

# Evaluation of a training program for community-based end-of-life care of older people toward aging in place: A mixed methods study

Chizuru Nagata<sup>\*</sup>, Masae Tsutsumi, Asako Kiyonaga, Hiroshi Nogaki

Division of Community/Gerontological Nursing, Yamaguchi University Graduate School of Medicine, 1-1-1 Minami-kogushi, Ube, Yamaguchi 755-8505, Japan

## ARTICLE INFO

### Keywords:

End-of-life care  
Community-based services  
Evaluation of training program  
The four-level Kirkpatrick model  
Focus group discussion  
Mixed methods study

## ABSTRACT

**Aims:** To evaluate a training program that supports community-based service staff in implementing aging-in-place and end-of-life care programs.

**Background:** Globally, as the population ages, the need for end-of-life care has never been greater. Since Japan is facing the issues of a super-aged population sooner than most countries, there is a particularly urgent need to enhance end-of-life care for older people. Most Japan's older people wish to spend their final days at home, however, only 11–13% end their lives at home, while 73% die in hospitals. As part of care system, small-scale community-based service for aging-in-place established across Japan in 2006 managed locally. These are flexible services using home or facility care or both for the individual to live long term at their preferred place. We developed the end-of-life care educational training program to encourage behavioral changes in community-based service staff of various readiness levels.

**Design:** Mixed methods study design.

**Methods:** A pre-post evaluation of knowledge, confidence and attitude toward end-of-life care, combining quantitative and qualitative data from 53 community-based service staff members who participated in the training program from September 2017 to September 2019. Participants were informed of the end-of-life care process using focus group discussions about end-of-life care and completed surveys evaluating the program before, immediately following and three months after the training. We used the four-level Kirkpatrick model as the evaluation indicator.

**Results:** Quantitative analysis results indicated that participants were satisfied with the training program. Their knowledge scores regarding end-of-life care significantly improved; they also experienced confidence gains and changes in attitudes, becoming more approving of end-of-life care. Qualitative data revealed details of participants' satisfaction and what was learned. Through the focus group discussions, they created action plans for implementing end-of-life care programs, which some had accomplished in their local centers by the three-month follow-up.

**Conclusions:** These results suggest that the training program is effective for promoting end-of-life care through community-based services in Japan. Conducting follow-up training could effectively strengthen participants' commitment to end-of-life care at community-based services. Use of the training program is expected to promote services to support aging-in-place.

## 1. Introduction

Globally, an estimated 40 million people need palliative end-of-life care (EoLC) (World Health Organization, 2020). Approximately 40% of people who require EoLC are over 70 years old and almost 75% of these live in the Western Pacific, Africa and Southeast Asia (Worldwide Hospice Palliative Care Alliance, 2020). The improvement of global

EoLC is an urgent need, as there is a growing consensus that healthcare professionals have insufficient knowledge, skills and training to provide EoLC for older people (Ahlström et al., 2018; Hirakawa et al., 2017; Nakanishi and Miyamoto, 2016).

In Japan, the average life expectancy in 2019 exceeded 84 years (Ministry of Health, Labour and Welfare, Government of Japan, 2019). Additionally, 35.6 million citizens are aged 65 years or older, with a

<sup>\*</sup> Corresponding author.

E-mail addresses: [nagata@yamaguchi-u.ac.jp](mailto:nagata@yamaguchi-u.ac.jp) (C. Nagata), [tutumi@yamaguchi-u.ac.jp](mailto:tutumi@yamaguchi-u.ac.jp) (M. Tsutsumi), [kiyonaga@yamaguchi-u.ac.jp](mailto:kiyonaga@yamaguchi-u.ac.jp) (A. Kiyonaga), [nogaki@yamaguchi-u.ac.jp](mailto:nogaki@yamaguchi-u.ac.jp) (H. Nogaki).

<https://doi.org/10.1016/j.nepr.2021.103091>

Received 4 July 2020; Received in revised form 13 May 2021; Accepted 16 May 2021

Available online 19 May 2021

1471-5953/© 2021 Elsevier Ltd. All rights reserved.

28.1% rate of aging (Statistics Bureau, Ministry of Internal Affairs and Communications, Government of Japan, 2019). Adults over 65 are predicted to reach approximately 37 million in 2025 (Cabinet Office, Government of Japan, 2019). Thus, enhancing EoLC for older people in Japan is especially urgent.

Dying at home surrounded by family members is considered by many to be an indicator of high-quality care and constitutes a “good death” (Bannon et al., 2018; Costa et al., 2016). Most of Japan’s older people wish to spend their final days at home, even when terminally ill (Cabinet Office, Government of Japan, 2012); however, only 11–13% end their lives at home, while 73% die in hospitals (Ministry of Health, Labour and Welfare, Government of Japan, 2019; Morioka et al., 2018). In contrast, about 23% of all deaths in the UK occur at home and 47% occur in hospitals. Although home care is encouraged in Japan, the rate of deaths at home or in aged care facilities remains low.

## 2. Background

Japan provides a range of home care services aimed at preventing the unnecessary hospitalization of older people needing long-term care. As part of this integrated care system, small-scale community-based services (CBS) for aging-in-place were established across Japan in 2006, following a revision of the insurance system. These are flexible services using home or facility care or both for the individual to live long term at their preferred place. The concept of the facility here is home-based support; for example, staying at a facility that recreates an individual’s home living environment. Services are managed locally and are expected to respond sensitively to community needs. EoLC is a component of CBS that supports clients’ experiences of a good death (Srinonprasert et al., 2019). It is not mandatory for CBS to provide EoLC.

Providing EoLC for a broad range of patients is necessary. At present, there is no systematic way to accommodate EoLC for particular groups of patients, such as those with dementia. Dementia poses many challenges for caregivers and health professionals (D’astous et al., 2019; Hirooka et al., 2020). Communication difficulties complicate care, dementia-specific EoLC training is lacking (D’astous et al., 2019) and care for people with dementia is often poorly managed (Moss et al., 2002). Training is also lacking among clinicians generally; this gap in professional knowledge poses a significant barrier to improving access to EoLC for all patients (World Health Organization, 2020).

Hirakawa et al. (2017) established that the need for EoLC-skilled, community-based health professionals has only recently been incorporated into undergraduate curricula in Japan and is minimally addressed, often not including care assistants or community health workers; hence, ongoing EoLC education is needed. A Chinese study found that undergraduates had minimal knowledge about—and largely negative attitudes toward—EoLC requiring medical treatment that can be conducted only at hospitals and about the fear and anxiety of facing death (Jiang et al., 2019). In Japan, although fundamental nursing education programs endeavor to strengthen EoLC (Ministry of Health, Labour and Welfare, Government of Japan, 2007), nursing students’ opportunities for involvement in EoLC practices are limited because EoLC is often considered too complex (Tamaki et al., 2019).

Most training for health professionals is hospital-based and often lacks a community perspective (Nagano et al., 2019). However, positive changes are possible with only a modest time investment: a two-day frontline workers’ training course has been shown to increase confidence and knowledge about EoLC (Shulman et al., 2018).

This study focuses on an “aging-in-place” training initiative for building capacity in community services to provide EoLC in situ, accommodating older people who wish to experience the end of life at home, as one of the indicators of a good death is dying in one’s favorite place (Miyashita et al., 2008). Although death at home is not always a good death, when people wish to die at home, every effort should be made to accommodate this request; however, sufficient resources are not available (Ishikawa et al., 2021).

