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A Delphi Study on Development of Measuring Tool for Terminal Care Performance

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Abstract
The purpose of this study was to create a scale to measure the level of terminal care performance in hospital nurses in order to provide adequate terminal care. The data were collected during the first and second rounds of the survey, and the selected samples were 12 and 16 nurses with more than three years of clinical experience, respectively. This is a Delphi research study in which a panel of experts reviewed the findings and reached a consensus. The developed scale for degree of terminal care performance consists of 46 items, 15 for care before dying, 17 for care during dying, and 14 for care after dying. The findings of this study are expected to be used in the development of a terminal care education program that improves actual job satisfaction of hospital nurses by reducing their burden from terminal care and allowing them to provide terminal care appropriate for the patient's situation.

Keywords: Hospitals, Terminal care, Nursing, Development

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1. INTRODUCTION

In Korea, the proportion of the population aged 65 years or older to the total population has steadily increased due to a low birth rate and an aging population, and is expected to reach 30% by 2030 and 40% by 2060, transforming Korean society into a super-aged society.[1]. This demands a new nursing scheme to manage the growing elderly population, which is increasing the use of medical services for them, the demand for elderly long-term care services, and the prevalence of geriatric diseases such as stroke, dementia, cancer, and chronic diseases.This, in turn, increases the number of elderly deaths in hospitals and increases the demand for medical services for the elderly, and as the number of elderly people who have difficulty living independently grows, so does social interest in terminal care[2]. The care for elderly patients at home is difficult due to the decrease in multi-generation families, the prevalence of nuclear familiesand single-person households, and increased social and professional activities of family members, forcing the care for and death ofelderly to occur in hospital [3]. The provision of terminal care by medical personnel has also been shown to reduce the number of emergency hospitalizations alleviate the suffering of patients and their families, and reduce the burden on medical providers[4-6]. In Korea, after the government announced the institutionalization of hospice palliative care, the need for hospice palliative care increased not only for cancer patients and their families but also for patients with other various disease groups [2]. This phenomenon indicates that the center of terminal care is shifting from family to medical personnel [7]. In addition, the passage of the Well-dying Act' in 2016 reminded us of the importance of terminal care, and the current situation, including the absence of a hospice ward, is forcing the general ward nurses to frequently perform terminal care. These made the role of hospital nurses in terminal care to be more important, leading to the necessity of understanding their terminal care performance [8, 9].

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The goal of terminal care performance is to assist terminally ill patients in dying with dignity and decency[10]. One of the important roles of nurses is to care for patients who are dying in the last stage of life and to help them face death positively. Terminally ill patients and their families demand professional pain management staff to relieve their pain, alleviate their discomfort, provide medical information, and care for their emotional needs. Although nurses should have fair and respectful bioethics for patients' lives, the rise and escalation of ethical conflicts related to life due to the Do Not Resuscitate (DNR) order make it difficult for them to guarantee the dignity of death. In addition, patients with DNR order, who decided to stop treatment, require physical, mental, and spiritual nursing, as well as skilled terminal care to care for the various difficulties that terminally ill patients and their families face.[3, 7]. Nurses caring for terminally ill patients, on the other hand, may struggle with terminal care performance due to psychological pain such as feelings of helplessness or death anxiety, as well as hopelessness that there is nothing they can do to save the patients' lives [11]. In addition, it is necessary to lower the terminal care stress of nurses in order to increase efficiency since terminal care performance may be overloaded. It may be difficult for terminal care nurses, who face the patient's death more closely than anyone else, to perform the terminal care required according to each hospital's policy and each patientdue to the lack of awareness of death and stress. Furthermore, the difference between the importance given to terminal care performance domains, that is, physical, psychological, and spiritual domains, and actual performance and differences in the degree of terminal care performance between those required by hospitals and individuals are also factors that hinder effective terminal care performance. Hospital nurses are trained in the nursing application, under the understanding of the importance of terminal care performance [12]. Reorganization of educational contents for hospital nurses considering the difference between the importance given to each domain of terminal care performance and actual performance is expected to improve the quality of nursing care and promote nursing that meets the needs of patients.

