

Current State of Palliative Care in Iran and Related Issues: A Narrative Review

Abstract

Background: Palliative research studies seem to be limited and disperse in Iran. The present study was therefore conducted to review and categorize the Palliative Care (PC) studies performed in Iran in terms of the research type, the type/focus of PC, the measured outcomes in interventional palliative studies and their related results, the disease type, and their geographical distribution. **Materials and Methods:** This narrative review was conducted in 2021 in which both Iranian and international databases including PubMed, Scopus, Web of science, CINAHL, ProQuest, Magiran, SID, Noormags, ISC were searched. The inclusion criteria were original articles conducted in Iran and results published in Persian or English journals ab initio in which PC was assessed as a variable (dependent or independent) or the main concept. **Results:** A total of 1096 articles were identified from which only 44 articles were reviewed. The research studies were mainly focused on cancer and majority conducted in Tehran. Majority of studies were quantitative-interventional leading to a variety of positive changes in dependent variables, including reduce in pain severity, change in life pattern, a good response to therapy, increase life expectancy, improve in dysphagia, improve quality of life, reduce patients' metastasis, and increase in nurses' self-efficacy. **Conclusions:** The PC studies distributed across different fields and cities in Iran resulted to a number of positive outcomes for patients. More focused and robust research studies with different patients need to be conducted in this emerging field in Iran.

Keywords: Palliative care, review, nursing, Iran, neoplasm, terminal care, supportive care

Introduction

The aim of Palliative Care (PC) is to improve Quality of Life (QoL) and manage symptoms of individuals living with life-threatening illnesses.^[1-3] This approach can be useful for different groups of patients, such as those affected by cardiovascular diseases, cancer, chronic pulmonary diseases, Acquired Immune Deficiency Syndrome (AIDS), diabetes, dementia, kidney failure, and neurological diseases.^[4] In other words, PC can be useful for all the patients affected by dangerous diseases regardless of their age, diagnosis, and background.^[5] It has been estimated that 40 million people are in need of PC each year; 78% of people in need of PC live in low- and middle-income countries. Nevertheless, less than 10% of the patients living in low-income and middle-income countries receive PC.^[4] It is predicted that the rapid population growth will lead to an increasingly growing number of the patients

who need PC.^[2,6,7] For example, about 90 million people in the United States are affected by a serious disease and receive treatment. And 80% of this population need PC; however, only half of the hospitalized patients who need PC receive that.^[8]

Regardless of the diversity of the patients needing PC, this type of care is based on a set of fundamental principles, including patient-oriented care, the continuance of the care during the treatment period, starting the care at the time of diagnosis, inter-professional collaboration, and public access.^[7] This structure has been developed in many countries since years ago.^[9] However, it seems that there is no coherent PC program in Iran and despite its significant role, PC is considered a major challenge in the health system.^[10]

Considering different challenges of PC, the Iranian researchers have paid attention to this area in recent years.^[11] However, the research studies seem to be limited

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and disperse in terms of the focus/independent variable of PC (i.e. spiritual care, physical care, mental care), the research type (i.e., observational, experimental, and semi-experimental studies), the outcomes/dependent variable in interventional palliative studies (i.e., quality of life, patient satisfaction, and symptom distress), the disease type (i.e., cancer, cardiovascular diseases, neurological diseases), and the geographical distribution (i.e., different provinces/cities). The present study was therefore conducted to review and categorize the PC studies performed in Iran regarding previously mentioned categories and issues.

Materials and Methods

This narrative review was conducted in 2021 in which both Iranian and international databases, including PubMed, Scopus, Web of science, CINAHL, ProQuest, Magiran, SID, Noormags, and ISC were searched. The inclusion criteria were original articles (quantitative, qualitative, mixed methods) conducted in Iran and results published in Persian or English journals ab initio in which PC was assessed as a variable (dependent or independent) or the main concept. Studies focusing on hospice or end of life care were excluded. Articles that had a focus on related concepts to PC like quality of life or spirituality care or only had suggestions for future PC were excluded. Nonoriginal publications, including short communication, letter to editor, book review, and review articles and those without having access to full text were also excluded. A comprehensive search at the beginning of the study could not identify any similar review article in this relatively new area of investigation in Iran.

