Scientific Research Publishing

The Impact of Repeated Death Conference Participation on Nurses' Terminal Care and Nursing in Death Conference Using the Death Conference Nursing Self-Assessment Sheet

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Abstract

Background: Increasing the number of DC (Death Conference) experiences, nurses are expected to improve the quality of nurses' terminal care and developing nursing minds. Therefore, there is a need for further evidence on the impact of repeated DC experiences on nurses' terminal care. *Aim*: This study aims to clarify the impact of repeated DC experiences on nurses' terminal care and nursing in DC using the prepared Death Conference Nursing Self-Assessment Sheet. *Method*: The study is approved by the Ethics Review Board of St. Mary's College, Chukyo Gakuin University, and the hospital where the survey was conducted. This study was an observational and cross-sectional study using an anonymous, self-completed questionnaire composed of the newly created Death Conference Nursing Self-Assessment Sheet. Its evaluation items in the Death Conference Nursing Self-Assessment sheet consist of four categories (Cooperation, Future direction of nursing, Specific measures for nursing, and Feeling of the nurse) and 14 questions. The questionnaires were conducted on 144 nurses in the ER, ICU, and Palliative Care Ward (Hospice Ward) in a general hospital in Japan. For analysis, JMP ver.14.2 was used to perform Fisher's exact test, Wilcoxon/Mann Whitney test, univariate, and multivariate logistic regression analysis. *Results*: Thirty-four participants (23.6%) who answered the number of DC experiences were included in the final analysis. Seventeen nurses had DC experiences, and 17 had no experience. There were significant differences in all of the above categories impacting nurses' terminal care and nursing in DC. *Conclusion*: Repeated DC affected nurses' terminal care and nursing in DC

using the Death Conference Nursing Self-Assessment Sheet. In the future, verification of the reliability, validity of the questionnaire, and more evidence of the way of terminal concerns by raising the quality of DC for developing nursing minds will be needed.

1. Introduction

According to a report by the Ministry of Health, Labor and Welfare, the number of deaths in Japan in 2017 was 1,340,397, and the places of death were 978,260 (73%) in hospitals, 177,473 (13.2%) in homes, 99,910 (7.5%) in retirement homes, 33,105 (2.5%) in nursing homes for the elderly, and 24,144 (1.8%) in clinics [1]. In end-of-life care, it is desirable for nurses to understand the diversity of patient values and to respect patient wills and rights. In especially ER, HCU, and Palliative Care Ward of hospitals, nurses are often involved in terminal care on a daily basis. In the daily clinical setting, patients are required to make various decisions, and nurses' support for them requires consensus in teams. Team medical care in terminal care requires the direction of improving the professionalism of each medical staff, increasing the role of each medical staff, and promoting cooperation and complementation of medical staff. Therefore, holding DC before and after terminal care is important.

Terminal care is defined as the care of terminally ill patients, such as those with terminal cancer, in which death is unavoidable, and also as the end-of-life care in emergency and intensive care, that is, when acutely ill patients treated in an intensive care unit are judged to be unlikely to be saved even after appropriate treatment is performed [2] [3] [4] [5]. Death Conference (DC) is a place where the physicians and nurses who are facing the patient's death look back on the care of the deceased patient to improve the quality of care in the future [5]-[10]. It should also include a review of nurses' terminal care of deceased patients and a case conference of patients and their families with medical staff in their department.

Participation in DC is essential for improving the quality of nurses' terminal care and fostering nursing minds. However, there are only a few studies in Japan that clarify quantitatively how nurses' participation in DC is related to the current state of terminal care. Hence, a self-assessment sheet for nursing, including the concept of the significance of DC, is necessary to reflect on daily end-of-life care, including the acute phase, and to enhance the content of DC and death education. Then, at first, we conducted a literature review in previous research to clarify the significance of DC. It explained that improving the quality of DC could lead to the improvement of the quality of patient care and the effect of ca-

tharsis for nurses. The significance of DC showed "Refraction," "Cooperation," "Directionality of nursing," "Caring for patient," "Caring for family," "Specific methods of nursing," and "Feelings of the nurses" [11].