Most of the studies on terminal care so far have included intensive care unit nurses [13, 14], hospice nurses, clinical nurses, and hospital nurses [15, 16] as subjects. The subjects of studies on hospital nurses included the relationship between terminal care stress and death perception [17], terminal care-related stress [18], and degree of terminal care performance [19].

For the Korean scale for degree of terminal care performance, the one developed by Park & Choi (1996) has been used until now [20]. In foreign countries, studies from Fish & Shelly's (1978) using activities based on spiritual nursing based on religious beliefs to Fromelt's (1991) hospice nurses to terminal care performance for terminal patients have prepared for terminal care performance. It has been the basis for this [21, 22, 32]. Recently, the concept of nursing pursues holistic nursing in consideration of physiology, body, social culture, and psychological aspects while providing overall nursing care for patients. Although 20 years have passed since the development of the scale for degree of terminal care performance, there has been no study on the measurement of the degree of terminal care performance or the development of the terminal care performance measurement scale suitable for the situation in Korea. Accordingly, this study investigates the validity and utilization status of the existing scale for terminal care performance and the actual degree of terminal care performance and explores the new direction of the scale for terminal care performance.

Considering these situations, the development of a terminal care performance measurement scale suitable for the current clinical environment is an urgent task. This is considered to be needed for the establishment of strategies for standardization of scale for terminal care performance and alleviation of terminal care stress and burnout in hospital nurses. The purpose of this study was, therefore, to develop a scale to measure the degree of terminal care performance in hospital nurses.

2. METHOD

The equation editor was used to show each equation. This was a Delphi research study for the development of a scale to measure the degree of terminal care performance in hospital nurses, which identified the components of the scale and reached acollective agreement through a review by a panel of experts.

2.1 Process of Developing Scale for Terminal Care Performance

The development process of the deathbed care performance tool is as follows [Figure 1].

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- **Organization of Expert Panel**

The expert panel consisted of 12 clinical nurses who directly performed terminal care at a general and a university hospital in Seoul (n=4 and 3, respectively) and a general and a university hospital in Daegu (n=2 and 3, respectively), after contacting university hospitals located in two cities.

- **1st Round of Delphi Survey**

Interview was conducted with members of theexpert panel. An overall literature review on terminal care was performed in databases such as RISS, NDSL, PubMed, and CINAHL. The 1st version of questionnaire items were developed based on the interview and literature search results. Two university professors reviewed the validityand based on the results, revisions were made.

- **2nd Round of Delphi Survey**

The 2nd expert panel composed of 16 clinical nurses working at a general and a university hospital located in Daegu reviewed the validity and reliability of the revised 1st version of questionnaire items. Based on the results and statistical analysis, a final version of thescale was developed.

