Original Article

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Effect of interprofessional collaboration among nursing home professionals on end-of-life care in nursing homes

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SUMMARY As end-of-life (EOL) care in nursing homes is gradually increasing, interprofessional collaboration in EOL care in nursing homes is becoming important. However, a method for measuring interprofessional collaboration has not been established. Therefore, this study aimed to clarify the effect of interprofessional collaboration on EOL care in nursing homes. Questionnaires were mailed to the facility directors of 378 nursing homes in Kanagawa Prefecture, Japan, and distributed to nurses, care managers, and professional caregivers. Three professionals from each nursing home completed the same questionnaire, which included 9 items on EOL care: shared facility policy, residents' wishes, each professional's roles, person in charge of the facility, residents' conditions, mental status of residents' families, emergency codes, residents' key people, and sufficient discussion among professionals. Based on the professionals' responses, interprofessional collaboration was assessed. We used multivariable analysis, with interprofessional collaboration as an independent factor. The outcome was the amount of EOL care in the nursing home. A total of 180 (47.6%) nursing homes participated. Multivariable analysis showed that interprofessional collaboration (beta [β] coefficient 2.5, 95% confidence interval [CI] 0.45-4.48; $p = 0.017$), availability of EOL care bonuses (β coefficient 4.4, 95% CI 1.41-7.38; $p = 0.004$), physician support for emergency care during off time (β coefficient 5.4, 95% CI 1.86-8.94; $p = 0.003$), and EOL care conferences (β coefficient 4.1, 95% CI 1.19-6.99; $p = 0.006$) were significant factors associated with the amount of EOL care in the nursing homes. We found evidence in the adjusted model that interprofessional collaboration among facility professionals is effective for EOL care in nursing homes.

Keywords nurse, interprofessional working, care manager, professional care giver, perception, differences in perception

1. Introduction

End-of-life (EOL) care is of interest in ageing societies, especially in the super-aged society of Japan (*1*), and it requires interprofessional collaboration among multiple professionals (*2,3*). However, in Japan, most professionals do not receive sufficient interprofessional education before university graduation (*4*). Therefore, the provision of EOL care based on interprofessional collaboration is an important issue.

There are many issues involved in the implementation of EOL care in nursing homes, including interprofessional collaboration and legal situations. Concerning the location where people die, EOL care in nursing homes is less common (7%) than hospital death (73%) in Japan (*5*). The rate of hospital deaths in other countries is lower than that in Japan. EOL care in nursing homes is important for preventing the undesirable transfer of patients to hospitals and is a key issue in Japan, as the country with the largest superaged population (*1*). The Japanese government initiated public long-term care insurance (LTCI) in 2010, making people aged 65 and over eligible for elderly facility service benefits, based strictly on physical and mental disability. Elderly facilities with LTCI coverage are mainly geriatric health service facilities (GHSFs) and nursing homes. GHSFs provide physical therapy to older persons to support their daily living functions so they can resume independent living at home; thus, they act as 'intermediate' facilities. A previous study reported

that 26.8% of residents died in GHSFs (*6*). On the other hand, nursing homes provide only chronic care, with an average length of stay of approximately 4 years (*7*), which is longer than that in other countries. However, it is difficult to provide EOL care in nursing homes, and palliative care services in nursing homes cannot be extended because such services are generally available only in hospitals. Moreover, euthanasia is not legal even at the terminal stage in Japan, which is also a different situation than that in other countries. To implement EOL care in nursing homes, consistent communication between facility professionals and residents' families from admission to the EOL care period is necessary. Therefore, interprofessional collaboration that includes families is essential for EOL care in nursing homes.

Interprofessional collaboration among nurses, care managers, and professional caregivers is required for EOL care in Japanese nursing homes. A nurse usually assesses residents' medical conditions and requires consultation with a physician during the EOL care period. A care manager is a professional who is responsible for assessing residents' wishes for EOL care, creating care plans, and organizing services during the EOL care period (*8*). The care manager role has been introduced and covered in long-term care facilities, including nursing homes and social services, by the LTCI system in Japan (*9*). A professional caregiver provides daily care for residents from admission to EOL care. Since professional caregivers are the most common staff in nursing homes, professional caregivers play an important role in interprofessional collaboration for EOL care in nursing homes.

