

SYSTEMATIC REVIEW

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Attitudes of physicians, nurses, and the general public toward End-of-Life (EoL) decisions in European countries: an umbrella review

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Abstract

Background End-of-life (EoL) decisions represent some of the most ethically complex and emotionally charged aspects of healthcare. Understanding the attitudes of physicians, nurses, and the public toward EoL decisions is crucial for aligning care provided with the personal values and preferences of patients.

Aim To explore the attitudes of physicians, nurses, and the general public toward EoL decisions, including the withdrawal or withholding of life-sustaining treatments, euthanasia, physician-assisted suicide (PAS), palliative sedation, and advance care planning (ACP) within European countries.

Design An umbrella review was conducted, covering the period from January 2010 to June 2024. The search strategy included Medline, CINAHL, and PsycINFO, supplemented by manual searches of reference lists of all included studies to identify additional relevant studies.

Results The search identified 587 papers, 11 of which were included in the synthesis. Of these, six addressed euthanasia and PAS, three focused on ACP, one on the withdrawal of life-sustaining treatments, and one on palliative sedation.

In Europe, the general public expressed the highest level of support for EoL practices such as euthanasia and PAS, followed by nurses, while physicians often held a more cautious perspective. For withdrawal of treatment, palliative sedation, and ACP, a critical recurring theme was the need to improve communication between patients and healthcare professionals.

Conclusions The divergence underscores the intricate complexity of navigating ethical, cultural, and professional considerations in EoL care. Effective communication serves as a cornerstone for respecting patient autonomy and ensuring that healthcare decisions align with individual values, goals and preferences.

Keywords Attitude, End-of-life (EoL) decision, Euthanasia, Physician-assisted suicide (PAS), Withdrawal of treatment, Palliative sedation, Advance care planning (ACP)

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Introduction

End-of-life (EoL) decisions represent some of the most ethically complex and emotionally charged aspects of healthcare. These decisions encompass a wide range of practices, including the withdrawal or withholding of life-sustaining treatments, euthanasia, physician-assisted suicide (PAS), palliative sedation, and other related issues such as advance care planning (ACP) [1, 2].

An attitude is defined as a psychological tendency reflected in the evaluation of an entity with varying levels of approval or disapproval [3]. Attitudes represent how a person assesses something and consist of three key components: cognitive, affective, and behavioral intentions [4]. The cognitive component involves beliefs or thoughts, such as: “I believe that terminally ill patients should have the right to request PAS”. The affective component relates to the emotional response to these beliefs, such as: “I feel sadness and empathy when I think about patients suffering without the option of PAS”. The behavioral component refers to the actions or intentions stemming from these cognitive and affective evaluations, for example: “I plan to advocate for policies that support access to PAS”.

Understanding the attitudes of physicians, nurses, and the general public toward EoL decisions is crucial because it helps align care provided with the personal values and preferences of patients and their caregivers [5, 6].

Healthcare professionals (HCPs), such as physicians and nurses, are directly involved in the EoL decision-making process, and they often find themselves guiding patients and their families through complex and challenging choices [7]. The perspectives and decisions made by these professionals are not formed in isolation but are shaped by various factors, including their personal beliefs, ethical or religious values, and the cultural context in which they were raised [8, 9]. Additionally, their experiences in different healthcare settings – whether those healthcare settings prioritize life extension, palliative care, or a patient-centered approach – can also influence differing viewpoints on how best to approach EoL issues [10].

Beyond HCPs, the attitudes of the general public are also pivotal as they shape social norms, legal frameworks, and political debates surrounding EoL issues. Public perceptions of dignity, quality of life, and the so-called right to die can shape legislative reforms, such as the regulation of euthanasia or PAS in certain countries [11]. Public opinion may also affect the level of autonomy that individuals expect to have in making their own EoL decisions, as well as the level of trust placed in HCPs to respect those choices [12].

A further critical element is the legal and political landscape in which EoL decisions occur. European countries, for instance, display considerable variation in their legal approaches to euthanasia, PAS, and other EoL practices. For instance, while nations such as the Netherlands, Belgium, and Luxembourg have legalized euthanasia – subject to variations in patient age group, procedures, and eligibility criteria – under strict regulatory frameworks, in others such as Italy, Ireland, and Poland this practice is illegal. Legal differences not only reflect but also actively shape the attitudes, practices, and discourse around EoL care within each national context. In more permissive legal environments, HCPs may be more likely to engage in open conversations with patients about options like PAS, whereas in more restrictive jurisdictions, such discussions may be limited by legal risks or professional codes of conduct [13–17].