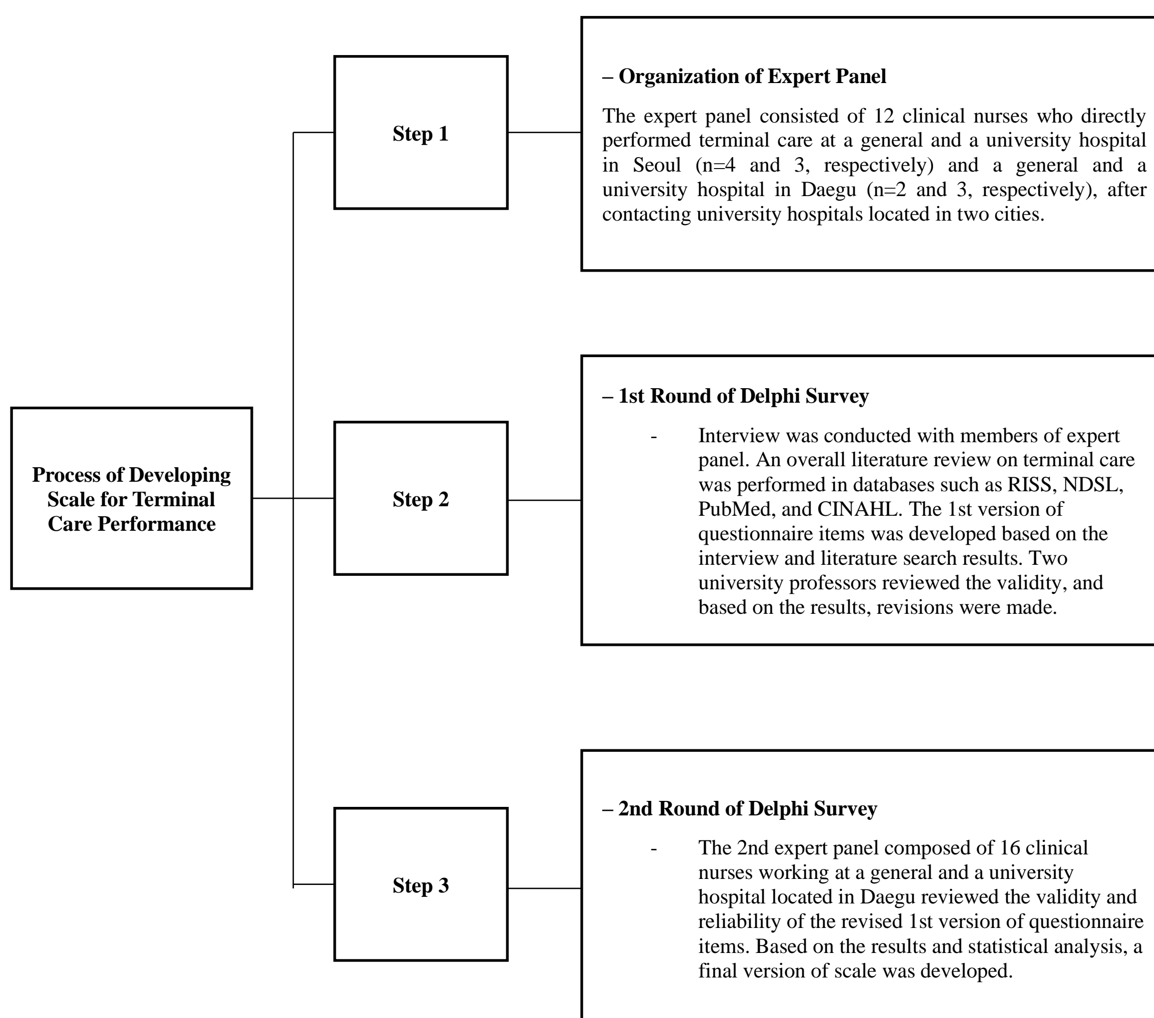

Figure 1: Process of Developing Scale for Terminal Care Performance

2.2 Subjects

In the Delphi study, the organization of the expert panel is necessary and, in this study, the members were 12 clinical nurses who had 3-20 years of experience inthedirect performance of terminal care in hospitals located in Seoul and Daegu. They were from J general hospital (n=4) and K university hospital (n=3) in Seoul and P

general hospital (n=2) and C university hospital (n=3) in Daegu. The members of 1st expert panel for 2nd round of Delphi survey were 16 clinical nurses from P general hospital and C university hospital in Daegu, for their general characteristics, most of them had bachelor's degree (n=19) and was followed by master's (n=5) and doctor's (n=3). The most frequent religion was Catholic. The hospice ward was the most common department, followed by cardiology, nephrology, surgery, and hematological departments, and this distribution was more noticeable in the second group. The most frequent number of years of service was 10-20 years and more than 50% reported high or normal job satisfaction (Table 1).