If the need for EoLC can be met by community-based services (CBS), which are not based in a hospital, facility, or home, aging-in-place may become more common for older people in Japan. People in end-of-life CBS can live out their final stage surrounded by familiar staff and fellow residents in a home-like atmosphere; this is particularly pertinent for people with dementia, who react adversely to changes in their environment. EoLC in CBS is extremely challenging due to limited access to medical care—even though it is provided through collaboration with general physicians—and lack of EoLC education for community health workers (Anstey et al., 2016). While most EoLC training programs are hospital-based, there is a community-based program in Japan that is very close to our objective, although only 10 trainees have completed it (Hirakawa et al., 2017). However, we could not find any programs targeting CBS that did not involve the provision of care in a hospital setting. Additionally, the staff of CBS comprises multiple professionals, some of whom are inexperienced or unqualified and no existing program covers their training and needs. Therefore, we developed the EoLC educational training program to encourage behavioral changes in CBS staff of various readiness levels. This study aimed to evaluate a training program that supports community-based service staff in implementing aging-in-place and EoLC programs.

## 3. Methods

### 3.1. Study design

This study used a mixed methods approach with a pre-post evaluation of knowledge, confidence and attitude toward EoLC. Qualitative data clarified changes in behavior. We used the four-level Kirkpatrick model (Kirkpatrick and Kirkpatrick, 2005) as the evaluation indicator. The authors, who had 8–20 years of nursing experience and 9–30 years of research experience with older people and home care, planned and conducted an EoLC training program. This program includes small-group discussions focused on EoLC (Focus Group Discussions [FGDs]). A FGD is one type of tool that can be used for health and medical research (Wong, 2008).

### 3.2. Training program

The self-contained training programs were conducted once a year, a total of three times. Each program had different content and participants but the structure was the same: orientation, presentation and FGD. The programs (Table 1) had some minor changes every year.

The training focused on the significance of EoLC in CBS; the physical aspects when people are close to death, such as sleeping longer and eating, moving and drinking less; and the role of care providers in EoLC

**Table 1**  
Contents of the training program.

Topic	Time (min)
<b>Orientation</b>	30
Procedure of the informed consent of this study	
Explanation of the purpose, significance, and ethical consideration	
Survey before the training program	
<b>Presentation</b>	45
Lecture of medical findings on EoLC, dementia, spiritual pain, and the role of physicians in EoLC	
Topics that respond to the needs of the participants for that year	
<b>Break</b>	15
<b>Focus Group Discussion (FGD)</b>	90
EoLC topics or episodes provided by highly experienced participants	
The role of care providers in EoLC	
Questions and answers between participants	
Closing remarks	
Announcements through the FGD of each group	
Survey after the training program	

for older people and family (e.g., what, when and how to contact medical professionals). Physicians from local hospitals presented a 45-minute lecture on dementia, the role of physicians in EoLC and responding to people distress at the end of life.

FGD was adopted as a principal part of the training program, facilitating the mutual exchange of participants' feelings, beliefs, experiences and reactions (Gibbs, 1997) to generate data, provide an interactive forum, create new knowledge and influence and educate participants (Morgan, 1997). Previous research has suggested that health care professionals' behavioral change is more likely to occur through interactive education (Forsetlund et al., 2009). The 90-minute discussion enabled participants to discuss EoLC with each other and with those experienced in providing community-based EoLC in an informal and welcoming environment. The focus groups were led by a

moderator who guided a small group of participants through a set of carefully focused questions in a permissive and non-threatening way (Krueger and Casey, 2015). FGD enables researchers to collect qualitative data through discussions of specific themes between participants with similar backgrounds or experiences (Krueger and Casey, 2015; Morgan, 1997). However, little has been written about improving EoLC using a focus-group study (Axelsson et al., 2019; Fryer et al., 2016; Kisorio and Langley, 2016).

### 3.3. Participants

Participants were recruited from 29 CBS consisting of 21 dementia-specific group homes, seven small-scale multifunctional care homes and one small nursing home in City A in the Chugoku district of Western

**Table 2**  
Focus group members.

Group No.	Participant No.	Sex	Service type	Position	Occupation	Experience at CBS (years)	Patients cared for at EoLC
1st year G1	P1	Female	DGH	Manager	Care worker	16	0
	P2	Female	DGH		Nurse	3	5
	P3	Female	DGH		Care worker	15	0
	P4	Female	DGH	Manager	Care worker	11	5
1st year G2	P1	Female	DGH	Manager	Care worker	7	2
	P2	Female	DGH	Manager	Care worker	15	0
	P3	Female	DGH		Care worker	10	0
	P4	Female	DGH		Nurse	9	>10
	P5	Male	DGH		Care worker	5	0
1st year G3	P1	Female	DGH		Care worker	5	2
	P2	Male	DGH	Manager	Care worker	4	5
	P3	Female	DGH	Manager	Care worker	8	0
	P4	Female	DGH		Nurse	6	>10
	P5	Male	DGH	Manager	Care worker	2	0
2nd year G4	P1	Female	DGH	Manager	Nurse	2	0
	P3	Female	DGH		Care worker*	7	15
	P4	Female	SMCH	Manager	Care worker	8	0
	P5	Female	SMCH		Care worker	8	0
	P6	Male	SNH	Manager	Care worker	3	>10
	P7	Female	DGH	Manager	Care worker*	9	0
	P1	Male	SMCH		Nurse	10	2
2nd year G5	P2	Female	DGH	Manager	Care worker*	15	1
	P3	Female	GH		Helper	6	4
	P4	Female	SMCH		Nurse	< 1	0
	P5	Female	SNH		Care worker	1	0
	P6	Female	DGH	Manager	Care worker*	16	0
	P1	Female	SMCH		Nurse	1	0
2nd year G6	P2	Female	DGH	Manager	Care worker*	7	4
	P3	Female	SMCH		Helper	6	0
	P4	Female	SMCH		Helper	< 1	0
	P5	Female	DGH		Care worker	6	0
	P6	Male	DGH	Manager	Care worker*	5	8
	P1	Female	SMCH		Nurse	2	0
	P2	Female	SNH		Nurse	1	>10
3rd year G7	P3	Male	DGH		Care worker	9	2
	P4	Female	DGH	Manager	Care worker **	10	0
	P5	Female	DGH	Manager	Care worker **	18	2
	P6	Female	DGH		Helper	2	2
	P7	Female	SMCH		Nurse	7	>10
	P1	Female	SMCH		Care worker	2	0
	P2	Male	SMCH	Manager	Care worker	2	0
3rd year G8	P3	Male	DGH	Manager	Care worker **	6	>10
	P4	Female	DGH	Manager	Care worker	1	1
	P5	Female	DGH		Nurse*	4	0
	P6	Female	DGH	Manager	Care worker	13	0
	P7	Female	SMCH	Manager	Care worker	8	0
	P1	Female	SNH		Nurse	< 1	0
	P2	Female	SNH		Care worker	4	0
3rd year G9	P3	Female	SMCH		Care worker	3	0
	P4	Female	SMCH	Manager	Care worker*	9	0
	P5	Female	DGH	Manager	Care worker	5	0
	P6	Female	DGH	Manager	Care worker	13	0
	P7	Female	DGH	Manager	Care worker **	17	0

DGH: dementia-specific group home, SMCH: small-scale multifunctional care home, SNH: small-scale nursing home

Helper: those who are not qualified but are skilled workers providing physical care and housework.

