การพัฒนารูปแบบการดูแลประคับประคองแบบมีส่วนร่วม
The Development of A Participatory Palliative Care Model

นิพนธ์ต้นฉบับ

Original Article

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บทคัดย่อ

วัตถุประสงค์: เพื่อพัฒนาและทดสอบรูปแบบการดูแลประคับประคองแบบมีส่วนร่วมต่อสมรรถนะพยาบาลวิชาชีพในโรงพยาบาลส่งเสริมสุขภาพตำบล **วิธีการศึกษา:** การศึกษามี 3 ระยะ ระยะที่ 1 วิเคราะห์สถานการณ์ บริบทของชุมชนและประเมินความต้องการพัฒนา ระยะที่ 2 กำหนดเป้าหมาย แก้ปัญหา การตัดสินใจ การเปลี่ยนแปลง การยอมรับ ความผูกพัน และความรับผิดชอบ โดยใช้แนวคิดการมีส่วนร่วม ร่วมกับพัฒนาสมรรถนะพยาบาลตาม Co2HoPE Model และสร้างแนวทางการดูแลผู้ป่วยประคับประคองในชุมชน ระยะที่ 3 ดำเนินการเยี่ยมบ้านและประเมินผลการดำเนินงาน คัดเลือกตัวอย่างแบบเจาะจงเป็นพยาบาลวิชาชีพในโรงพยาบาลส่งเสริมสุขภาพตำบลในเขต อ.เมือง จ.ลพบุรี 17 แห่ง 24 คน และผู้ป่วยโรคมะเร็งแบบประคับประคองในชุมชน อ.เมืองลพบุรี 10 คน ทดสอบพยาบาลด้วยแบบประเมินสมรรถนะการดูแลแบบประคับประคองก่อนและหลังการเยี่ยมบ้าน และประเมินความพึงพอใจของผู้ป่วยต่อการดูแลแบบประคับประคอง เปรียบเทียบคะแนนสมรรถนะก่อนและหลังการดูแลผู้ป่วย **ผลการศึกษา:** รูปแบบประกอบด้วย ระบบการส่งต่อแบบไร้รอยต่อ การพัฒนาสมรรถนะพยาบาลแบบประคองในชุมชน การดูแลแบบมีส่วนร่วม การแบ่งปันอุปกรณ์ และระบบเครือข่ายการดูแล คะแนนสมรรถนะของพยาบาลเพิ่มจาก 127.29 เป็น 176.88 คะแนน ซึ่งแตกต่างอย่างมีนัยสำคัญทางสถิติ (P-value < 0.05) พบความพึงพอใจของผู้ป่วยและผู้ดูแลระดับมากที่สุด **สรุป:** การดูแลประคับประคองแบบมีส่วนร่วมที่พัฒนาขึ้นทำให้สมรรถนะของพยาบาลสูงขึ้นและผู้ป่วยและผู้ดูแลมีความพึงพอใจในระดับมากที่สุด

คำสำคัญ: พัฒนารูปแบบ; การดูแลแบบประคับประคอง; การมีส่วนร่วม; คนไข้มะเร็ง; สมรรถนะ; พยาบาล

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Abstract

Objective: To develop and test the participatory palliative care model for nurses in sub-district health promoting hospitals. **Method:** Of the 3 study phases, phase 1 consisted of situational analysis, community context and needs for development. Phase 2 consisted of goal setting, problem solving, decision making, changes, acceptance, bond and responsibility using participation concept with the nurse competency development Co2 HoPE Model. The guideline was and model was developed. In phase 3, the home care was carried out and evaluated. Twenty-four nurses from sub-district health promoting hospitals and 10 patients/care givers in Muang district, Lopburi province, Thailand were purposively selected. Nurses were tested for competency in palliative care before and after delivering home care. Patients/care givers were asked for satisfaction toward palliative care. Scores of nurse's competency were compared. **Results:** The participatory palliative care consisted of 5 components namely seamless referral system, development of nurse's competency in community palliative care, participatory care, device sharing, and care network. Score of nurse's competences after the care (176.88 points) was significantly higher than that before the care (127.29 points) (P-value < 0.05). Satisfaction was at the highest level. **Conclusion:** The developed participatory palliative care for cancer patients improved nurse's competency and satisfied the patients/care givers.

