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Factors related to patients' readiness for advance care planning: a systematic review

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Abstract

Background Advance care planning can help to align the care provided with the values, goals and preferences of patients at the end of life. Therefore, readiness for advanced care planning is considered a prerequisite and predictor of the patient's willingness to participate in the end of life conversation. The present study was conducted with the aim of investigating the factors affecting patients' readiness for advance care planning (RACP).

Methods This systematic review was searched in 4 databases: PubMed, Scopus, Web of science, ProQuest using relevant keywords. No time limit was considered. The quality of the articles was assessed using Joanna Briggs Institute tool for qualitative studies and the Appraisal Tool for cross-sectional Studies. The data was analyzed based on the directed content analysis approach guided by the theory of planned behavior (TPB).

Results 3227 primary article titles were identified. After removing duplicates, screening and final selection, 22 relevant articles remained for analysis. Factors affecting RACP were extracted based on the TPB. Attitude factors include "ACP training", "perceived experiences of health status", "Socio-demographic factors", and "psycho-spiritual readiness". Subjective norms include "social support and family participation" and "accessibility to health services". The perceived behavioral control includes "dialogue about ACP", "readiness actions", and "determining a proxy decision maker."

Conclusion In this study, according to the theory of planning behavior, various factors have an effect on the RACP. Therefore, according to the collaborative and multifactorial nature of the factors affecting preparation for ACP, it is suggested that different effective dimensions should be considered according to the specific conditions of each patient and the stage of the disease. Therefore, health service providers should first measure the level of readiness of patients and families, and by understanding the factors affecting their readiness, they should conduct training or dialogue in the field of ACP.

Keywords Advance directives, Advance care planning, Decision making, Theory of planned behavior, Readiness, Palliative care

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Background

Although advances in medical technology have contributed to increasing the human lifespan, it does not necessarily guarantee its quality; rather, the world has been facing two phenomena of senescence and increasing rate of chronic diseases, affecting the human quality of life. It is expected that 60-year-old individuals and above would reach 2 billion people by 2050 [1]. This elderly population is under the burden of chronic diseases and often copes with one or several chronic diseases such as hypertension, hypercholesteremia, arthritis, diabetes, cardiovascular disease, cancer, and dementia [2]. Chronic diseases by 2019 claimed 74% of global mortality [3], and often lead to a long course of physical and functional deterioration in the long run [4]. They necessitate complex decision-making by patients and families on the selection of the type of care and therapeutic options. When patients are not in a stable condition, the options that are chosen for continuing treatment may not be in line with their values and care preferences [5]. Thus, it is necessary to discuss their preferences at the early stages of the disease for their required care in the future [6, 7].

Advance care planning (ACP) is a constant and dynamic communication process along which, patients with consultation of healthcare specialists, family members, and other acquaintances, make decisions about their future healthcare, and prepare themselves for the possible therapeutic situations [8]. Although ACP is absolutely personal for every patient and should encompass various dimensions, including clinical, emotional, cultural, spiritual, and legal, its essential principles are the same. This means that in a continuous communication process, the physician should specify the patient's priorities and determine what medical conditions they can treat and what degree of dysfunction they regard as intolerable. In this process, it is also found who would be chosen as the spokesperson [9]. Typically, when the person is still able to express their desires independently and they have stable clinical status, ACP is registered as an official document. This document includes patient preferences about life-preserving interventions and the introduction of a healthcare proxy (HCP). HCP is a legal document based on which the patient determines a representative for them so that, in case they are no longer able to adopt and implement healthcare decisions, the representative can legally adopt healthcare decisions on behalf of the patient [10]. Although ACP attempts to assure patients that in the future they would receive care in line with their values and preferences, what makes the outcome of the ACP process successful is that the patients have the necessary readiness for participation in discussions [11].

According to the trans-theoretical model, the behaviors and attitudes of patients during the ACP process change along five stages: precontemplation (the person is resistant and demotivated; thus, they are not prepared to join the program); contemplation (the person is willing to join, but the positive and negative aspects of the plan have made him profoundly ambivalent); readiness (the person intends to act and actively collects the relative information); action (the person shares their preferences with the family members or care providers or documents their decisions); and maintenance (the person sustains the discussions and updates their proposed document) [12]. Therefore, the involvement of the patient in ACP discussions, in case he or she has not acquired the necessary readiness for action, would be stressful and ineffective. Healthcare providers, before initiating ACP, should investigate the extent of the patient readiness so that they know when they should start the ACP conversation [5].

The readiness of patients for participation in ACP and speaking about death is an important issue, which if neglected, would seriously harm the patient [11]. The humans' view about death and readiness or confrontation with our issues affected by various factors including religion, culture, and values [13]. For example, since the Westerners have been trained about death in their culture, they are far more willing to talk about death as compared to their Asian counterparts. In the Asian culture, most people get distressed when talking about death and prefer to refrain from open conversations about the issues related to the end of life [14]. Primarily aims to ensure that patients' preferences are respected and to facilitate shared planning between patients and healthcare providers [15].

However, if patients are not adequately prepared for these discussions, they may experience emotional distress, their needs may go unrecognized by healthcare providers, and ACP goals may not be fully achieved [5]. Therefore, if patients enter discussion without acquiring the readiness, not only do they get harmed but also their needs would not be properly recognized by the healthcare providers, and they would not achieve ACP goals [5]. Simon et al. (2015) regarded the time of initiating ACP as a challenging issue and defined poor perception of disease by patients as one of the obstacles of ACP [16]. On the other hand, Brinkman-Soppelenburgh et al. in a systematic review stated that if involvement in the ACP process is stressful for patients, its implementation would not have any impact on compatibility of cares with the needs and satisfaction of patients as well as their families [17]. Another review indicated that the patients' tendency to participate in ACP is different. Some are fearful to face death and think that if they talk about death with their family, they would impose great stress and burden on them. Thus, initiation of ACP within this time period aggravates the patient fear and distress, and would make the outcome of the program unpleasant for them [18].

Table 1 PICO framework

Component	Description
Population	Adult patients
Intervention	Factors related to patients' readiness for ACP
Comparison	None
Outcome	Patients' readiness or willingness to engage in ACP

Jabbarian et al., also stated the doubt of patients to attention and discussion about their treatment preferences as an obstacle for participation in ACP [19]. Zwakman et al. in this regard, emphasize that healthcare specialists should be sensitive about the signs of lack of readiness and develop the patient's ability for adaptation to the discussions [20]. However, in spite of the importance of patients' readiness for initiating discussions in ACP, sparse studies have directly and indirectly dealt with this issue [21]. It seems that considering the growing popularity of ACP in societies, it is essential to perform a systematic review to investigate the current knowledge available about the extent of readiness for receiving ACP. Thus, the present systematic review was performed to evaluate the readiness of patients about advance care planning (ACP).