\* participated in program 2 times \*\* participated in program 3 times

Japan. A total of 53 participants from 17 of the CBS applied for the study's training program: 34 from 11 dementia-specific group homes, 14 from 5 small-scale multifunctional care homes and 5 from a small-scale nursing home. The EoLC workshops were given three times between 2017 and 2019 (14 participants attended the first, 18 the second and 21 the third) and there was a total of nine focus groups consisting of four to seven members each. Participants were nurses and care staff with or without experience of EoLC (Table 2). One researcher joined the discussion as a moderator in each group. Although these were designed to be one-off sessions with different groups of staff, 12 participants enjoyed the workshops so much that they attended more than once.

### 3.4. Data collection

Questionnaires were administered before (including the collection of demographic data), immediately following and three months after the training. The results were analyzed based on the four-level Kirkpatrick model (Kirkpatrick and Kirkpatrick, 2005)—“reaction” (level one): the learners' satisfaction with the program; “learning” (level two): demonstrated as improved knowledge, acquired skills and attitude changes; “behavior” (level three): the extent to which participants' behavior changes as a result of the training program; and “results” (level four): training outcomes, such as increased production, improved quality and decreased costs. These levels formed the theoretical basis for the evaluation (Bates, 2004; Moreau, 2017). The four-level Kirkpatrick model is generally used as a tool for program evaluation in nursing; quantitative and qualitative data are evaluated at each level (Jones et al., 2018). Reaction (level one) was evaluated using a 4-point Likert scale ranging from 1 to 4 (*Never, Rarely, Often and Very Often*) that evaluated whether the training content was understandable, interesting, applicable for the workplace and delivered in a comfortable learning environment. These surveys were conducted immediately following the training. Learning effects (level two) were evaluated based on participants' scores on a knowledge test (true/false questions), a questionnaire item asking if they believed they could care for someone at the end of life at their CBS and the reasons for their answer. Levels three (behavior) and four (results) were evaluated using qualitative data—which are more sensitive to behavioral change than quantitative data—from the open-ended questions of the three-month follow-up survey. The results in level four were considered as the new practices participants adopted to facilitate the clients' good deaths.

In the FGD, participants were asked: “What is your experience of EoLC?” Episodes of community-based EoLC practices and problem solutions were discussed in the training. EoLC practices and tasks performed in each facility were reported and questions from inexperienced participants were addressed by those with EoLC experience. Participants provided consent to have their FGD statements audio recorded.

### 3.5. Data analysis

Demographic data of participants were described as means and standard deviations and examined by frequency analyses. Survey data were summarized and responses were compared between those with and without EoLC experience, number of training sessions attended by each participant and before and after intervention. Statistical analysis was conducted using the Japanese version of IBM SPSS statistics version 25.

Qualitative data from the FGD and the qualitative elements from the questionnaire survey were analyzed using content analysis (Elo and Kyngäs, 2008). All data were transcribed verbatim and analysis results were shared, checked and further analyzed by an experienced interdisciplinary research team to confirm the trustworthiness of this research

process.

Both quantitative and qualitative data were analyzed by applying Kirkpatrick's four levels. First, for level one (reaction) and two (learning), the findings of participants' satisfaction and knowledge improvement and the qualitative data from the FGD were compared to verify whether these sources were mutually supportive. Second, at level three, the qualitative data from the FGD were analyzed to evaluate whether the participants' changes in perceptions had led to changes in behavior. Finally, the qualitative data from the three-month follow-up questionnaire were analyzed to estimate whether behavioral changes (level three, behavior) and goals (level four, results) were achieved.

### 3.6. Ethical considerations

Participants were informed of the study purpose and assured that participation was voluntary and that they had the right to withdraw at any time. Participants were also asked to provide written consent to participate in the training and to allow researchers to record the FGDs. The transcripts were managed strictly anonymously. This study was approved by (institution removed for blind review).

## 4. Results

### 4.1. Participant characteristics

A total of 53 staff, including 12 nurses and 41 care staff, participated in at least one training session; eight people participated twice and four participated three times. Participant characteristics are shown in Table 3. The mean years of professional experience were  $13.0 \pm 7.7$ , with 90.5% of participants having over five years of professional experience; the mean experience at CBS was  $6.8 \pm 4.9$  years, with 37.7% of participants having less than five years of experience at CBS. Most (60%) of participants with EoLC experience had dealt with fewer than five cases and 31 (58.5%) had no EoLC experience.

**Table 3**  
Participants' Characteristics (N = 53).

Characteristics	Classification	n (%)
Age (years)	30 s	12 (22.6)
	40 s	13 (24.5)
	50 s	19 (35.8)
	>60	9 (17.0)
Sex	Male	9 (17.0)
	Female	44 (83.0)
Occupation	Nurse	12 (22.6)
	Certified care worker	36 (67.9)
	Home helper	5 (9.4)
Professional experience (years)	<5	5 (9.4)
	5–10	20 (37.7)
	11–20	20 (37.7)
	>21	8 (15.1)
Experience at the CBS (years)	<5	20 (37.7)
	5–10	23 (43.4)
	11–20	10 (18.9)
Practical experience in end-of-life care (cases)	0	31 (58.5)
	1–5	13 (24.5)
	6–10	7 (13.2)
	>11	2 (3.8)

**Table 4**  
Comparison of satisfaction between the two groups.

Question items Satisfaction: 4-point scale	First participation (n = 41)		Subsequent participation (n = 12)		p-value	Without EoLC experience (n = 25)		With EoLC experience (n = 16)		p-value
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Understanding										
Lecture	3.67	0.49	3.75	0.62	0.297	3.56	0.54	3.84	0.36	0.106
FGD	3.68	0.61	3.67	0.49	0.704	3.60	0.71	3.81	0.4	0.467
Interests										
Lecture	3.62	0.58	3.92	0.29	0.072	3.51	0.66	3.79	0.4	0.271
FGD	3.76	0.58	3.83	0.39	0.802	3.72	0.68	3.81	0.4	0.926
Applicable										
Lecture	3.57	0.74	3.82	0.4	0.261	3.49	0.72	3.69	0.69	0.171
FGD	3.56	0.63	3.83	0.39	0.149	3.60	0.5	3.5	0.73	1.000
Learning environment										
Facilitator	3.78	0.57	3.83	0.39	0.948	3.72	0.68	3.87	0.34	0.662
Season, Place, Time	3.68	0.61	3.67	0.49	0.704	3.64	0.7	3.75	0.45	0.843

Mann–Whitney U test.