Table 1: General characteristics of study subjects

Variables		1st round (N=12)	2nd round (N=16)
		n (%) or M±SD	n (%) or M±SD
Age		44±5.88	37.81±6.53
Sex	Female	12 (100.0)	16 (100.0)
Highest education level	Bachelor of Arts	-	1 (6.3)
	Bachelor	8 (66.7)	11 (68.8)
	Master	2 (16.7)	3 (18.8)
	Doctor	2 (16.7)	1 (6.3)
Religion	Christian	2 (16.7)	2 (12.5)
	Buddhist	2 (16.7)	2 (12.5)
	Catholic	3 (25.0)	7 (43.8)
	Other	-	-
	None	5 (41.7)	5 (31.3)
Work department	Cardiology	1 (8.3)	1 (6.3)
	Nephrology	1 (8.3)	1 (6.3)
	Surgery	3 (25.0)	1 (6.3)
	Hema-oncology	-	1 (6.3)
	Hema-oncology medicine	-	1 (6.3)
	Hospice	6 (50.0)	11 (68.8)
Years of service	< 5	1 (8.3)	2 (12.5)
	5–10	-	4 (25.0)
	10–20	-	6 (37.5)
	> 20	8 (66.7)	4 (25.0)
Job satisfaction	High	4 (33.3)	7 (43.8)
	Middle	6 (50.0)	9 (56.3)
	Low	6 (50.0)	-

2.3 Instrument

The items for the first and second questionnaires were produced through focus group interviews and were divided into three domains: before, during, and after death. To investigate the previous studies, a literature review on terminal care was conducted using databases including RISS, NDSL, PubMed, and CINAHL. Based on the review findings, a questionnaire was developed and focus group interviews were conducted with hospital nurses on terminal care.

The purpose of the focus group interview was to understand the contents of terminal care by listening to the vivid experiences of terminal care of hospital nurses who are performing terminal care in actual clinical settings. For the focus group interview, four groups consisting of three-five clinical nurses with extended experience interminal care who belonged to a research group active in four hospitals located in Seoul and Daegu were organized and invited as a member of an expert panel . The interviews continued until the data was saturated. Based on this, a total of 42 terminal care nursing questions were developed. Each item was rated on a five-point scale (five: strongly agree, four: agree, three: moderate, two: disagree, one: strongly disagree). The developed

scale was repeatedly revised after being reviewed by a panel of experts where items to be deleted, corrected, and added were continuously adjusted. Finally, 50 items were developed. The developed items were divided, following the agreement among experts, into three periods before dying, during dying, and after dying based on the time when terminal care was provided. The developed questionnaire was administered to 16 clinical nurses for the 2nd Delphi survey.

2.4 Data Collection

Items for the domainwere developed through literature review and focus group interviews. The focus group interview was conducted from Jan. 15 to Apr. 30, 2020. A snowball sampling method was used to include clinical nurses with sufficient experience understanding of the field of terminal care for patients. A focus group interview was conducted with seven nurses from expert panel who participated in the 1st Delphi survey. The interview contents were analyzed and the clarity of the analysis results was checked. The interview questions were related to terminal care: “Do you have experience of presenting at patient's death?”, “Could you tell us about the experience of presenting at patient's death?”, “Could you tell us about the content of terminal care?”, “Please tell us, if any, about the difficulties related to terminal care in the general ward”, and “What kind of effort do you make for terminal care?” .

The 1st expert panel repeatedly reviewed the items in order to develop items based on findings from interviews and literature review by May 15, 2021. The content validity of each item of the scale with the composition completed was reviewed during the second Delphi survey from May 15, 2021 to Jun. 30, 2021.

2.5 Data Analysis

The first item was developed through expert panel interviews and open-ended questions, and the second Delphi survey was conducted using a completed questionnaire. The IBM SPSS/WIN 23 program was used for the second Delphi data analysis. Frequency and percentage, mean, and standard deviation were analyzed, and content validity was measured by calculating the content validity ratio (CVR) for each item. Kendall's W was calculated to check the degree of agreement of the expert panel on all questions. The CVR indicates the percentage of experts who answered that the question was “appropriate.” In this study, it was calculated as the proportion of respondents who responded with four or five points on the five-point scale. The CVR calculation formula was as follows:

$$CVR = \frac{n_e - \frac{N}{2}}{\frac{N}{2}}$$

refers to the number of respondents who responded with four or five points, and N refers to the total number of respondents.

