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Attachment at the end of life: A systematic review

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Review Article

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Abstract

Background. The diagnosis of an advanced life-threatening illness brings with it existential challenges that activate the attachment system and different attachment styles influence coping with advanced illness.

Objectives. The objective of this work were (a) to analyze the influence of attachment styles of patients with advanced disease and their relatives on emotional distress and other psychological and existential aspects, and (b) to identify the most used assessment instruments to measure it, highlighting those with better psychometric properties in palliative care contexts.

Methods. Articles on attachment published from October 2005 to February 2025 using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guide (PRISMA) were identified by searching PubMed, PsycINFO, Google Scholar, SCOPUS, Dialnet, and the Web of Science databases.

Results. Of 1847 studies identified, 24 were included (21 quantitative and 53 qualitative). Quality assessment revealed low risk of bias and high methodological quality. The main results indicated that a secure attachment style was associated with better coping, adaptation and adjustment strategies to the experience of illness, causing a buffering effect on suffering at the end of life. In contrast, patients with insecure attachment styles presented higher levels of emotional distress, demoralization, existential loneliness, death anxiety and showed a poorer psychological adaptation to cancer. Almost two-thirds of the studies (65.1%) used some version of Experiences in Close Relationships (ECR) scale.

Significance of results. The attachment theory appears to offer a valuable conceptual framework for understanding how individuals may respond to the emotional and relational demands associated with advanced illness and end-of-life care. Its contributions have been increasingly considered in literature addressing psychosocial adjustment and coping in palliative contexts For the assessment of attachment styles in a palliative context, the most used instrument is the original ECR-M16 scale or its iderived versions.

Introduction

Introduction to attachment theory and attachment styles

John Bowlby (1986, 1998) describes attachment theory as an explanatory model of interpersonal and intrapersonal relationships through the human tendency to establish strong emotional bonds with certain people throughout life. First, he emphasizes that this need is fundamental to human beings and is present throughout the life cycle, that is, from "the cradle to the grave" (Bowlby 1986). At the same time, the goal of attachment is to maintain a relationship that generates physical and psychological comfort in the face of possible and diverse threats by maintaining contact with an attachment figure. Thus, attachment theory is a way of conceptualizing the human tendency to establish emotional bonds (attachments) with certain people, as well as an attempt to explain the suffering and anxiety generated by the unwanted separation or emotional loss of those bonds (Bowlby 1986).

For Yárnoz (2008), attachment theory is a way of explaining and trying to understand relationships, while for Marrone (2001) it is the basis of empathy and compassion, proposing a theory of affections and emotional regulation that underpins emotional difficulties, since there isa clear relationship between attachment and psychological difficulties existing in childhood, adolescence, and adulthood.

For a long time, empirical research on attachment focused primarily on the study of the development of bonds and their implications during the first years of life (Ainsworth, Blehar, Waters, & Wall 1978). However, beginning in the 1980s, authors such as Main, Kaplan,

and Cassidy (1985) and Hazan and Shaver (1987) promoted theoretical development and empirical research on attachment in later stages of childhood (Zeifman & Hazan 2008).

Based on these studies, an attachment figure in adulthood is defined as one who assumes the role of a secure base, facilitating the development of activities of exploration and personal development. It is also a figure that offers a sense of comfort in threatening or stressful situations, and is therefore used as a safe haven. Ultimately, it generates in the individual the need to avoid or reduce separation, whether concrete or symbolic (Hazan & Shaver 1994).

John Bowlby's attachment theory (1986, 1998) posits that the bonds a person has maintained with their attachment figures during childhood can condition, although not necessarily determine, that person's experience in later relationships with themselves and with others. Therefore, it is believed that attachment styles in adulthood generate behavioral patterns that maintain a certain continuity and stability with respect to the attachment styles displayed in previous stages (Ravitz et al. 2010). The most relevant characteristics of the 4 adult attachment styles are described below:

- A person with a secure attachment style is characterized by valuing close relationships, by their ability to maintain them without losing their personal autonomy, and by their consistency and good judgment when discussing close relationships and related topics. They are able to handle stressful situations in daily life, notice what is going well and what is going wrong, regulate their emotions, and express their discomfort constructively, as well as facilitate collaboration and satisfying relationships.
- People with a preoccupied attachment style are characterized by overinvolvement in intimate and friendship relationships, by their dependence on others' opinions of their personal worth and acceptance, by their tendency to idealize some people, and by their inconsistency or exaggerated emotionality when discussing these relationships. In interpersonal conflicts, they tend to blame themselves while maintaining a positive view of others. They will have difficulty regulating their emotions, and their excessive expressions of distress provoke others to mobilize, although attempts to obtain consistent attention are frequently frustrated, which again reflects the image of a person who is not being cared for.
- People with an avoidant attachment style downplay close relationships, emphasize independence, autonomy, and self-sufficiency, have restricted emotionality, and their ideas about the relationships they have had or would like to have are unconvincing. In interpersonal problems, they maintain self-esteem by placing the primary responsibility on others. They emphasize their self-sufficiency and avoid expressing their needs. They tend to trivialize or minimize their problems and difficulties. They neutralize their strongest emotions, and in cases of emotional distress, they use avoidance mechanisms and distance themselves from others.
- People with a disorganized attachment style avoid intimate relationships due to distrust and fear of abuse or abandonment. Their sense of personal insecurity is prominent, with emotional dysregulation occurring, and they frequently maintain chaotic relationships. In a healthcare setting, they are the patients who cause the most difficulties when it comes to relating to themselves.

Importance of attachment theory in palliative care

As described, throughout life, human beings need relationships and bonds that convey security, emotional support, protection, and support. Because of this, every person will seek proximity and contact with their attachment figure at certain times in their life, especially if there is a perception of danger, fear, and threats to the integrity of the person and their family. Therefore, it is expected that when a person experiences chronic suffering or discomfort, they will activate their attachment system to soothe or contain this concomitant discomfort (Bowlby 1998).

The diagnosis of an advanced life-threatening illness brings existential challenges that activate the attachment system (Scheffold et al. 2019), creating a greater need to establish secure bonds that can help reduce the suffering that appears in facing the threat and proximity of death. This attachment behavior contributes to the person's adaptation to the environment and to their survival (Bowlby 1993), becoming more important in the experiences of existential suffering (Tarbi et al. 2024) that appear during the process of advanced illness or end of life.

The 4 attachment styles influence differently social functioning, coping and adaptation to the disease process, response to stress, psychological well-being and even healthy behavior, therapeutic adherence and clinical management (Ciechanowski et al. 2002; Maunder and Hunter 2001; Schmidt et al. 2002). Specifically, in relation to patients with oncological disease and/or with palliative needs, the identification of the attachment style of patients and family members helps healthcare professionals to adjust the therapeutic relationship and to be able to focus attention on the psychosocial needs of those patients and families who need it most, identifying the most complex cases, and proposing communication and relationship styles in accordance with the needs of that support, according to their attachment styles (Calvo et al. 2014; Hooper et al. 2012; Lo et al. 2009; Nicolaisen et al. 2014; Nissen 2016; Petersen and Koehler 2006; Philipp et al. 2017; Strauss and Brenk-Franz 2016; Tan et al. 2005).

Attachment styles and their measurement

Different measurement instruments are available to evaluate the 4 attachment styles, considering the theoretical approach and the nomenclature of the classification of attachment styles, although all instruments differentiate between secure attachment styles and different subtypes of insecure attachment (Martínez and Santelices 2005). Main, Kaplan, Cassidy (1985), through the Adult Attachment Interview (AAI), differentiate 3 adult attachment styles that are similar to the childhood categories: secure/autonomous, avoidant, and anxious/preoccupied, although there would be a fourth "unclassifiable" one.

From another theoretical perspective, Hazan and Shaver (1987) considered that adults with different attachment histories would classify themselves according to their way of thinking, feeling and behaving in close relationships, giving rise to 3 primary interpersonal styles during adolescence and adulthood (Hazan and Shaver 1987).