4.2. Reaction to the program and learning (Kirkpatrick levels one and two)

4.2.1. Quantitative findings

Participants reported positively about the learning environment and that the program was understandable, interesting and applicable to the workplace; all categories scored over 90% (Table 4). The knowledge test and responses regarding participants' ability to include EoLC at their CBS (Yes/No) for level two (learning) indicated a significant difference in the scores before and after training (Table 5) for knowledge ( $p < 0.001$ ) and confidence ( $p = 0.020$ ). Of the 19 participants who reported before training that they would not be able to provide EoLC with confidence for the clients, seven changed their answers to indicate that they

would be able to do so after training. The reasons given for finding it impossible to provide EoLC were lack of readiness or confidence, feeling anxious and that it was against their institution's policy. Before training, participants with EoLC experience responded that they would be able to care for the clients at the end of life with confidence ( $p < 0.001$ ) more than those without experience; this difference was moderated after the training ( $p = 0.059$ ). Attitude, which was evaluated by whether they agreed or disagreed with providing EoLC in CBS, also changed after the training ( $p = 0.014$ ). Although eight participants disagreed with EoLC in CBS before the training, six participants indicated that they had changed their mind following the training by obtaining knowledge, confidence and useful information on EoLC (Table 5). The main reasons for being favorable to providing EoLC after the training were that participants'

**Table 5**  
Comparison before and after training First participation (n = 41).

Question items	Mean	SD	p-value
<b>Knowledge test</b>			
Before	6.54	3.57	<0.001
After	9.32	1.35	
<b>Confidence about EoLC</b>	Yes	No	
Before	22	19	0.020
After	29	12	
Chi-square test for without and with EoLC experience	Yes	No	
Before without EoLC experience	8	17	<0.001
Before with EoLC experience	14	2	
After without EoLC experience	15	10	0.059
After with EoLC experience	14	2	
<b>Attitude regarding EoLC</b>	Agree	Against	
Before (Agree/Against)	33	8	0.014
After (Agree/Against)	39	2	

Wilcoxon signed-rank test. Chi-square test for without and with EoLC experience.

**Table 6**  
Comparison of knowledge tests.

Item	Group	Score	p
Number of participations	1 (n = 41)	6.54 ± 3.57	0.315
	2 or 3 times (n = 12)	8.08 ± 2.11	
Occupation	Nurse (n = 11)	7.64 ± 3.08	0.287
	Care staff (n = 30)	6.13 ± 3.70	
Professional experience (years)	< 10 (n = 22)	6.68 ± 3.27	0.989
	> 11 (n = 19)	6.37 ± 3.98	
Length of experience at the CBS (years)	< 5 (n = 22)	7.50 ± 2.72	0.188
	> 6 (n = 19)	5.42 ± 4.15	
Practical experience of EoLC	None (n = 16)	6.20 ± 3.61	0.375
	> 1 (n = 25)	7.06 ± 3.57	

Mann-Whitney U test.

**Table 7**

Follow-up questionnaire after 3 months of training (n = 35).

Question items	Yes (%)	No (%)
1. After the training, did you have any new thoughts or awareness about end-of-life care in community-based services? Describe the specific contents.	29 (82.9%)	6 (17.1%)
2. Have you made any new efforts toward end-of-life care in community-based services since the training? Describe the specific contents.	11 (31.4%)	24 (68.6%)
3. Did you provide end-of-life care at your community-based services after the training? Describe the specific contents.	6 (17.1%)	29 (82.9%)
4. Did you apply the training contents to your work at the community-based service? Describe the specific contents.	29 (82.9%)	6 (17.1%)

fears about EoLC were resolved, they recognized the importance of EoLC at CBS and they felt more confident in implementing EoLC by coordinating the night shift. According to the ANOVA and two-group comparisons, knowledge scores were not affected by how many of the study training sessions participants attended, their professional backgrounds or years of experience, or having prior EoLC experience (Table 6). Data from three months after the training showed that 17.1% of participants had implemented EoLC by then. Those who did not implement EoLC were also undertaking new initiatives to realize EoLC or apply what they had learned from the training (Table 7).

#### 4.2.2. Qualitative findings

The FGD data indicated that participants understood others' experiences, experienced reduced anxiety, were impressed and shared a sense of fulfillment and gained motivation (reaction). Participants learned a new perspective on care, wherein the intention is not to preserve life but to achieve good death and received useful information about resource development and EoLC systems (learning; Table 8, Fig. 1).

**4.2.2.1. Simulating and sharing EoLC fulfillment experiences as a reaction and new insights on EoLC.** One of the study participants, who was a new CBS care staff, stated:

I was shocked to hear what EoLC was actually like and was rather anxious. I was relieved to hear that I was not the only one feeling afraid and I had a sense of accomplishment, hearing the experience of others in the group. So, I feel it is important to have opportunities to learn together about EoLC, sharing experiences, anxiety and accomplishments. (G5P5)

A manager and care worker agreed and stated the importance of the training because she had faced the same experience that was discussed in the session. This participant stated:

*In the process of EoLC, I encountered an opportunity to observe respiratory status at death, which was just as we learned in the training. I was convinced that the training was right.* (G5P2/second time)

Another participant, a home helper with experience of EoLC, mentioned:

As I learned in this training, I assisted a person at end of life without a drip [because this is the correct care] even though they were dehydrated. (G5P3)

A care worker and manager without experience of EoLC said:

I was impressed and stimulated by the experiences of EoLC and I understood that CBS provided peaceful and happy death without medical care. (G5P6/second time)

Multiple participants expressed their satisfaction with the focus

group training for being able to compare their own experience with others and come to understand the significance of community-based EoLC.

Some participants stated how the training changed their perspectives. One new care worker said:

I learned in detail about how to determine death and about cardiac arrest, respiratory arrest and mydriasis... also, I learned to use a stethoscope if I am not able to check the pulse. (G5P5)

Another participant, an experienced nurse, shared a new insight:

So far, I have cared for my patients in order to save their lives, but the training made me notice that support for a peaceful death is also an important part of nursing care. (G5P1)

Another group member stated that she learned about the differences between EoLC in hospitals and in the client's home, how to minimize suffering and how to care for someone when they are dying. In discussing possible scenarios from practice, one participant said:

I am worried about how I can obtain cooperation from the client's family. (G3P5)

Other participants shared that it is vital to earn the family members' trust first. A care worker with EoLC experience said that the way to earn this trust is "to respond to their wishes with an understanding that family members tend to change them often" (G3P1). A care worker and manager (G3P2) mentioned the importance of providing considerate care to ensure that a client's family has "no regrets," and another manager (G3P3) added, so that the family would not have any regrets:

I inform the family about the condition of the client by frequent phone calls and letters. (G3P3)

The aforementioned participant (G3P5) continued:

*We ask family members beforehand about their wishes at the end-of-life stage, but it is difficult to even for the specialist to determine when EoLC starts. I learned that it is natural that family members also cannot determine [this] and [they] change their minds and that we need to understand their feelings and changing wishes to provide the necessary care. It's important to support family members so that they do not have any regrets.*

#### 4.3. Behavior and results related to the program (Kirkpatrick levels three and four)

##### 4.3.1. Process leading up to level three

The analyses of qualitative data from the FGD and the post-training responses in the questionnaires suggested that participants experienced deep learning resulting in behavioral changes. They discussed how to prepare themselves for EoLC and action plans for establishing EoLC through the FGD (Table 8).