To start the review process, at first suitable key words were identified using Mesh, Snomed, Embase, and other related literatures. A specific search strategy [Table 1] for aforementioned databases were then made and conducted with researchers receiving advices from three expert medical librarians. After removing duplicates, the title and abstract of retrieved articles were reviewed by two researchers according to inclusion criteria. In case of disagreement between two assessors, articles were reviewed by the third researcher. And 39 articles were remained for a final review [Figure 1]. References of these selected articles were also secondary reviewed for potentially relevant articles resulting in adding five more articles. The 44 final articles were reviewed by all three researchers and agreement between them regarding main components and findings of final articles were achieved.

Ethical considerations

This review article was approved by the ethics committee of Isfahan University of Medical Sciences (IR.MUI.MED.REC.1399.054). All attempts were made to prevent any types of biases in retrieving, reviewing, and reporting of articles.

Table 1: Search strategy in some databases

Databases	Search Strategy
Scopus	TITLE-ABS-KEY("Palliative Care" OR "Palliative Treatment" OR "Palliative Therapy" OR "Palliative Supportive Care" OR "Palliative Surgery" OR "Hospice Care" OR "Bereavement Care" OR "Spiritual Healing" OR "Terminal Care" OR "End of Life Care") AND TITLE-ABS-KEY ("Chronic Disease" OR "Chronic Illness" OR "Life threatening disease" OR "difficult treatment" OR "seriously ill patient*" OR "cancer" OR "end-stage chronic illness" OR "Dementia*" OR "Renal Failure" OR "Multiple Sclerosis" OR "Arthritis, Rheumatoid" OR "Heart Failure" OR "Liver Failure" OR "Pulmonary Disease, Chronic Obstructive" OR AIDS OR "Diabetes Mellitus") AND TITLE-ABS-KEY (Iran*)
Web of Science	TS= ("Palliative Care" OR "Palliative Treatment" OR "Palliative Therapy" OR "Palliative Supportive Care" OR "Palliative Surgery" OR "Hospice Care" OR "Bereavement Care" OR "Spiritual Healing" OR "Terminal Care" OR "End of Life Care") AND TS= ("Chronic Disease" OR "Chronic Illness" OR "Life threatening disease" OR "difficult treatment" OR "seriously ill patient*" OR "cancer" OR "end-stage chronic illness" OR "Dementia*" OR "Renal Failure" OR "Multiple Sclerosis" OR "Arthritis, Rheumatoid" OR "Heart Failure" OR "Liver Failure" OR "Pulmonary Disease, Chronic Obstructive" OR AIDS OR "Diabetes Mellitus") AND TS= (Iran*)

Results

The important components and findings of final included articles are presented in Table 2. Results of the study showed that included studies had a focus on different patients/participants including cancer,^[12-44] hemodialysis,^[45] heart failure,^[46,47] chronic disease,^[48] chronic pain,^[49] and with anonymous groups.^[50-55] Several provinces/cities were engaged in the studies including Tehran,^[12-15,17,20,21,24-26,29-35,37,39-43,48,51,52] Isfahan,^[22,27,28,38,55] Kerman,^[45,53] Tabriz,^[16,36] Mashhad,^[18,19] Yasouj,^[44] Gorgan,^[49] Neyshabour,^[50] Jiroft,^[46,47] Meybod/Ardakan,^[54] Gorgan/Gonabad.^[23] Majority of studies had quantitative approach, including interventional,^[17-19,22,23,29,31,33,35, 44,47,49,54] descriptive,^[20,39,41,42,50,53] and correlational-analytical.^[37,45,46,51] This was then followed by qualitative^[12-16,21,24-27,30,32,34,36,40,43,48,52] and mixed methods.^[28,38,55] In quantitative interventional PC studies, a range of medical-surgical,^[17-19,23,29,31,33,37] educational,^[44,49,54] and psycho-spiritual^[22,35] managements were used as an independent variable.