The CVR ranges from +1.0 to -1.0, and a positive (+) CVR value implies that more than half of the raters responded with four or five points on a five-point scale, while 0 meansthat half of the raters responded with four or five points. A negative (-) CVR value implies that more than half of the raters responded with one, two, or three points. In this study, following the suggestion of Lawshe (1975), the minimum CVR value for 16 respondents was set as 0.49, and under this criterion, the correction or deletion of items was considered [22].

2.6 Research Ethics

This study was approved by the bioethics committee of the researcher's institution (IRB approval No. 2019-09-019). During the interview, consent was obtained for the recording, and after sufficiently explaining the research contents to the expert group, voluntary consent was obtained and the research was conducted. It was explained that the information obtained during the research process would be used only for the research and would be permanently deleted at the end of the research. It was explained that all information obtained through the research would be encrypted and properly managed.

3. RESULTS

Table 2 shows the results of the Delphi survey that confirmed the terminal care performance of clinical nurses. Of the total 50 items, 46 were found to have content validity above the criteria value (CVR>.49) for both

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performance and importance; therefore, they were judged to be appropriate for the terminal care performance of clinical nurse scale. In particular, the items showing the highest points for clinical care performance were as follows: “After preparing terminal care supplies, I can put on disposable gloves and remove the monitor and intubation device attached to the body,” (4.75±0.45), “I can lay the patient on his/her back, put his/her hands on his/her stomach, and close his/her eyes,” “If the patient's mouth is not closed, I can roll up a towel or gauze to use as a bib,” and “I can cover the patient's body except the face with a clean duvet or sheet” (4.75±0.58). On the contrary, “I can identify the patient's condition according to the determination of terminal status criteria,” “I can identify the patient's spiritual condition and needs and provide appropriate spiritual care,” “I can practice spiritual care according to the patient's religion,” and “I can guide patients and caregivers about the post-mortem donation process if they want” showed content validity below the criterion value (CVR<.49). Kendall's W test (W=.27, p<.001), which was performed to check the agreement of clinical nurses, showed that the clinical nurses' opinions on the items with statistical significance were consistent with each other.

In the final scale on the degree of terminal care performance, 46 items were included; items 1, 17, 34, and 36 were excluded as their content validity was below the criteria.

Table 2: Terminal Care performance analysis results

No		Item	Performance	
			M±SD	CVR
1	**Before dying**	I can identify the patient's condition according to the determination of terminal status criteria.	3.94±0.77	.38
2		I can provide terminal care counseling.	4.25±0.58	.88
3		I can write a pre-death checklist.	4.25±0.68	.75
4		I can identify the extent to which the patient and their caregiver accept death.	4.06±0.68	.63
5		I can conduct appropriate therapeutic communication with the patient’s caregivers.	4.00±0.63	.63
6		I can keep the patient and their surroundings clean so that they are comfortable.	4.50±0.52	1.00
7		I can give advance notice that unexpected things can happen at any time before death.	4.44±0.63	.88
8		I can explain the patient's current condition and pre-death symptoms to the caregiver.	4.50±0.63	.88
9		I can recognize the fear of death felt by patients and their families and intervene accordingly.	4.13±0.72	.63
10		I can help patients and their families say what they want to say before death.	4.25±0.68	.75
11		I can explain the death process so that the patient's family can understand the patient's pain.	4.25±0.86	.50
12		I can intervene to manage and prevent bedsores.	4.50±0.63	.88
13		I can assess and manage the pain level.	4.13±0.72	.63
14		I can assess and manage breathing patterns.	4.31±0.79	.63