**4.3.1.1. Action plans to establish EoLC through the FGD.** Participants described feeling motivated by the FGD and expressed their plans for achieving EoLC, such as:

*I have to tell the staff that it is preferable and happy for the older people to die peacefully at CBS.* (G4P4)

*We don't have experience in EoLC. Cooperation between physicians and visiting nurses has been established, but the perception of staff members cannot be readily changed. I need to persuade them to try practicing EoLC, as that is our policy. Also, we need to hold study sessions.* (G3P5)

A participant, who had previously thought that she must call the police when a person dies outside of a hospital, stated:

**Table 8**  
Categories on qualitative data using Kirkpatrick's four levels evaluation model.

Level	Category	Sub Category	Data
<b>Level 1.: Reaction</b>			I was impressed and stimulated by the experiences of EoLC, and I understood that CBS provided peaceful and happy death without medical care. (G5P6)
		Getting impression and motivation	I was impressed by the fact that other participants, especially care workers, think more seriously and honestly about EoLC and provide care than nurses like me. (G9P1/nurse)
Satisfaction	Simulating and sharing EoLC fulfillment experiences		I have no experience in EoLC, but I want to help clients to stay in the place where they are used to live as long as possible because they are not a cancer patient but they just grow weak due to the aging. I think I must do my best. (G7P4 )
		Understanding the necessity and efficacy of training	I was shocked to hear what EoLC was actually like and was rather anxious. I was relieved to hear that I was not the only one feeling afraid, and I had a sense of accomplishment, hearing the experience of others in the group. So, I feel it is important to have opportunities to learn together about EoLC, sharing experiences, anxiety, and accomplishments. (G5P5)
<b>Level 2: Learning</b>			In the process of EoLC, I encountered an opportunity to observe respiratory status at death, which was just as we learned in the training. I was convinced that the training was right. (G5P2)
		Acquisition of new knowledge, perspective and useful information	As I learned in this training, I assisted a person at end of life without a drip [because this is the correct care] even though they were dehydrated (G5P3)
Learning resources with training	New insight on EoLC		I learned in detail about how to determine death and about cardiac arrest, respiratory arrest, and mydriasis... also, I learned to use a stethoscope if I am not able to check the pulse (G5P5)
		Realizing the meaning of community-based EoLC	I have cared for my patients in order to save their lives, but the training made me notice that support for a peaceful death is also an important part of nursing care. (G5P1/nurse)
			I learned that it is natural that family members also cannot determine when EoLC start and change their minds and that we need to understand their feelings and changing wishes to provide the necessary care. It's important to support family members so that they do not have any regrets.(G3P5)
			Care workers tend to picture the EoLC with the patient resting in bed, but nurses teach them that clients can get out of the bed as long as the client feels will and spend time in the dayroom with other clients. (G3P4/nurse)
			I learned that we can get involved in the EoLC calmly through CBS contrary to a hospital. (G5P4)
			I was impressed and stimulated by the experiences of EoLC, and I understood that CBS provided peaceful and happy death without medical care. (G5P6)
			There were only two choices, hospital or home, but now there is a CBS which provides EoLC. CBS can provide the same service. Older people who cannot be cared at home until the end can stay in CBS. CBS has some good points different from home. (G7P6)
			For the last 2–3 days before her death, she was just like I learnt in the training. She could only manage to move in a wheelchair, and when I put a tiny amount of food she liked in her mouth, she nodded and said "Yes" and was satisfied with the single bite. She stayed where other residents stayed and listened to music and did what she liked. That is the best thing about CBS. (G9P6)
			I have a conflict as a nurse in EoLC through CBS that may be easier if I can medical care, but I can give a feeling of peace of mind different from hospital. (G7P2/nurse)
			I have to tell the staff that it is preferable and happy for the older people to die peacefully at CBS (G4P4)
			We don't have experience in EoLC. Cooperation between physicians and visiting nurses has been established, but the perception of staff members cannot be readily changed. I need to persuade them to try practicing EoLC, as that is our policy. Also, we need to hold study sessions. (G3P5)
			I was afraid that I would have to call an ambulance and police to certify death if a person died at night when physicians were not available. I want to tell my colleagues about this so they know what we should do after a person's death (G2P2)
<b>Action plans to establish EoLC through FGD</b>			I felt that creating an EoLC procedure manual will help me in being prepared for EoLC, so I intend to make it right away (G7P1/nurse)
			I'd like to remove pain even in the patient facing natural death with my expertise as a health professional. (G8P5/nurse)
			I had never thought of providing EoLC at CBS. A patient at the end-of-life stage was hospitalized and fell on the first day. I regretted that I should have decided EoLC at CBS until her last phase. I think we need to consider in future when client and family request EoLC in our facility. (G8P6)
			There is a client in her final stage at my CBS. I'd like to discuss the plan with the doctor and practice EoLC. (G9P7)
			It is useful for the staff with no experience in EoLC to directly ask questions and exchange opinions in the FGD. (G2P5)
<b>Importance of deepening the meaning of the training after the training; Practicing 3 months making use of what they learned in the training</b>			The training led to the improvement of EoLC in my facility (G4P6)
			I realized anew that death of natural causes is included in the EoLC (G4P6; G4P7)
			I was convinced that CBS would become increasingly important in the provision of EoLC (G2P5; G3P2; G6P6)
<b>Level3: Behavior</b>			I was impressed by the significance of EoLC in CBS learned in the FGD, and I have asked staff to put it into practice at the study meeting (G4P4)
Behavioral change	Making use of learning resources	Importance of learning EoLC	I held a CBS joint workshop of EoLC with five facilities (G1P1)

(continued on next page)

Table 8 (continued)

Level	Category	Sub Category	Data
Level 4: Results	Achieving EoLC	Performing appropriate care for achieving EoLC	<p>The materials of this training were very helpful. As staff read and imagined EoLC, we were not surprised even when facing the client's death. (G6P2)</p> <p>I realized that the ideal environment for users is the place where they can spend their time with people they are used to live with.(G2P5; G3P1; G4P3)</p> <p>I have close contact with the client's family. (G2P4/nurse) I treat clients with a new feeling and practice EoLC with different ideas. (G4P7)</p> <p>After training, I have come to give more support to the family members especially when the client died earlier than they expected (G8P3)</p> <p>I've discussed and practiced not only EoLC but also daily care activities with our staff members. (G3P1)</p> <p>We do not have a system for EoLC yet, but we have started to provide EoLC as much as possible instead of sending patients to hospital when their condition worsens; We care in collaboration with physicians and visiting nurses. (G8P5/nurse )</p> <p>We have created a consent form to confirm the older people's wish to die in the facility and suggested it to our executives. (G2P2; G3P4)</p>
		Development of original EoLC system	<p>After the training, I discussed with staff members including physicians, and we decided to change our policy to practice EoLC. (G3P2;G9P5 )</p> <p>The client's EoLC at CBS was decided according to the wishes of the family. (G2P5; G9P7)</p> <p>I used not to inform the news of residents' death to other residents, however, I will let them know from now and encourage them to say good bye.(G1P1)</p>
Realization of EoLC at CBS	Achieving EoLC	Achievement of good death	<p>I attempted to relieve clients' pain in cooperation with the attending physician (G2P1)</p> <p>The client ate and drank only what he wanted, and died calmly and naturally ten days later (G1P1)</p> <p>The 104-year-old person hated medicine so we stopped giving it. The condition gradually worsened but it was a calm end of life. We were able to talk with him until the day before he died, and we recognized the significance of EoLC at CBS. (G2P1)</p> <p>The client died without suffering living peacefully until the end, her last words, which were uttered on the day of her birthday party, were "thank you" and "let's eat the cake". (G3P1)</p>