Bartholomew and Horowitz (1991) integrates the categorical and dimensional views with the 4-category model and classifies the attachment styles of individuals (Bartholomew and Horowitz 1991) systematizing Bowlby's conception of "internal operating models" and defining individual differences in adult attachment in terms of the intersection of 2 dimensions: on the one hand, the self-model dimension (self-perception) and the perception of others, and on the other hand, the anxiety/dependence and avoidance dimensions. Both dimensions are dichotomized as positive or negative and, when combined, make up the 4 styles attachment patterns (Fig. 1; Bartholomew et al. 2001).

Thus, over the past 15 years, research on adult attachment has generated 2 parallel lines of research, each of which is based

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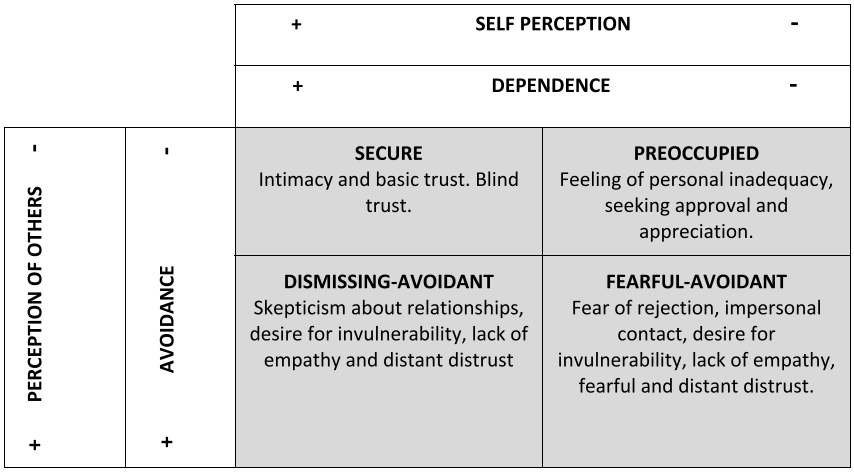

Figure 1. Two-dimensional model of adult attachment. *Source*: Extracted from Bartholomew and Horowitz (1991), modified from Viel (2019).

Table 1. Questionnaires used according to representational or behavioral system

Representational system		Behavioral system
Origin	Evolutionary psychology: • Ainsworth (1978) • Main, Kaplan, & Cassidy (1985), Main (1990)	Social psychology: • Hazan and Shaver (1987) • Bartholomew and Horowitz (1991)
Evaluation method	• Interviews	• Questionaries self-reported • Interviews
Domain or focus of study	Mental state regarding: • Parent–child relationship • Early childhood • Losses/separations	Feelings, behaviors, and cognitions regarding current interpersonal and romantic relationships.
Classification system	• Categorial	• Categorial • Dimensional
Main instruments	• Adult Attachment Interview (AAI) (George C, Kaplan N, Main M. (George et al. 1996). • Attachment Style Interview (ASI) (Bifulco, Lillie, Ball & Moran 1998)	• Adult Attachment Scale (AAS) (Collins and Read 1990) • Relationship Scales Questionnaire (RSQ) (Bartholomew and Horowitz 1991) • Experiences in Close Relationships (ECR) (Brennan et al. 1998) • ECR-Revised (Fraley and Shaver 2000)

on different conceptualizations and theories, and therefore there are also different ways of assessing this construct (Martínez and Santelices 2005). Table 1 shows the most used instruments, according to these lines of research.

A better understanding of how attachment styles shape the psychosocial experiences of patients with advanced illness and their families may help the development of individual and effective interventions in palliative care settings. Given the complexity of psychological, relational, and existential challenges in end-of-life contexts, identifying how different attachment patterns influence coping, communication, and psychological adjustment is critical. Additionally, gaining clarity on the most appropriate and psychometrically sound instruments for assessing attachment in these settings can enhance clinical assessment and tailored support. This systematic review addresses the following research questions:

1. How do attachment styles influence the psychosocial adjustment and experiences of patients and family members in the context of advanced illness?
2. What psychosocial factors related to advanced disease are associated with different attachment styles in patients and their caregivers?
3. Which assessment instruments are most commonly used to classify attachment styles in palliative care settings, and which demonstrate the strongest psychometric properties for this context?

The aim of this paper was (a) to describe the psychosocial factors related to advanced disease that are influenced by the attachment styles of patients and family members, and (b) to identify the assessment instruments to classify the attachment styles of patients most used in palliative care settings and to select those that present better psychometric properties.

Methods

The review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Liberati et al. 2009).

Search strategy and information sources

A comprehensive literature search was conducted from January 10 and 20, 2024. We updated the search on to February 8, 2025.

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The study of attachment in the oncology population is relatively recent, so this review includes studies published in peer-reviewed journals from the last 2 decades, specifically studies published between October 2005 and February 8, 2025. Searches for each data base are shown in Supplementary Appendix.

The systematic searches were conducted across the PubMed, PsycINFO, SCOPUS, Google Scholar, Dialnet, and Web of Science databases. Observational study designs were considered, including cross-sectional, longitudinal or cohort. No single-case studies or previously conducted systematic reviews or narrative studies were included in this review to avoid interpretive bias. Only published in English and Spanish were included in.

The flowchart of the search process is presented in Fig. 2 (PRISMA diagram).

Inclusion and exclusion criteria

The review included studies of adults aged 18 or older, both general and clinical populations samples. A search strategy was devised to include the following keywords and synonyms for the terms related to attachment, in the context of end of life, advanced cancer, the field of care and palliative care, people with advanced illness and their primary family caregivers. Specifically, the following terms from headings in English and Spanish were used referring to the problem, to the population and to processes: ("advanced cancer" OR "terminal illness" OR "palliative care" OR "end of life") AND ("patients" OR "family caregivers") AND ("attachment styles" OR "attachment" OR "attachment measuring" OR "attachment assessment" OR "attachment scales") AND ("adults" OR "adult patients" OR "aged 18 years or older" OR "aged 18+" OR "over 18").

In this sense, empirical studies that broadly examined the impact of the attachment style of patients and family members on the experience of advanced illness and the process of death were included. The association of different attachment styles with different psychological aspects such as emotional distress, existential suffering, existential loneliness, death anxiety, as well as social support, family caring abilities, coping strategies, adaptation and emotional adjustment to the disease process of both patients and their family carers was examined. Finally, the influence that attachment styles could have on the therapeutic relationship between the professional and the patient was examined.

The scales or assessment instruments used to classify attachment styles were also examined.

Studies that used samples of patients under 18 years of age-from non-palliative health contexts, and in some cases, that did not have measures to assess attachment style were excluded. Only studies that were in English or Spanish were considered. To reduce the potential for interpretive bias, this review excluded single-case reports, as well as prior systematic and narrative reviews.

Selection and data collection process

The selection of articles followeda 4-phase process: (1) export and elimination of duplicates (2) preliminary screening of titles and abstracts; (3) full-text screening; and (4) final inclusion in the review.

The initial screening phase involved reviewing titles and abstracts to assess their eligibility for the subsequent full-text screening. During this stage, a color-coding system was employed to classify each article: green (include), amber (uncertain), and red (exclude). Researcher KS was responsible for the export of records, removal of duplicates, and the initial screening. Articles marked as amber (uncertain) were re-evaluated by a second researcher, JTL, to determine their suitability for the next phase. To reduce the likelihood of prematurely excluding potentially relevant studies, a deliberately inclusive approach was adopted: any study presenting ambiguity or insufficient information in the title or abstract was advanced to the full-text screening. The second screening was performed independently by 2 researchers, QB and JTL. Discrepancies between reviewers were resolved through discussion and consensus with the involvement of a third author (SV) to help reach agreement.

To integrate findings across study types, we extracted key characteristics from each article, including lead author and country, year of publication, study aim, participant characteristics (sample size, mean age), study design and setting, attachment assessment tools, main results, and conclusions. Quantitative data were summarized descriptively and compared narratively across outcomes and measures (e.g., associations between attachment style and psychological distress), while qualitative findings were thematically synthesized. No meta-analysis was conducted due to heterogeneity in study designs and measures (Table 3).