Next step, for clarifying the relationship between DC experiences and the current situation of terminal care for nurses who have experienced, is the newly developed Terminal Care and Death conference Nursing Self-Assessment Sheet. In our recent study (Open Journal of Nursing, 2020, vol. 10, issue 4 [5]), the result of an anonymous, self-completed questionnaire composed of the Terminal Care Nursing Self-Assessment Sheet that was conducted for 144 nurses in the ER, ICU, and Palliative Care Ward (Hospice Ward) in a general hospital in Japan, was revealed. Its evaluation of the items in the Terminal Care Nursing Self-Assessment Sheet consists of six categories (Reflection, Cooperation, Response to patients, Response to patients' family, Specific measures for nursing, and Feelings of the nurse) and 14 questions. It was shown that DC impacted on nurse's terminal care of Reflection, Cooperation, Response to patients, Response to patients' family, and Feelings of the nurse. DC that looks back on terminal care has significance as an opportunity to consider the way of terminal concerns and direction of future care [5].

Under the hypothesis where the number of DC participation will increase, nurses are expected to improve the quality of nurses' terminal care and developing nursing minds. Therefore, there was a need for further evidence on the impact of repeated DC participation on the nurses' terminal care. Hence, continuing from our previous study, this study aims to clarify the impact of repeated DC participation on nurses' terminal care and nursing in DC using the prepared Death Conference Nursing Self-Assessment Sheet.

2. Methods

2.1. Participants

The participants in this study included those in our previous studies (refer to Open Journal of Nursing, 2020, vol 10, issue 4 [5]). The following participant's information is quoted from this issue. Eligible participants were nurses who are considered to have experienced terminal care in a general hospital that has an ER, HCU, and Palliative Care Ward (Hospice Ward) in Japan. In all, we recruited 144 participants who work in an ER, HCU, and Palliative Care Ward, and who worked in May 2018. Participants excluded from the study for the following reasons: those who were not assigned to the HCU, ER, or Palliative Care Ward for more than two months.

2.2. Procedure

This study was an observational and cross-sectional study using an anonymous, self-completed questionnaire composed of the newly created Death Conference Nursing Self-Assessment Sheet. The method shown below is consistent with our previous research process (refer to Open Journal of Nursing, 2020, vol 10, issue 4

[5]). The following procedure's information is quoted from this issue. The difference from the previous study is that the result is from analysis by using the Death Conference Nursing Self-Assessment Sheet.

This study was approved by the Ethics Review Board of St. Mary's College, Chukyo Gakuin University, and the hospital where surveys were completed. The study was conducted following the Declaration of Helsinki. We distributed consent documents with the anonymous, self-completed questionnaire before the survey to all participants through the head nurse from the nursing department and asked them to fill out the questionnaire as having their consent by answering freely. The consent form stated that there would be no disadvantage, even if they did not participate in the research. The survey had a response time of 10 to 15 minutes. It was placed in an envelope, sealed, and collected by collaborators using a two-week retention method. All participants underwent an anonymous, self-completed survey composed of the Terminal Care and Death conference Nursing Self-Assessment Sheet. The participant characteristics were gender, affiliation, clinical experience, age, academic background, number of postmortem experiences, and with or without and the number of DC experiences [5]. The evaluation items in the Death Conference Nursing Self-Assessment sheet consist of four categories (Cooperation, Future direction of nursing, Specific measures for nursing, and Feeling of the nurse) and 14 questions.

A Death Conference Nursing Self-Assessment Sheet was created using a 5-step Likert scale of 1 to 5 for all items. In the beginning they are asked, "How often do you think about your nursing at the current terminal care and death conference, please circle the closest numbers respectively?" For this, the following steps were set. Here were scoring and answers for questions of all 14 items, "1) I never think about it, 2) I rarely think about it, 3) I sometimes think about it, 4) I often think about it, 5) I always think about it."