15		I can practice oral hygiene.	4.50±0.52	1.00
16		I can understand the psychological state of the patient and provide appropriate support.	4.19±0.66	.75
17		I can identify the patient's spiritual condition and needs and provide appropriate spiritual care.	3.75±0.86	.00
18		I can provide a separate place for the patient and their family to be together.	4.25±0.77	.63
19		I can evaluate the level of understanding and awareness of the caregiver about the patient's current condition.	4.19±0.66	.75
20		I can contact and explain the imminent death situation to the patient's family.	4.44±0.63	.88
21		I can explain the patient's impaired consciousness and prolonged sleep.	4.44±0.63	.88
22		I can explain that the patient's condition is unstable and the same movement can be repeated.	4.44±0.51	1.00
23		I can explain that the patient's hands and feet may become cold and sweaty, and their skin color may gradually turn blue.	4.56±0.51	1.00
24		I can explain changes in the patient's pain expression pattern, such as a grimacing face.	4.50±0.52	1.00
25	**During dying**	I can explain that the patient may take deep breaths and their breathing may become irregular.	4.56±0.51	1.00
26		I can explain that the sputum boils in the patient's throat and that the procedure to draw out the sputum can cause pain in the patient.	4.56±0.51	1.00
27		I can take proper oral care so that the patient's mouth does not dry out.	4.50±0.52	1.00
28		I can help the patient adopt a comfortable position depending on his/her condition.	4.44±0.51	1.00
29		I can explain that the anus is open and the stools can come out and can prepare a diaper or put a blanket on the bed.	4.56±0.51	1.00
30		I can explain to the caregiver the need for a reduction in the artificial nutrition and fluid supply.	4.50±0.63	.88
31		I can explain the role of the family at the time of death.	4.31±0.70	.75
32		I can do therapeutic communication with caregivers in terminal care.	4.19±0.75	.63
33		I can give the patient's family time to say their final goodbyes.	4.56±0.51	1.00

34		I can explain changes in the patient's pain expression pattern, such as a grimacing face.	3.88±0.81	.25
35		I can explain the administrative procedures after death to the patient's family.	4.63±0.62	.88
36		I can guide patients and caregivers about the post-mortem donation process if they want.	3.81±0.91	.00
37	After dying	I can explain so that families can prepare funeral arrangements in advance.	4.44±0.73	.75
38		After the doctor's death declaration, I can notify the family and express my condolences.	4.44±0.63	.88
39		I can give the patient's family time to accept the patient's death.	4.44±0.51	1.00
40		I can support the patient's head with a pillow to maintain a comfortable appearance.	4.69±0.48	1.00
41		After preparing terminal care supplies, I can put on disposable gloves and remove the monitor and intubation device attached to the body.	4.75±0.45	1.00
42		I can wipe off blood and body fluids from the patient's face and body, and place absorbent diapers on the patient.	4.69±0.60	.88
43		I can change the patient’s clothes to clean ones.	4.69±0.60	.88
44		I can lay the patient on his/her back, put his/her hands on his/her stomach and close his/her eyes.	4.75±0.58	.88
45		If the patient's mouth is not closed, I can roll up a towel or gauze to use as a bib.	4.75±0.58	.88
46		I can cover the patient's body except the face with a clean duvet or sheet.	4.75±0.58	.88
47		I can explain the discharge-related procedures for a dying patient to the patient's family and can perform discharge procedures and administrative tasks.	4.69±0.60	.88
48		I can make a nursing record related to the patient's condition before and after death.	4.69±0.70	.75
49		I can see them up to the lift when they leave for the funeral home.	4.69±0.60	.88
50		I can arrange the hospital room after death.	4.69±0.70	.75
		Kendall’s W		.27 (p<.001)

Finally, Terminal Care Performance measurement tool was developed with 46 items, excluding 1, 17, 34, and 36 questions in which the content validity was lower than the standard [Table 3].