Although EOL care bonuses, physician support for emergency care, proximity to affiliated hospitals, and physician EOL care conferences are important factors of EOL care in nursing homes (*7,10-12*), interprofessional collaboration has not been reported to affect EOL care in nursing homes. The EOL care bonus system was initiated in 2006 and provides financial support for EOL care in nursing homes from the Japanese government. In addition, bonuses result in higher-quality EOL care, such as advance care planning (*10*). Because nurses in almost all nursing homes work on call at night, professional caregivers are often needed to provide EOL care in nursing homes at that time. In general, many nurses have prior work experience in hospitals before working at nursing homes (*13*). However, almost all professional caregivers have not previously had careers in which they might witness the death of a person before working at nursing homes (*14*). Professional caregivers' provision of EOL care in nursing homes at night without the presence of a nurse has raised concerns about the quality of EOL care in nursing homes. Therefore, interprofessional collaboration is important to ease caregivers' anxiety; in particular, EOL care conferences are required to effectively provide EOL care (*15,16*). However, to the best of our knowledge, there have been few reports investigating interprofessional collaboration in EOL care in nursing homes.

In the present study, we focused on interprofessional collaboration in EOL care in nursing homes, but quantifying interprofessional collaboration is difficult (*17,18*). An assessment of interprofessional collaboration among nursing home professionals providing EOL care in nursing homes will offer necessary insight. However, previous research has not reported the contribution of interprofessional collaboration to EOL care in nursing homes. Therefore, the objective of the present study was to investigate the effect of interprofessional collaboration on EOL care in nursing homes.

2. Materials and Methods

2.1. Study design and participants

This was a cross-sectional study of nursing homes in Kanagawa Prefecture. Data were collected via a longitudinal questionnaire survey from November 2015 to January 2016 (*10*). The survey was sent to the facility directors of all 378 nursing homes in Kanagawa Prefecture that were registered in the LTCI Services Informational Publication System in November 2015 (*19*). The facility directors distributed the survey forms to 3 representative professionals working in each facility: a nurse, a care manager, and a professional caregiver. Nursing homes that returned completed questionnaires were included in the study. Facilities that returned questionnaires with missing data were excluded. Gift cards with a value of 500 Japanese yen were used as an incentive to encourage study participation. We requested participation repeatedly by calling and faxing nonresponding nursing homes. The directors of the Health and Welfare Departments in Yokohama city, Kawasaki city, Yokosuka city, Sagamihara city, and Kanagawa Prefecture cooperated in the implementation of the present survey.

2.2. Setting

The setting of the present study included all nursing homes in Kanagawa Prefecture, Japan. This prefecture is near the national capital of Tokyo, which had a population of approximately nine million people as of 2014, 22.5% of whom were older persons (*20,21*). Kanagawa Prefecture is facing many issues related to the rapid increase in the population of older persons that will occur in Japan over the next 20 years (*22*).

2.3. Questionnaire

Identical questionnaires were distributed to all three professionals (nurses, care managers, and caregivers); the questionnaires included questions about perceptions

of interprofessional collaboration in EOL care in each nursing home. The three professionals were asked to respond 'Yes' or 'No' to the 9 items on interprofessional collaboration in EOL care (Supplemental data). For the study feasibility assessment, two nursing home visits were conducted to interview all three professionals (nurses, care manager, and caregivers), and a pilot survey was performed with the same survey questionnaire at 14 nursing homes in August 2014. The questionnaire included nine items designed to reveal each professional's perceptions of interprofessional collaboration in EOL care in each nursing home, and questionnaire content was developed based on the interviews conducted at the two nursing homes (Supplemental data).

2.4. Ethical considerations

This study was approved by the medical study institutional review boards of Yokohama City University (No. A140522015, approved on 24 July 2014) and performed in accordance with the Declaration of Helsinki. We explained the research content and provided a written description. We asked only the nursing homes that agreed to participate after being informed of the above information to complete the set of questionnaires. Therefore, consent was implied by the return of the questionnaires by the nursing home facilities.