Those categories and subjects are including the concept of the significance of DC (Open Journal of Nursing, 2019, 9, p. 527) [11] that was revealed in previous literature reviews [6] [9] [10] [12] [13] [14] [15] [16], and incorporated as a conceptual framework (Table 1). Three collaborators in previous studies reviewed the category of the significance of DC. This time, to ensure content validity, the 14 assessment items were initially considered and prepared by two co-authors of university teachers with clinical experience in terminal care as nurses. Next, we obtained advice from another co-author, a college faculty member conducting terminal care research, and two other co-authors, chief nurse managers who are in charge of the terminal care ward. The translation from Japanese to English and back of the 14 items in the Death Conference Nursing Self-Assessment Sheet was con-firmed by two bilingual native adults in English and Japanese, and a request, was also sent to an English proofreading company. They also verified the consistency of these 14 items with four categories and the meaning of DC. Participants' characteristics question items are first identified by collaborators and then advised by the nursing department of the institution surveyed without the use of individual identification.

Table 1. Items of terminal care and death conference nursing self-assessment sheet derived from literature reviews.

Category*	Significance of DC*	No.†	Items of Terminal Care and Death Conference Nursing Self-Assessment Sheet
Reflection	Review of nursing care provided by self-reflection	T1	I have been able to look back on the nursing I performed.
Cooperation	Collaboration with other professions	T2	I am strengthening cooperation with other professions about patient care.
	Bond with patient and family	T13	I feel a renewed bond with my patients and their family.
	Team sharing and collaboration	D6	Death Conference helps me improve my teamwork.
Future direction of nursing	Share the purpose and direction of care	D2	I share the purpose and direction of care.
	Clarification and resolution of nursing problems	D3	I clarify nursing problems and get solutions.
	Proposal to connect the solution to the next	D5	I have a proposal to connect the solutions obtained for the next time.
	Sharing of values	D7	I share values with people who have the same thoughts.
Response to patients	Response to unrelieved mental and physical pain in a patient	T5	I have stress resulting from the patient's inability to relieve mental or physical pain.
	Involvement with patients who have a gap in perceptions of the condition	T6	I have stress associated with patients who have a different perception of their conditions.
	The act of responding to a patient's emotional expression and questions about patient's remaining life	T7 T8	I have stress on patients' emotional expression. I am stressed out from responding to questions from patients about life expectancy.
Response to patients' family	Respect for family-to-patient wishes	T3	I respect the wishes of patients' family members toward patients.
	Dealing with family members of patients who seems to have difficulty getting involved	T9	I am stressed out by the family of patients who are considered difficult to care for.
	Anxiety and concern about the family's treatment of patients	T12	I am anxious and worried about the treatment of patients by their families.
Specific measures for nursing	Procedures for postmortem treatment and technique concerns	T10	I have misgivings about procedures and skills for postmortem treatment.
	Learning patient care at the end of life	D1	I feel death conference is an opportunity to learn about end-of-life patient care.
	Understanding the will of patients and their families and reviewing care	D4	I understand patients and their family's intentions and reflect on their care.
Feeling of the nurse	Thoughts of nurses who support the decision-making of terminal cancer patients	T4	I support the decision-making of dying patients and their families.

Continued

Awareness of the emotional reaction to a dying patient	T11	I have emotional reactions towards dying patients.
Satisfaction with satisfying patients' wishes	T14	I have a sense of satisfaction in fulfilling the wishes of the patients, such as the patients spending time with their families.
Stability of mind through talking	D8	Talking at death conference will calm my mind.
Be rebuked or accused of being penitentiary	D9	I am always remorseful and sometimes denied and accused at death conference.
Growing interest in palliative care	D10	I have an increased interest of palliative care after death conference.
Improvement in the quality of care	D11	I can improve the quality of care by participating in death conference.
Deepen one's view of end-stage patient care	D12	I look back at care and deepen my thoughts on end-of-life patient care at death conference.
Improvement of nurses' self-efficacy	D13	I can increase my self-efficacy at death conference.
Nurse's catharsis	D14	I feel catharsis at death conference.