Table 3: Developed Terminal Care Performance Tools

No		Item	Performance	
			M±SD	**CVR**
1	**Before dying**	I can provide terminal care counseling.	4.25±0.58	.88
2		I can write a pre-death checklist.	4.25±0.68	.75
3		I can identify the extent to which the patient and their caregiver accept death.	4.06±0.68	.63
4		I can conduct appropriate therapeutic communication with the patient’s caregivers.	4.00±0.63	.63
5		I can keep the patient and their surroundings clean so that they are comfortable.	4.50±0.52	1.00
6		I can give advance notice that unexpected things can happen at any time before death.	4.44±0.63	.88
7		I can explain the patient's current condition and pre-death symptoms to the caregiver.	4.50±0.63	.88
8		I can recognize the fear of death felt by patients and their families and intervene accordingly.	4.13±0.72	.63
9		I can help patients and their families say what they want to say before death.	4.25±0.68	.75
10		I can explain the death process so that the patient's family can understand the patient's pain.	4.25±0.86	.50
11		I can intervene to manage and prevent bedsores.	4.50±0.63	.88
12		I can assess and manage the pain level.	4.13±0.72	.63
13		I can assess and manage breathing patterns.	4.31±0.79	.63
14		I can practice oral hygiene.	4.50±0.52	1.00
15		I can understand the psychological state of the patient and provide appropriate support.	4.19±0.66	.75
16	**During dying**	I can provide a separate place for the patient and their family to be together.	4.25±0.77	.63
17		I can evaluate the level of understanding and awareness of the caregiver about the patient's current condition.	4.19±0.66	.75
18		I can contact and explain the imminent death situation to the patient’s family.	4.44±0.63	.88
19		I can explain the patient's impaired consciousness and prolonged sleep.	4.44±0.63	.88
20		I can explain that the patient's condition is unstable and the same movement can be repeated.	4.44±0.51	1.00

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21		I can explain that the patient's hands and feet may become cold and sweaty, and their skin color may gradually turn blue.	4.56±0.51	1.00
22		I can explain changes in the patient's pain expression pattern, such as a grimacing face.	4.50±0.52	1.00
23		I can explain that the patient may take deep breaths and their breathing may become irregular.	4.56±0.51	1.00
24		I can explain that the sputum boils in the patient's throat and that the procedure to draw out the sputum can cause pain in the patient.	4.56±0.51	1.00
25		I can take proper oral care so that the patient's mouth does not dry out.	4.50±0.52	1.00
26		I can help the patient adopt a comfortable position depending on his/her condition.	4.44±0.51	1.00
27		I can explain that the anus is open and the stools can come out and can prepare a diaper or put a blanket on the bed.	4.56±0.51	1.00
28		I can explain to the caregiver the need for a reduction in the artificial nutrition and fluid supply.	4.50±0.63	.88
29		I can explain the role of the family at the time of death.	4.31±0.70	.75
30		I can do therapeutic communication with caregivers in terminal care.	4.19±0.75	.63
31		I can give the patient's family time to say their final goodbyes.	4.56±0.51	1.00
32		I can explain the administrative procedures after death to the patient's family.	4.63±0.62	.88
33	**After dying**	I can explain so that families can prepare funeral arrangements in advance.	4.44±0.73	.75
34		After the doctor's death declaration, I can notify the family and express my condolences.	4.44±0.63	.88
35		I can give the patient's family time to accept the patient's death.	4.44±0.51	1.00
36		I can support the patient's head with a pillow to maintain a comfortable appearance.	4.69±0.48	1.00
37		After preparing terminal care supplies, I can put on disposable gloves and remove the monitor and intubation device attached to the body.	4.75±0.45	1.00
38		I can wipe off blood and body fluids from the patient's face and body, and place absorbent diapers on the patient.	4.69±0.60	.88