Methods

Study design

This systematic review was performed based on Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) [22], the methodological design of the Joanna Briggs Institute (JBI) [23] and the PICO (Population, Intervention, Comparison, Outcomes) framework [24]. The protocol of the study has been registered in PROSPERO under Code CRD42022320431.

Eligibility criteria

All studies explicitly expressing the readiness of patients for ACP or those presenting data based on which this index can be calculated have been chosen. Observational studies including qualitative, quantitative, mixed method study, cross-sectional, case control, cohort studies were included. The review studies were not included. All primary studies performed on patients with any race, ethnicity, and either of the male or female genders were included.

Inclusion and exclusion criteria

The research question was: "What factors influence readiness for advanced care planning?" To systematically identify and select relevant studies, we used the PICO (Population, Intervention, Comparison, Outcomes) framework (Table 1) [24]:

Table 2 Inclusion and exclusion criteria

Criteria	Inclusion	Exclusion
Population	Adults ≥ 18 years	Pediatric populations
Language	English	Non-English
Data type	Primary data	conferences abstract, case report studies, review studies, grey studies, and letter to editor

Table 3 Search strategy

Search strategy
Search engines and databases: PubMed, Scopus, Web of science, ProQuest,
Date: Up to March 23, 2024
Strategy: #1 AND #2
#1 ("Advance Directives" OR "Decision Making" OR communication OR "Physician-Patient Relations" OR "Patient Preference" OR "Personal Autonomy" OR "Advance care planning" OR "do not resuscitate order" OR "endoflife discussions" OR "Anticipatory care plan" OR "future care planning" OR "Living Wills" OR "Resuscitation Orders" OR "Medical treatment order" OR "Statement of wishes" OR "Medical directive" OR "end of life discuss" OR "end of life conversation" OR "end of life decision" OR "end of life plan" OR "end of life preference" OR "advance medical plan" OR "advance statement")
#2 readiness OR commitment OR preparedness OR acceptance OR willingness

Population All Adult patients aged 18 years and above (e.g., older adults, individuals with chronic illness, or those with life-limiting conditions).

Intervention Factors related to patients' readiness for ACP.

Comparison None (as this review does not include a comparison group).

Outcome Patients' readiness or willingness to engage in ACP.

The abstract of studies published in conferences, case report studies, review studies, grey studies, and letter to editor due to the nonuse of primary data were excluded. The inclusion and exclusion criteria are summarized in Table 2.

Search strategy

A comprehensive search of studies was performed in four databases including PubMed/Medline, Web of Science, Scopus, and ProQuest on May 23, 2024 (Table 3). Duplicate references were eliminated using EndNote X8 software. Selection of the keywords of this systematic review study has been a combination of Mesh Term and Free Text Words. Studies were included regardless of publication year and were restricted to English language

only. In case of unavailability of full text or ambiguity in data, three emails were sent to the corresponding author. In case of no response, studies were excluded. Disagreements in selection were resolved by agreement between two investigators (S.B., E.H.) and, if necessary, adjudication was performed by a third reviewer.

Screening process

The screening process was carried out in two phases: title and abstract screening, and then full-text screening. A third reviewer resolved conflicts, if necessary. Both phases followed a decision-making tree based on inclusion/exclusion criteria. Any reasons for excluding a study at the full-text stage were documented. Finally, the studies selected for inclusion were checked for duplicate reporting [25].

Data extraction

Data extraction was performed by two researchers (S.B. and EH.) separately and using a researcher-made information extraction form. A pilot test was conducted to ensure consistency. Disagreements were resolved through discussion or arbitration by a third reviewer. The data related to the author of the paper, year of study, place of study, design of study, participation and their number as well as the influential factors were extracted in a researcher-made form.

Using this form, the factors affecting readiness for ACP were extracted. To extract the results, we first categorized the findings from the studies into the three components of the TPB. Specifically, we examined how individuals' attitudes toward discussing and planning for end-of-life care, the influence of social norms, and perceived control were addressed in the studies. This classification allows us to relate the findings more coherently based on the components of the TPB. After classified the results, the relationships between these components and their impact on ACP were analyzed. The factors affecting RACP were extracted using guided content analysis approach [26] according to theory of planned behavior (TPB) [27].

Guided content analysis involved the systematic coding of extracted data according to predefined categories aligned with components of the Theory of Planned Behavior (TPB). These categories included identifying common patterns and themes in the areas of attitudes, subjective norms, and perceived behavioral control found across the studies [28]. The Theory of Planned Behavior (TPB) states that "when an individual intends to perform an action, the intention to perform that action is considered before performing the intended behavior, and this intention is influenced by the individual's attitude, subjective norms toward the behavior, and the individual's sense of control over the behavior [29]. In addition, differences or unique factors highlighted across individual studies were analyzed for their broader relevance. TPB is a fit framework for examining ACP, as it provides a framework for understanding and predicting the human behavior including decisions related to healthcare. TPB in ACP helps in identifying the factors affecting the intentions and actions of individuals about end-of-life care priorities. TPB considers three main components: attitudes, mental norms, and perceived behavioral control. Use of TPB in ACP would allow healthcare specialists to investigate how the attitudes of individuals to discussion and planning for end-of-life care, social impacts, and perceived control over planning would influence their actual behavior. By understanding these factors, healthcare providers can adjust communication strategies and interventions for enhancing effective care pre-plans, and make sure that the individual preferences and values are considered in healthcare decision-making [30, 31].

Quality assessment of reports

The quality of qualitative studies were assessed by using the JBI Critical Appraisal Checklist (Table 4) [32]. Studies were included if the reviewers agreed that at least seven out of ten criteria were met, ensuring a level of methodological rigor. Cross-Sectional Studies evaluated by using the appraisal tool for cross-sectional studies (AXIS) (Table 5) [33], which evaluates six domains.

. A score of one was assigned for each affirmative response. Studies were not excluded based on quality, but rather were reviewed for evidence assessment during synthesis.

Results

After searching the keywords in the databases, overall 3227 papers were found. After eliminating the duplicate cases, 3114 papers remained for investigation. After examining the papers, 3047 of them were excluded from the study because of failing to fulfill the inclusion criteria. The remaining 67 papers were investigated based on the full text in detail, whereby ultimately 22 papers qualifying the inclusion criteria were included [4, 5, 14, 20, 30, 34–50] (Fig. 1).