Keywords: model development; palliative care; participatory care, cancer patients, competency; nurse

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Introduction

Cancer is a major public health worldwide with an upward trend. Based on the World Health Organization (WHO), in 2021, cancer was the second most cause of death worldwide with a total of 10 million cases per year.[1] In Thailand, mortality rate had been increasing from 120.3 to 124.8 deaths per 100,000 population from 2018 to 2022, respectively.[2] In Lopburi province of Thailand, there had been increasing from 2,111 to 2,050 and 2,251 new cancer cases in 2017 to 2019, respectively.[3]

Cancer patients need continuous care from home to hospital and community, especially those who need palliative care with the treatment till the end of life. The care for family members of cancer patients includes helping them to be able to adjust and face the loss. Palliative care is for cancer patients with advanced or life-threatening disease. The care is patient and family centered in nature, and wholistic for physical, psychological, social, and spiritual aspects of life. The care aims to prevent and alleviate suffering, to improve quality of life of the patient and family members, and to help them understand the disease and better plan the care in advance. Palliative care offers information to the patient and family members. The counseling session allows the patient and family members to plan for care when entering the end of life. Psychological support is provided for both parties in choosing the treatment plan needed. They are also provided with a channel for advice and help for emergency. They are trained to manage physical and psychological problems and advised to manage physical symptoms with either pharmacological or non-pharmacological treatment. When discharged, they need continuous care especially those with physical suffering. They are also advised to seek timely medical attention for unmanageable suffering. The suffering and treatment cause excessive expenditure; the transfer and transport of the patient causes even more suffering. Difficulties are also caused by complexities of the devices to use at home. Problems exist in the community and need more understanding and measures for alleviation for cancer patients and their family members.

In communities, community nurses have been lacking knowledge and skills to take care of cancer patients. In addition to the high workload, this nurse's lack of confidence for continuous care usually had the patients re-hospitalized, had them suffered more, or left them with inadequate home visit. Understanding in cancer patient care, especially palliative one is of great need.

Palliative care could be applied not only at the end-of-life stage, but at as early as the diagnosis of cancer, and at each step of care including operation, chemotherapy, and radiotherapy. Palliative care should be provided for all cancer patients at all stages especially those with metastatic disease which face more symptoms and side effects of the treatment than earlier stages. To best cater to the need of the patient and family members, the need of the two parties should be incorporated in the care plan. The comprehensive care plan includes the contribution of multidisciplinary team. This care could result in improved quality of life, good dying, and accepted loss.

The Ministry of Public Health has proposed the Service Plan policy to promote seamless health care. The access and transfer among primary, secondary, tertiary and excellence care should be readily available, fair and non-discriminatory.[4] The palliative care should be continued seamlessly at all-level hospitals to home with loved ones. From the policy, measures for seamless palliative care for cancer patients and family members at all levels of hospitals should be practical.

Lopburi Cancer Hospital a specialized healthcare setting had been developing a participatory palliative care from August 1, 2017, to July 24, 2019 with Thawung Community Hospital and 12 Sub-district Health Promoting Hospitals in Lopburi province. This model emphasized the seamless care from specialized hospital to hospitals close to the community. Problems and situations were identified using focus group and in-depth interview. In coordination, responsible persons were assigned and the communication channel for access was clarified. The transfer of unclear information and counseling was expected to be reduced. The ultimate objective was to reduce re-hospitalization. Regarding process, nurses and village health volunteers were expected to have more confidence and improved performance. At the end of the project, palliative care centers were established and operated in Lopburi Cancer Hospital, Thawung Community Hospital and 12 Sub-district Health Promoting Hospitals. The performance of nurses were improved at a certain level. An efficient palliative care network from the community level to specialized hospital was developed with specific responsible personnel and a refer in-refer out and refer-back referral system All development was however with room for improvement. Community nurses needed more performance in palliative care to achieve better outcomes of quality care, good dying, reduced suffering, maintained patient human dignity, and enhanced adjustment after family loss. A participatory based concept, among other concepts, has been applied to improve community care.