This work is part of a broader project called ELISI (Attitudes towards End-of-Life Issues in Italy) (<https://www.elisiproject.it/>). Funded by the European Union (Next-GenerationEU) and the Italian Ministry of University and Research, ELISI aims to provide an updated and comprehensive picture of the attitudes of Italian physicians, nurses, and the general public on EoL topics. This manuscript provides an in-depth overview of the current literature on attitudes toward EoL decisions across European countries. The findings from this literature review will be instrumental in comparing the results of the Italian survey from the ELISI project with the European context, facilitating a deeper understanding of how attitudes in Italy align with or differ from those in other European countries and contributing to more informed policy discussions and ethical deliberations about EoL care.

The following review question guided this study: what are the attitudes of physicians, nurses, and the general public toward EoL decisions in European countries?

Methods

Design

We conducted an umbrella review, a method that aggregates and synthesizes findings from multiple systematic reviews to provide a comprehensive overview of the evidence on a specific topic. This approach is particularly valuable in fields with extensive research, where systematic reviews address overlapping or related questions or for subjects that have been extensively studied through numerous reviews [18, 19].

Our work followed the structured nine-step framework for umbrella reviews proposed by Cant et al. [19], providing a rigorous and standardized methodology for synthesizing findings from multiple systematic reviews. The reporting process adhered to the PRISMA guidelines for systematic reviews and meta-analyses [20], ensuring both

transparency and methodological rigor (see supplementary information file).

A protocol was developed by three members of the author team (PR, AGS, and FI) prior to the study's initiation and was subsequently approved by all researchers involved in the ELISI project during a dedicated meeting on December 5, 2023. Given this thorough internal approval process, it was deemed unnecessary to formally register the protocol, as the researchers collectively ensured its rigor and adherence to methodological standards.

Search strategy

The search was conducted using three databases: PubMed, CINAHL, and PsycINFO. These databases were selected for their extensive coverage of relevant literature in the fields of medicine, nursing, and psychology. PubMed is a widely recognized resource for biomedical and health-related research, CINAHL specializes in nursing and allied health literature, and PsycINFO focuses on psychological and behavioral sciences.

We developed a search string representing four semantic clusters. The first cluster addressed practices and issues related to EoL care, as defined in the ELISI

Project, namely withdrawal or withholding of life-sustaining treatments, euthanasia, PAS, palliative sedation, and ACP. The second cluster focused on attitudes, regardless of whether they pertained to cognitive, affective, or behavioral components. The third cluster targeted systematic reviews. Finally, the fourth cluster ensured the inclusion of researches specific to European countries.

To maximize the comprehensiveness of the search, synonyms and spelling variations for keywords were incorporated into each cluster. Additionally, database-specific thesaurus terms were employed to align with the controlled vocabulary used in PubMed, CINAHL, and PsycINFO. The search string used for PubMed is detailed in Table 1.

We limited the search to peer-reviewed papers written in English and published on or after January 1, 2010, a date chosen as a reference in the ELISI Project due to the enactment of Italy's law on palliative care. This time frame allowed us to trace the evolution of the debate on EoL issues in Europe. All database searches were conducted in June 2024. Finally, we conducted a manual search and examined the reference lists of all included studies to identify additional relevant studies.