In this study, only the papers related to the views of patients were investigated, while others were excluded. Totally, the opinions of 10,543 individuals have been investigated with the mean age of 51.89±12.7 years; among them7108 were female and 3417 were male, and 18 were unknown. Regarding the countries, four studies met the inclusion criteria from the USA [35, 36, 39, 44], four studies from South Korea [37, 43, 45, 46], four studies from China [5, 14, 30, 49], four studies from Taiwan [4, 34, 47, 48], two study from Japan [38, 50], one from Netherlands [20], one from Germany [41], one from Canada [42], and one study jointly performed between USA and

Table 4 Critical appraisal checklist for qualitative research [32]

	Li et al. [34]	Zwakman et al. [20]	Thiede et al. [35]	Chan et al. [4]	Chan and Pang [14]	Calvin and Eriksen [36]
Congruity between the stated philosophical perspective and the research methodology	Yes	Yes	Yes	Yes	Yes	Unclear
Congruity between the research methodology and the research objectives	Yes	Yes	Yes	Yes	Yes	Yes
Congruity between the research methodology and the methods used to collect the data	Yes	Yes	Yes	Yes	Yes	Yes
Congruity between the research methodology and the representation and analysis of data	Yes	Yes	Yes	Unclear	Yes	Yes
Congruity between the research methodology and the interpretation of results	Yes	Yes	Yes	Unclear	Yes	Yes
Statement locating the researcher culturally or theoretically	Yes	Unclear	Yes	Yes	Yes	Yes
The influence of the researcher on the research, and vice-versa, is addressed	Yes	Yes	Yes	Yes	Yes	Yes
Participants, and their voices, are represented adequately	Yes	Yes	Yes	Yes	Yes	Yes
Research is ethical	Yes	Yes	Unclear	Yes	Yes	Yes
Conclusions appear to flow from the analysis or interpretation of the data	Yes	Yes	Yes	Yes	Yes	Yes
Total	10	9	9	8	10	9

Japan [40]. Data analysis was done based on guided content analysis approach according to TPB [46]. Based on TPB, the factors affecting RACP were extracted in four main classes including mental norm, perceived control over behavior, behavior, and the influential external factors (Table 6). The selected studies have been published between 2006 and 2024. The designs of studies included 16 cross-sectional [5, 30, 37–50], 4 mixed method [4, 34–36], and two studies [14, 20], as qualitative. Table 7 reports a summary of the features of the selected studies.

Attitudes

Based on studies, attitude was classified into four subcategories of "ACP training", "perceived experiences of health status", "Socio-demographic factors", and "psychospiritual readiness".

ACP training

The first subcategory is ACP training. In the study by Kim and Lee, AD documentations, experience of AD training, and experiences of exposure to AD through media have been mentioned as the factors affecting readiness for ACP [37]. According to Chan et al., those who received relevant ACP training showed considerably more positive tendency and confidence in undertaking ACP in perceived clinical relevance, while the individuals who had received training as didactic format reported lower levels of confidence in implementing ACP compared to the blended training [30]. *In the study* by Lui et al., patients with higher knowledge of hospice and palliative care, and positive attitudes toward these services were more likely to receive palliative care [48]. Further, Li et al. reported that lack of fundamental awareness of ACP the value of life preservation according to Christianity showed negative effects on RACP [34]. Also Wan-Ting et al. reported that lack of ACP knowledge was the main reason affecting subjects' unwillingness to participate in ACP [47]. Other studies have also mentioned awareness of end-of-life care planning [43], knowledge about personal obstacles, facilitators, and issues under discussion (communication experience) [41], and greater positive attitudes [45] as effective on readiness. They included perceived intensity of end-of-life issues, perceived sensitivity of end-of-life issues, perceived benefits, perceived obstacles [37], perceiving the dynamic process of readiness for participation in readiness for end-of-life, and in turn provision of physician insight and enhancement of quality of life of their teenagers and families [51], perceiving sustainable treatment and increasing tendency to accepting ADs [46], and attitude to advance care planning and social support [45].

Table 5 Critical appraisal checklist for qualitative research [33]

	Kim and lee [37] Y	Wang and Sheng [5]	Sakai et al. [38]	Wang et al. [39]	Friend and Alden [40]	Berlin et al. [41]	Sudore et al. [42]	Chan et al. [30]	Hong et al. [43]	Brown et al. [44]	Ko et al. [45]	Kim and Choi [46]	Wan-Ting et al. [47]	Liu et al. [48]	Gao et al. [49]	Fukue et al. [8]
Clear Aims and Objectives?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Appropriate Study Design for the Aims?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Justified Sample Size?	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Target population clearly defined?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Appropriate sample frame for representative sample?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Selection Process to select representative subjects?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Addressed and categorised non-responders?	Y	Y	Y	N	N	N	Y	N	Y	N	N	Y	N	Y	Y	N
Appropriate outcomes for the aims?	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Trialled/ piloted/ published survey instruments?	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N
Pre-determined statistical significance level?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Repeatable methods?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Basic data described?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Response rate raise concerns over Non-response bias?	Y	Y	Y	N	N	N	Y	N	N	N	N	Y	Y	Y	Y	N
Non-responders described?	Y	Y	Y	N	N	N	Y	N	Y	N	N	Y	N	Y	Y	N
Results internally consistent?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
All analyses presented were described in methods?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Discussions and conclusions justified by results?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Limitations discussed?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Funding sources or conflicts of interest?	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Ethical approval or consent attained?	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y