There has been an attempt to apply participatory concept in community palliative care with nurses. Based on Sashkin (1987) and Swansburg (1996)[5,6], participation refers to shared goal setting, problem-solving, decision-making, accepting, bonding and taking responsibility. In this present study, participatory care was defined as the care process participated by nurses at the sub-district health promoting hospitals, cancer patients and their caregivers. In this continuous, participatory palliative care development, these local parties participate in goal setting, decision making for self-development in their own community, problem-solving, being ready for timely changes, trusting and accepting between providers and the patient and their caregivers, bonding among all parties, being independently responsible in the assigned care tasks, and evaluating and benefiting the participatory palliative care. In this area of Lopburi province, nurses were expected to better their performance in five aspects of the palliative care based on Co2 HoPE Model of the Palliative Care Nurse Society of Thailand (2017)[7] including communication, continuing care, holistic care, personal development, and ethical and legal competency. This concept is consistent with the study of Andershed and Ternestedt among family members participating in taking care of end-stage cancer patients involving the different context of hospital, nursing care setting, and home care visit.[8] They revealed that proper participation allowed open, sincere, respectful interactions between patients, family members and providers. The family members were able to participate in the care by being allowed to discuss and explain to providers the situation of their patient and the family. This allowed for trust among involved parties. The authors also exerted that poor or improper participation, no participation, and insincere participation perceived by family members would be more difficult to participate. Family members could feel powerless and unsafe and have difficulty receiving answer and understanding the situation. All of these could further complicate the family member's participation. The study also showed that healthcare providers take a crucial role in promoting family members taking part in the care. This evidence supports a wider application of participatory palliative care for cancer patients.

With the concern on the need for the seamless care for cancer patients, this development research aimed to create a participatory palliative care in cancer patients in Lopburi province. The project was in accordance with the 20-year national policy on healthcare service that aims to enrich the community involvement in healthcare, voluntarism, and supportive action. The care could be connected from home to community and healthcare settings. In doing so, all parties need knowledge and understanding in palliative care for the end-of-life patients to better manage the symptoms, concerns and fear, and ultimately to lessen suffering both in the patient and family members. All parties need to be mindful to overcome the suffering and the dying passage. An effective network of participatory care needs to be created and maintained with the network coordinator. The counseling and referral of care should be in place and advisors, mentors and consultants are readily available. The ultimate are the patients can pass away with dignity.

Specifically, this study aimed to develop a participatory palliative care program for cancer patients and their family members and nurses in Lopburi province. Components of participatory palliative care were identified. In terms of outcome measurement, we compared nurse's competency in participatory palliative care for cancer patients. Satisfaction of the patients and primary caregivers toward participatory palliative care was also determined.

Methods

In this development research, participants were cancer patients, their primary family members and nurses. The procedure consisted of three phases. In **phase 1** (2564), the researcher conducted a situational analysis, literature review, and the need for development. The first step started with situational analysis where circumstances of palliative care of sub-district health promoting hospitals in Lopburi province were identified and analyzed. In this situational analysis, data from the pilot project of wholistic palliative care for cancer patients from 2017 to 2019 at Thawung Community Hospital and 17 sub-district health promoting hospitals of Muang district in Lopburi province were used for analysis to align with the concept of participation[4,5] and palliative care performance development of Co2HoPE Model.[7] Needs for the development of the guidance were determined. Additional documents were also analyzed to synthesize participatory palliative care guidance.

The information form the situational analysis mentioned above was presented to workers at Lopburi Provincial Health Administration Office, Muang District Health Administration Office and King Narai the Great Hospital for planning of setting goals and activities for the model of palliative care for cancer patients. Lastly, another situational analysis with 24 nurses from 17 sub-district health promoting hospitals of Muang district, Lopburi province based on the present situation and context (2021) was conducted to update the participatory palliative care guidance. At this terminal stage of phase 1, the 24 nurses from 17 sub-district health promoting hospitals of Muang district, Lopburi province were tested for 1) knowledge about palliative care, 2) skill and practice performance, and 3) palliative care competency.