*Open Journal of Nursing, 2019, 9, p. 527 [13]. †No., Question No., T: Terminal Care Nursing Self-assessment items, D: Death Conference Nursing Self-assessment items. Concerning Terminal Care Nursing Self-assessment items, categories, significance of DC and those items are quoted from our previous studies (Refer to Open Journal of Nursing, 2020, vol. 10, issue 4 [5]).

2.3. Analysis

Data were analyzed using JMP (ver. 14.2; SAS Institute Inc., Cary, NC, U.S.). Gender, affiliation, age, academic background, and the number of postmortem experiences are expressed as observation numbers and percentages. The Fisher's exact test was used for categorical variables. The characteristics: clinical experience was evaluated by the Mann-Whitney U test to investigate the difference in the groups between nurses who participate in DC: High group and Low group frequency. The results presented are in the median and IQR (interquartile range). The affiliation variable is divided into HCU and others (ER and Palliative Care Ward). The academic background variable is divided into technical college, junior college, four-year university, and others (a particular course of junior college or university, five-year school, and graduate course).

The results of the median and IQR are presented as follows. In the univariate analysis for items in the Death Conference Nursing Self-Assessment Sheet by DC experiences, which are categorized by participating in DC: High group and Low group frequency, the P values from the Mann-Whitney tests are analyzed. Univariate and multivariate logistic regression analysis was used for variables in the Death Conference Nursing Self-Assessment Sheet predicting DC experiences which are categorized by participating in DC: High group and Low group frequency. In the multivariate analysis, two models are presented with the variables used for adjustment. Model 1 was adjusted for gender, age. Model 2 was adjusted

for academic background. *P*-Values for the Whole Model Test of all variables predicting DC experience in model 1 and model 2 are by specific likelihood ratio Chi-square tests that evaluate how well the categorical model fits the data.

P values < 0.05 were considered significant. The sample size calculation used the EPI-INFO 7.0 statistical package. A sample size of at least 132 participants of the population size of 1000 nurses included public health nurses, midwives, associate nurses defined as sufficient for an 85% incidence rate with the statistical power of 80%, an acceptable margin of error of 5% and a confidence level of 95%.

3. Results

3.1. The Process of the Enrolment and Participant Characteristics

During the study period, 144 nurses are expected to have experienced terminal care at the department of ER, HCU, and Palliative Care Ward in a general hospital. Responses were received from all 144 participants who distributed the survey. The participants of this study are included in the analyzed 139 participants (97%) in the final analysis of our previous studies [5]. Participants included in final analysis of this study were 34 participants (23.6%) who answered the number of DC experiences.

Characteristics of the study participants are listed in Table 2. Each eligible nurse in the study group is classified according to DC experiences; High group (50%, n = 17), or Low group (50%, n = 17), and comparisons were made between the groups. Gender distribution was as follows: in the High group, there were no men and 17 women participants; in the Low group, there were a man and 16 women participants. The affiliation of nurses was nineteen participants for HCU, one for ER, and fourteen for Palliative Care Ward, fifteen (88%) of 17 nurses in the Low group of DC experiences belong to HCU, as were twelve (71%) in the High group. The median (interquartile range, IQR) clinical experience of all participants was 7 (3 - 14.8) years. The median (interquartile range) clinical experience in the High group and the No group were 20 (11.5 - 25) years and 4 (3 - 10) years, respectively. Therefore, the clinical experience was much longer in the High group of DC experiences. Twelve of all participants (41%) were age < 30. There was a larger proportion of nurses in the Low group 12 (71%) than in the High group Two (12%) in the age group < 30 years. Thirteen nurses among the entire group (38%) had a technical college academic background, and there was a larger proportion of nurses in the High group 9 than in the Low group 4 in the technical college group. Twenty-one (62%) nurses had experienced more than 20 postmortem treatments, none said that they had not experienced postmortem treatment. The number distribution of postmortem experiences was as follows: in the High group, 0, 1, and 16 nurses in number of postmortem experiences 1 - 9, 10 - 19, and ≥ 20, respectively; in the Low group, 10, 2, and 5 nurses, respectively. There was, therefore, a higher proportion of the number of postmortem experiences ≥ 20 in the High group (*P* < 0.001) (Table 2).