Y=YES

N=NO

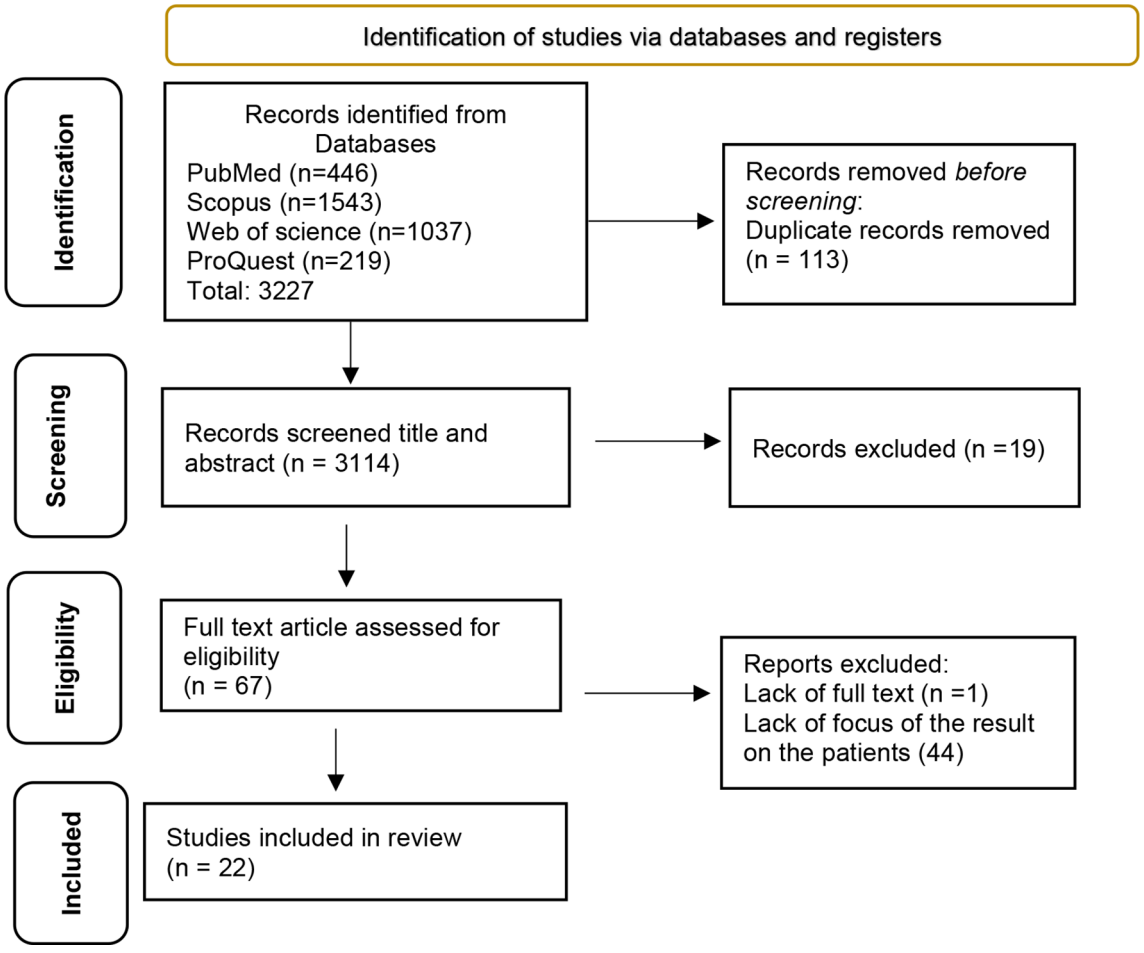

Fig. 1 Study flow diagram

Table 6 Factors related to patients' readiness for advance care planning

Categories	Subcategories
Attitudes	ACP training
	Perceived experiences of health status
	Socio-demographic factors
	Psycho-spiritual readiness
Subjective norms	Social support and family interaction
	Accessibility to health services
Perceived behavioral control	Dialogue about ACP
	Readiness actions
	Determining a proxy decision maker

Perceived experiences of health status

The next subcategory is "perceived experiences of health status". Sheng and Wang consider the previous experiences of the person and longer duration of disease among the past experiences affecting RACP [5]. Kim and Lee et al. regarded a major disease experienced by the family or friends such as history of hospitalization in ICU, intubation, cardiopulmonary resuscitation, or life-threatening conditions as effective [37]. Also, Zwakman et al. considered learning from previous experiences of disease as effective in this regard [20]. On the other hand, Berlin et al. found consistency between values as well as the life before and along the palliative treatment about the effect of previous experiences of person as effective on RACP [41]. Kim and Lee showed that self-rated health was higher in comparison to the previous year in individuals who had less tendency to completing AD. Also, the number of chronic conditions was associated with ADs completion [37].Lui et al. mention that disease status significantly influenced their willingness to undergo palliative care [48]. In the study by Ko et al., self-rated health was a strong predictor of ADs, where the participants who had poorer health status had greater tendency to completing ADs [45]. Also Fukue et al., mention that skeletal muscle frailty as a condition of health status was negatively associated with ACP acceptance [50].

Socio-demographic factors

The effective Socio-demographic factors on ACP include higher income [5, 44], the personal traits and external factors [35]. Further, in the study by Sakai et al., RACP

Table 7 Characteristics of the studies included in the review

Authors Year	Year	country	Aim	Study design	Participants
Li et al. [34]	2021	Taiwan	To depicted ethnic minority patients' complex ACP decision-making behavior	Mixed-Method	indigenous patients (*N* = 9)
Kim and lee [37]	2021	Korea	To examine the factors associated with willingness to complete ADs in community-dwelling older adults	Cross-sectional	community-dwelling older adults(*N* = 121)
Wang and Sheng [5]	2022	China	to assess ACP readiness among patients with chronic diseases and identify its relationship to patients' coping styles	Cross-sectional	Patients with chronic diseases (*N* = 168)
Sakai et al. [38]	2022	Japan	To develop the Readiness for Advance Care Planning (RACP) Scale	Cross-sectional	Japanese citizens (*n* = 624)
Zwakman et al. [20]	2021	Netherlands	To determine how patients' readiness is expressed and develops throughout an ACP conversation	Qualitative	advanced lung or colorectal cancer patients (*n* = 15)
Wang et al. [39]	2021	USA	To evaluate current ACP documentation and assess readiness to engage in ACP	Cross-sectional	adults undergoing liver transplantation (*N* = 170)
Thiede et al. [35]	2021	USA	To examine spokespersons' perceived preparedness for surrogate decision making after engaging in ACP	Mixed-Method	patients with advanced illness and their spokespersons (*N* = 198 dyads)
Friend and Alden [40]	2021	USA and Japan	To identifies strategies for increasing AD planning among late-middle-age Japanese and US individuals	Cross-sectional	Japanese (*N* = 224) and US (*N* = 232)
Berlin et al. [41]	2021	Germany	To provide a valid instrument to assess peoples readiness for end-of-life conversations before they are initiated	Cross-sectional	community sample (*N* = 349) individuals affected by cancer (*N* = 84)
Sudore et al. [42]	2017	Canada	to create versions of the Survey that could identify alterations in response to an ACP intervention in a more brief manner	Cross-sectional	participants)*N* = 501) (4 Canadian and 3 US sites)
Chan et al. [30]	2020	China	To examine the association between readiness for ACP, in terms of perceived relevancy of ACP with their clinical work, attitudes toward and confidence and willingness to perform it	Cross-sectional	healthcare professionals (*N* = 250)
Chan et al. [4]	2020	Taiwan	To investigate ACP behavioral engagement, socio-demographical correlates, and preferred intervention strategies.	Mixed-Method	older community-dwelling residents' (*N* = 52)
Hong et al. [43]	2017	Korea	To examine the prevalence and factors associated with the willingness to receive hospice care and complete ADs among 2026 middle-aged adults in South Korea	Cross-sectional	middle-aged adults (*N* = 2026)
Brown et al. [44]	2017	USA	To develop and validate a scale that assesses the readiness of gynecologic oncology patients to engage in ACP	Cross-sectional	3 independent samples of gynecologic oncology patients(*n* = 245)
Ko et al. [45]	2016	Korea	To explore low-income older adults' willingness to complete ADs	Cross-sectional	Participants(*N* = 204)
Kim and Choi [46]	2014	Korea	To examined the influence of understanding of life-sustaining treatment on their willingness to complete AD	Cross-sectional	Outpatients(*N* = 187)
Chan and Pang [14]	2011	China	To identify different approaches to end-of-life care decision-making among Chinese frail old age home residents	Qualitative	participants(*N* = 42)
Calvin and Eriksen [36]	2006	USA	To initiate development of an instrument to assess readiness of patients to discuss ACPs	Mixed-Method	