2.5. Statistical analysis

Univariable analysis was performed using a simple regression model of the amount of EOL care in nursing homes. The factors were the eight identified response patterns (① to ⑧) for the 9 items (question 1 [Q1] to Q9). Multivariable analysis was conducted using a linear regression model. The primary outcome was the number of EOL care residents in the nursing home with adjustment per 100 beds as of 2014. According to our hypothesis, interprofessional collaboration was included as a variable in the multivariable linear regression model. Availability of EOL care bonuses, physician support for emergency care during off time, proximity to affiliated hospitals, and EOL care conferences were also included as variables (10,12). Interprofessional collaboration was quantified based on the perceptions of interprofessional collaboration in EOL care of the three professionals from each nursing home. The quantified value was stratified into three levels. For the higher level, the three professionals agreed with all 9 interprofessional collaboration questions. The middle level was between the higher level and lower level. For the lower level, any of the three professionals disagreed with any of the questions. All *p*-values were two-tailed, and all analyses in this study were performed using SPSS version J21 (IBM, Tokyo, Japan). A p-value < 0.05 was considered statistically significant in all analyses.

3. Results

3.1. Study participants

Of the 378 nursing homes that were sent questionnaires, 237 returned them (62.7% response rate) (Figure 1). The remaining 141 nursing homes (37.3%) did not return responses. Among the 237 responding nursing homes, one of the three professionals in 21 facilities (8.9%) did not answer any of the nine questions. Thirty-six facilities (15.2%) returned partially completed questionnaires. Ultimately, 180 nursing homes (47.6%) were included in the study.

3.2. Characteristics of the participating facilities

A total of 176 of the facilities (97.8%) were subsidized by the national government, and four facilities (2.2%) were subsidized by the local government. The mean number of beds was 60.0 (standard deviation [SD]: 39.8). A total of 160 (88.9%) nursing homes had individual rooms, and the median number of rooms was 21 (interquartile range [IQR]: 5.5-85). Among the 3,739 discharged residents from 180 nursing homes (mean ± SD: 21.5 ± 10.4 resident/facility), 2,804 residents (mean±SD: 15.8 ± 8.9 resident/facility) were discharged due to death during the year. Of those who died, 1,698 residents died in the nursing home (60.6%; mean ± SD: 9.4 ± 8.4 resident/facility). With adjustment for the number of deaths per 100 beds, the mean number of residents who died in the nursing home was 11.3 per year (SD: 9.7). Of the 180 nursing homes included in the study, 108 (65.6%) adopted the EOL care bonus system.

3.3. Characteristics of the three types of professionals in the responding facilities

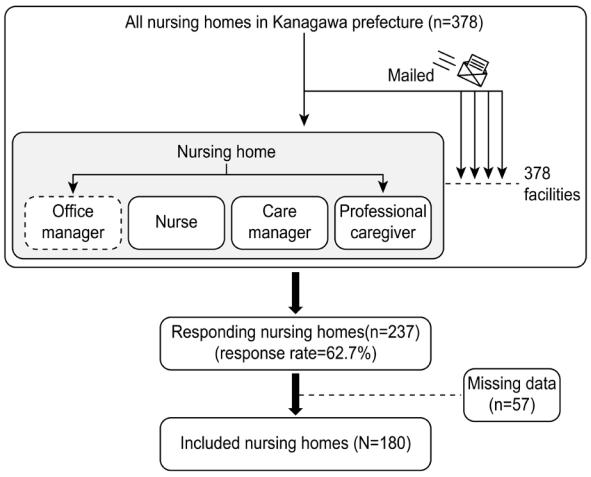

Figure 1. Flow charts of the inclusion criteria for the study. Among the responding nursing homes (n = 237), those with complete responses from the three types of professionals were included.