Risk of bias assessment

Methodological quality and risk of bias were assessed for each empirical study using the criteria proposed by Hawker et al. (2002). For each study, the following areas were analyzed: title and abstract, introduction and objectives, methodology, sample, data analysis, ethical aspects, results, generalization and transferability, and implications of the study for practice. Of the 9 aspects, a score was obtained on a Likert scale from 0 to 4, where 4 indicated the highest quality and 0 indicated very low quality, and a total score (Table 2). This tool contributed to the transparency and reliability of the quality assessment process. Two reviewers independently assessed the risk of bias for each included study, conducting their evaluations separately to ensure methodological objectivity. Discrepancies were resolved through discussion, with consensus achieved in all instances. In cases where consensus was difficult to achieve, a third reviewer (SV) was consulted to assist in reaching an agreement.

Results

Included studies

Initially, 1847 articles were identified and 1656 were excluded because they were duplicates or did not meet the inclusion criteria (Fig. 2).

For an initial selection, 191 articles were identified and after evaluating the inclusion and exclusion criteria, 53 articles were preselected. There was no disagreement between the researchers about the inclusion of the articles in the study.

Subsequently, a total of 24 articles were excluded, 16 of which were not carried out in palliative or end-of-life contexts, 4 studies did not include measures to assess attachment style, and 2 were carried out in a population other than that of our review; 3 were review studies and 4 were cases studies, Finally, 2 researchers reviewed the full text of the preselected studies, and it was decided to include 24 articles for the systematic review.

The average quality of the selected articles ($n = 24$) was 33.3, and 2 of them (Lo et al. 2009; Scheffold et al. 2018) obtained the maximum score, while 13 studies obtained scores below the average (Cicero et al. 2009; Gauthier et al. 2012; Milberg and Friedrichsen

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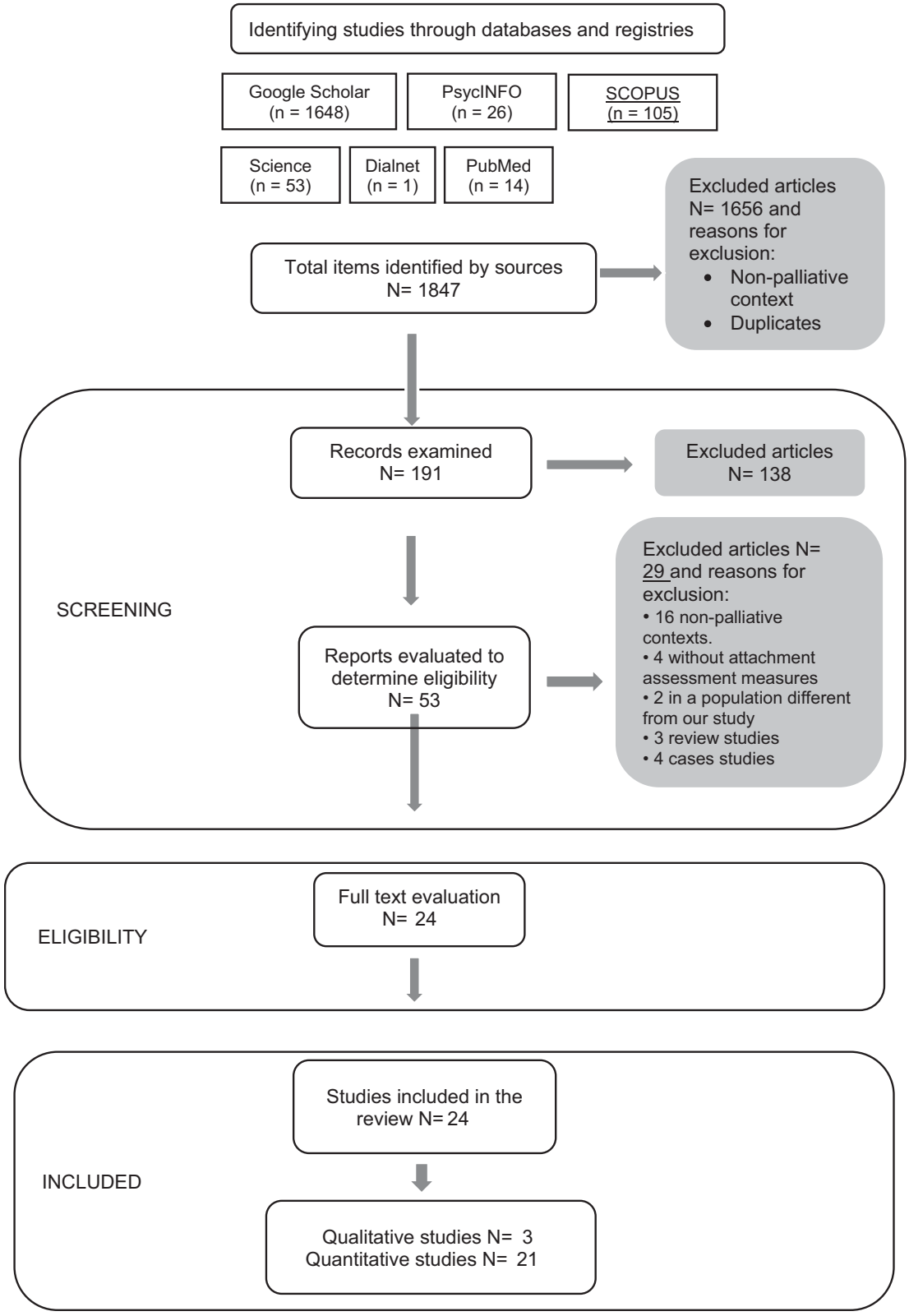

Figure 2. PRISMA flowchart.

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2017; Oldham et al. 2011; Philipp et al. 2017; Tsilika et al. 2016; Xiaoyun and Fenglan 2020) (Table 2).

Characteristics of the selected studies

Configuration and design features

The oldest study was published in 2006 (Hunter et al. 2006) and the last ones in 2020 (Mah et al. 2020; Ramos et al. 2020). And 26% of the studies had been carried out in Canada ($n = 729.2\%$), followed by Germany ($n = 5$, 20.8%) and Italy with 3 works; and 2 works in the United States). The remaining studies were represented by 1 study in each country and were the following: Australia, Turkey, Greece, Sweden, Iran, Poland, and China ($n = 1$, 4.2%). None was carried out in Spain.

Regarding the study design only 3 studies (12.5%) of 24 present a qualitative analysis methodology (Kunsmann-Leutiger et al. 2018; Milberg and Friedrichsen 2017; Shahvaroughi-Farahani et al. 2019).

Most studies employ quantitative methodology ($n = 21$; 87.5%), of which 4 use longitudinal designs (Calvo et al. 2014; Lo et al. 2009; Philipp et al. 2021; Tsilika et al. 2016). while the remaining studies follow a cross-sectional design, as do the 3 qualitative studies (Braun et al. 2012; Cicero et al. 2009; De Luca et al. 2017; Gauthier et al. 2012; Hunter et al. 2006; Lo et al. 2010; Mah et al. 2020; Oldham et al. 2011; Philipp et al. 2017; Ramos et al. 2020; Rodin et al. 2007; Scheffold et al. 2018, 2019; Vehling et al. 2019; Xiaoyun and Fenglan 2020; Yilmaz Özpolat et al. 2014; Zaporowska-Stachowiak et al. 2019) The description of the main characteristics of the included studies can be found in Table 3.

Characteristics of the participants

Most studies ($n = 20$; 83.3%) included both male and female patients, 8 (33.3%) studies involved caregivers (both sexes) along with patients or family members and only 1 study (4.2%) included only female patients.