Table 7 (continued)

Authors Year	Year	country	Aim	Study design	Participants
Wan-Ting et al. [47]	2022	Taiwan	To determine the most important factors that influence willingness to participate in ACP among outpatients in Taiwan	Cross-sectional	Outpatients($N=198$)
Liu et al. [48]	2024	Taiwan	To investigates the factors influencing the willingness of older cancer patients to receive palliative care, considering the 'person-centered' approach to advance care planning	Cross-sectional	older cancer patients($N=195$)
Gao et al. [49]	2024	China	To evaluate the psychometric properties of the ACPRS-C within the context of community-dwelling older adults with chronic diseases	Cross-sectional	older adults participated($n=228$)
Fukue et al. [50]	2022	Japan	To evaluate readiness and investigated the relationship between the ACP desire and multiple clinical prognostic parameters.	Cross-sectional	patients($N=81$)

was associated with age above 70 years, having documented ACP as well as greater knowledge about AD [38]. In the study Wan-Ting et al. education level mentioned [47]. Also in the study Hong et al., higher levels of education, greater monthly income, better knowledge about care planning of EOL, and death of one family member or friend in the past year were associated with tendency to completing ADs [43]. According to Brown et al., the women with medical power of attorney documents and living wills had greater readiness compared to those who did not have these ADs. Further, women with DNR showed greater readiness compared to women without it [44]. In the study by Chan et al., the number of deceased parents was associated with participation in ACP. Also, household income and ACP participation had a weak relationship [4]. However, in the study by Kim and Lee, age, gender, level of education, and marital status were not correlated with ADs [37]. In the study by Ko et al., again age, gender, education, marital status, and economic status showed no relationship with completing ADs [57]. However, in the study by Wang et al., age and white race showed relationship with ACP completion [39].

Psycho-spiritual readiness

The next subcategory is psychological-spiritual readiness. The value of life preservation according to the Christian religion [34], attitude to death and self-confidence [40], RACP was associated with active coping style, while showing no relationship with passive coping style [5]. Also, relational issues, emotional level of comfort with uncertainty [35], avoidance, and procrastination [14] as well as end-of-life decision-making conflict and belief toward good death [47] were found as the mentioned psychological factors. Gao et al. also mentioned the attitude, beliefs, and motivation dimensions essentially encapsulate the fundamental aspects of assessing ACP readiness [49].

Subjective norms

Subjective norms are another effective factor on readiness for advance care planning. This category includes "social support and family participation" and "accessibility to health services".

Social support and family interaction

The first subcategory is social support afamily participation. In the study by Kim and Lee, encouragement for completion of AD by families, friends, or healthcare providers has been mentioned [11]. Ko et al. also noted greater social support as contributing to development of greater tendency for completion of ADs [45]. Further, Friend and Alden considered mutual interdependence, family participation, and independence as effective

factors [40]. In the study by Ko et al., social support was a strong predictor of ADs; the participants who enjoyed greater social support showed greater tendency to complete ADs [45]. Also in the study by Wan-Ting et al., reducing families' end-of-life decision-making burden is an important reason for people to participate in ACP [47].

Accessibility to health services

Also, insufficient resources for healthcare and common health inequality in remote societies negatively affect the intention of patients to participate in ACP [34]. Unlike quality of life, healthcare situations and end-of-life medical care [42] have an inverse impact on RACP.

Perceived behavioral control

The perceived behavioral control category included "dialogue about ACP", "readiness actions", and "determining a proxy decision maker ".

Dialogue about ACP

According to the study by Sakai et al., understanding the importance of speaking and writing about ACP, practicing speaking and writing about ACP, intention and tendency to speaking about ACP are effective on RACP [38]. The study by Zwakman et al. mentioned cessation of discussion and distancing from the issue of discussion as the negative factors in RACP [20]. Berlin et al. noted the role of communication in readiness for end-of-life conversations [41].

Readiness actions

Readiness actions are the next subcategory. In this regard, a study by Zwakman et al. indicated that preliminary readiness of individuals affects RACP [20]. Also, in the study by Friend and Alden, they considered readiness as an effective factor in this regard [40]. In another study by Chan and Pang, holding onto life was mentioned as an effective factor. In their qualitative study, they noted that preplanning as well as measuring the benefits can be effective on RACP [19]. Sakai et al. also mentioned the effect of readiness for behavior in ACP [38]. In the study by Kim and Lee, high levels of perceived severity of disease, benefit perceived, and cues to action were associated with greater completion of ADs. On the other hand, perceived barriers were associated with less tendency to completing ADs [22].

Determining a proxy decision maker

In a study by Wang et al. in the US, readiness for determining a proxy decision maker and flexibility of decision-makers have been mentioned as an influential factor [39].

Discussion

To our knowledge, this is the first systematic review examining the factors affecting readiness of patients for ACP based on TPB. The findings suggested that TPB dimensions can predict readiness for ACP.