PC interventions were led to a variety of positive changes in dependent variables measured including reducing in pain severity,^[17] change in life pattern,^[49] a good response to therapy,^[19] increase life expectancy,^[22] improve in dysphagia,^[23] improve QoL,^[18,31,35,44,47] reduce patients' metastasis,^[33] and increase in nurses' self-efficacy.^[54] In one study,^[29] PC had no effect on the outcome (urinary symptoms). In quantitative noninterventional studies, health care

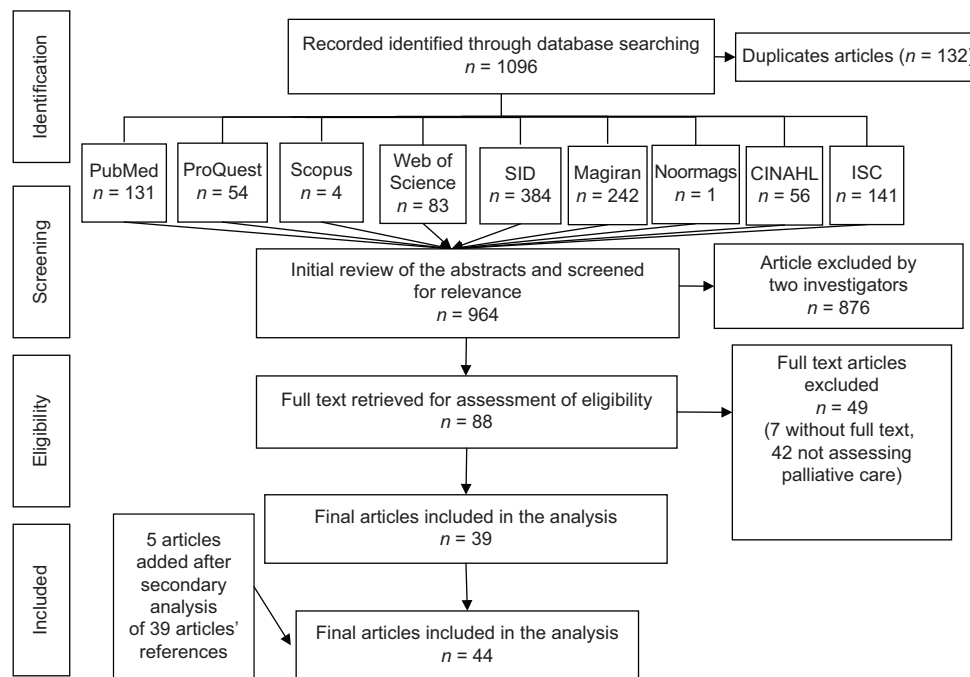


Figure 1: The reviewing process

providers' knowledge/attitude/practice/perspectives about PC,^[45,50,51,53] palliative treatment,^[23,37,41] QoL,^[39,46] information behavior of patients,^[42] and the feasibility of home PC^[20] were investigated. Qualitative research was also an important portion of palliative research recognized in this review either in the shape of a single study or in combination with a quantitative arm as a mixed-methods research. This indicates the growing interest of researchers particularly nurse's researchers to qualitatively explore palliative concept and related components,^[12,14,24,25,52] current and future challenges,^[13,16,34,36,48] or physio-psycho-spiritual/symptom palliation^[32,40,43] in an Iranian context. Also, attempts were made to mine health care perceptions^[15,30] and even empower them.^[21,27] Providing an application^[28] and an interprofessional curriculum^[38] were among mixed methods research studies conducted in this field of endeavor. It is interesting to see that a first step toward pediatric palliative oncology^[26] was also started need huge work to complement this initial stage.

Discussion

The majority of studies in this review were conducted in the field of cancer. This is not surprising as it is a main health issue all around the world including Iran. Some researchers also believe that oncology is one of the main fields from which QoL, the heart of PC, was initiated. Given the variety of problems still exist in the oncology area, continuing palliative research is expectable. However, there is a paucity of palliative research in such areas as cardiovascular and neurological in Iran need further investigation. Policy makers and researchers need to focus more on the growing field of PC. Conducting more research with different patients' populations in several geographical

areas of Iran might also reveals problems are culturally, socially, or economically context-bonded. Findings of the study also showed that in quantitative studies, whether in selecting the type of intervention^[17,19,22,23,29,31,33,35,44,47,49,54] or evaluating the dependent variables,^[17,19,29,33,37] the main focus was on the physical aspect of the PC and other psychosocial and spiritual aspects have been neglected. PC care includes several principles, including pain relief and other uncomfortable symptoms and integration of psychological and spiritual aspects of patient care,^[56] regardless of the stage of illness.^[3] Therefore, understanding of patients' lives particularly in more subjective and personal domains is necessary and worthy of investigation.^[57]