The majority ($n = 19$, 79.2%) were conducted with patients diagnosed with some type of advanced oncological disease (Braun et al. 2012; Calvo et al. 2014; Gauthier et al. 2012; Kunsmann-Leutiger et al. 2018; Lo et al. 2010, 2009; Mah et al. 2020; Philipp et al. 2021, 2017; Ramos et al. 2020; Rodin et al. 2007; Scheffold et al. 2018, 2019; Shahvaroughi-Farahani et al. 2019; Vehling et al. 2019; Xiaoyun and Fenglan 2020; Yilmaz Özpolat et al. 2014; Zaporowska-Stachowiak et al. 2019). In 4 of them (Cicero et al. 2009; De Luca et al. 2017; Hunter et al. 2006; Tsilika et al. 2016), the patients had an oncological diagnosis, but could present other advanced stages, although in no case was it a surviving population or newly diagnosed. Finally, in 2 of the studies (Milberg and Friedrichsen 2017; Oldham et al. 2011), they expanded the diagnoses of advanced diseases by adding other chronic diseases with no possibility of cure to oncological diagnoses. Regarding the healthcare context or place where patients were cared for, the majority ($n = 14$) were outpatients (Braun et al. 2012; De Luca et al. 2017; Lo et al. 2010, 2009; Mah et al. 2020; Philipp et al. 2017; Ramos et al. 2020; Rodin et al. 2007; Scheffold et al. 2018, 2019; Shahvaroughi-Farahani et al. 2019; Vehling et al. 2019; Xiaoyun and Fenglan 2020; Yilmaz Özpolat et al. 2014), and to a lesser extent ($n = 4$), home patients and only in 3 studies, the patients in the sample were admitted to palliative care units (hereinafter referred to as PCU) (Kunsmann-Leutiger et al. 2018; Tsilika et al. 2016; Zaporowska-Stachowiak et al. 2019). Three of the studies did not specify the services or the context in which they were being attended and studied (Cicero et al. 2009; Oldham et al. 2011; Philipp et al. 2021).

Assessment measures for attachment style

Of the studies analyzed, only 1, that was a study of clinical interviews did not use any scale (Milberg and Friedrichsen 2017) (Table 4).The most frequently used scales was the Experiences in Close Relationships (ECR) scale, including its original version ($n = 6$), the shortened version ECR-M16 ($n = 8$), and the revised version (ECR-R) ($n = 2$), accounting for 65.2% of the total scales used (Table 4). Of the remaining studies ($n = 23$), the majority ($n = 15$, 65.2%) used as a self-report measure 1 of the versions of the ECR scale, either the original ECR-M36 by Brennan, Clark & Shaver (1998) (Braun et al. 2012; De Luca et al. 2017; Gauthier et al. 2012; Lo et al. 2010; Rodin et al. 2007; Xiaoyun and Fenglan 2020), the ECR-M36-Revised by Fraley, Waller & Brennan (2000) (Yilmaz Özpolat et al. 2014) or the reduced and validated version for the cancer population, Modified Brief Experience in Close Relationship (ECR-M16) by Lo, Walsh, Mikulincer, et al. (2009) (Lo et al. 2009, 2010; Mah et al. 2020; Philipp et al. 2017, 2021; Scheffold et al. 2018, 2019; Tsilika et al. 2016; Vehling et al. 2019).

In 3 studies, the Relationship Questionnaire by Bartholomew and Horowitz (1991) was used (Calvo et al. 2014; Hunter et al. 2006; Oldham et al. 2011); and in 2 other studies, the Revised-Adult Attachment Scale by Collins and Read (1990) was used (Ramos et al. 2020; Zaporowska-Stachowiak et al. 2019). The remaining described scales were each used in only 1 study: the AAI by George et al. (1996), (Shahvaroughi-Farahani et al. 2019), the Adult Attachment Projective (APP) by George and West (2012) (Kunsmann-Leutiger et al. 2018), and finally Cicero et al. (2009) used the Relationship Style Questionnaire (RSQ) by Griffin and Bartholomew (1994).

Characteristics of the variables studied

Attachment styles and experience of distress, emotional discomfort, and other psychological symptoms. In 6 studies (Cicero et al. 2009; Hunter et al. 2006; Ramos et al. 2020; Rodin et al. 2007; Scheffold et al. 2018; Vehling et al. 2019), there was a direct relationship between insecure attachment styles and the presence of greater distress, depression, anguish, death anxiety, or demoralization, as well as greater difficulties in coping and adapting to cancer (Calvo et al. 2014; Cicero et al. 2009; De Luca et al. 2017; Hunter et al. 2006; Ramos et al. 2020; Xiaoyun and Fenglan 2020).

Attachment styles and family. Cancer is considered a "family disease" (Baider 2003; Davis-Ali et al. 1993) and represents a family crisis. In this sense, attachment has a predominant place, since the family is one of the main systems that provide shelter, help, and emotional support in times of difficulty or internal imbalance. In 6 studies (Calvo et al. 2014; Cicero et al. 2009; De Luca et al. 2017; Hunter et al. 2006; Ramos et al. 2020; Xiaoyun and Fenglan 2020), they associated the insecure attachment style with greater depressive symptoms, stress and worse adjustment and adaptation to the disease in family caregivers, as well as communication difficulties between the couple.

Attachment styles and family capabilities related to the needs of patient care in the face of an advanced illness. The secure attachment style was associated with greater capacities to request and receive family support, either from their caregiving environment or from health professionals (Braun et al. 2012; Mah et al. 2020). Care did not only refer to practical support, but importance was given to knowledge of the relational nature and the bond between them so that they can be supportive in the more psychological

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Table 2. Methodological quality, risk of bias, and quality assessment for the included empirical studies[a]

	Author (year)	Abstract and title	Introduction and aims	Methodology and data	Sampling	Data analysis	Ethics and bias	Results	Transferability and generalizability	Implications and usefulness	Total score
1	Lo et al. (2009)	4	4	4	4	4	4	4	4	4	36
2	Hunter et al. (2006)	2	4	4	4	4	4	4	4	4	34
3	Milberg and Friedrichsen (2017)	4	3	3	4	4	3	3	3	4	31
4	Shahvaroughi-Farahani et al. (2019)	4	4	4	3	4	4	4	3	4	34
5	Zaporowska-Stachowiak et al. (2019)	3	4	4	4	4	3	4	4	4	34
6	Kunsmann-Leutiger et al. (2018)	4	4	3	4	4	3	4	4	4	34
7	Yilmaz Özpolat et al. (2014)	4	4	4	4	3	3	4	3	4	33
8	De Luca et al. (2017)	4	4	4	4	4	3	4	4	4	35
9	Calvo et al. (2014)	4	4	3	4	3	4	4	4	4	34
10	Oldham et al. (2011)	4	3	2	3	4	3	4	4	4	31
11	Scheffold et al. (2018)	4	4	4	4	4	4	4	4	4	36
12	Cicero et al. (2009)	3	3	4	4	4	2	4	4	4	32
13	Rodin et al. (2007)	3	4	4	4	4	3	4	4	4	34
14	Ramos et al. (2020)	3	4	4	4	4	3	4	3	4	33
15	Scheffold et al. (2019)	4	3	4	4	4	4	4	3	4	34
16	Philipp et al. (2017)	4	3	3	4	4	2	4	3	4	31
17	Vehling et al. (2019)	4	4	4	4	4	3	4	4	4	35
18	Tsilika et al. (2016)	3	3	4	4	4	2	4	4	4	32
19	Philipp et al. (2021)	4	4	4	4	4	2	4	4	4	34
20	Lo et al. (2010)	4	4	4	4	3	3	4	3	4	33
21	Xiaoyun and Fenglan (2020)	4	3	3	4	4	2	4	3	4	31
22	Mah et al. (2020)	4	4	4	4	4	3	4	3	4	34
23	Gauthier et al. (2012)	3	4	4	4	4	2	4	3	4	32
24	Braun et al. (2012)	4	4	4	4	4	2	4	3	4	33

[a]Hawker´s criteria for quality assessment of empirical studies. Maximum score = 36.