Table 2. Participant characteristics.

Characteristics	DC experiences		P value
	High (n = 17)	Low (n = 17)	
Gender, no. (%)*			1.00
Men	0 (0)	1 (6)	-
Women	17 (100)	16 (94)	-
Affiliation, no. (%)*			<0.001
HCU	4 (24)	15 (88)	<0.01
Others† ER	1 (6)	0	1.0
Palliative Care Ward	12 (71)	2 (12)	0.001
Clinical experience, Median (IQR), y‡	20 (11.5 - 25)	4 (3 - 10)	<0.001
Age group, no. (%)*			<0.01
<30	2 (12)	12 (71)	0.001
30-39	5 (29)	4 (24)	1.0
≥ 40	10 (59)	1 (6)	0.002
Academic background, no. (%)*			0.146
Technical college	9 (53)	4 (24)	0.157
Junior college	3 (18)	3 (18)	1.0
Four-year university	1 (6)	6 (35)	0.085
Others§	4 (24)	4 (24)	1.0
Number of postmortem experience, chance, no (%)*			<0.001
0	0	0	-
1 - 9	0	10 (59)	<0.001
10 - 19	1 (6)	2 (12)	1.00
≥20	16 (94)	5 (29)	<0.001

IQR, interquartile range. DC, Death Conference. DC experiences were categorized by participating in DC: High or Low. *P values are from Fisher's exact test analyzed on nonparametric comparisons between nurses who participate in DC: High group and Low group frequency. †Others included ER and Palliative Care Ward. ‡P values are from the Mann-Whitney U test analyzed on nonparametric comparisons between nurses who participate in DC: High group and Low group frequency. §Others included who graduated a particular course of junior college or university, five-year school, and graduate course.

No significant differences in characteristics were observed in gender or academic background.

3.2. In the Univariate Analysis for Items in the Death Conference Nursing Self-Assessment Sheet by DC Experiences

In the univariate analysis for items in the Death Conference Nursing Self-Assessment Sheet by DC experiences; High group and Low group frequency listed in Table 3. Nurses who had experience in DC showed significant results (Question No., Category—Items of the Death Conference Nursing Self-Assessment Sheet) on the following questions. D4. Specific measures for nursing—understanding

Table 3. Univariate analysis for items of death conference nursing self-assessment Sheet by DC experiences.

No.*	Variables†	DC experiences		
		High n = 17	Low n = 17	P values‡
D1.	I feel death conference are an opportunity to learn about end-of-life patient care.	4 (3 - 4.5)	4 (3 - 4)	0.267
D2.	I share the purpose and direction of care.	4 (3 - 4.5)	3 (2.5 - 4)	0.074
D3.	I clarify nursing problems and get solutions.	4 (3 - 4)	3 (2.5 - 3.5)	0.070
D4.	I understand patients and their families' intentions and reflect on their care.	4 (3 - 4)	3 (2 - 4)	0.047
D5.	I have a proposal to connect the solutions obtained for the next time.	4 (3.5 - 4)	3 (2 - 3)	<0.001
D6.	Death conference helps me improve my teamwork.	4 (2 - 4)	2(2 - 3)	0.011
D7.	I share values with people who have the same thoughts.	4 (3 - 4)	3 (2 - 3.5)	0.004
D8.	Talking at death conference will calm my mind.	3 (2 - 4)	2 (2 - 3)	0.027
D9.	I am always remorseful and sometimes denied and accused at death conference.	2 (1 - 3.8)	2 (1 - 2)	0.529
D10.	I have an increased interest of palliative care after death conference.	4 (3 - 4)	3 (2 - 4)	0.074
D11.	I can improve the quality of care by participating in death conference.	4 (3 - 4)	3 (2 - 4)	0.090
D12.	I look back at care at death conference and deepen my thoughts on end-of-life patient care at death conference.	4 (4 - 4)	3 (2 - 4)	0.025
D13	I can increase my self-efficacy at death conference.	4 (3 -4)	3 (2 - 3.5)	0.019
D14	I feel catharsis at death conference.	4 (2 - 4)	3 (2 - 3)	0.089