The first dimension is attitudes to ACP. According to the findings, training ACP can influence the readiness for ACP. In line with our results, In-Fun Liils et al. in a study on the ethnic minority of Taiwan introduced the main obstacle against readiness for participation in APC as lack of knowledge. Minimum contact with healthcare systems, trivial exposure to care resources, and limited access to information were mentioned as the factors contributing to this lack of awareness [35]. Spelten et al. also in a scoping review reported the obstacles of participation of patients with cancer in ACP as limited understanding and awareness at three levels of functional literacy (understanding EOL language), interactive literacy (opportunities for meaningful dialogues of EOL with providers and families), and critical literacy (lack of certainty about the future care) [52]. It seems that training can reduce the fear and mistakes about the complex concept and give more confidence to patients. In this way, patients can make decisions more easily and would have greater control over their life and care.

Previous experiences can be an important determining factor in development of the attitudes held by individuals. They can induce fear, confidence, worry, or hope in them and influence the intention to adopt ACP behavior [16]. In this regard, Wang and Sheng reported that the previous experience of care of one of the dying family members has enhanced the readiness of patients for ACP [5]. Also, the study by Amjad et al. indicated that older individuals who have the experience of end-of-life care for others show greater readiness for participation in ACP [51]. Experience of disease is so important that in the study by Piers et al. most of the elderlies who were in the near-death stage tended to plan AD only with regards to the issues related to their personal experiences and fears, while they refrained from its other dimensions [53]. It seems that previous experiences through influencing the values, readiness, and awareness of different factors can considerably determine the readiness of individuals for advancing ACP [54]. Therefore, acknowledgments and incorporation of these experiences in the planning process can lead to adoption of individual base and more suitable decisions in the care plan.

Demographic factors such as age, being only child, income [5, 43], personal characteristics, and the present context [35] can also play a key role in readiness for ACP. These factors can influence the attitude, awareness, and tendency of individuals for participation in discussion about their future preferences and care decisions. For example, age can be influential at the time of thinking

about and planning for end-of-life care. More senior individuals view toward increasing perception of death have greater tendency to consider APC. Meanwhile, ACP can mitigate the upcoming challenges such as imposition of burden on children, increased healthcare costs, possible family conflicts, and ethical issues [55]. According to our results, the cultural and religious context of the patient also play a key role in readiness. Those with different cultural backgrounds may have varying views about its interventions, life-support, and end of life choices [13]. These beliefs can shape the way individuals treat ACP as well as their decisions [14]. Thus, understanding the effect of socioeconomic factors is essential for HCP, so that they can adapt discussions and materials of ACP to the unique traits of individuals, as well as enhance effective communication and decision-making with their values and priorities.

The second dimension of TPB is subjective norms referring to the social pressures perceived for performing (or not performing) [56]. Our results also indicated the role of social support and family participation. Kim and Lee stated that supporting can assure patients that they are not alone in advance care decision-making and have some resources for consultation and support [32, 40]. Nahapetyan et al. (2019) also emphasized that the most important individuals that can affect mental norms of the elderly in the terminal stages of life about use of palliative services are the spouse, children, and physician/nurses who guide the decisions of the person [57]. Thus, community-oriented programs should be organized for enhancing the knowledge of ACP.

Access to healthcare services

Our findings indicated that existence of psychological readiness can allow the patient to make better decisions about types of care, preference, and advanced issues by combining information, emotions, as well as their personal values [34]. The patients who have psychological readiness may be more open and confident in interaction with the healthcare team and participation in the decision-making process [35, 40]. In complex decision-making, psychological readiness can help patients face less stress and anxiety [5]. Available studies have reported that patients depending on their awareness, acceptance, recognition, and acknowledgment differ in their readiness for participation in ACP [20]. They have different coping strategies affecting their readiness [58]. Thus, they should receive the attention of HCPs.

The third category is perceived behavioral control. Dialogue can have positive effects on readiness of patients for understanding, collaborating, and participating in ACP. Dialogues, either written or orally, can serve as a powerful tool for raising awareness, exchanging information, and establishing a mutual understanding about advance care [38]. When dialogue and discussion are stopped, or a large gap occurs between the sessions, it can influence patient readiness for ACP [20]. Thus, it can be stated that dialogues on ACP can function as an effective instrument in enhancing readiness and participation of patients in ACP and care decision-making, and should not be neglected.

The actions that have been taken for establishing readiness in the patient can drive them towards initiating or completing the ACP process or have an inverse role [4, 20, 40]. Chan et al. in this regard noted that pre-planning as well as measuring the benefits can be effective on readiness for ACP [14]. It seems that establishing such readiness is a multidimensional issue, encompassing socioeconomic conditions as well as health policies; thus, planning for it is something essential [39, 42]. This stage can help the patient to view ACP with greater confidence and more extensively, and get involved in the care decision-making better and more purposefully [41]. It seems that when patients have a higher degree of controllability and self-impact, they benefit from greater levels of readiness for ACP.

If individuals believe that they do not have resources or opportunities for performing the behavior of interest, they are less likely to perform that action [50]. Studies have shown that readiness for determining a successor decision-maker and flexibility to decision-makers play a key role in advancing ACP [39, 42]. It seems that since the successor decision-maker plays the role of translator and executor of preferences and values of the patient in confrontation with complex and important decisions, they can be determinant of performing or not performing different parts of ACP or even getting involved in it or not [11].

Limitations

In this study, we generally considered the factors affecting RACP from the view of patients, regardless of the type or stage of the disease. Thus, in case of publishing further studies, it is suggested to examine the views of patients with different diseases and in special diseases and under different conditions of the disease. It also seems that readiness of healthy and young individuals differs from that of patients especially patients with life-threatening conditions. Thus, in future studies it is suggested to capture these differences. The first strength of performing RACP systematic review study is based on a behavioral theory. The second strength is examining the concept of RACP and its influential factors in different societies. Another limitation was constraining the search to the studies published in English. As such, it may be possible that important studies in other languages may have not been included in this study, and potentially deprive our review of some valuable data. Nevertheless, due to the

comprehensive search strategy, as well as extensive and precise inclusion criteria, we believe that we have found sufficient studies to respond to the research questions.

Conclusion

Based on the present study results, according to planning behavior theory, the new behavior in healthcare first needs changes in the ACP learning domains, all-round support of society and families, as well as psychological readiness. Next, by understanding the control over behavior, determining the successor decision-maker, performing a series of activities in this regard, acquiring readiness and patient approval are essential. Next, a collaborative conversation should be formed between patient, family, and healthcare providers on ACP. Meanwhile, factors such as experiencing a life-threatening condition, socio-demographic factors such as age, gender, as well as socioeconomic status plus current health status affect the person's readiness for ACP. Thus, considering the collaborative and multi-dimensional nature of the factors affecting readiness for ACP, it is suggested to pay attention to various influential dimensions as well as the special conditions of the disease and the patient, during ACP training. Further, healthcare providers such as physicians, nurses, and other practitioners first should measure the extent of readiness of patients and their families, and by understanding the factors affecting their readiness begin to train and speak with them about ACP. Meanwhile, in the training approaches in medical faculties as well as healthcare provision centers, the factors affecting RACP should be borne in mind. It is also suggested to organize training courses for HCPs at all levels to reduce ACPR barriers in spite of development of centers providing these palliative services in different societies. Finally, community-based outpatient plans or public campaigns can serve as a way for enhancing the awareness of patients, families, and society of such services and prepare them for initiation of intervention.