In **phase 2** (early 2022), the researcher develop the participatory palliative care model by identifying goals, decision making processes, changes needed, acceptance, bond, and responsibilities for all relevant parties. The competencies of palliative care for community nurses (i.e., nurses who work in the sub-district health promoting hospitals) were established. The researcher trained 24 nurses from 17 sub-district health promoting hospitals. In this training, each of 24 nurses performed 6 visits of home care for palliative cancer patients specifically 2 with researcher as the trainer, and 4 independently without the trainer. This took about 1 month for all visits to complete. At the end of this phase, the protocol of participatory palliative care was revised according to information and feedbacks from the nurses. Specifically, steps of participatory palliative care were refined and logbook to document participatory palliative care was designed. Model for participatory palliative care for seamless service of Muang district, Lopburi province was redefined.

In **phase 3**, the refined protocols and logbook were tested in June 2022. The same 24 nurses provided home health for 10 cancer patients. Each nurses made 10 home care visits within one month. On each home visit, more than one nurse (usually 2 – 3 nurses) provided the home care. After 2 – 3 visits, participating nurses and researcher conducted a conference to share information and experiences and discussed how to improve the work. Shortcomings and recommendations obtained from the conference were used for revising the protocol and the service model.

Participants

The participants consisted of nurses and cancer patients. For the nurse, they were 24 nurses from 17 sub-district health promoting hospitals in Muang district in Lopburi province recruited by a purposive random sampling. To be eligible, they had to provide palliative care and willing to participate in the study. However, those who moved out of Lopburi province or other settings with no palliative care or those who were unable to complete all research activities were excluded.

Another set of participants was 10 palliative-phase cancer patients under the care of sub-district health promoting hospitals in Lopburi province recruited by the purposive random sampling. To be eligible, the patients had to be willing to participate, have palliative performance scale (PPS) score of 50 points or higher, be at palliative stage (i.e., having metastatic cancer), and have no desire for resuscitating treatment, On the other hand, patients with signs or symptoms unstable to the point of inability to communicate or participate in the study were excluded.

Research instruments

In this study, instruments for screening performance during the development process and instruments for evaluating study outcomes were used. There were two instruments for screening competency/performance during phase 1. First, the **10 questions evaluated participating nurses on knowledge about palliative care** in step of development need assessment in phase 1 of the study. The response was “yes” or “no” with a score of 1 point rewarded for a correct answer. Levels of knowledge were categorized as low, moderate and high (0 – 0.33, 3.34 – 6.66, and 6.67-10.00 points, respectively). Second, the **check list for skill and practice performance** had 5 issues for the researcher to observe and evaluate performance of the nurse in phase 2 of the research. The rating was defined as 1-being able to practice, 2-performing a good practice, and 3-pracitiving naturally. With the possible total score of 0 – 15 points, levels of the performance were categorized as high, moderate and low (10.2 – 15.0, 5.1 -10.1, and 0 – 5.0 points, respectively).

The next two instruments were for measuring **study outcomes** namely 1) Palliative Care Nursing Self–Competence Scale (PCNSC)[9] (The PCNSC/Thai version) for the nurses and 2) satisfaction patients and/or primary caregivers toward palliative care. The PCNSC/ Thai version consisted of two parts. The first part collected the nurse’s demographic characteristics. The second part assessed the nurse’s competency in communication, continuing care and coordination (5 items), holistic care (35 items), personal development and leadership (5 items), and ethical and legal issues (5 items). Each item was rated on 6-point rating scale ranging from 0-being unable to perform to 5-being able to perform and advise others. With the possible total scores of 0 – 250 points, levels of nurse’ competency in palliative care were categorized as 1) being able to perform while being supervised by others, 2) being able to perform with mentor, 3) being able to perform with manual, 4) being able to perform one’s self, and 5) being able to perform and advise others (0 – 50, 51 – 100, 101 – 150, 151 – 200, and 201 – 250 points, respectively). Participating nurses complete this questionnaire in phase 1 (first evaluation), and phase 3 (second evaluation).