*No., Question No., D, Items of Death Conference Nursing Self-Assessment Sheet. Data are Median (IQR; interquartile range). †Variables, Items of Death Conference Nursing Self-Assessment Sheet. DC, Death Conference, DC experiences were categorized by participating in DC: High or Low. ‡*P* values are from the Mann-Whitney U test analyzed on nonparametric comparisons between nurses who participate in DC: High group and Low group frequency.

patients and their family's intentions and reflect on their care ($P = 0.047$), D5. Future direction of nursing—having a proposal to connect the solutions obtained for the next time ($P < 0.001$), D6. Cooperation—DC helps me improve my teamwork ($P = 0.011$), D7. Future direction of nursing—sharing values with people who have the same thoughts ($P = 0.004$), D8. Feeling of the nurse—talking at DC will calm my mind ($P = 0.027$), D12. Feeling of the nurse—looking back at care and deepen my thoughts on end-of-life patient care at the DC ($P = 0.025$), D13. Feeling of the nurse—can increase my self-efficacy at DC ($P = 0.019$).

However, items that did not show a significant relationship with DC experiences; High group and Low group frequency were as follows: D1. Specific measures for nursing—feeling DC are an opportunity to learn about end-of-life patient care ($P = 0.267$), D2. Future direction of nursing— sharing the purpose and direction of care ($P = 0.074$), D3. Future direction of nursing—clarifying nursing problems and get solutions ($P = 0.070$), D9. Feeling of the nurse—being always remorseful and sometimes denied and accused at DC ($P = 0.529$), D10. Feeling of the nurse—having an increased interest of palliative care after DC ($P = 0.074$), D11. Feeling of the nurse—can improve the quality of care by participating in DC ($P = 0.090$), D14. Feeling of the nurse—feeling catharsis at DC ($P = 0.089$) (Table 3).

3.3. Univariate and Multivariate Logistic Regression Analysis for Items of Terminal Care Nursing Self-Assessment Sheet Predicting DC Experiences

Univariate and multivariate logistic regression analysis for items of the Death Conference Nursing Self-Assessment Sheet predicting DC experiences; High group and Low group frequency are shown in Table 4. In univariate logistic regression analysis, all variables, the original concept, which is the significance of DC included items of the Death Conference Nursing Self-Assessment Sheet

Table 4. Univariate and multivariate logistic regression analysis for items of death conference nursing self-assessment sheet predicting DC experiences.

Variable	No.	Crude OR	95% Cl	*P* value	Model 1			Model 2		
					Adjusted OR*	95% Cl	*P* value	Adjusted OR†	95% Cl	*P* value
Cooperation Team sharing and collaboration	D6	2.54	1.20, 5.37	0.007	2.47	0.87, 7.04	0.066	2.41	1.10, 5.25	0.016
Future direction of nursing Proposal to connect the solution to the next	D5	6.12	1.76, 21.22	<0.001	5.99	1.32, 27.32	0.004	6.00	1.59, 22.63	0.001
Sharing of values	D7	4.30	1.45, 12.81	0.002	3.20	0.82, 12.50	0.007	4.10	1.26, 13.35	0.006
Specific measures for nursing Understanding the will of patients and their families and reviewing care	D4	2.35	1.00, 5.53	0.035	2.59	0.79, 8.47	0.083	2.73	1.02, 7.30	0.029
Feeling of the nurse Stability of mind through talking	D8	2.70	1.14, 6.40	0.011	1.49	0.51, 4.34	0.454	2.69	1.00, 7.22	0.027
Deepen one's view of end-stage patient care	D12	2.55	1.02, 6.34	0.028	2.40	0.77, 7.49	0.106	2.47	0.94, 6.54	0.049
Improvement of nurses' self-efficacy	D13	2.59	1.14, 5.87	0.013	3.18	0.92, 10.98	0.033	2.87	1.15, 7.15	0.011