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Author contributions
MAR and SB conceptualized and designed the study, retrieved data, and rechecked the data. AZ, SB, TK, AA, MG, AMS and EH conducted study analyses. MAR, SB, and TK did the initial drafting. MAR, TK, EH, and SB critically assessed the data and provided intellectual inputs. All members approved the final draft.

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References

1. Davari M, Haycox A, Walley T. Health care financing in Iran; is privatization a good solution? Iran J Public Health. 2012;41(7):14.
2. Jaul E, Barron J. Age-related diseases and clinical and public health implications for the 85 years old and over population. Front Public Health. 2017;5:335.
3. Thomas SA, Browning CJ, Charchar FJ, Klein B, Ory MG, Bowden-Jones H, et al. Transforming global approaches to chronic disease prevention and management across the lifespan: integrating genomics, behavior change, and digital health solutions. Front Public Health. 2023;11:1248254.
4. Chan H-L, Li I-F, Tseng L-C, Hsiung Y. Exploring behavioral readiness and program strategies to engage older community residents in advance care planning: a pilot mixed-method study in Taiwan. Int J Environ Res Public Health. 2020;17(12):4285.
5. Wang X, Sheng Y. Readiness for advance care planning and its relationship to coping style in patients with chronic diseases in communities: a cross-sectional study. Nurs open. 2022;9(2):1332–42.
6. Allen LA, Stevenson LW, Grady KL, Goldstein NE, Matlock DD, Arnold RM, et al. Decision making in advanced heart failure: a scientific statement from the American Heart Association. Circulation. 2012;125(15):1928–52.
7. Nishikawa Y, Hiroyama N, Fukahori H, Ota E, Mizuno A, Miyashita M, et al. Advance care planning for adults with heart failure. Cochrane Database Syst Rev. 2020;2:CD013170.
8. Sudore RL, Lum HD, You JJ, Hanson LC, Meier DE, Pantilat SZ, et al. Defining advance care planning for adults: a consensus definition from a multidisciplinary Delphi panel. J Pain Symptom Manage. 2017;53(5):821–32. e1.
9. Arulkumaran N, Szawarski P, Philips BJ. End-of-life care in patients with end-stage renal disease. Oxford University Press; 2012. pp. 879–81.
10. Dinescu A. Advance Care Planning. Clin Geriatr Med. 2021;37(4):605–10.
11. Hutchison LA, Raffin-Bouchal DS, Syme CA, Biondo PD, Simon JE. Readiness to participate in advance care planning: a qualitative study of renal failure patients, families and healthcare providers. Chronic Illn. 2017;13(3):171–87.
12. Prochaska JO, Velicer WF. The transtheoretical model of health behavior change. Am J Health Promotion. 1997;12(1):38–48.
13. Deng R-L, Duan J-Z, Zhang J-H, Miao J-R, Chen L-L, Lee DT. Advance care planning for frail older people in China: a discussion paper. Nurs Ethics. 2019;26(6):1696 – 706.
14. Chan HY, Pang SM. Readiness of Chinese frail old age home residents towards end-of-life care decision making. J Clin Nurs. 2011;20(9–10):1454–61.
15. Jimenez G, Tan WS, Virk AK, Low CK, Car J, Ho AHY. Overview of systematic reviews of Advance Care Planning: Summary of evidence and global lessons. J Pain Symptom Manag. 2018;56(3):436–e5925.
16. Simon J, Porterfield P, Bouchal SR, Heyland D. Not yet'and 'Just ask': barriers and facilitators to advance care planning—a qualitative descriptive study of the perspectives of seriously ill, older patients and their families. BMJ Support Palliat Care. 2015;5(1):54–62.
17. Brinkman-Stoppelenburg A, Rietjens JA, Van der Heide A. The effects of advance care planning on end-of-life care: a systematic review. Palliat Med. 2014;28(8):1000–25.
18. Johnson S, Butow P, Kerridge I, Tattersall M. Advance care planning for cancer patients: a systematic review of perceptions and experiences of patients, families, and healthcare providers. Psycho-oncology. 2016;25(4):362–86.
19. Jabbarian LJ, Zwakman M, van der Heide A, Kars MC, Janssen DJ, van Delden JJ, et al. Advance care planning for patients with chronic respiratory diseases: a systematic review of preferences and practices. Thorax. 2018;73(3):222–30.