Lastly, the **satisfaction** of the patients and/or primary caregivers toward palliative care were evaluated. This questionnaire was modified from the satisfaction of family members of the palliative patients.[10] The first part collected demographic characteristics. The second part contained 10 positive questions assessing satisfaction. The response was a 6-point rating scale ranging from 0-the least satisfied to 5-the most satisfied. With the possible total scores of 0 – 5 points, levels of satisfaction were categorized as dissatisfied, least satisfied, less satisfied, moderately satisfied, and most satisfied (0.00 – 0.83, 0.84 – 1.66, 1.67 – 2.43, 2.44 – 3.26, 3.27 – 4.09, and 4.10 – 5.00 points, respectively). Participating patients and/or primary caregivers completed the questionnaire in phase 3.

For research instrument **quality assurance**, content validity was examined by three experts in suicide and shown as content validity index (CVI). Internal consistency reliability was tested in 20 patients with characteristics comparable to the participating patients/caregivers. For the questionnaire on the participating nurses' knowledge about palliative care, content validity was good with CVI of 1 and internal consistency reliability was high with Kuder-Richardson coefficient of 0.95. For the check list for skill and practice performance of the nurse, it had a good content validity (CVI of 1). The PCNSC/Thai version had a high internal consistency reliability (Cronbach's alpha coefficient of 0.992). The satisfaction question had a good content validity (CVI of 1) and a high internal consistency reliability (Cronbach's alpha coefficient of 0.991).

Participant ethical protection

The study was approved by the Ethics Committee for Human Study of Lopburi Cancer Hospital (approval number: LEC 6407; approval date: March 25, 2021). All participants both nurses and patients/primary caregivers were informed about objectives, process, and voluntary and anonymity nature of the study. All participants could withdraw from the study at any time with no negative consequences.

Data analysis

Components of participatory palliative care was identified. Descriptive statistics including mean with standard deviation and frequency with percentage were used to summarize demographic characteristics of the participants. Scores of competencies of the nurses before and after the home health care were compared using paired t test or Wilcoxon signed ranks test, as appropriate. Statistical significance was set at a type I error of 5%.

Results

The participatory palliative care model in Muang district, Lopburi province was based on the five components as follows: 1) seamless information transferal system, 2) competencies of the nurse based on Co2HOPE model, 3) healthcare network system, 4) devices sharing, and 5) participatory health care.

For the first component, the seamless information transferal system would identify the transmission and receiving of the information of the patient care including the patient's needs between the center which was Lopburi Cancer Hospital and King Narai Hospital to sub-district health promoting hospitals. The transmission should be two-way communication for consultation using mobile phone applications (such as Line®) and telephone.

For the **second** component of nurse's competencies based on Co2HOPE model, they consist of communication, continuing care, coordination, holistic care, personal development and leadership, and ethical and legal competencies. For the **third** component of healthcare network system, it consists of cooperation of nurses in tertiary hospitals, general hospitals and sub-district health promoting hospitals, palliative care in the community, and guideline for palliative care. For the fourth component of device sharing, it consists of protocol for device borrowing and the device warehouse. For **fifth** component of participatory care, it consists of goal setting, problem solving, decision making, changes, acceptance, bond, and responsibility.

Outcome of the participatory palliative care for cancer patients

The outcomes were based on participants of nurses and patients/primary caregivers. For the 24 nurses, they were all women, 43.13 ± 9.71 years old by average, mostly with bachelor's degree (75.00%), 18.92 ± 9.22 years of nursing experience by average, mostly never being trained with palliative care (83.30%), and with 3.25 ± 5.34 years of experience of palliative care.

For the 10 patients/primary caregivers, it was found that all 10 patients could answers the questionnaires with no help from primacy caregivers needed. There were men and women in equal number, 62.00 years old by average, mostly with universal coverage health insurance (80.00%), with primary school education (70.00%), with lung cancer (70.00%), with PPS score of 50 - 60% (90.00%).

For the scores of nurse competences using the PCNSC/Thai version, the mean score before the home care (127.29 ± 36.81 points) increased to 176.88 ± 32.37 points after providing the home care with statistical significance (P-value < 0.001, Wilcoxon signed rank test).