Another important issue in reviewed articles was paying less attention to caregivers and their families, whereas PC is a supportive care approach focused on both the patient and their relatives.^[58] More research needs to be done on family members of patients as key members during patient treatment and care. Also, in the current articles, the attitude, performance, and perspective of the health care providers about PC have been investigated. However, no study has examined health care providers' awareness about PC and their educational needs. It is an important matter in reviewed articles indicating that medical staff did not know or even heard about PC.^[59-61] The main limitation of the review was that only original studies conducted in Iran with published articles in English or Farsi was investigated. The gray literature and articles in other languages need to be reviewed further. Some studies particularly qualitative ones might be indexed in other Iranian databases with keywords that not easily could be retrieved.

Table 2: The important components and findings of final included articles

Authors	Research design	Sample	Focus of palliative care or independent variable	Dependent variable (Only for interventional studies)	Type of disease	Geographical distribution	Major findings
Hesari, <i>et al.</i> ^[49]	Quasi-experimental	30 elderly women	Educating of Palliative Care (PC) including management of pain and physical problems	Life pattern of old women	Chronic pain	Gorgan	Mean changes of life pattern before teaching PC significantly differed from those of immediately, one and 3 months after the educational program.
Aghaei, <i>et al.</i> ^[12]	Content analysis	7 nurses, 1 physician, 2 homecare nurses, 2 psychologists, 1 social worker, 2 patients, 1 patient kin	The nature of relationship in PC		Cancer	Tehran	Three categories were identified: «being with the patient», «close communication», and «mutual understanding with the patient».
Ansari, <i>et al.</i> ^[13]	Directed content analysis	22 participants included cancer patients, their family caregivers, health care providers, and policy makers	Challenges in PC		Cancer	Tehran	«Process» was the main category consisting three sub-categories: «stakeholder weakness», «political conflict», «standard care», «and implementation of research and education approaches».
Borimnejad, <i>et al.</i> ^[14]	Hermeneutic phenomenological study	10 nurses	Human relationships in PC		Cancer	Tehran	The main theme was «human relations». This theme included the sub-themes of «psychological support» and «comprehensive acceptance».
Hamooleh, <i>et al.</i> ^[15]	Conventional content analysis	14 nurses	Perception of Iranian nurses regarding ethics-based PC		Cancer	Tehran	Original categories encompass the following: «human dignity», «professional truthfulness» and «altruism».
Hassankhani, <i>et al.</i> ^[16]	Content analysis	23 participants (8 managers of community-based care, 8 nurses, 1 oncologist, 1 pain specialist, 2 nursing doctors and the nursing manager of the province) who were involved with home care.	Barriers to home-based palliative care		Cancer	Tabriz	Three categories of barriers were explored including «the lack of instructions», «family desperation» and «lack of professionalism».
Hemati, <i>et al.</i> ^[17]	Experimental	86 patients	Efficacy of fentanyl transmucosal patch in the treatment of chronic soft tissue cancer pain	Pain severity, pattern of sleep	cancer	Tehran	Pain severity was significantly reduced after the treatment. The transmucosal fentanyl patch group experienced many side effects.

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Table 2: Contd...

