliative care. To recognize the importance of palliative care	Understanding of life and death	Life toward death. Preparation for death	80	L&D	TP
		Understanding of hospice and palliative care	Origin of hospice work. Purpose of hospice work	80	L&D	Chap.
		Spiritual care	Principles and professional criteria of spiritual needs. Spiritual nursing intervention	40	L&D	NP
		Ethics of palliative care	Ethics related to terminal patients. Hospital ethic committee	40	L&D	NP
2	To recognize the necessity of holistic care. To acquire the skill of communicating with compassion	Nutrition management	Needs of nutrition management. Nutrition management guidance	80	L&D	Nut.
		Mental and emotional caring	Psychological needs of hospice patients. Good death. Psychological care for hospice patients	80	L&D	NP
		Therapeutic communication	Communication with hospice patients. Communication with hospice patients' family	80	L&D	NP
3	To recognize the importance of using a multidisciplinary approach. To acquire the skills for pain and symptom management	Pain and symptom management	Pain evaluation and management. Side effect of narcotic painkiller. Symptom management	80	L&D	PHN
		Social and financial caring	National social welfare policies. Private social welfare resources	80	L&D	SWW
		Preparation for good death	Dignified death. Death preparation education	80	L&D	NP
4	To learn how to manage stress as palliative care provider. To improve one's qualities as a team member	Cancer and nursing	National undertaking cancer management. Nursing needs of cancer patients. Nursing care for canter patient	80	L&D	NP
		Proper attitudes and role as a palliative care provider	Palliative care overview. Attitude of palliative nursing professional. Roles of palliative nursing professional	40	L&D	NMHC
		Stress management	Stress risk factor. Stress management strategies	40	L&D	NMHC
		Theory and practice about foot massage	Effects & method of foot massage. Foot massage practicum	100	L&P	FMT
5	To recognize the effect of palliative care provision in actual practice	Visiting to hospice center	Fieldtrip of a hospital hospice center	240	FT	NMHC
		Case study	Case study, presentation & discussion. Evaluation of the program	120	Con.	NP

S.=Session; Meth.=Methods; Lec.=Lecturer; L & D=Lecture and discussion; L & P=Lecture and practice; Con.=Conference; TP=Theological professor; Chap.=Chaplain; Nut.=Nutritionist; NP=Nursing professor; PHN=Professional hospice nurse; SWW=Nursing manager of a hospice center; FMT=Foot massage therapist.

vestigation procedure for the experimental group was performed on December 1, 2013, after the completion of the data collection from the control group, the five educational sessions were provided for the experimental group. The lectures were given by the researchers and lecturers from Hospice Palliative Care Research Center of S University. The post-investigation procedure was performed immediately after the completion of the education. The control group was given palliative care education upon the completion of the post-investigation procedure. The pre- and post-investigation procedures were conducted by blind-study assistants, and it took each participant 10~15 minutes to complete the questionnaire.

6. Date analysis

The collected data were analyzed using the SPSS Win 18.0 (SPSS, Inc., Chicago, IL) program. First, the general characteristics and homogeneity of the experimental and control groups were analyzed using descriptive statistics, Chi-square test, Fisher's exact test, and t-test. Second, the effects of the program on the experimental and control groups were analyzed using ANCOVA with a non-homogenous item (the value representing the bereavement experience) among the general characteristics as a covariate, to determine if there was a difference between the effects of the

program on the two groups. Third, the sample size was analyzed using the G*Power program for statistical power analysis. Fourth, the internal consistency of the evaluation tools was analyzed using Cronbach's α.

RESULTS

1. General characteristics and homogeneity of the dependent variables

The general characteristic of the participants included their age, gender, marital status, religion, and bereavement experience. Bereavement refers to the period of mourning and grief following the death of a beloved person; parents, brothers, a spouse and offsprings. The mean age was 35.5 years. Females constituted 94.2% (n=81), and 59.3% (n=51) were single. 76.7% (n=66) of participants had religions, 31.4% (n=27) had bereavement experiences (Table 2).

The homogeneity analysis results showed no significant difference between the experimental and control groups, but the results of the be-

reavement experience showed a significant difference between the groups (F=7.30, p=.007). The homogeneity of the groups was confirmed as there was no statistically significant difference in their recognition of a good death, palliative care, and the meaning of life at a 5% significance level (Table 2).