39	I can change the patient’s clothes to clean ones.	4.69±0.60	.88
40	I can lay the patient on his/her back, put his/her hands on his/her stomach and close his/her eyes.	4.75±0.58	.88
41	If the patient's mouth is not closed, I can roll up a towel or gauze to use as a bib.	4.75±0.58	.88
42	I can cover the patient's body except the face with a clean duvet or sheet.	4.75±0.58	.88
43	I can explain the discharge-related procedures for a dying patient to the patient's family and can perform discharge procedures and administrative tasks.	4.69±0.60	.88
44	I can make a nursing record related to the patient's condition before and after death.	4.69±0.70	.75
45	I can see them up to the lift when they leave for the funeral home.	4.69±0.60	.88
46	I can arrange the hospital room after death.	4.69±0.70	.75
	Kendall’s W	.27 (p<.001)	

4. DISCUSSION

All nurses, regardless of their departments in hospital, experience the death of patients, however it is more common in intensive care units, hematology oncology departments, and hospice wards.The nursing department's curriculum, however, seems insufficient to prepare nurses for such experience. Some nurses may not learn terminal care until they graduate from nursing college because terminal care courses areset as elective subjects rather than compulsory subjects. In addition, there is a tendency for the terminal care to be treated as relatively less important compared to other courses related to disease, treatment, and drug therapy [24]. For that reason, new nurses who start working in an unprepared state are inevitably embarrassed by the death of patients they encounter at the hospital. Furthermore, few hospitals provide systematic training on terminal care to nurses [25]. As a result, nurses believe that terminal care is difficult, and they frequently hear about it empirically and indirectly from senior nurses or rely on doctors' prescriptions. A patient's death is natural and patients want to maintain their human dignity even at the moment of death. Nurses play an important role in terminal care because one of their important roles is to care for terminally ill patients so that they can die in a positive and comfortable manner[27]. Because nurses do their best in their duties, providing high-quality terminal care to patients increases their job satisfaction. Therefore, nurses want to receive systematic guidelines and education on terminal care [25, 27-29]. If these expectations are not met, nurses are forced to perform terminal care like a machine, devoid of emotion, and avoid being involved in terminal care[30, 27]. Some studies have shown that provision of terminal care education for nursing students and nurses has a positive effect [31].

This study attempted a development of measurement scale to confirm the provision of high-quality terminal care in hospital nurses. To clarify the contents of terminal care and materialize terminal care practiced in clinical practice through the developed scale for degree of terminal care performance, items were developed by a panel consisting of clinical nurses. For the difference between the developed and the existing terminal care scale, the latter is divided into physical, psychological, social, and spiritual nursing [20], whereas the former is divided into before, during, and after dying according to the temporal flow of terminal care. In addition, While the items of the existing scales were general and abstract, the developed ones are composed of very concise and clear performance-oriented practical terms. This is to identify the most important domain of terminal care for each period such as those before, during, and after death, leading to removal of unnecessary care to maximize the capability of nursing.

5. CONCLUSIONS

This study attempted to develop a measurement scale to confirm the provision of high-quality terminal care by hospital nurses. This is a Delphi research study that drew a collective consensus through the review of an expert group. After excluding four items from #1, 17, 34, and 36 with content validity (CVR.49) below the standard value among 50 items developed by the focus group, the developed scale for terminal care performance included 46 items, together with 15, 17, and 14 items for the terms before, during, and after, respectively. The developed and conventional scales for terminal care differ in that the conventional one divided item into four categories such as physical, psychological, social, and spiritual nursing care, whereas the developed one divided them into three categories based on when the care is provided: before, during, and after terminal care. In addition, items of conventional instruments are general and abstract while newly proposed items are very concise and clearly composed using performance-oriented practical terms. Dividing items into three categories: those before, during, and after terminal care, based on the time the care was fully agreed upon by the panel of experts. These results are expected to be used in the development of terminal care education programs that improve nurses' job satisfaction by alleviating their burden of terminal care and improving their skill to provide terminal care suitable for the patients' situation. This study, however, has low generalizability because the participants were limited to nurses working in just four general hospitals located in two cities. Therefore, a follow-up study, based on the results of this study, with expanded participants is proposed.

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