20. Zwakman M, Milota M, Van der Heide A, Jabbarian L, Korfage I, Rietjens J, et al. Unraveling patients' readiness in advance care planning conversations: a qualitative study as part of the ACTION Study. Support Care Cancer. 2021;29:2917–29.
21. Shaw M, Hewson J, Hogan DB, Raffin Bouchal S, Simon J. Characterizing readiness for advance care planning from the perspective of residents, families, and clinicians: an interpretive descriptive study in supportive living. Gerontologist. 2018;58(4):739–48.
22. Liberati A, Altman DG, Tetzlaff J, Mulrow C, Gøtzsche PC, Ioannidis JP, et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. Ann Intern Med. 2009;151(4):W–65.
23. JBI. Critical appraisal tools 2021 [.
24. Hosseini M-S, Jahanshahlou F, Akbarzadeh MA, Zarei M, Vaez-Gharamaleki Y. Formulating research questions for evidence-based studies. J Med Surg Public Health. 2024;2:100046.
25. Wood JA. Methodology for dealing with duplicate study effects in a meta-analysis. Organizational Res Methods. 2008;11(1):79–95.
26. Hsieh H-F, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res. 2005;15(9):1277–88.
27. Conner M, Armitage CJ. Extending the theory of planned behavior: a review and avenues for further research. J Appl Soc Psychol. 1998;28(15):1429–64.
28. Ajzen I. The theory of planned behavior: frequently asked questions. Hum Behav Emerg Technol. 2020;2(4):314–24.
29. Golmohammadi M, Ebadi A, Ashrafizadeh H, Rassouli M, Barasteh S. Factors related to advance directives completion among cancer patients: a systematic review. BMC Palliat Care. 2024;23(1):3.
30. Chan HY-l, Kwok AO-l. Yuen K-k, au DK-s, Yuen JK-y. Association between training experience and readiness for advance care planning among healthcare professionals: a cross-sectional study. BMC Med Educ. 2020;20:1–9.
31. Zhou D, Jill C, Parks M, Susan M. Knowledge, attitudes, and practice behaviors of oncology advanced practice nurses regarding advanced care planning for patients with cancer. 2010.
32. Lockwood C, Munn Z, Porritt K. Qualitative research synthesis: methodological guidance for systematic reviewers utilizing meta-aggregation. JBI Evid Implement. 2015;13(3):179–87.
33. Downes MJ, Brennan ML, Williams HC, Dean RS. Development of a critical appraisal tool to assess the quality of cross-sectional studies (AXIS). BMJ Open. 2016;6(12):e011458.
34. Li I-F, Huang S-M, Lee C-F, Chen Y-H, Hsiung Y. Perceptions of behavioral awareness, intention, and readiness for advance care planning: a mixed-method study among older indigenous patients with late-stage cancers in remote areas of Eastern Taiwan. Int J Environ Res Public Health. 2021;18(16):8665.
35. Thiede E, Levi BH, Lipnick D, Johnson R, Seo La I, Lehman EB, et al. Effect of advance care planning on surrogate decision makers' preparedness for decision making: results of a mixed-methods randomized controlled trial. J Palliat Med. 2021;24(7):982–93.
36. Calvin AO, Eriksen LR. Assessing advance care planning readiness in individuals with kidney failure. Nephrol Nurs J. 2006;33(2).
37. Kim E, Lee KS. Factors associated with willingness to complete advance directives in older adults. Geriatr Nurs. 2021;42(5):1042–7.
38. Sakai S, Nagae H, Miyashita M, Harasawa N, Iwasaki T, Katayama Y, et al. Developing an instrument to assess the readiness for advance care planning. J Pain Symptom Manage. 2022;63(3):374–86.
39. Wang CW, Lebsack A, Sudore RL, Lai JC. Low rates of advance care planning (ACP) discussions despite readiness to engage in ACP among liver transplant candidates. Dig Dis Sci. 2021;66:1446–51.
40. Friend JM, Alden DL. Improving patient preparedness and confidence in discussing advance directives for end-of-life care with health care providers in the United States and Japan. Med Decis Mak. 2021;41(1):60–73.
41. Berlin P, Leppin N, Nagelschmidt K, Seifart C, Rief W, Von Blanckenburg P. Development and validation of the readiness for end-of-life conversations (REOLC) scale. Front Psychol. 2021;12:662654.
42. Sudore RL, Heyland DK, Barnes DE, Howard M, Fassbender K, Robinson CA, et al. Measuring advance care planning: optimizing the advance care planning engagement survey. J Pain Symptom Manage. 2017;53(4):669–81. e8.
43. Hong M, Kim H, Hong S, Kim MH. End-of-Life Care attitudes among Middle-aged koreans: willingness to Use Hospice services and Advance directives. J Hosp Palliat Nurs. 2017;19(5):452–9.
44. Brown AJ, Shen MJ, Urbauer D, Taylor J, Parker PA, Carmack C et al. The advance care planning readiness scale: development and validation of a measure of willingness to discuss and acceptance of end-of-life care in gynecologic cancer patients. Int J Gynecologic Cancer. 2017;27(4).
45. Ko E, Lee J, Hong Y. Willingness to complete advance directives among low-income older adults living in the USA. Health Soc Care Commun. 2016;24(6):708–16.
46. Kim SH, Choi J. Understanding of life-sustaining treatment in patients with chronic illness and their willingness to complete advance directives. J Hosp Palliat Nurs. 2014;16(4):217–23.
47. Tsai W-T, Chen C-M, Chung M-C, Tsai P-Y, Liu Y-T, Tang F-C, et al. Important factors influencing willingness to participate in advance care planning among outpatients: a pilot study in central Taiwan. Int J Environ Res Public Health. 2022;19(9):5266.
48. Liu Y-L, Wu L-M, Tsai W-I, Lee C-H. Factors influencing the willingness of older cancer patients to receive palliative care in advance care planning in southern Taiwan. Educ Gerontol. 2024;50(9):805–16. https://doi.org/10.1080/03601277.2024.2341363
49. Gao F, Chui PL, Che CC, Xiao L, Wang F. Psychometric properties evaluation of the Advance Care Planning Readiness Scale for community-dwelling older adults with chronic diseases residing in suburban counties within the Chinese context. Nurs Open. 2024;11(4):e2162.
50. Fukue N, Naito E, Kimura M, Ono K, Sato S, Takaki A, et al. Readiness of advance care planning among patients with cardiovascular disease. Front Cardiovasc Med. 2022;9:838240.
51. Amjad H, Towle V, Fried T. Association of experience with illness and end-of-life care with advance care planning in older adults. J Am Geriatr Soc. 2014;62(7):1304–9.
52. Spelten ER, Geerse O, van Vuuren J, Timmis J, Blanch B, Duijts S, et al. Factors influencing the engagement of cancer patients with advance care planning: a scoping review. Eur J Cancer Care. 2019;28(3):e13091.
53. Piers RD, van Eechoud IJ, Van Camp S, Grypdonck M, Deveugele M, Verbeke NC, et al. Advance care planning in terminally ill and frail older persons. Patient Educ Couns. 2013;90(3):323–9.
54. Martina D, Lin C-P, Kristanti MS, Bramer WM, Mori M, Korfage IJ, et al. Advance care planning in Asia: a systematic narrative review of healthcare professionals' knowledge, attitude, and experience. J Am Med Dir Assoc. 2021;22(2):349. e1-. e28.
55. Kwon SA, Kolomer S. Advance care planning in South Korea: social work perspective. Soc Work Health Care. 2016;55(7):545–58.
56. Fishbein M, Ajzen I. Predicting and changing behavior: the reasoned action approach. Psychology; 2011.
57. Nahapetyan L, Orpinas P, Glass A, Song X. Planning ahead: using the theory of planned behavior to predict older adults' intentions to use hospice if faced with terminal illness. J Appl Gerontol. 2019;38(4):572–91.
58. Loberiza FR Jr, Swore-Fletcher BA, Block SD, Back AL, Goldman RE, Tulsky JA, et al. Coping styles, health status and advance care planning in patients with hematologic malignancies. Leuk Lymphoma. 2011;52(12):2342–8.

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