I was afraid that I would have to call an ambulance and police to certify death if a person died at night when physicians were not available. I want to tell my colleagues about this, so they know what we should do after a person's death. (G2P2)

A nurse participant said:

I felt that creating an EoLC procedure manual will help me in being prepared for EoLC, so I intend to make it right away. (G7P1)

4.3.1.2. Importance of deepening the meaning of the training after the training. Three months after the training, 31 of the 53 respondents answered that the training was an excellent opportunity for the

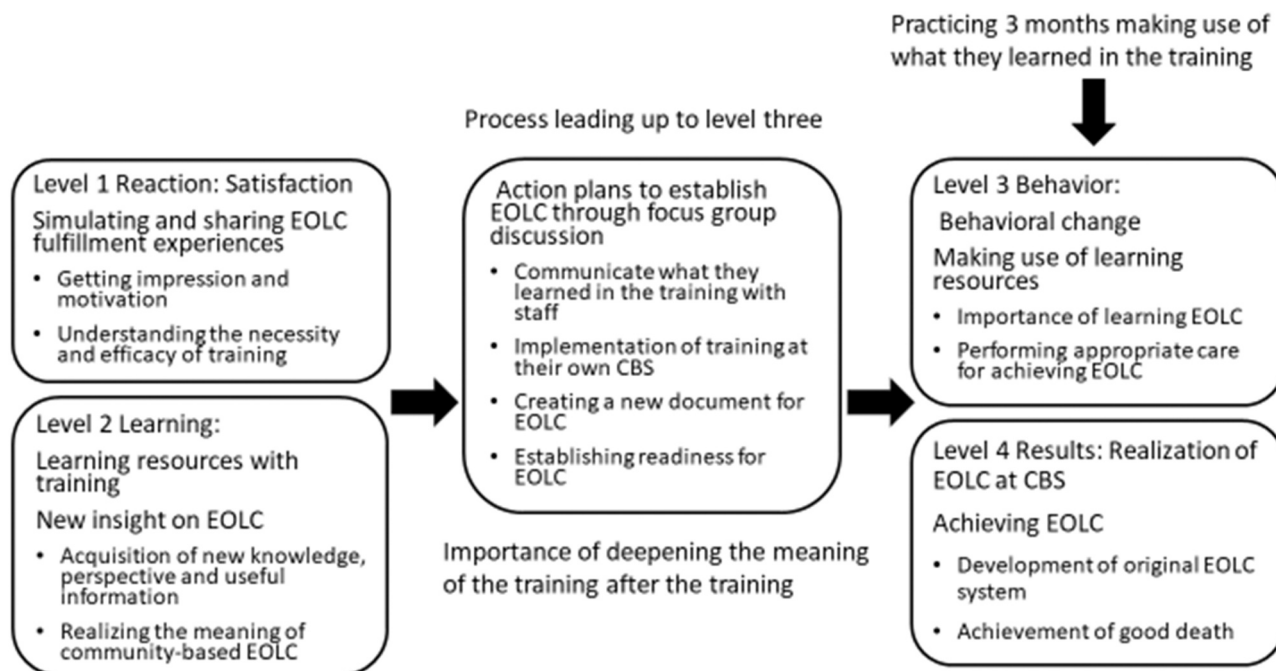


Fig. 1. The evaluation based in 4-level of the Kirkpatrick Model.



exchange of ideas and that it enhanced EoLC. They recognized the value of the FGDs, such as:

It is useful for staff with no experience in EoLC to directly ask questions and exchange opinions in the FGD. (G2P5)

They enhanced their EoLC using what they learned:

*The training led to the improvement of EoLC in my facility. (G4P6)*

*I realized anew that death of natural causes is included in the EoLC. (G4P6; G4P7)*

Even those who had doubts about EoLC at CBS were persuaded of its value:

*I was convinced that CBS would become increasingly important in the provision of EoLC. (G2P5; G3P2; G6P6)*

#### 4.3.2. Achieving EoLC at CBS

At the three-month follow-up evaluation, participants had been able to make behavioral changes that put their learning into practice. Participants reported that they performed the appropriate care for achieving EoLC (level three, behavior). Some participants proceeded to develop individualized EoLC systems in their facility and realized good practice in EoLC (level four, results) (Table 8, Fig. 1).

Participants described implementing study meetings:

*I was impressed by the significance of EoLC in CBS learned in the FGD and I have asked staff to put it into practice at the study meeting (G4P4);*

*I held a CBS joint workshop of EoLC with five facilities. (G1P1)*

They took practice initiatives:

I treat clients with a new feeling and practice EoLC with different ideas. (G4P7/second time)

After training, I have come to give more support to the family members especially when the client died earlier than they expected. (G8P3/third time)

I've discussed and practiced not only EoLC but also daily care activities with our staff members. (G3P1)

Others initiated change:

We do not have a system for EoLC yet, but we have started to provide EoLC as much as possible instead of sending patients to the hospital when their condition worsens. (G8P5/second time)

We obtained descriptions of the development of individualized EoLC systems in CBS and recognized EoLC as "results." For example:

*We have created a consent form to confirm the older people's wish to die in the facility and suggested it to our executives. (G2P2; G3P4)*

*We decided to change our policy to practice EoLC. (G3P2; G9P5)*

*I attempted to relieve patient pain in cooperation with the attending physician. (G2P1)*

*The client died without suffering, living peacefully until the end; her last words, which were uttered on the day of her birthday party, were "Thank you" and "let's eat the cake." (G3P1)*

## 5. Discussion

To the best of our knowledge, this is the first study to evaluate a training program on EoLC at CBS using Kirkpatrick's model. The results suggest that the training program is effective and the format works for influencing and educating staff about EoLC at CBS in settings other than

hospitals. This study revealed details of behavioral changes, such as providing close family support, taking new approaches and applying what was learned in the training not only to EoLC but also to daily services and of the EoLC achieved after training.

Training improved participants' knowledge; notably, their knowledge scores were not affected by their professional background, years of experience, whether they had previous EoLC experience and how many of the study-provided training sessions they attended. These results suggest that prior knowledge is not a relevant factor for implementing community-based EoLC programs. The qualitative data suggest that the training provides the content, knowledge and experiences necessary for the development of community-based EoLC. Participants created an action plan through the FGD, deepened the meaning of the training and increased motivation, continued learning and changed their perception and performance; then, they achieved effective EoLC. As a primary factor in the results, the action plan effectively propelled outcomes beyond levels one and two to achieve levels three and four. The realistic experience of EoLC in the FGD inspired and convinced participants who had never experienced EoLC that it might be possible to implement and significantly contributed to participants' behavioral changes (Amjad et al., 2014; Tamaki et al., 2019). Thus, the training program should include time for creating individualized action plans in the FGD. Additionally, a three-month post-training timeline is critical to allow for preparations accommodating staff behavioral changes.

Focus groups were created based on the characteristics of participants in each group while attempting to ensure consistency across the groups. Some researchers promote the value of uniformity in focus group participants, while others consider it useful to summarize multiple viewpoints within focus groups consisting of various levels and roles (Kitzinger, 1995). In this study, the group dynamics of FGD participants with varying levels of experience produced lively discussions, allowing participants to enhance their readiness with empirical knowledge, new perspectives and useful information that they put into their action plans. Participants found it easy to understand the experiences of EoLC practice described by other FGD members from the same kind of CBS, perceiving how they could realistically adapt EoLC to their CBS.