Table 3. Findings from the studies included in this review

	Author (year) and country	Objective	Participants (N sex and mean age)	Design	Setting	Measures to assess attachment	Main results/Conclusions
1	Lo et al. (2009) Canada	To analyze the psychometric properties of the Experiences in Close Relationships Scale (ECR), adapted for the cancer population; and (2) the validity of a brief, modified 16-item version.	$N = 326$ patients with advanced cancer. 33% women and 67% men (mean age of 59.1 years)	Quantitative Longitudinal	Hospice Homecare Service	Experiences in Close Relationships Scale-Modified Short Form (ECR-M16)	The ECR-M36 and ECR-M16 are reliable and valid. They are good measures of attachment style orientation for use with medically ill adult populations.
2	Hunter et al. (2006) Australia	To relate attachment to emotional relationships associated with negative affect in patients with terminal cancer, and how these variables influence each other.	$N = 67$ patients with advanced cancer. 13% women and 87% men (mean age of 66 years)	Quantitative Cross-sectional	Hospice Homecare Service	Relationship Questionnaire (RQ)	Patients with better partner relationships had lower levels of Emotional Distress. Emotional support from partners is important for managing distress and for patients' well-being. Insecure attachment is related to poorer psychological adjustment and less demand for emotional support.
3	Milberg and Friedrichsen (2017) Sweden	Exploring attachment figures of patients and family members during home palliative care.	$N = 12$ patients (4 women and 8 men -median 64 years) with advanced disease and 14 family members (11 women and 3 men -median 69 years).	Qualitative Cross-sectional	Hospice Homecare Service	Clinical interview	Four types of attachment figures are identified for patients and family members. Some family members may be experiencing the loss of the patient (attachment) while the patient is still alive (anticipatory grief). It is important for palliative care teams to identify these attachment figures and develop trusting relationships.
4	Shahvaroughi-Farahani et al. (2019) Iran	To qualitatively examine attachment style in palliative care.	$N = 9$ women (mean age of 44.2 years) with advanced cancer.	Qualitative Cross-sectional	Palliative care unit	Adult Attachment Interview (AAI)	Recognizing the patient's attachment styles enables the team to behave according to the patient's specific needs.

(*Continued*)

Table 3. (*Continued.*)

	Author (year) and country	Objective	Participants (N sex and mean age)	Design	Setting	Measures to assess attachment	Main results/Conclusions
5	Zaporowska-Stachowiak et al. (2019) Poland	The relationship between the palliative patient's attachment style and the relationship with the physician at the end of life.	$N = 110$ (52 men and 58 women, age range 36–80 years) patients with advanced cancer.	Quantitative Cross-sectional	Hospice Homecare Service	Revised-Adult Attachment Scale (RAAS)	Patient attachment style is associated with the relationship with their palliative care physician. Secure style was associated with better relationships. Implementing attachment theory in palliative care practice may improve end-of-life care.
6	Kunsmann-Leutiger et al. (2018) Germany	To assess the relationship between spiritual coping and attachment in palliative care patients. Four attachment patterns are examined – secure, avoidant, preoccupied, and unresolved – and are related to 3 types of spiritual coping: seeking, trusting, and reflective strategies.	$N = 80$ cancer patients (57 women and 23 men, mean age of 70.1 years)	Qualitative Cross-sectional	Palliative care unit and Hospice Homecare Service	Adult Attachment Projective (AAP)	There is an association between attachment style and spiritual coping. Patients with a preoccupied attachment style score lower on spiritual coping. And those with a secure and avoidant attachment style score equally high. Increasing awareness of the influence that attachment styles have on spiritual coping can significantly contribute to the quality of life of patients with advanced diseases and would allow health professionals to adapt to individual needs at this stage of life.
7	Yilmaz Özpolat et al. (2014) Turkey	To investigate the role of attachment in psychosocial adjustment to cancer and to explore psychosocial adjustment and therapeutic adherence.	$N = 68$ (32 women and 35 men, mean age of 50.13 years) cancer patients.	Quantitative Cross-sectional	Oncology Unit of the hospital	Experiences in Close Relationships – Revised (ECR-R)	Avoidant attachment style was associated with difficulties in social relationships and increased psychological distress after diagnosis. Patients who perceive more social support are more likely to accept help from professionals and also have better family adjustment and less Emotional Distress.
8	De Luca et al. (2017) Italy	Understanding how psychological variables and attachment styles can contribute to improving effective and functional adjustment to the disease and promoting better psychological well-being.	$N = 176$ cancer patients (mean age of 48.66 years) and 88 partners (mean age of 49.43 years).	Quantitative Cross-sectional	Oncology Unit of the hospital	Experiences in Close Relationships (ECR)	The presence of anxiety-depressive symptoms and insecure attachment styles in partners negatively influence adaptation to cancer and affect the quality of couple relationships. The anxiety-depressive levels of patients and their partners influence each other, which negatively affects the level of marital satisfaction.

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Table 3. (*Continued.*)

	Author (year) and country	Objective	Participants (N sex and mean age)	Design	Setting	Measures to assess attachment	Main results/Conclusions
9	Calvo et al. (2014) Italy	To evaluate the relationship between attachment styles, patient–caregiver reciprocal empathy, and doctor-patient therapeutic alliance in advanced oncological disease.	$N = 37$ patients (17 women and 20 men, mean age of 66.04 years) with advanced cancer, their primary caregivers (13 women and 24 men, age range 40–70 years) and 4 physicians (1 woman and 3 men).	Quantitative Longitudinal	Hospice Homecare Service	Reciprocal Questionnaire (RQ)	Caregivers with secure attachment may be less vulnerable during the terminal phase of the illness, as they perceive greater emotional reciprocity from the patient. In the doctor–patient relationship, patients' attachment style significantly affects their perception of therapeutic alliance. Secure patients have better alliances, followed by preoccupied, fearful, and avoidant patients. However, doctors do not take attachment styles into account in the therapeutic relationship.
10	Oldham et al. (2011) USA	To assess attachment style in patients who request physician-assisted death.	$N = 84$ family members 68 (57 women and 27 men, mean age of 61 years) of terminally ill of patients (36 women and 48 men) who requested it PAD before death	Quantitative Cross-sectional	Does not indicate it	Reciprocal Questionnaire (RQ)	Two-thirds of patients had an insecure attachment style. Patients' attachment styles are an important factor in patients who request physician-assisted death. Recognizing a patient's attachment style can improve the physician's ability to maintain a constructive relationship with the patient throughout the dying process.
11	Scheffold et al. (2018) Germany	Exploring attachment and its association with psychological distress.	$N = 162$ patients (99 women and 63 men, mean age of 58.51 years) with advanced cancer.	Quantitative Cross-sectional	Does not indicate it	Experiences in Close Relationships Scale-Modified Short Form (ECR-M16)	64% of patients had insecure attachment (disorganized 31%, avoidant 17%, and preoccupied 16%) and it contributed to the prediction of depression (10%) and death anxiety (14%). Avoidant attachment style was associated with more physical symptoms but did not predict psychological distress. Disorganized style significantly predicted higher death anxiety and depression, whereas preoccupied only predicted higher death anxiety.

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Table 3. (*Continued.*)

	Author (year) and country	Objective	Participants (N sex and mean age)	Design	Setting	Measures to assess attachment	Main results/Conclusions
12	Cicero et al. (2009) Italy	To explore whether dimensions of attachment and perceived social support predict adjustment to cancer.	$N = 96$ subjects (83% women and 16.7% men, mean age of 60.46 years) with cancer.	Quantitative Cross-sectional	Oncology Unit of the hospital	Relationship Scales Questionnaire (RSQ)	Patients with high levels of anxious attachment showed high levels of helplessness/hopelessness and anxious preoccupation. Patient perception of social support from friends was predictive for 2 strategies, fighting spirit and stoic acceptance. However, family support was not predictive. Patients in advanced stages of the disease showed higher levels of helplessness/hopelessness.
13	Rodin et al. (2007) Canada	To examine the association between disease-related factors, perceived social support, secure attachment, and the emergence of depressive symptoms.	$N = 326$ patients (140 women and 186 men, mean age 61.8 years) with metastatic cancer.	Quantitative Cross-sectional	Oncology Unit of the hospital	Experiences in Close Relationships (ECR)	Secure attachment has a protective effect against the appearance of depressive symptoms related to the disease and is partly related to the possibility of accepting socio-family support.
14	Ramos et al. (2020) USA	To examine associations between attachment style, communication behaviors, and physical well-being among couples coping with cancer.	$N = 166$ couples with one member with cancer (65% women and 35% men, mean age of 52.45 years).	Quantitative Cross-sectional	Oncology Unit of the hospital	Revised-Adult Attachment Scale (RAAS)	Insecure attachment styles were associated with poorer communication between partners. They were also associated with poorer physical well-being.
15	Scheffold et al. (2019) Germany	Know the interrelation and influence between insecure attachment, as well as existential resources: spiritual well-being and degree of psychological distress.	$N = 190$ patients (116 women and 74 men, mean age 57.81 years) with advanced cancer.	Quantitative Cross-sectional	Oncology Unit of the hospital	Experiences in Close Relationships Scale-Modified Short Form (ECR-M16)	Patients with disorganized attachment styles have a high risk for both depressive symptoms and death anxiety, and this association is related to a lower experience of spiritual well-being.
16	Philipp et al. (2017) Germany	To evaluate the psychometric properties of the German translation of the Brief Experiences in Close Relationships Scale (ECR-M16-G).	$N = 182$ (61% women and 39% men, mean age of 57.9 years) patients with advanced cancer.	Quantitative Cross-sectional	Oncology Unit of the hospital	Experiences in Close Relationships Scale-Modified Short Form (ECR-M16)	The ECR-M16-G is a valid and reliable measure of insecure attachment in patients with advanced cancer and can be recommended as a tool for clinical care and research.