Authors	Research design	Sample	Focus of palliative care or independent variable	Dependent variable (Only for interventional studies)	Type of disease	Geographical distribution	Major findings
Farmani, <i>et al.</i> ^[50]	Cross-sectional study	116 nurses	The nurses' knowledge, attitude and practice towards PC		---	Neyshabur	Majority of nurses had a good attitude towards PC but did not have a good knowledge and practice.
Asadi-Lari, <i>et al.</i> ^[18]	Experimental	149 patients	Palliative therapy including patients who were to undergo palliative surgery, palliative chemotherapy and/or palliative radiotherapy, and the best supportive available care		cancer	Mashhad	In general, the mean score of Quality of Life (QOL) in the curative group was higher than the PC group. There was a significant difference between the two groups in terms of physical, role, and social functions.
Bagheri, <i>et al.</i> ^[19]	Prospective randomized trial	60 patients	The effect of iodopovidone versus bleomycin in chemical pleurodesis	Comparing the efficacy and safety of bleomycin pleurodesis with povidone iodine pleurodesis	Cancer	Mashhad	The response rate to treatment was 83.3% in the povidone-iodine group and 66.7% in the bleomycin group.
Farahani, <i>et al.</i> ^[20]	Descriptive study	196 nurses	The feasibility of home PC		Cancer	Tehran	There was relative satisfaction and social acceptance of pain management, medication access, and equipment. Obstacles to this type of care include lack of access to end-of-life services and hospices and training opportunities.
Ansari, <i>et al.</i> ^[21]	Content analysis	20 participants including: cancer patients, their family caregivers, health care providers, experts and policy makers	Educational needs on PC for cancer patients		Cancer	Tehran	Four main categories were identified, which included "academic education planning", "workforce training", "public awareness", and "patient and caregiver empowerment".
Hematti, <i>et al.</i> ^[20]	Experimental	89 patients	Spiritual well-being for increasing life expectancy in palliative radiotherapy patients	Life expectancy (LE)	Cancer	Isfahan	Listening, reading, and watching the text of the holy Quran are useful for increasing LE.
Besharat, <i>et al.</i> ^[23]	Descriptive cross-sectional study	39 patients	Stent placement for inoperable esophageal cancer	Survival function, dysphagia recovery	Cancer	Gorgan, Gonabad	Although dysphagia improved in patients with esophageal cancer after dilatation or stenting, the survival rate of these patients after PC was low.

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Authors	Research design	Sample	Focus of palliative care or independent variable (dependent variable) Only for interventional studies)	Type of disease	Geographical distribution	Major findings
Borimnejad, et al. ^[24]	Hermeneutic phenomenological method	14 nurses	Concept of palliative nursing	Cancer	Tehran	Two themes of «providing excellent» and «Palliative Care as an alarm» were explored.
Ansari, et al. ^[43]	Content analysis	22 stakeholders including cancer patients, caregivers, health care providers and policy makers	PC policy analysis	Cancer	Tehran	Four categories were explored namely “context”, “content”, “process”, and “actors”.
Barasteh, et al. ^[25]	Content analysis	17 policy makers, decision-makers, faculty members, researchers, center manager and PC providers such as physician and other fields	Present status and the future challenges of PC in Iran	Chronic diseases	Tehran	PC challenges were categorized into four main categories including “policy-making”, “program implementation”, “comprehensive education” and “drug availability”.
Mojen, et al. ^[26]	Content analysis	29 participants (PC) specialists, policy makers, health care providers, the parents of children with cancer	Pediatric PC in Iran	Cancer	Tehran	The main theme was «classes of PC services» with the two main categories «comprehensive care» and «establishing social justice».
Taleghani, et al. ^[27]	Community-based action research	33 samples (included nurses, head nurses, managers of nursing services, nursing professors and professors of oncology department)	Empowering nurses in providing PC	Cancer	Isfahan	Three categories of “professional development of nursing in PC”, “obstacles to provide PC” and “strategies for improving provision of PC” were identified.
Salimian, et al. ^[28]	Mixed method	---	Developing a mobile application to improve the quality of cancer PC	Cancer	Isfahan	Ghasedak software was created for self-care for cancer with user training features.
Javanmard, et al. ^[29]	Clinical trial	36 patients	Diode laser ablation of prostate and channel transurethral resection of prostate in patients with prostate cancer and bladder outlet obstruction symptoms	Cancer	Tehran	Post void residual, maximum urinary flow rate, and Prostate Symptom Score improved significantly in both groups. But after the operation, there was no statistically significant difference between the two groups.
Seyedfatemi, et al. ^[30]	Conventional content analysis	15 nurses	Iranian nurses’ perceptions of PC for patients	Cancer	Tehran	Two main categories: “management of physical pain” and “psychological empowerment” was identified.

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Table 2: Contd...