A previous study did not evaluate level four results, possibly due to the short evaluation period or because it was against their institution's policy (Heydari et al., 2019). However, our study found that participants who attended two or more of the three training sessions demonstrated a higher performance in CBS.

Thus, to gain further insights, future training programs should involve regular long-term follow-up training sessions, depending on the needs and circumstances of each participant. In this study, some participants had not instituted EoLC because it conflicted with their institution's policies. It has been noted that Kirkpatrick's model does not consider the culture and values of organizations (Moreau, 2017), which was also true in this study. In the future, we will consider combining different evaluation tools.

Our results are relevant but not limited to Japan, as many patients and families around the world may be more satisfied if they died in a place of their choosing (Sadler et al., 2014). Hence, CBS promotion of EoLC at and provision of an alternative place of death is encouraged.

## 6. Strengths and limitations

Limitations to the intervention include the small sample size, lack of participation criteria, use of self-report data and, potentially, a tendency of participants to give positively biased responses. A program strength is that participants discussed being on an equal footing toward implementing EoLC and some reported back to the focus groups on aspects of the training they had applied in practice, suggesting that the training resulted in behavioral changes in the workplace.

## 7. Conclusion

The training program aimed at improving EoLC for people in community settings was unique in targeting a range of health professionals at different organizational levels. The group education method likely strengthened the program's impact through vicarious learning and enhanced team performance. Participants generally reported increased confidence in dealing with EoLC following the program; six participants reported a change in their attitudes and acceptance of the benefits of implementing EoLC in CBS. Increasing the number of patients receiving such care will promote EoLC and further investigation could lead to improved results. In addition, conducting follow-up training after a one-to-two-year period could effectively strengthen participants' commitment to EoLC at CBS.

## Ethical approval

This study was approved by the Ethical Review Board of School of Health Sciences Yamaguchi University Graduate School of Medicine (approval No.469, 27/7/2017). All participants provided written informed consent.

## Funding

This study was supported by JSPS KAKENHI Grant Number JP17K12397.

## CRedit authorship contribution statement

**Chizuru Nagata:** Conceptualization, Design, Project administration, Funding acquisition, Research plan, Methodology, Investigation, Data curation, Data analysis, Writing - original draft. **Masae Tsutsumi:** Conceptualization, Design, Investigation, Data collection, Content analysis. **Asako Kiyonaga:** Design, Investigation, Visualization, Data collection, Content analysis. **Hiroshi Nogaki:** Design, Validation, Supervision, Writing - review & editing.

## Declaration of Competing Interest

The authors declare that we have no competing financial interests or personal relationships.

## Acknowledgments

The authors wish to thank all community-based services staff members for their participation in this study. We particularly acknowledge Professor Teresa Stone for her valued contribution.

## Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.nepr.2021.103091](https://doi.org/10.1016/j.nepr.2021.103091).

## References

- Ahlström, G., Nilsen, P., Benzein, E., Behm, L., Wallerstedt, B., Persson, M., Sandgren, A., 2018. Implementation of knowledge-based palliative care in nursing homes and pre-post post evaluation by cross-over design: a study protocol. *BMC Palliat. Care* 17, 52. <https://doi.org/10.1186/s12904-018-0308-2>.
- Amjad, H., Towle, V., Fried, T., 2014. Association of experience with illness and end-of-life care with advance care planning in older adults. *J. Am. Geriatr. Soc.* 62 (7), 1304–1309. <https://doi.org/10.1111/jgs.12894>.
- Anstey, S., Powell, T., Coles, B., Hale, R., Gould, D., 2016. Education and training to enhance end-of-life care for nursing home staff: a systematic literature review. *BMJ Support. Palliat. Care* 6 (3), 353–361. <https://doi.org/10.1136/bmjspcare-2015-000956>.
- Axelsson, L., Benzein, E., Lindberg, J., Persson, C., 2019. End-of-life and palliative care of patients on maintenance hemodialysis treatment: a focus group study. *BMC Palliat. Care* 18, 89. <https://doi.org/10.1186/s12904-019-0481-y>.