In terms of frequency of levels of competencies, proportions of nurses reporting being able to perform the care by themselves and to advise others increased from 0% before the care intervention to 20.80% after the intervention (Table 1). Similarly, proportions of nurses reporting being able to perform the care by themselves increased from 16.70% before to 58.30% after the intervention. On the other hand, the decreasing proportions of nurses reporting being able to perform with the use of guideline/manual (66.70% to 16.70%), with mentor (12.50% to 4.20%), and with the other's supervision (4.20% to 0%) from before to after the care intervention were found (Table 1).

Table 1 Frequency of nurses with reported competency before and after the care intervention (N = 24).

Level of competency based on the PCNSC/Thai version scores	N (%) by care intervention	
	Before	After
Being able to perform the care by themselves and to advise others) (201 – 250 points)	0 (.00)	5 (20.80)
Being able to perform the care by themselves)	4 (16.70)	14 (58.30)
Being able to perform with the use of guideline/manual) (151 - 200 points)	16 (66.70)	4 (16.70)
Being able to perform with mentor (51 - 100 points)	3 (12.50)	1 (4.20)
Being able to perform with supervision by others) (0 – 50 points)	1 (4.20)	0 (.00)

The patients' satisfaction toward palliative care was at 4.35 out of 5 points by average. Most aspects of satisfaction were at the "most satisfied" level except for the satisfaction on the response in accordance with their culture, beliefs, and religion when hospitalized of which the mean score was 3.80 points and the moderate satisfaction (Table 2).

Table 2 Satisfaction of patients toward palliative care (N =10).

Satisfaction	mean	SD	Level
1. Satisfied with receiving information and changes continuously.	4.30	0.82	Most satisfied
2. Satisfied with participating with planning and making decision for patient care.	4.40	0.70	Most satisfied
3. Satisfied with convenience and being close to the patient.	4.50	0.71	Most satisfied
4. Satisfied with the nurse talking and asking about the patient symptoms and changes regularly.	4.50	0.71	Most satisfied
5. Satisfied with the nurse allowing for expressing positive and negative feelings which makes you feel warm and have trust.	4.50	0.71	Most satisfied
6. Satisfied with the nurse for the help on pain relief.	4.40	0.70	Most satisfied
7. Satisfied with the response in accordance with their culture, beliefs, and religion when hospitalized.	3.80	1.03	Moderately satisfied
8. Satisfied with the nurse for preparing you to face things.	4.20	0.79	Most satisfied
9. Satisfied with the knowledge and preparation for home care.	4.40	0.70	Most satisfied
10. Satisfied with the help/advice/assistance when facing problems.	4.50	0.71	Most satisfied
Overall satisfaction	4.35	0.76	Most satisfied

Discussions and Conclusion

Participatory palliative care needs competencies of the nurse to take care of cancer patients at home. This study developed the participatory palliative care model and protocols for nurses in sub-district health promoting hospitals in Muang district, Lopburi province, Thailand, using the Participation Theory with the Co2 HoPE Model for developing nursing competencies. Participatory concept help improve teamworking where team members working in different places could understand, rely on and trust each other. Such teamworking could offer better care outcomes for patients, family members, and caregivers. The concept could also help healthcare providers improve competencies in caring cancer patients with palliative care in line with the policies of the Ministry of Public Health. The ultimate goals are healthy population, and happy providers. The sustainable health care system needs continuous follow-up and monitoring system.

The seamless care from hospital to the home could be done where the policy of "Close-to-Home Hospital" is in place and effective. The work flow must be effectively executed as planned from all parties involved. All parties must be fully cooperated. The participatory palliative care in our study might be effective since the satisfaction from the patients/primary care givers was at the highest level. This is consistent with the work of Runguthaisiri which developed the model of palliative care for terminal-stage patients with community participation in Selapum district, Roi-et province.[11] The study consisted of 3 participation steps of community preparation, participation planning, and plan execution. Based on the interview, they found that participants used participatory technique through focus group, policy making, setting up the center for palliative care, and the cooperative team for patient care of hospital care providers, hospital, community health center, healthcare volunteer, and family members/relatives/caregivers. Of the 51 patients under the care, 35 of them were terminal stage cancer patients. The most provided service by the palliative care center was demonstration and training for family members or relatives to take care the patient at home, and the providers' attending the patient's funeral.[11]