Authors	Research design	Sample	Focus of palliative care or independent variable	Dependent variable (Only for interventional studies)	Type of disease	Geographical distribution	Major findings
Sarafi, <i>et al.</i> ^[45]	Cross-sectional and descriptive analytic study	322 patients 45 nurse	Palliative care priorities		Haemodialysis	Kerman	From the perspective of hemodialysis patients and nursing staff, PC had a high priority.
Saidi, <i>et al.</i> ^[31]	Clinical trial	70 patients	A palliative total gastrectomy	Abdominal distress and relentless weight loss	Cancer	Tehran	The operative mortality rate was 10% and none of the survivors suffered from disabling symptoms or weight loss.
Seyedfatemi, <i>et al.</i> ^[32]	Hermeneutic phenomenological study	11 nurses	Using palliative care to provide psychological comfort to cancer patients		Cancer	Tehran	Three themes related to the constitutive pattern including “stress management”, “empathetic behavior”, and “all-embracing outlook” were identified.
Simforoosh, <i>et al.</i> ^[33]	Clinical trial	26 patients	Cytoreductive and palliative radical prostatectomy, extended lymphadenectomy, and bilateral orchiectomy	Functional and oncological outcomes	Cancer	Tehran	Metastasis was greater in the radical prostatectomy group of conductive cells. There was no dysfunction in 22 patients in the CRP group, but in 9 patients systemic therapy required surgical intervention. There was no significant difference between the two groups in terms of specific cancer survival.
Khoshnazar, <i>et al.</i> ^[34]	Qualitative study	9 patients	Structural challenges of providing PC for patients with breast cancer		Cancer	Tehran	Undefined palliative care services and the lack of adequate palliative care providers were the two main categories.
Zaki-Nejad, <i>et al.</i> ^[35]	Quasi-experimental study	50 patients	Dignity therapy and QOL of patients with cancer receiving PC	QOL	Cancer	Tehran	In the intervention group, dignity therapy improved the quality of life.
Jabbari, <i>et al.</i> ^[36]	Qualitative study	Rural family physicians (FPs, n=23) and key palliative end-of-life care (P/EOLc) stakeholders (n=13)	Organizing PC in the rural areas of Iran		Cancer	Tabriz	Four main themes were identified, including “health care provider teams”, “structures and procedures”, “obstacles”, and “strategies or solutions”.

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Authors	Research design	Sample	Focus of palliative care or independent variable	Dependent variable (Only for interventional studies)	Type of disease	Geographical distribution	Major findings
Bahador <i>et al.</i> ^[46]	Descriptive analytic	100 patients	The study of PC and its relationship with QOL		Heart failure	Jiroft	There was a significant and positive relationship between QOL and PC in the patients. This relationship between QOL a month later and PC was better and more meaningful ($r=-0.39$) ($P=0.0001$) than QOL in discharge time and PC ($P=0.098$) ($r=-0.16$). The majority of participants core their knowledge about PC as weak, which was significantly related to their previous experience in caring of a terminally ill patient. Less than one third stated their good ability to either assess or manage pain in end of life.
Asadi, <i>et al.</i> ^[51]	Cross-sectional	216 General practitioners	The concept of PC practice among Iranian general practitioners		--	Tehran	Four main themes were identified Including “comprehensive care”, “pain management”, “religious care”, and “spiritual care”. Participants had moderately negative to neutral attitudes toward Palliative care. The highest mean score was related to the “patient’s preference” category and the lowest was related to the “withdrawing treatment” category. The average scores of QOL are significantly increased in the intervention group after training program. Patients with tumor necrosis less than 50% or with ascites and portal branch thrombosis had lower survival.
Negarandeh, <i>et al.</i> ^[52]	Hybrid model of concept analysis	8 nurses - 25 articles	Concept analysis of PC in nursing		---	Tehran	
Razban, <i>et al.</i> ^[53]	Descriptive design	121 Nurses	Nurses’ attitudes toward PC		---	Kerman	
Sadat Bahador, <i>et al.</i> ^[47]	Quasi-experimental	88 patients of CCU and Post CCU	The impact of PC program on QOL	QOL	Chronic heart failure	Jiroft	
Saberi, <i>et al.</i> ^[37]	Experimental study	36 patients	Palliative treatment including trans arterial chemoembolization (TACE)	Results of trans arterial chemoembolization	Cancer	Tehran	