DC, Death Conference, OR, odds ratio. CI, confidence interval. No., question no. Variable, the original concept of items of Death Conference Nursing Self-Assessment Sheet (refer Table 2). *Adjusted for gender, age. (Model 1), †Adjusted for academic background. (Model 2). DC experiences were categorized by participating in DC: High or Low. OR reviled High/Low. *P*-Values for the Whole Model Test of all variables predicting DC experience in model 1 and model 2 are all less than 0.05, which are by specific likelihood ratio Chi-square tests that evaluate how well the categorical model fits the data. Participation experience in Death Conference was categorized by the participation experience High or Low.

(Refer Table 3), are shown to be independent risk factors for DC experiences as follow (Question No., Category). D6. Cooperation (OR 2.54, 95% CI, 1.20, 5.37, $P < 0.007$), D5. Future direction of nursing (OR 6.12, 95% CI, 1.76, 21.22, $P < 0.001$), D7. Future direction of nursing (OR 4.30, 95% CI, 1.45, 12.81, $P = 0.002$), D4. Specific measures for nursing (OR 2.35, 95% CI, 1.00, 5.53, $P = 0.035$), D8. Feeling of the nurse (OR 2.70, 95% CI, 1.14, 6.40, $P = 0.011$), D12. Feeling of the nurse (OR 2.55, 95% CI, 1.02, 6.34, $P < 0.028$), D13. Feeling of the nurse (OR 2.59, 95% CI, 1.14, 5.87, $P < 0.013$).

In model 1 of the multivariate logistic regression analysis adjusted for gender, age, variables; the original concept, which is the significance of DC of items of the Death Conference Nursing Self-Assessment Sheet, are shown to be independent risk factors for DC experiences. High group and Low group frequency are as follows (Question No., Category). D5. Future direction of nursing (OR 5.99, 95% CI, 1.32, 27.32, $P = 0.004$), D7. Future direction of nursing (OR 3.20, 95% CI, 0.82, 12.50, $P = 0.007$) and D13. Feeling of the nurse (OR 3.18, 95% CI, 0.92, 10.98, $P = 0.033$). However, in the following questions of D6, D4, D8, and D12, no significant difference was seen using model 1.

In model 2 of the multivariate logistic regression analysis was adjusted for academic background, variables; the original concept, which is the significance of DC of items of the Death Conference Nursing Self-Assessment Sheet, are shown to be independent risk factors for DC experiences. High group and Low group frequency are as follows (Question No., Category). D6. Cooperation (OR 2.41, 95% CI, 1.10, 5.25, $P = 0.016$), D5. Future direction of nursing (OR 6.00, 95% CI, 1.59, 22.63, $P = 0.001$), D7. Future direction of nursing (OR 4.10, 95% CI, 1.26, 13.35, $P = 0.006$), D4. Specific measures for nursing (OR 2.73, 95% CI, 1.02, 7.30, $P = 0.029$), D8. Feeling of the nurse (OR 2.69, 95% CI, 1.00, 7.22, $P = 0.027$), D12. Feeling of the nurse (OR 2.47, 95% CI, 0.94, 6.54, $P = 0.049$), D13. Feeling of the nurse (OR 2.87, 95% CI, 1.15, 7.15, $P = 0.011$).

4. Discussion

4.1. Nurses' Terminal Care Related to DC Experiences and Nursing in the Death Conference Using the Death Conference Nursing Self-Assessment Sheet

Under the hypothesis that increasing the number of DC participation, nurses were expected to improve the quality of nurses' terminal care and developing nursing minds. Therefore, there was a need for further evidence on the impact of repeated DC participation on nurses' terminal care. Hence, continuing from our previous study clarify [5], we analyzed that the impact of repeated DC participation on nurses' terminal care and nursing in DC using the prepared Death conference Nursing Self-Assessment Sheet. There were significant differences in four categories (Cooperation, Future direction of nursing, Specific measures for nursing, and Feeling of the nurse). The current results show that repeated DC participation concerns about the impacted on nurses' terminal care and nursing in DC.