The development of the care model could be possible with the 4 participation concepts of early start, use of mediator, trust and appropriateness. Situational analysis revealed that strengths of the care service center were clear policy and effective communication, while weakness was inadequate budget. The opportunity for development was participation which was mandated in the constitution and the policy of the Ministry of Public Health. For the threat, transferring healthcare center such as sub-district health promoting hospitals from the supervision of the Ministry of Public Health to the local administration office of the Ministry of Internal Affairs. This analysis is consistent with the work of Prommarat which studied the effects of home palliative care model in the healthcare network of Banghong district, Lampoon province.[12] After the wholistic palliative care by multidisciplinary team and the community, mean scores of palliative care outcomes increased with a better access to care service, improved quality of life, higher satisfaction, and more good dying.[12] It is also consistent with the study of Lotfallah and colleagues where a broader understanding on palliative care equipped with participation of the specialists were the key to better clinical responses of the palliative patients.[13] Integration of educational curriculum such as online demonstration and training could improve effectiveness of palliative care.[13]

It is also consistent with the work of Tiangkaew and Sukiluk.[14] They studied effects of palliative care for cancer patients at Ayuthaya Hospital. Satisfaction of patients/care givers was at a high level for their physical and social health, and nursing care with moderate satisfaction for psychological health and spiritual health.[14] Study of Promsilp and colleagues also showed that mean scores of spiritual nursing care and perceived capability to spiritual care were at a moderate level among nurses taking care of terminal stage patients.[15] The care of spirituality needs skills and expertise, only competent nursed could provide comprehensive care. Unfortunately, most training allows for negligible portion of spiritual care, but mostly on physical and psychological care.

The use of the participation concept with the Co2 HoPE Model allows for the development of 5 components of nurse's competency namely communication for consultation for patients and family members, coordination for continuing care of patients and family members, holistic care patients and family members, personal development on knowledge, leadership in palliative care, and ethical and legal aspects of palliative care. We model the care process of 10 days with development activities including lecture, group discussion, case study, field group discussion, demonstration and training. We also used teaching, learning and sharing, self-evaluation by answering the questionnaire and observation. We also evaluated knowledge, skill, and self-evaluation. All of these activities could result in better nurse's competency in participatory palliative care.

A study of Kuanhin and colleagues also showed similar results in a participatory action research in 208 nurses in sub-district health promoting hospitals in Nakhon Srithammarat province.[16] They showed that the development program resulted in improved competency in palliative care and the needs for development. The model for palliative care for nurses was developed.[16] A study of Jaipia showed that 'the model of palliative care of nurses in Changmai Maharat Hospital and 8 hospitals in the network consisted of 10 components namely communication, evaluation and management for pain, evaluation and management of discomfort, attitude for care, legal and ethical aspects of care, religious, sociocultural and belief aspects of care, end-of-life care, management of loss and sorrow, multidisciplinary team cooperation, and professional development and research.[17]

Our study is also consistent with the work of Yimyu who found that competency of nurses in palliative care at a tertiary hospital consisted of palliative care and pain management, knowledge management and ethical, legal, religious aspects of care and transferal system, communication and care for loss and sorrow, and preparation for near dying and care for post death.[18] The study also categorized nurse's competency in palliative care into 3 levels specifically excellent level (being able to teach and oversight), second level (being able to teach but not oversight), and first level (fair competency which needs oversight from mentor).

This study has certain limitations. With no control group, bias from confounders could be expected and interpretation should be cautious. Clinical outcomes such as discomfort at end-stage of life should be evaluated.

Based on our findings and conduct, it is recommended that the model could be adopted in caring cancer patients with various stages. Nurses could be improved in their palliative care competency regrading differences in culture, beliefs, religions, and norms in caring. For the future research, study with control could alleviate the suffering from bias. Studies wit longer duration should be conducted.

In conclusion, the participatory palliative care for cancer patients for nurses consisted of seamless information transferal system, competencies of the nurse based on Co2HOPE model, healthcare network system, device sharing, and participatory health care. After the palliative home care provided, scores of competencies increased significantly and the patients/care giver were highly satisfied.

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Conflict of Interest Statement

The authors declare no conflict of interest.

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