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Authors	Research design	Sample	Focus of palliative care or independent variable	Dependent variable (Only for interventional studies)	Type of disease	Geographical distribution	Major findings
Irajpour, <i>et al.</i> ^[38]	Mixed model study	17 health professionals including physicians, nurses, psychologist, nutritionist, social worker, and rehabilitator	Interprofessional curriculum for PC of the cancer patients		Cancer	Isfahan	Two general topics of PC and interprofessional education/collaboration were identified.
Mirzaei, <i>et al.</i> ^[39]	Cross-sectional design	100 patients	The QOL of breast cancer patients receiving palliative and supportive care		Cancer	Tehran	The findings showed that 31% of breast cancer patients, who received palliative and support care, had good QOL, 18% had relatively good QOL and 51% had poor QOL. The mean perceived self-efficacy score and its dimensions in the intervention group were significantly higher than the control group ($p < 0.001$).
Dehghani, <i>et al.</i> ^[54]	Experimental study	80 nurses	PC training including training principles of PC, pain management and evaluation and management of physical symptoms, care goals and ethical, and spiritual and cultural considerations and communication	PC self-efficacy scale	-----	Maybod, ardakan	
Mardanihamooleh, <i>et al.</i> ^[40]	Content analysis	15 nurses	PC of pain in cancer		Cancer	Tehran	Original categories: "palliation of physical pain" and «palliation of psychological pain» were explored. Survival in elderly patients was significantly longer ($p=0.01$) and generally the mean survival was 5.47 ± 8.38 months.
Mehrvarz, <i>et al.</i> ^[41]	Cross-sectional	49 patients	advanced cancer of the ampulla of vater and pancreatic head patients underwent Palliative bypass surgery		Cancer	Tehran	

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Authors	Research design	Sample	Focus of palliative care or independent variable	Dependent variable (Only for interventional studies)	Type of disease	Geographical distribution	Major findings
Ghazi-Mirsaeed and Moghimkhan ^[42]	Descriptive cross-sectional	100 patients	Information behavior of patients with cancer in PC		Cancer	Tehran	Information needs in “mental health” care were greater than in other dimensions of palliative care. The nurse was the highest source of information used, but the patient’s greatest desire was for the “physician” source of information. “Lack of time for doctors and nurses” is mentioned as the highest obstacle and “free consultation by the poverty care team” is mentioned as the highest priority in choosing patient information services.
Mardanihamooleh, <i>et al.</i> ^[43]	Content analysis	14 nurses	Spirituality-based PC in cancer patients from the perspective of nurses		Cancer	Tehran	The main categories: “promoting spiritual health” and “spiritual management were explored”.
Hosseini, <i>et al.</i> ^[44]	Clinical trial	46 patients	Palliative-care education	QOL	Cancer	Yasouj	Mean score of QOL of the patients in the intervention group had a significant difference before and after the intervention ($P=0.003$).
Zargham-Boroujeni, <i>et al.</i> ^[55]	Comparative multi-stage study	20 experts	Compilation of the neonatal PC clinical guidelines in NICU.			Isfahan	In the first stage, the draft of neonatal palliative care was designed based on neonates’, their parents’, and the related staff’s requirements. In the second stage, its rank and applicability were determined and after analyzing the responses, with agreement of the focus group, the clinical guideline was written. In the third stage, the means of indication scores obtained were 75%, 69%, 72%, 72%, and 68% by Appraisal of Guidelines for Research and Evaluation (AGREE) instrument

Conclusion

Diversity in independent/dependent palliative variables or concepts measured across different cities in Iran seems to follow only personal interests and justifications of researchers rather to track a specific research plan introduced by policy makers. However, the PC approach had a number of positive outcomes for patients especially cancer patients but engaged Iranian health care providers and policy makers with several challenges. More focused and robust research studies with different patients need to be conducted in this emerging field in Iran. Future research studies might need to focus more on the core elements of PC such as quality of life and symptom management. Moreover, interventional studies with promising results need to be investigated further with bigger sample sizes to provide robust grounds for research utilizations in the palliative area of Iran.

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Conflicts of interest

Nothing to declare.

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