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Table 3. (*Continued.*)

	Author (year) and country	Objective	Participants (N sex and mean age)	Design	Setting	Measures to assess attachment	Main results/Conclusions
17	Vehling et al. (2019) Canada	Examining the contribution of attachment to the demoralization syndrome.	$N = 382$ patients (228 women and 154 men, mean age of 58.7 years) with advanced cancer.	Quantitative Cross-sectional	Oncology Unit of the hospital	Experiences in Close Relationships Scale-Modified Short Form (ECR-M16)	The prevalence of demoralization was clinically relevant and was associated with lower secure attachment (stronger anxious than avoidant) Insecure attachment was associated with higher symptom burden and demoralization.
18	Tsilika et al. (2016) Greece	Exploring the psychometric properties of the ECR-M16 Greek short version.	$N = 100$ (50 women and 50 men, mean age of 69.10 years) palliative patients	Quantitative Longitudinal	Palliative care unit	Experiences in Close Relationships Scale-Modified Short Form (ECR-M16)	The G-ECR-M16 is a valid research tool for the impact of attachment patterns in Greek cancer patients.
19	Philipp et al. (2021) Germany	To test a longitudinal model hypothesizing that avoidant attachment mediates high demoralization and anxiety over time.	$N = 206$ patients (126 women and 80 men, mean age of 57.9 years) with advanced cancer.	Quantitative Longitudinal	Oncology Unit of the hospital	Experiences in Close Relationships Scale-Modified Short Form (ECR-M16) German version.	Avoidant attachment partially mediated the relationship between death anxiety and demoralization. Compared with previous research, avoidant attachment may play a less central role in explaining the course of existential distress over time.
20	Lo et al. (2010) Canada	To examine whether secure attachment patterns and spiritual well-being explain the protective effect of age against distress.	$N = 342$ patients (33% women and 67% men, mean age of 59.1 years) with advanced metastatic cancer.	Quantitative Cross-sectional	Oncology Unit of the hospital	Experiences in Close Relationships (ECR)	Age was inversely associated with depression and positively associated with spiritual well-being and secure attachment. This effect was mediated by secure attachment and spiritual well-being. Depression was inversely related to secure attachment and spiritual well-being. The relative protection from psychological distress of older cancer patients may be the result of age-related developmental achievements and/or differences in response to adverse life events.

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Table 3. (*Continued.*)

	Author (year) and country	Objective	Participants (N sex and mean age)	Design	Setting	Measures to assess attachment	Main results/Conclusions
21	Xiaoyun and Fenglan (2020) China	To explore the psychological experiences of family caregivers of hospitalized patients and identify the relationships between insecure attachment, social support, and psychological experiences.	$N = 207$ families (130 women and 77 men, mean age of 41.55 years) of patients with gastric or colorectal cancer.	Quantitative Cross-sectional	Does not indicate it	Experiences in Close Relationships (ECR)	Family caregivers experience depression and high self-esteem. Anxious attachment had direct effects on depression and social support, avoidant attachment had direct effects on self-esteem and social support. Social support has mediated the relationship between adult attachment and psychological experiences.
22	Mah et al. (2020) Canada	To examine the relationship between secure attachment and death preparation. To test whether couple communication mediates this relationship and whether gender and age moderate this mediating effect.	$N = 289$ patients with advanced cancer as a couple.	Quantitative Cross-sectional	Oncology Unit of the hospital	Experiences in Close Relationships Scale-Modified Short Form (ECR-M16)	Women, and older women, showed better preparation with better partner communication. Secure attachment supports death preparation in advanced cancer in part through better partner communication.
23	Gauthier et al. (2012) Canada	To examine perceptions of pain catastrophizing, attachment style, and relational context in relation to pain perception and solicitous responses to distraction and punishment.	$N = 191$ patients (105 women and 86 men, mean age of 56.8 years) with advanced cancer.	Quantitative Cross-sectional	Hospice Homecare Service	Experiences in Close Relationships (ECR)	Pain catastrophizing and anxious attachment interacted with punishment responses. Greater pain catastrophizing was related to lower punishment and higher distraction responses.
24	Braun et al. (2012) Canada	To examine the associations between caregiving styles (close, sensitive, controlling, and compulsive) and the attachment styles of their caregivers – spouses and patients.	$N = 110$ patients (110 men, mean age of 61.7 years) with advanced gastrointestinal or lung cancer and their caregiver spouses (110 women, mean age of 59.8 years).	Quantitative	Oncology Unit of the hospital	Experiences in Close Relationships (ECR)	Most spouses had a close and sensitive caregiving style and moderate levels of controlling and compulsive caregiving styles. Close and sensitive caregiving was negatively associated with caregivers' avoidant attachment. Controlling caregiving was positively related to caregivers' avoidant and anxious attachment styles. Compulsive caregiving was positively associated with caregivers' anxious attachment. It was also positively associated with patients' avoidant attachment and negatively associated with patients' anxious attachment.

Table 4. Questionnaires used in the articles included in the systematic review

Questionnaire used	No. of articles	% of articles[a]
Experience in Close Relationship Scale, ECR-M36 (Brennan et al. 1998)	6	26.1
Experience in Close Relationship revised. ECR-M16-R (Fraley and Shaver 2000)	1	4.3
Modified Brief Experience in Close Relationship, ECR-M16, (Lo et al. 2009)	8	34.7
Relationship Questionnaire, RQ (Bartholomew and Horowitz 1991)	3	13
Adult Attachment Interview, AAI (George et al. 1996)	1	4.3
Revised-Adult Attachment Scale, RAAS (Collins and Read 1990)	2	8.7
Adult Attachment Projective, APP (George and West 2001)	1	4.3
Relationship Style Questionnaire, RSQ (Griffin and Bartholomew 1994)	1	4.3
The Clinical interview – no questionnaire	1	

[a]Percentage calculated on articles that use scales ($n = 23$). One article that use interviews was excluded.

or existential management of the disease process. And, on the contrary, insecure attachment styles presented greater difficulties; in the case of patients with insecure-avoidant attachment styles, they believed they deserved care, but they did not trust that others could provide it. Often, their caregivers underestimated their needs because of this self-sufficiency and tendency to minimize emotional, relational and practical needs.

Attachment styles and professional-patient relationships. 33% of the studies ($n = 8$) (Calvo et al. 2014; Hunter et al. 2006; Milberg and Friedrichsen 2017; Rodin et al. 2007; Scheffold et al. 2018; Shahvaroughi-Farahani et al. 2019; Tsilika et al. 2016; Zaporowska-Stachowiak et al. 2019) point out that the professional-patient relationship is affected by the patients' attachment styles and by the professionals' established reactions toward them. All of them conclude that it is essential to offer individualized support and adapt the intervention to the needs of these patients according to their attachment style. But, in addition, the health professional, as a trustworthy person, can function as a new and worthy "attachment figure" and the palliative care unit as a "safe place" that aims to accompany patients to die in peace.