Table 1 Search string used for PubMed

| Database | Search string |
|----------|---|
| PubMed | <p>("withdrawing treatment"[Title/Abstract: ~ 2] OR"refuse treatment"[Title/Abstract: ~ 2] OR"sustaining treatment"[Title/Abstract: ~ 2] OR"support treatment"[Title/Abstract: ~ 2] OR"prolong*" [Title/Abstract] OR"palliat*" [Title/Abstract] OR"Terminal Care"[Title/Abstract: ~ 2] OR"life threatening"[Title/Abstract: ~ 2] OR"life limiting"[Title/Abstract: ~ 2] OR"euthanasi*" [Title/Abstract] OR"assisted suicide"[Title/Abstract: ~ 2] OR"assisted death"[Title/Abstract: ~ 2] OR"assisted dying"[Title/Abstract: ~ 2] OR"Right to Die"[Title/Abstract: ~ 2] OR"final exit"[Title/Abstract: ~ 2] OR"self-directed death"[Title/Abstract: ~ 2] OR"rational suicide"[Title/Abstract: ~ 2] OR"advance care planning"[Title/Abstract: ~ 2] OR"Palliative Care"[MeSH Terms] OR"Withholding Treatment"[MeSH Terms] OR"Euthanasia"[MeSH Terms] OR"suicide, assisted"[MeSH Terms] OR"Right to Die"[MeSH Terms] OR"Refusal to Treat"[MeSH Terms] OR"Terminally ill"[MeSH Terms] OR"Terminal Care"[MeSH Terms] OR"End-of-life"[Title/Abstract] OR"EoL"[Title/Abstract] OR"surrogate decision")</p> <p>AND</p> <p>("preferenc*" [Title/Abstract] OR"wish*" [Title/Abstract] OR"choice*" [Title/Abstract] OR"perspective*" [Title/Abstract] OR"belie*" [Title/Abstract] OR"attitude*" [Title/Abstract] OR"opinion*" [Title/Abstract] OR"perception*" [Title/Abstract] OR"view*" [Title/Abstract] OR"desire*" [Title/Abstract] OR"Choice Behavior"[MeSH Terms] OR"Attitude"[MeSH Terms] OR"Perception"[MeSH Terms] OR"Intention"[MeSH Terms])</p> <p>AND</p> <p>("systematic literature"[Title/Abstract: ~ 1] OR"systematic Medline"[Title/Abstract: ~ 2] OR"systematic PubMed"[Title/Abstract: ~ 2] OR"systematic review"[Title/Abstract: ~ 1] OR"systematic reviews"[Title/Abstract: ~ 1] OR"systematic search"[Title/Abstract: ~ 1] OR"systematic searches"[Title/Abstract: ~ 1] OR"systematical review"[Title/Abstract: ~ 1] OR"systematical reviews"[Title/Abstract: ~ 1] OR"systematically identified"[Title/Abstract: ~ 1] OR"systematically review"[Title/Abstract: ~ 1] OR"systematically reviewed"[Title/Abstract: ~ 1] OR"umbrella review"[Title/Abstract: ~ 1] OR"umbrella reviews"[Title/Abstract: ~ 1])</p> <p>AND</p> <p>("france"[Title/Abstract] OR"french"[Title/Abstract] OR ("Spain"[Title/Abstract] OR"Spanish"[Title/Abstract]) OR ("Germany"[Title/Abstract] OR"German"[Title/Abstract] OR ("Italy"[Title/Abstract] OR"italian"[Title/Abstract]) OR ("Belgium"[Title/Abstract] OR"belgian"[Title/Abstract]) OR ("austria"[Title/Abstract] OR"austrian"[Title/Abstract]) OR ("poland"[Title/Abstract] OR"polish"[Title/Abstract]) OR ("switzerland"[Title/Abstract] OR"swiss"[Title/Abstract]) OR ("netherlands"[Title/Abstract] OR"dutch"[Title/Abstract]) OR ("Greece"[Title/Abstract] OR"Greek"[Title/Abstract]) OR ("Finland"[Title/Abstract] OR"Finnish"[Title/Abstract]) OR ("Norway"[Title/Abstract] OR"norwegian"[Title/Abstract]) OR ("Sweden"[Title/Abstract] OR"swedish"[Title/Abstract]) OR ("Latvia"[Title/Abstract] OR"latvian"[Title/Abstract]) OR ("Estonia"[Title/Abstract] OR"estonian"[Title/Abstract]) OR ("Lithuania"[Title/Abstract] OR"lithuanian"[Title/Abstract]) OR ("portugal"[Title/Abstract] OR"portuguese"[Title/Abstract]) OR ("Romania"[Title/Abstract] OR"romanian"[Title/Abstract]) OR ("bulgaria"[Title/Abstract] OR"bulgarian"[Title/Abstract]) OR ("hungary"[Title/Abstract] OR"hungarian"[Title/Abstract]) OR ("united kingdom"[Title/Abstract] OR"british"[Title/Abstract] OR"UK"[Title/Abstract]) OR ("Scotland"[Title/Abstract] OR"scottish"[Title/Abstract]) OR ("Wales"[Title/Abstract] OR"Welsh"[Title/Abstract] OR"europ*" [Title/Abstract])</p> <p>AND ("humans"[MeSH Terms])</p> |

Inclusion and exclusion criteria were established prior to the study (Table 2).