For the assessment items of the categories that were significant in the univariate analysis described above, a significant association with the experience of participating in DC; High group and Low group frequency was confirmed by univariate and multivariate logistic regression using adjustment factor of an academic background. The verification of the reliability and validity of the questionnaire are the challenge in the future. More evidence of the way of terminal concerns by raising the quality of DC developing nursing minds will be needed using the Terminal Care and Death Conference Nursing Self-Assessment Sheet. Moreover, research to see the relationship between items of the Terminal Care Nursing Self-Assessment Sheet and items of the Death Conference Nursing Self-Assessment Sheet will also be needed. Nurses should resolve the stress associated with terminal care by participating in DC [5], and consider how to operate DC so that nurses can grow not only in nursing but also as a whole.

4.2. Current Status and Issues of Nurses' Terminal Care and Nursing in the Death Conference That Was Not Related to DC Experiences

There was no significant association between the experience of participating in DC and the following category (the significance of DC) corresponding to items in the Death Conference Nursing Self-Assessment Sheet. They are the following category (the significance of DC) that Specific measures for nursing (learning patient care at the end of life), Future direction of nursing (share the purpose and direction of care, clarification and resolution of nursing problems), Feeling of the nurse (be rebuked or accused of being penitentiary, growing interest in palliative care, improvement in the quality of care and nurse's catharsis).

Concerning specific measures for nursing (learning patient care at the end of life), it is necessary to acquire knowledge and skills through training. In hospitals, it is necessary to examine the contents of nursing standards and procedures related to postmortem treatment, dealing with family members at that time, and regarding DC. Regular training needs to be held throughout the hospital or in each ward department to acquire knowledge and skills in terminal care.

About future direction of nursing (share the purpose and direction of care, clarification and resolution of nursing problems), it is necessary to have a time to hold DC regularly and to analyze the content and quality of DC to reduce the stress of nurses performing terminal care even in busy to respond to patients and their families. It is necessary to hold DC regularly, analyze the content and quality of DC using the assessment sheet used this time, and make improvements as appropriate. Nurses and health care professionals should share the development of the nursing process of patients and their families, classify and resolve problems that have arisen in dealing with patients and their families, and build evidence.

According to feeling of the nurse (be rebuked or accused of being penitentiary, growing interest in palliative care, improvement in the quality of care and nurse's catharsis), at the conference, nurses and healthcare professionals should

never blame each other's nurses or impose their responsibilities on particular nurses, as indicated in the definition of DC. Nurses and healthcare professionals should maintain DC as a place where they can find directions for using in the next nursing, and the aim is to improve nursing. With the participation of DC, the team can support nurses to share their own problems, feel catharsis by solving them, and take a new interest in terminal care.

This study has several limitations. The generalizability may be limited because the number of participants was very small. To generalize these results, we need to add many more participants. The future task is to verify the reliability and validity of the Terminal Care and Death Conference Nursing Self-Assessment Sheet.

5. Conclusion

It suggests that with the increasing number of DC participation, nurses are expected to improve the quality of nurse's terminal care and developing nursing minds. The impact of repeated DC participation on nurses' terminal care and nursing in DC using the prepared Death Conference Nursing Self-Assessment Sheet was analyzed. There were significant differences in four categories (Cooperation, Future direction of nursing, Specific measures for nursing, Feeling of the nurse). The current results show that repeated DC participation concerns the impact on nurses' terminal care and nursing in DC.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

Funding

Authors' Contributors

Yuko Harding: participated in the conception and design, analysis and interpretation of data, drafting the article, revising it for intellectual content, and final approval of the finished article.

Yoshiko Ishibashi: acquisition of data, final approval of the finished article.

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Masako Yano: participated in the conception and design, interpretation of data, revising it for intellectual content, final approval of the finished article.

Michiyo Ando: revising it for intellectual content, final approval of the finished article.

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