Attachment and spirituality: existential needs at the end of life. In general, insecure attachment styles are negatively associated with spiritual well-being and patients are generally worse at coping with spiritual aspects, increasing their psychological distress (Philipp et al. 2017; Scheffold et al. 2018, 2019). Specifically, demoralization, existential distress, death anxiety, and difficulties in managing "Double Awareness" (Rodin and Zimmermann 2008) are associated with insecure attachment styles (Philipp et al. 2021; Vehling et al. 2018, 2019). Existential loneliness is also one of the many factors associated with the experience of existential suffering at the end of life, and there is a clear association between the lack of an attachment figure in times of need for protection and security and the negative experience of existential loneliness, which is not associated with social or physical loneliness (Viel 2019). Thus, Attachment Theory is important to understand individual differences in managing feelings of loneliness at the end of life (Petersen and Koehler 2006), paying special attention to patients with insecure attachment styles who will be more likely to respond with high levels of suffering to loneliness, higher levels in preoccupied patients than in avoidant patients (Hunter et al. 2006).

To cope with the emotional and existential distress generated by the negative experience of loneliness, patients can feel safe, not only because of the physical proximity of the attachment figure, but also when they think and feel mentally close to it, as a "symbolic proximity," that is, they access the mental representation of a security figure, without the need for physical contact (Milberg and Friedrichsen 2017).

Discussion

This systematic review suggests that incorporating attachment theory into comprehensive palliative care may offer meaningful benefits for patients with cancer or other advanced illnesses, as well as for their families or caregivers, both from an empirical and clinical perspective.

Including attachment as a theoretical framework for palliative psychology within the integrated model of palliative care could be a promising initiative for developing effective psychological interventions in the future.

In fact, the most representative authors in this field (Hunter et al. 2006; Petersen and Koehler 2006; Rodin et al. 2007; Tan et al. 2005) propose a palliative care approach that considers attachment theory, and that therapeutic and psychotherapeutic interventions are based on their knowledge and contributions. To this end, attachment styles must be identified and recognized during the first visit to a PCU (Petersen and Koehler 2006), allowing us to observe the experience of separation and anxieties generated by the experience of advanced illness, as well as the relational characteristics of the patient with his or her family and with the health professional who is caring for him or her, mostly a medical professional (Petersen and Koehler 2006). They also suggested that early detection and intervention could help repair previous traumatic experiences, rebuild bonds and work on pending issues or unresolved conflicts in advance (Petersen and Koehler 2006), which could contribute to early palliative psychological care if we could identify these patients and family members early. Likewise, the PCU was proposed as a safe environment where the professional, as a trustworthy person, would be like a new attachment figure (Petersen and Koehler 2006).

Therefore, identifying attachment styles and understanding their influence on the coping and adaptation of patients and family members to illness, end of life and the grieving process provides an essential theoretical and clinical framework for the personalized and individualized care of patients treated in ICUs, whether they are inpatients, outpatients or in home care (Milberg and Friedrichsen 2017). This paradigm is of vital importance for professionals to adapt their intervention to the different attachment styles and to maximize the effectiveness of the treatment, given the special situation of high vulnerability that comes with the experience of advanced illness or end of life, where the establishment of a therapeutic relationship of trust or therapeutic alliance with the patient is of utmost importance.

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Although the study is primarily conceptual in nature, it has allowed us to offer attachment theory-based intervention models with sufficient clinical benefit and to propose the foundations for future research, using empirical evidence, into the impact that these psychotherapeutic proposals have on the psychological well-being and improvement of the quality of life of these patients and their families or caregivers. Thus, the findings of our study recommend that in cases where one works with patients with an avoidant attachment style, that is, those who minimize the effects of their illness on their life and mood, it would be advisable that the professional's support is not perceived as something that undermines their own sense of individuality, independence, autonomy and self-sufficiency, so the help offered should be more educational and/or psychoeducational in style. In this sense, in addition to showing interest and availability, the professional will pay particular attention to their need to promote a sense of autonomy, and the patient may become more interested and open to a helping relationship (Milberg and Friedrichsen 2017; Scheffold et al. 2018; Shalev et al. 2022; Tan et al. 2005). On the other hand, patients with more anxious attachment styles, who exacerbate their difficulties through hypervigilance and have difficulty feeling supported, would benefit more from predictable support, in which predictability and availability are clearly delimited and identified from the beginning, and who can have the necessary emotional support from the entire interdisciplinary team (Hunter et al. 2006; Rodin et al. 2007; Scheffold et al. 2018; Shalev et al. 2022). Thus, understanding the relational functioning of the patient and their family will allow healthcare professionals to adapt their interventions and contribute to improving the quality of life, as intended by the palliative care model (Gómez-Batiste et al. 2013; Hales et al. 2008).

Although most of the studies included are observational, some of them describe interventions where they include, in the psychological treatment carried out, the attachment theory suggesting that, specifically, knowing the attachment styles is essential, because the findings of the reviewed studies revealed a direct association between insecure attachment styles and the presence of psychological symptoms, such as greater experience of existential suffering, death anxiety, demoralization syndrome, existential-spiritual suffering, depression, anxiety, existential loneliness and greater difficulties in coping with advanced illness and end-of-life process (Calvo et al. 2014; Cicero et al. 2009; De Luca et al. 2017; Hunter et al. 2006; Milberg and Friedrichsen 2017; Nicholls et al. 2014; Petersen and Koehler 2006; Philipp et al. 2021, 2017; Ramos et al. 2020; Rodin et al. 2007; Scheffold et al. 2018, 2019; Sirito et al. 2019; Vehling et al. 2018, 2019; Xiaoyun and Fenglan 2020; Yilmaz Özpolat et al. 2014). These results highlight the potential role of insecure attachment style in predicting poor psychosocial outcome (Nissen 2016) and, therefore, these are the patients who are most likely to require specialized psychotherapeutic intervention given their complexity.

The results of these studies also conclude that insecure attachment styles were associated with lower capacities to request and receive family support, either from their caregiving environment or from health professionals (Braun et al. 2012; Calvo et al. 2014; Cicero et al. 2009; Hunter et al. 2006; Mah et al. 2020; Nicholls et al. 2014; Nissen 2016; Ramos et al. 2020; Rodin et al. 2007; Xiaoyun and Fenglan 2020; Yilmaz Özpolat et al. 2014). And in the most extreme cases, these patients, often considered "difficult," had dysfunctional behaviors that led to late diagnoses and difficulties in adherence with a poorer quality of life (Zaporowska-Stachowiak et al. 2019).

In this same sense, it has also been shown that caregiver families, especially the primary caregiver with an insecure attachment style, also presented greater emotional distress, depressive symptoms, worse adjustment to the disease and lower perception of social support (Calvo et al. 2014; Cicero et al. 2009; De Luca et al. 2017; Hunter et al. 2006; Nicholls et al. 2014; Ramos et al. 2020; Xiaoyun and Fenglan 2020), than families with secure attachment styles. The relevance of this finding is that, in all studies, family and social support was related to better family emotional adjustment, decreasing emotional distress (Yilmaz Özpolat et al. 2014).

And, since, for palliative care, the patient and the family are the unit to be treated (Baider 2003; Cicero et al. 2009; Davis-Ali et al. 1993), this systemic and comprehensive approach is essential, incorporating, in the psychotherapeutic intervention, the attachment theory in the care of a profile of patients and family members who present greater psychosocial complexity, therefore, greater risk of suffering and worse coping with the experience of illness.

Our research also highlights the relevance of attachment theory in the professional-patient relationship, which should be based on the helping relationship. A process of change and transformation is proposed toward this type of intervention that requires a model centered on the bond of safety with the patient and requires respect for his or her biography, narrative, personality, values, and lifestyle (Fernández-González et al. 2021; Gramm et al. 2022; Mah et al. 2020; Prado-Abril et al. 2019; Shalev et al. 2022; Shaw et al. 2019; Tarbi et al. 2024).

In this new doctor–patient relationship, which includes attachment theory, it is necessary to redefine roles, where the patient is seen by the professional as autonomous, proactive, and has the leading role, and the professional is sensitive and knows how to contain the suffering of the other and identifies the relational needs of patient or family based on their attachment style (Calvo et al. 2014; Hunter et al. 2006; McLean and Hales 2010; Milberg and Friedrichsen 2017; Nissen 2016; Petersen and Koehler 2006; Rodin et al. 2007; Scheffold et al. 2018; Shahvaroughi-Farahani et al. 2019; Tan et al. 2005; Tsilika et al. 2016; Zaporowska-Stachowiak et al. 2019).