Table 1. Characteristics of the three types of participating professionals from each of the nursing homes (*n* = 180)

Variable	Nurse	Care manager	Professional caregiver
Age			
< 40	23 (12.8%)	59 (32.8%)	95 (52.8%)
40-49	42 (23.3%)	68 (37.8%)	58 (32.2%)
50-59	66 (36.7%)	41 (22.8%)	24 (13.3%)
60-69	47 (26.1%)	9 (5.0%)	2 (1.1%)
≥ 70	1 (0.6%)	3 (1.7%)	0 (0%)
Female gender	162 (90.0%)	98 (54.4%)	80 (44.4%)
Experience in their nursing homes [mean years ± SD]	7.3 ± 6.8	8.8 ± 5.9	9.2 ± 5.3
Experience in their areas of expertise [mean years ± SD]	26.1 ± 11.0	9.2 ± 5.3	9.7 ± 5.3
Experience of EOL care in their nursing homes (0, 1-4, ≥ 5 times)	28, 19, 129	33, 36, 109	25, 50, 103

SD: standard deviation; EOL: end of life.

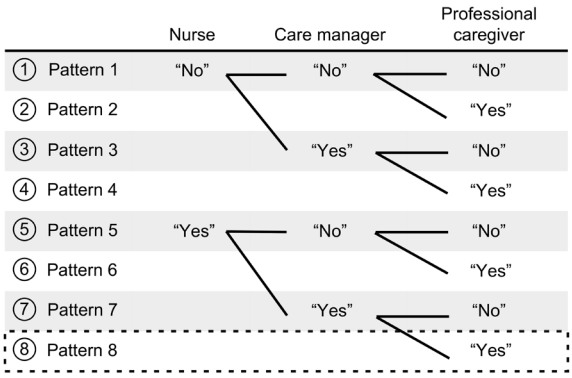

Figure 2. Eight patterns of 'Yes' or 'No' responses to the survey questions. Theoretically, Pattern 1 indicates the most negative response and Pattern 8 indicates the most positive response regarding interprofessional collaboration in EOL care in nursing homes.

Table 1 shows that almost all nurses were female. However, there were equal numbers of females and males among the care managers and professional caregivers. The findings also revealed that the participating care managers and professional caregivers were younger and had less expert experience than the nurses. Moreover, the care managers and professional caregivers had worked the majority of their careers at the nursing homes.

3.4. Differences in perception among the three types of professionals

The 'Yes' or 'No' responses to the questions in the present survey from the three types of professionals were categorized into eight patterns (①-⑧), as shown in Figure 2. Table 2 shows the results regarding the number of types of professionals who indicated the presence of interprofessional collaboration in EOL care in relation to each item. The following response patterns were observed: three professionals (⑧) > two professionals (④, ⑥, ⑦) > one professional (②, ③, ⑤) > none of the professionals (①). The univariable analysis showed that Q1, Q2, Q3, and Q7 received 'Yes' responses from none of the professionals (①); Q1, Q2, Q5, Q8, and Q9 received 'Yes' responses only from the nurse (⑤); and Q1, Q2, Q3, Q5, Q6, Q7, and Q8 received 'Yes' responses from all three professionals (⑧). These items were significantly associated with the amount of EOL care in nursing homes (Table 2).

3.5. Multivariable analysis results

In the multivariable analysis, the extent of interprofessional collaboration (adjusted coefficient 2.5, 95% confidence interval [CI] 0.45-4.48; $p = 0.017$), availability of EOL care bonuses (adjusted coefficient 4.4, 95% CI 1.41-7.38; $p = 0.004$), physician support for emergency care during off time (adjusted coefficient 5.4, 95% CI 1.86-8.94; $p = 0.003$), and EOL care conferences (adjusted coefficient 4.1, 95% CI 1.19-6.99; $p = 0.006$) were significant factors associated with the amount of EOL care provided in nursing homes (Table 3).

4. Discussion

4.1. Summary of the findings

To our knowledge, this is the first survey to reveal that interprofessional collaboration is associated with the amount of EOL care in nursing homes. Additionally, in the univariable analysis, the perception of the presence of interprofessional collaboration in EOL care by all three professionals (the nurse, care manager, and professional caregiver) was related to an increase in EOL care in nursing homes, whereas the perception of the presence of interprofessional collaboration in EOL by none of the professionals or exclusively by the nurse was related to a decrease in EOL care in nursing homes.