- Bannon, F., Cairnduff, V., Fitzpatrick, D., Blaney, J., Gomes, B., Gavin, A., Donnelly, C., 2018. Insights into the factors associated with achieving the preference of home death in terminal cancer: a national population-based study. *Palliat. Support. Care* 16, 749–755. <https://doi.org/10.1017/S1478951517000876>.
- Bates, R., 2004. A critical analysis of evaluation practice: the Kirkpatrick model and the principle of beneficence. *Eval. Program Plan.* 27, 341–347. <https://doi.org/10.1016/j.evalprogplan.2004.04.011>.
- Cabinet Office, Government of Japan, 2012. Attitude survey for the health of the elderly. Available at: <http://www8.cao.go.jp/kourei/ishiki/h24/sougou/zentai/index> (accessed 15 November 2017).
- Cabinet Office, Government of Japan, 2019. Annual Report on the Ageing Society. Available at: <https://www8.cao.go.jp/kourei/whitepaper/w-2019/html/zenbun/index.html> (accessed 21 November 2019).
- Costa, V., Earle, C.C., Esplen, M.J., Fowler, R., Goldman, R., Grossman, D., Levin, L., Manuel, D.G., Sharkey, S., Tanuseputro, P., You, J.J., 2016. The determinants of home and nursing home death: a systematic review and meta-analysis. *BMC Palliat. Care* 15, 8. <https://doi.org/10.1186/s12904-016-0077-8>.
- D'astous, V., Abrams, R., Vandrevale, T., Samsi, K., Manthorpe, J., 2019. Gaps in understanding the experiences of homecare workers providing care for people with dementia up to the end of life: a systematic review. *Dementia* 18 (3), 970–989. <https://doi.org/10.1177/1471301217699354>.
- Elo, S., Kyngäs, H., 2008. The qualitative content analysis process. *J. Adv. Nurs.* 62, 107–115. <https://doi.org/10.1111/j.1365-2648.2007.04569.x>.
- Forsellund, L., Bjørndal, A., Rashidian, A., Jamtvedt, G., O'Brien, M.A., Wolf, F.M., Davis, D., Odgaard-Jensen, J., Oxman, A.D., 2009. Continuing education meetings and workshops: effects on professional practice and health care outcomes. *Cochrane Database Syst. Rev.* 2, 003030 <https://doi.org/10.1002/14651858.CD003030.pub2>.
- Fryer, S., Bellamy, G., Morgan, T., Gott, M., 2016. "Sometimes I've gone home feeling that my voice hasn't been heard": a focus group study exploring the views and experiences of health care assistants when caring for dying residents. *BMC Palliat. Care* 15, 78. <https://doi.org/10.1186/s12904-016-0150-3>.
- Gibbs, A., 1997. Focus groups. *Soc. Res. Update* 19, 1–8. ([https://openlab.citytech.cuny.edu/her-macdonaldsbs2000fall2015b/files/2011/06/Focus-Groups\\_Anita-Gibbs.pdf](https://openlab.citytech.cuny.edu/her-macdonaldsbs2000fall2015b/files/2011/06/Focus-Groups_Anita-Gibbs.pdf)).
- Heydari, M.R., Taghva, F., Amini, M., Delavari, S., 2019. Using Kirkpatrick's model to measure the effect of a new teaching and learning methods workshop for health care staff. *BMC Res. Notes* 12, 388. <https://doi.org/10.1186/s13104-019-4421-y>.
- Hirakawa, Y., Chiang, C., Hilawe, E.H., andoh, H., Uemura, K., Aoyama, A., 2017. Formative research for the nationwide promotion of a multidisciplinary community-based educational program on end-of-life care. *Nagoya J. Med. Sci.* 79 (2), 229–239. <https://doi.org/10.18999/nagjms.79.2.229>.
- Hirooka, K., Nakanishi, M., Fukahori, H., Nishida, A., 2020. Impact of dementia on quality of death among cancer patients: an observational study of home palliative care users. *Geriatr. Gerontol. Int.* 20 (4), 354–359. <https://doi.org/10.1111/ggi.13860>.
- Ishikawa, T., Haseda, M., Kondo, N., Kondo, K., Fukui, S., 2021. Predictors of home being the preferred place of death among Japanese older people: JAGES cross-sectional study. *Geriatr. Gerontol. Int.* 21, 345–352. <https://doi.org/10.1111/ggi.14135>.
- Jiang, Q., Lu, Y., Ying, Y., Zhao, H., 2019. Attitudes and knowledge of undergraduate nursing students about palliative care: an analysis of influencing factors. *Nurse Educ. Today* 80, 15–21. <https://doi.org/10.1016/j.nedt.2019.05.040>.
- Jones, C., Fraser, J., Randall, S., 2018. The evaluation of a home-based paediatric nursing service: concept and design development using the Kirkpatrick model. *J. Res. Nurs.* 23, 492–501. <https://doi.org/10.1177/1744987118786019>.
- Kirkpatrick, D.L., Kirkpatrick, J.D., 2005. *Evaluating Training Programs: The Four Levels*, third ed., Berrett-Koehler, San Francisco.
- Kisorio, L.C., Langley, G.C., 2016. Intensive care nurses' experiences of end-of-life care. *Intensive Crit. Care Nurs.* 33, 30–38. <https://doi.org/10.1016/j.iccn.2015.11.002>.
- Kitzinger, J., 1995. Qualitative research. Introducing focus groups. *BMJ* 311, 299–302. <https://doi.org/10.1136/bmj.311.7000.299>.
- Krueger, R.A., Casey, M.A., 2015. *Focus group interviewing*. In: Newcomer, K.E., Hatry, H.P., Wholey, J.S. (Eds.), *Handbook of Practical Program Evaluation*, fourth ed., John Wiley & Sons, New York, pp. 506–534.
- Ministry of Health, Labour and Welfare, Government of Japan, 2007. Report of the study group on the enhancement of basic nursing education (in Japanese). Available at: <http://www.mhlw.go.jp/shingi/2007/04/dl/s0420-13.pdf> (accessed 15 November 2017).
- Ministry of Health, Labour and Welfare, Government of Japan, 2019. Vital statistics (in Japanese). Available at: <https://www.mhlw.go.jp/toukei/saikin/hw/jinkou/kakutei18/index.html> (accessed 15 November 2019).
- Miyashita, M., Morita, T., Sato, K., Hirai, K., Shima, Y., Uchitomi, Y., 2008. Good death inventory: a measure for evaluating good death from the bereaved family member's perspective. *J. Pain. Symptom Manag.* 35 (5), 486–498. <https://doi.org/10.1016/j.jpainsymman.2007.07.009>.
- Moreau, K.A., 2017. Has the new Kirkpatrick generation built a better hammer for our evaluation toolbox? *Med. Teach.* 39 (9), 999–1001. <https://doi.org/10.1080/0142159X.2017.1337874>.
- Morgan, D.L., 1997. *Focus Groups as Qualitative Research*, second ed., Sage Publications, Thousand Oaks, CA.
- Morioka, N., Tomio, J., Seto, T., Yumoto, Y., Ogata, Y., Kobayashi, Y., 2018. Association between local-level resources for home care and home deaths: a nationwide spatial analysis in Japan. *PLoS One* 13 (8), 0201649. <https://doi.org/10.1371/journal.pone.0201649>.
- Moss, M.S., Braunschweig, H., Rubinstein, R.L., 2002. Terminal care for nursing home residents with dementia. *Alzheimer's Care Today* 3 (3), 233–246.

- Nagano, H., Obara, H., Takayama, Y., 2019. A brief home-based palliative care learning experience for medical students and resident doctors in Okinawa, Japan. *PLoS One* 14, 0218780. <https://doi.org/10.1371/journal.pone.0218780>.
- Nakanishi, M., Miyamoto, Y., 2016. Palliative care for advanced dementia in Japan: knowledge and attitudes. *Br. J. Nurs.* 25 (3), 146–155. <https://doi.org/10.12968/bjon.2016.25.3.146>.
- Sadler, E., Hales, B., Henry, B., Xiong, W., Myers, J., Wynnychuk, L., Taggar, R., Heyland, D., Fowler, R., 2014. Factors affecting family satisfaction with inpatient end-of-life care. *PLoS One* 9, 110860. <https://doi.org/10.1371/journal.pone.0110860>.
- Shulman, C., Hudson, B.F., Kennedy, P., Brophy, N., Stone, P., 2018. Evaluation of training on palliative care for staff working within a homeless hostel. *Nurse Educ. Today* 71, 135–144. <https://doi.org/10.1016/j.nedt.2018.09.022>.
- Srinonprasert, V., Limpawattana, P., Manjavong, M., Kuichanuan, T., Juntararungtong, T., Yongrattanakit, K., 2019. Perspectives regarding what constitutes a “good death” among Thai nurses: a cross-sectional study. *Nurs. Health Sci.* 21, 416–421. <https://doi.org/10.1111/nhs.12634>.
- Statistics Bureau, Ministry of Internal Affairs and Communications, Government of Japan, 2019. Annual report of population estimates. Available at: <https://www.stat.go.jp/data/jinsui/pdf/201911.pdf> (accessed 21 November 2019).
- Tamaki, T., Inumaru, A., Yokoi, Y., Fujii, M., Tomita, M., Inoue, Y., Kido, M., Ohno, Y., Tsujikawa, M., 2019. The effectiveness of end-of-life care simulation in undergraduate nursing education: a randomized controlled trial. *Nurse Educ. Today* 76, 1–7. <https://doi.org/10.1016/j.nedt.2019.01.005>.
- Wong, L.P., 2008. *Focus group discussion: a tool for health and medical research*. *Singap. Med. J.* 49 (3), 256–260.
- World Health Organization, 2020. Palliative care: key facts. Available at: [www.who.int/news-room/fact-sheets/detail/palliative-care](http://www.who.int/news-room/fact-sheets/detail/palliative-care) (accessed 13 April 2021).
- Worldwide Hospice Palliative Care Alliance, 2020. *Global Atlas of Palliative Care*, second ed. Worldwide Hospice Palliative Care Alliance and World Health Organization. Available at: <https://www.thewpca.org/resources/global-atlas-on-end-of-life-care> (accessed 31 January 2021).