In fact, at a clinical level, the most relevant thing is that professionals can become auxiliary attachment figures (Borelli and David 2003; Rodin et al. 2020a; Tsilika et al. 2016), providing a safe base for the patient and their family (Adshead 1998; Milberg and Friedrichsen 2017) knowing that, although time is more limited, it is more intense than in other healthcare contexts (Zaporowska-Stachowiak et al. 2019).

In our review, some of these articles propose insights into strategies and tools, as well as some "relational guidance" for professionals, although the scientific evidence regarding their benefits could not be analyzed (Borelli and David 2003; Hunter et al. 2016; Milberg and Friedrichsen 2017; Nissen 2016; Petersen and Koehler 2006; Shalev et al. 2022; Zaporowska-Stachowiak et al. 2019).

And regarding the second objective that we set ourselves in our research, it is important to point out that in order to carry out this type of interventions based on attachment theory, the findings conclude that measures based on categories and not on dimensions should be used since they are more useful in the clinical field and better adapt to the different attachment styles (Maunder and Hunter 2016), without ruling out that it is the attachment dimensions that detect more subtle differences between patients and that, therefore, they can also be useful in research (Scheffold et al. 2019). Even so, without a clear definitive consensus on whether

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attachment is mainly a category or a dimension, it seems useful to affiliate categories with dimensional scales (Ravitz et al. 2010), as we suggested where, mostly self-report instruments were used as an assessment measure, called "self-reported attachment" (Smith et al. 2010) in which the patient reflects cognitive capacity to respond affectively and behaviorally to the demands of current close relationships. It is recommended to use this term as a first step toward a clear and precise communication of the concept (Nissen 2016).

Because of this, it is necessary to have screening instruments that are easy to administer, brief and adapted to the palliative context, which generate psychotherapeutic effects, such as other questionnaires used in Spanish, the Emotional Distress Detection Questionnaire (DME) or the Primary Caregivers Questionnaire (DME-C), the Existential Loneliness Scale (EDSOL) and the Psychosocial and Spiritual Needs Scale (ENP-E) (Limonero et al. 2016, 2023, 2012, 2014; Mateo-Ortega et al. 2019; Sirito et al. 2019).

Thus, based on the above statements and on the result of the analysis of the different articles that make up the systematic review, as well as 3 other systematic reviews (Nicholls et al. 2014; Nissen 2016; Ravitz et al. 2010), it is concluded that the ECR scale, in its reduced version adapted for this population (Lo et al. 2009), called ECR-M16, is an excellent tool of choice to assess the 4 attachment styles, as well as the second-order factors, anxiety and avoidance, in people with advanced cancer (Lo et al. 2009). This test has also been validated in German (Philipp et al. 2017) and in Greek (Tsilika et al. 2016) with similar results.

Limitations

Despite its strengths, this review has several limitations that should be considered. One of them is related to the small number of quantitative investigations on attachment in the care of patients with advanced disease and their families (caregivers), which made it difficult to analyze the degree to which the modulating role of attachment in coping with situations of high emotional impact during the disease process, both for the patient and the care offered by their family members, as well as the generalization of the results. Another limitation would be related to the use of different instruments to evaluate attachment styles due to differences in their conceptualization, which may affect the variability in the interpretation of the results. However, a significant part of the investigations has been carried out with the ECR Scale in its original or abbreviated version, an aspect that would provide some solidity to these results.

Clinical implications

Although the number of empirical studies related to attachment at the end of life has been small, the findings of this review highlight the value of integrating attachment theory as a guiding framework in psychological care within palliative settings. Identifying attachment styles in patients with advanced illness and their caregivers provides a better understanding of their emotional and relational needs, enabling interventions more effectively to each individual.

This paradigm can be added to some of the existing ones in the identification and modulation of existential distress and suffering of patients with advanced cancer (An et al. 2020; Bayés 2013; Bayés et al. 2000; Boston et al. 2011; Breitbart et al. 2015, 2020; Byock 2002; Chochinov et al. 2002; Colosimo et al. 2018; Emanuel et al. 2020; García Campayo et al. 2016; Gómez-Batiste et al. 2013; Grossman et al. 2018; Krikorian and Limonero 2012; Limonero et al. 2012, 2023; Maté et al. 2008; Maté et al. 2009; Mateo-Ortega et al. 2019; Miyamoto et al. 2022; Rodin et al. 2009; Rodin and Zimmermann 2008; Sethi et al. 2020; Sirito et al. 2019; Tarbi et al. 2024).

While further research is needed on this topic, the findings of this study are promising for including attachment styles assessment as an essential part of the initial and comprehensive exploration of the palliative needs of the patient and their families (Hunter et al. 2016; Philipp et al. 2021).

Understanding the influence of attachment styles on patient interactions may facilitate the development of more specific, efficient, and effective interventions. In this sense, the findings of this systematic review conclude that patients and family caregivers with insecure attachment styles will be the ones who mostly need specialized psychotherapeutic support, since they are the ones who obtain the worst results in terms of psychological adaptation and adjustment (Calvo et al. 2014; Hunter et al. 2006; Miyamoto et al. 2022; Petersen and Koehler 2006; Philipp et al. 2021; Rodin et al. 2020a, 2020b; Scheffold et al. 2015, 2018, 2019; Sethi et al. 2020; Shahvaroughi-Farahani et al. 2019; Shalev et al. 2022; Slade and Holmes 2019; Troncoso et al. 2019a; Zaporowska-Stachowiak et al. 2019). And, although the attachment style is quite stable in adulthood, it can also be a dynamic process, resulting from the combination of different psychological, family, contextual, cultural, economic, and social factors, in which we can intervene (Hunter et al. 2016; Philipp et al. 2021).

Although our aim was to explore the role of attachment in the context of advanced illness from a systemic model (Baider 2003; Davis-Ali et al. 1993; Smilkstein 1978), the available literature was focused primarily on relationships with primary caregivers, especially spouses. Consequently, there is a gap in research that could address the role of attachment in the adjustment to diagnosis by children, parents, or other significant persons and their caregiving environment of patients with advanced cancer (Milberg and Friedrichsen 2017).

In summary, our research presents a coherent and consistent message that further research is needed to demonstrate the effectiveness of incorporating attachment theory into palliative care in order to help professionals, especially psychologists, understand the variability and complexity of patients and the influence that attachment styles have on coping with advanced and end-of-life illness (Fernández-González et al. 2021; Miyamoto et al. 2022; Rodin et al. 2020b; Sethi et al. 2020; Shaw et al. 2017, 2019; Slade and Holmes 2019; Troncoso et al. 2019a, 2019b; Wulandari et al. 2020). Identifying these patterns allows us to offer more sensitive, personalized, and effective support. Simple and brief tools, such as the ECR-M16-Revised, make it feasible to integrate this approach into daily clinical practice.

Conclusions

This review emphasizes the importance of considering attachment theory as a key element in the psychological care of patients with advanced illnesses. Recognizing how attachment styles influence coping mechanisms, emotional responses, and the dynamics between patients, families, and healthcare providers allows for a more nuanced and person-centered approach to care.

Identifying insecure attachment patterns early in the palliative care process offers professionals the opportunity to adapt their interventions, build stronger therapeutic alliances, and provide support that truly aligns with the emotional needs of everyone.

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This approach not only enhances the effectiveness of psychological interventions but also contributes to improving the overall well-being of both patients and their caregivers.

While current evidence highlights the clinical value of incorporating attachment assessments into routine practice, further research is necessary to develop standardized tools and evaluate the long-term benefits of attachment-informed interventions. Nonetheless, the findings suggest that an attachment-based perspective can enrich the palliative care model, offering a more comprehensive understanding of the complex psychological challenges faced by patients and families at the end of life.

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Highlights table

- Insecure attachment styles are associated with greater psychological distress, existential suffering, and poor adaptation to advanced illness.
- Early identification of attachment patterns could allow for personalized attachment-based interventions in palliative care settings.
- Healthcare professionals could act as auxiliary attachment figures, promoting trust and emotional support during palliative care.
- Attachment theory could offer a valuable clinical framework for improving psychosocial outcomes for both patients and family caregivers.

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