2. Effects of the program

The two groups' recognition of a good death showed a significant difference (F=11.44, p=.001). The group mean after correction, Least squares mean (LSM), also showed that the experimental group had a higher score (by 9.24 points) than the control group. The two groups' recognition of palliative care showed a significant difference (F=4.15, p=.045). The LSM also showed that the experimental group had a higher score (by 3.96 points) than the control group. The two groups' recognition of the meaning of life showed a significant difference (F=5.12, p=.026). The LSM also showed that the experimental group had a higher score (by 1.89 points) than the control group (Table 3).

Table 2. Baseline Characteristics of Participants   (N=86)

Characteristics	Categories	Exp. (n=42) n (%) or M ± SD	Cont. (n=44) n (%) or M ± SD	Total (N=86) n (%) or M ± SD	χ^2 or t	p
Gender	Female	40 (95.2)	41 (93.2)	81 (94.2)	0.16*	.683
	Male	2 (4.8)	3 (6.8)	5 (5.8)		
Age (yr)	20~29	18 (42.9)	17 (38.7)	35 (40.7)	1.57	.665
	30~39	8 (19.0)	13 (29.5)	21 (24.4)		
	40~49	10 (23.8)	10 (22.7)	20 (23.3)		
	≥50	6 (14.3)	4 (9.1)	10 (11.6)		
Marriage status	Single	28 (66.8)	23 (52.3)	51 (59.3)	1.84	.174
	Married	14 (33.2)	21 (47.7)	35 (40.7)		
Religion	Yes	33 (78.6)	33 (75.0)	66 (76.7)	0.15	.695
	No	9 (21.4)	11 (25.0)	20 (23.3)		
Education level	College	15 (35.7)	17 (38.6)	32 (37.2)	0.16	.923
	Bachelor	17 (40.5)	18 (40.9)	35 (40.7)		
	Above master	10 (23.8)	9 (20.5)	19 (22.1)		
Economy level	High	8 (19.0)	6 (13.6)	14 (16.3)	0.49	.780
	Middle	29 (69.1)	33 (75.0)	62 (72.1)		
	Low	5 (11.9)	5 (11.4)	10 (11.6)		
Health status	High	10 (23.8)	10 (22.7)	20 (23.3)	0.01*	.992
	Middle	31 (73.8)	33 (75.0)	64 (74.4)		
	Low	1 (2.4)	1 (2.3)	2 (2.3)		
Living with parents	Yes	20 (47.6)	21 (47.7)	41 (47.7)	0.01	.992
	No	22 (52.4)	23 (52.3)	45 (52.3)		
Experience of bereavement	Yes	19 (45.2)	8 (18.2)	27 (31.4)	7.30	.007
	No	23 (54.8)	36 (81.8)	59 (68.6)		
Good death		80.14 ± 8.98	76.70 ± 8.67	78.38 ± 8.94	1.80	.074
Palliative care		68.98 ± 8.66	69.45 ± 7.16	69.22 ± 7.89	−0.28	.781
Meaning of life		31.00 ± 4.42	29.66 ± 3.64	30.31 ± 4.07	1.53	.128

*Fisher's exact probability test; Exp.=Experimental group; Cont.=Control group.

Table 3. Comparison of Good Death, Palliative Care, and Meaning of Life between Groups   (*N*=86)

Variables	Groups	Pretest	Posttest	Adjusted posttest	F*	p
		M ± SD	M ± SD	LSM ± SE		
Good death	Exp.	80.14 ± 8.98	84.57 ± 13.81	84.05 ± 1.91	11.44	.001
	Cont.	76.70 ± 8.67	74.32 ± 10.32	74.81 ± 1.86		
Palliative care	Exp.	68.98 ± 8.66	72.14 ± 9.93	72.07 ± 1.34	4.15	.045
	Cont.	69.45 ± 7.16	68.00 ± 6.78	68.11 ± 1.31		
Meaning of life	Exp.	31.00 ± 4.42	32.31 ± 3.50	32.07 ± 0.56	5.12	.026
	Cont.	29.66 ± 3.64	29.91 ± 3.85	30.18 ± 0.55		

*F score were from analysis of covariates with experience of bereavement as covariates; Exp.=Experimental group; Cont.=Control group; LSM=Least squares mean.