4.2. Interpretation and explanation of the results

The findings presented in Table 2 revealed that the perceptions of interprofessional collaboration differed across items and professionals. The perception of interprofessional collaboration was most frequently reported by all three professionals, followed by the

Table 2. Positive responses regarding interprofessional collaboration in end-of-life care in the nursing homes (n = 180)

Variable	1. None		2. Only PCG		3. Only CM		4. Only 2 professionals (CM+PCG)		5. Only NS		6. Only 2 professionals (NS+PCG)		7. Only 2 professionals (NS+CM)		8. 3 professionals	
	Coefficient (95%CI)	p-value	Coefficient (95%CI)	p-value	Coefficient (95%CI)	p-value	Coefficient (95%CI)	p-value	Coefficient (95%CI)	p-value	Coefficient (95%CI)	p-value	Coefficient (95%CI)	p-value	Coefficient (95%CI)	p-value
Q1. Facility policy on EOL care, number (ratio)	13 (7.2%) -9.8 (-15.2-4.5)	< 0.001**	8 (4.4%) -3.0 (-9.9-3.9)	0.394	4 (2.2%) -3.0 (-9.9-3.9)	0.394	9 (5.0%) 6.4 (-0.1-12.9)	0.052	4 (2.2%) -11.6 (-21.1-2.1)	0.020*	10 (5.6%) 0.6 (-5.7-6.8)	0.857	16 (8.9%) -1.1 (-6.1-3.9)	0.659	116 (64.4%) 3.9 (0.9-6.8)	0.001*
Q2. Residents' wishes for EOL care, number (ratio)	9 (5.0%) -9.5 (-15.9-3.1)	0.004*	2 (1.1%) -5.2 (-18.8-8.4)	0.454	3 (1.7%) -5.2 (-18.8-8.4)	0.454	12 (6.7%) 4.7 (-1.0-10.4)	0.106	4 (2.2%) -11.3 (-20.9-1.8)	0.020*	10 (5.6%) -0.5 (-6.7-5.7)	0.876	11 (6.1%) -0.6 (-6.6-5.4)	0.842	129 (71.7%) 3.4 (0.3-6.6)	0.030*
Q3. Each professional's role in EOL care, number (ratio)	14 (7.8%) -9.5 (-14.6-4.3)	< 0.001**	5 (2.8%) -6.2 (-14.9-2.4)	0.156	3 (1.7%) -6.2 (-14.9-2.4)	0.156	13 (7.2%) 4.4 (-1.1-9.9)	0.116	4 (2.2%) -8.4 (-18.0-1.2)	0.086	15 (8.3%) 0.1 (-5.1-5.2)	0.979	18 (10.0%) -1.9 (-6.6-2.9)	0.436	108 (60.0%) 4.0 (1.1-6.8)	0.007*
Q4. Key worker to contact for each resident, number (ratio)	6 (3.3%) -6.6 (-14.5-1.3)	0.103	9 (5.0%) -0.9 (-7.5-5.6)	0.784	6 (3.3%) -0.9 (-7.5-5.6)	0.784	9 (5.0%) -2.8 (-9.3-3.8)	0.405	2 (1.1%) 2.3 (-11.4-15.8)	0.748	18 (10.0%) 1.7 (-3.0-6.5)	0.474	14 (7.8%) -0.3 (-5.6-5.0)	0.907	116 (64.0%) 1.4 (-1.6-4.4)	0.346
Q5. Residents' conditions during EOL care, number (ratio)	2 (1.1%) -6.4 (-20.0-7.2)	0.353	2 (1.1%) -9.4 (-23.0-4.1)	0.172	1 (0.6%) -9.4 (-23.0-4.1)	0.172	16 (8.9%) 0.5 (-4.5-5.5)	0.846	5 (2.8%) -11.0 (-19.5-2.4)	0.012*	10 (5.6%) -4.7 (-10.9-1.5)	0.139	10 (5.6%) -0.4 (-6.6-5.8)	0.898	134 (74.4%) 4.0 (0.8-7.2)	0.015*
Q6. Sufficient discussion among professionals, number (ratio)	7 (3.9%) -6.0 (-13.4-1.3)	0.942	4 (2.2%) -6.9 (-16.5-2.8)	0.161	7 (3.9%) -6.9 (-16.5-2.8)	0.161	9 (5.0%) 1.7 (-4.9-8.2)	0.611	7 (3.9%) -6.1 (-14.0-1.8)	0.130	9 (5.0%) -3.0 (-8.5-2.5)	0.289	17 (9.4%) -0.2 (-5.1-4.7)	0.942	117 (65.0%) 3.1 (0.1-6.0)	0.043*
Q7. Mental status of residents' families, number (ratio)	9 (5.0%) -9.7 (-16.0-3.3)	0.003*	7 (3.9%) -2.1 (-9.5-5.3)	0.573	9 (5.0%) -2.1 (-9.5-5.3)	0.573	14 (7.8%) 2.7 (-2.6-8.1)	0.310	42 (23.3%) -2.3 (-7.8-3.2)	0.415	18 (10.0%) 2.6 (-2.1-7.3)	0.280	7 (3.9%) -2.1 (-6.2-2.0)	0.314	85 (47.2%) 3.0 (0.1-5.8)	0.040*
Q8. Emergency codes during on-call hours, number (ratio)	2 (1.1%) -6.4 (-20.0-7.2)	0.353	1 (0.6%) -0.2 (-19.4-19.0)	0.981	2 (1.1%) -0.2 (-19.4-19.0)	0.981	5 (2.8%) 2.8 (-5.9-11.4)	0.532	6 (3.3%) -11.5 (-20.0-2.9)	0.009*	11 (6.1%) -2.1 (-8.1-3.8)	0.479	9 (5.0%) -3.0 (-9.5-3.6)	0.370	144 (80.0%) 4.7 (1.2-8.2)	0.009*
Q9. Residents' key people, number (ratio)	2 (1.1%) 3.2 (-10.4-16.8)	0.643	4 (2.2%) 2.2 (-7.5-11.9)	0.658	3 (1.7%) 2.2 (-7.5-11.9)	0.658	7 (3.9%) -2.3 (-9.7-5.0)	0.532	2 (1.1%) -11.1 (-22.1-0.0)	0.049*	12 (6.7%) -3.7 (-9.4-2.0)	0.208	12 (6.7%) -2.8 (-8.5-2.9)	0.333	137 (76.1%) 3.7 (0.4-7.0)	0.027