DISCUSSION

Palliative care is an integral part of hospital nursing care practice, but research related to palliative care remains limited. Possible reasons may be because health care practitioners have limited education in the delivery of palliative care. This study developed the program and evaluated the educational impact of a series of educational sessions to increase the recognition of a good death, palliative care and the meaning of life in order to deliver quality palliative care in general hospitals.

In this study, recognition of a good death was shown as 84.05 in the experimental group, but in the control group was shown as 74.81. This result was similar to Choi & Park's results[9] which was a primary hospice education program with nurse participants (81.9). However, it was higher than Jung's study[17] which investigated perception of a good death by a healthcare provider who were participating MD's (60.9) and nurses (65.1). It reveals that nurses who attend Nursing Education have more interest in a good death. Findings from a previous study illustrated that healthcare professionals should have a perception of a good death and should be sensitive to the legal, ethical and spiritual context for people nearing the end of life[18]. Therefore, the systematic professional training that provides opportunity for education of nurses, who are palliative care practitioners, should continue to be offered.

In recognition of palliative care, the experimental group (72.07) was higher than the control group (68.11). It is similar to a result of a study by Kim[14] and In[19]. Also, Mallory[20] reported palliative care education brought positive effects on the attitudes of nursing students towards terminal patient care. According to Kennedy[21], nurses should have a positive recognition of palliative care to be able to play the crucial role of a palliative care service provider, and especially as a coordinator of hospice care team members in addition to their primary duty of directly taking care of patients. Increasing the recognition of palliative care is important because palliative care is not just about care in the last months or days of a person's life, but about ensuring quality of life for both patients and families at every stage of the disease process. A palliative care approach should be used appropriately alongside active disease management and applies a holistic approach to meeting the needs of patients facing progressive illness and bereavement[22].

Meaning of life increased more significantly in the experimental group (32.07) than in the control group (30.18). Our findings are consistent with the result from hospice palliative education including logotherapy, with nursing college student participants[23] and the result of death education program with general population[24,25]. And also the findings are consistent with the results from hospice education with care workers participants[26,27]. Patients' death has negative effects on nurses' emotions, because their care is emotionally interactive with patients from the acute stage to terminal stage[28]. Actually, it was reported that 92.0% of nurses complain of caring for terminal patients[29]. These phenomena seem related to the current limitations for providing systematic palliative care education to nurses. Frankl[30] suggested that seeking the meaning of life greatly motivates human beings. Kang[24] noted that participants who had a higher level of perception of the meaning of life had positive attitudes concerning death. Therefore, present education programs will be utilized as a basis to reveal that the PCPE program, in spite of being a short program, is effective for increasing the level of nurses' understanding of the meaning of life.

After the program, Participants were asked to evaluate the program by open questions. The questions covered: the form and structure of the program, the lectures and conference, contents, usefulness of the subject matter and its relevance to practical and academic work. In answering the questions, participants expressed that they had gained further knowledge in palliative patient management and had refined their clinical practice. And they found the PCPE program useful in their work and asked for the program to continue. This indicates an ongoing need for continuing professional education to enable nurses to maintain and ex-

tend their professional capabilities. This issue is further discussed elsewhere in a study based on qualitative findings. And it recommends that undergraduate curriculum for nursing students and standardized palliative care education program for nurses also needs to be developed and to be conducted to verify the long term effects of the program.

Despite its important findings, this study has some limitations. First, both the sampling and data collection were conducted at a single general hospital in Seoul Korea. As a result, the finding of this study cannot be generalized beyond this group of nurses. Second, the results of this study might be influenced by exogenous variables due to a non-synchronized study design. Therefore special care should be exercised when interpreting the results of the study.

CONCLUSION

This study was a quasi-experimental study with a non-equivalent control group and a non-synchronized study design to develop a palliative care professional education program and investigate the effects of the program. The results of this study indicate that PCPE program allowed the nurses to accept death as a positive experience, understand the effects of palliative care, and reflect on their own lives to find further meaning of life. Participants felt that the PCPE program met their identified need for topic and context specific education. This study paved the way for the establishment of a similar program in hospitals in the future and the use of the program was expected to improve the quality of the palliative nursing services as well as the satisfaction of the patients and their families. However, more attention and study should be directed to the educational needs of nurses.

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