NS: nurse; CM: care manager; PCG: professional caregiver; CI: confidence interval; Q: question; EOL: end of life. Statistical analysis was conducted based on a simple regression model for the amount of EOL care in nursing homes; *$p < 0.05$; **$p < 0.001$.

Table 3. Multivariable analysis of factors associated with end-of-life care in the nursing homes (n = 180)

Variable	Coefficient	(95%CI)	p-value
Interprofessional collaboration	2.5	(0.45-4.48)	0.017*
Availability of EOL care bonuses	4.4	(1.41-7.38)	0.004*
Physician support for emergency care during off time	5.4	(1.86-8.94)	0.003*
Proximity to affiliated hospital	2.0	(-3.82-7.89)	0.494
EOL care conferences	4.1	(1.19-6.99)	0.006*

Based on multiple linear regression analysis; EOL: end of life; CI: confidence interval; *$p < 0.05$.

perception of interprofessional collaboration by two professionals, one professional, and no professionals. These results were expected to some extent. In the univariable analysis, the perception of interprofessional collaboration by all three professionals indicated increased EOL care in nursing homes. On the other hand, the perception of interprofessional collaboration exclusively by only the nurse or by none of the professionals indicated decreased EOL care in nursing homes. The results suggest that nurse leaders in EOL care need to attend to other professionals' perceptions of interprofessional collaboration in EOL care.

The results of the multivariable analysis revealed that interprofessional collaboration was associated with the amount of EOL care in nursing homes. The results are novel in revealing the importance of interprofessional collaboration.

In the other results of the multivariable analysis, availability of EOL care bonuses, physician support for emergency care during off time, and EOL care conferences were shown to be independent factors associated with EOL care in nursing homes, which is consistent with previous research (10). The univariable analysis indicated that the perception of interprofessional collaboration by all three types of professionals increased the amount of EOL care in nursing homes, while the perception of interprofessional collaboration exclusively by the nurse or by none of the professionals decreased the amount of EOL care in nursing homes. The results on the perception of interprofessional collaboration by three professionals and no professionals were readily understood. The results strongly suggested that the perception of interprofessional collaboration in EOL care in nursing homes by only nurses may be an interfering factor. The results indicated that nurses in nursing homes need interprofessional collaboration with other professionals, not only subjective perceptions of EOL care. For the implementation of EOL care in nursing homes, communication, interviews and surveys with many professionals can be helpful.

4.3. Study limitations

Our study has several limitations. First, causal relationships could not be established due to the retrospective design. Second, there was selection bias because the setting was one prefecture in Japan, and the sample size was small because facilities without subjective responses from all three professionals were excluded. Future surveys should have a sufficient sample size to accommodate the eight patterns shown in Figure 2. Third, the present study was a questionnaire survey and may have been affected by response bias due to the possibility that respondents provided socially desirable responses to the questionnaire (*23*). Fourth, the study was an exploratory assessment of interprofessional collaboration in EOL care in nursing homes, and interprofessional collaboration was measured based on professionals' perceptions. Future studies are needed to determine the validity of this measure.

4.4. Notable characteristics of this study compared to other studies

In the field of interprofessional collaboration, few studies have undertaken quantitative evaluations due to the difficulty of measuring collaboration (*24,25*). Moreover, studies of interprofessional collaboration in EOL care in nursing homes are limited (*16,26-28*). The survey method used in this study was unique in that the same questions were asked of three types of professionals who ostensibly worked together in the same facility. To the best of our knowledge, this is the first such study of EOL care in nursing homes in the global literature. In research on perceptions of interprofessional collaboration, team training has been shown to be effective in the perception of collaboration (*29*). However, previous literature has not examined the interprofessional collaboration among nursing home professionals. Therefore, our approach will undoubtedly contribute to awareness of the reality of EOL care in nursing homes.

Given the cooperation of the directors of the health and welfare departments, the response rate (62.7%) in the present study was higher than that of a general survey. Therefore, the results of our study have high external validity.

4.5. Practical considerations and future work

According to the results of the present study, interprofessional collaboration among nurses, care managers, and professional caregivers is important to promote EOL care in nursing homes. Therefore,

it will be useful to regularly assess the perception of interprofessional collaboration in EOL care based on each type of professional in nursing homes. A questionnaire survey of multiple professionals, such as that used in the present study, can be useful for the assessment of interprofessional collaboration in EOL care research given that the present study revealed differences in the perceptions of interprofessional collaboration among professionals and was successful in quantitatively assessing interprofessional collaboration.

In conclusion, interprofessional collaboration in EOL care is associated with the amount of EOL care in nursing homes. The perception of interprofessional collaboration exclusively by nurses or by no professionals may tend to decrease the amount of EOL care in nursing homes. Interprofessional collaboration among nursing home professionals is effective for EOL care in nursing homes.

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Supplemental Data

Questionnaire (Survey of End-of-Life Care)

Q1. Do you think that each professional shares a basic policy for end-of-life care in your nursing home? 1) Yes 2) No

Q2. Do you think that each professional shares residents' or residents' families' wishes regarding end-of-life care in your nursing home? 1) Yes 2) No

Q3. Do you think that the role of each professional in end-of-life care is clear in your nursing home? 1) Yes 2) No

Q4. Do you think that a key worker is chosen for each resident during end-of-life care in your nursing home? 1) Yes 2) No

Q5. Do you think that each professional shares information on residents' conditions during end-of-life care in your nursing home? 1) Yes 2) No

Q6. Do you think that there is sufficient discussion by each professional of residents during end-of-life care in your nursing home? 1) Yes 2) No

Q7. Do you think that each professional shares information on the mental statuses of residents' families during end-of-life care in your nursing home? 1) Yes 2) No

Q8. Do you think that each professional shares the emergency codes for a resident in your nursing home? 1) Yes 2) No

Q9. Do you think that each professional knows who the key person for each resident is in your nursing home? 1) Yes 2) No