The publications were eligible for inclusion if they met the following criteria: they must be systematic reviews that clearly stated objectives and eligibility criteria defined a priori, with an explicit and reproducible methodological procedure, a systematic search aimed at identifying all studies meeting the eligibility criteria, an assessment of the validity of the findings, and a systematic presentation of the results [21]. Systematic reviews employing quantitative, qualitative, or mixed-method studies were deemed eligible. Primary empirical research – i.e., original studies involving the direct collection and analysis of observational, qualitative, or experimental data – was excluded, including those categorized by PubMed, CINAHL, and PsycINFO as systematic reviews that did not meet the criteria above specified. Eligible publications also needed a clear focus on attitudes toward one or more of the following EoL practices or issues: withdrawal or withholding of life-sustaining treatments, euthanasia, PAS, palliative sedation, or ACP with no age or care setting limitations. Additionally, only publications involving citizens, physicians or nurses or a combination of physicians and nurses were eligible. Studies without clear participant categorization were excluded. Finally, eligible publications had to include at least one sample of participants from European countries; studies lacking clearly identifiable participant origins were therefore excluded.

Study selection

Two blinded investigators (CR and SM) conducted the screening of publications using Rayyan. The software facilitated the identification and exclusion of duplicate studies, each of which was manually reviewed by both investigators. The investigators independently assessed the titles and abstracts of the eligible articles retrieved from the search. For titles that met the inclusion criteria or where there was uncertainty, full-text papers were obtained for further review. The investigators independently evaluated the full-text papers to determine their eligibility and, if necessary, additional information was sought from study authors to clarify eligibility.

Disagreements were resolved through discussion, with unresolved cases referred to a third reviewer (PR) for a final decision.

Data extraction, quality appraisal, and data synthesis

Data extraction and quality evaluation of the included reviews followed a two-stage process. In the first stage, a tailored data extraction form was developed and pilot-tested on three studies. Two independent reviewers (CR and SM) extracted data from each eligible study, capturing key elements including the source of the literature, the type of EoL practice(s) or issue(s) investigated, the study’s specific aim, the countries of the population studied (indicating the number of included studies that focused on European countries and those that focused on non-European countries), the type of participants (e.g., the general public, physicians, nurses, or a combination of physicians and nurses), the setting (e.g., hospital, home, etc.), the type of studies included (qualitative, quantitative, or mixed-methods) and evidence on attitudes specific to each participant group. Attitudes of the “general public” encompassed those of family carers, patients, or citizens. A third author (PR) verified the accuracy of the extracted data by comparing it with the original publication. Any discrepancy identified during the extraction process was resolved through consultation of the original study documents and team discussion.

As this study is an umbrella review, attention was given to the potential methodological implications of overlapping primary studies across included reviews. A formal quantification of overlap was conducted: we manually examined every primary study included in each systematic review selected for our research, in order to identify studies that appeared in more than one review. This process revealed some overlaps. However, only four of these were European studies, thus relevant to our research focus. For transparency, all overlapping articles are detailed in Table 3. We did not find this overlap to affect the results and their interpretation.

In the second stage of the process, the quality of the included systematic reviews was assessed using both the component and overall scores from the Overview

Table 2 Inclusion and exclusion criteria

| Inclusion criteria | Exclusion criteria |
|---|---|
| <ul style="list-style-type: none"> Quantitative, qualitative, or mix-methods systematic reviews Focus on attitudes toward at least one or more of the following EoL practices or issues: withdrawal or withholding of life-prolonging treatments, euthanasia, PAS, patient refusal of life-sustaining interventions, palliative sedation or ACP Citizens, physicians, nurses, or a combination of physicians and nurses as participants At least one sample of participants from European countries | <ul style="list-style-type: none"> Primary empirical research, including those misclassified as systematic reviews by PubMed, CINAHL, and PsycINFO Unclear whether participants were physicians, nurses, or citizens Unclear country of origin of participants |

Table 3 Overlapping articles identified in the included systematic reviews*

| Article | Systematic reviews in which article is included | European/Non-European |
|--|---|-----------------------|
| Daskal et al. 1999 | Hendry et al. 2013; Scheeres-Feitsma et al. 2023; Tomlinson et al. 2015 | Non-European |
| Dees et al. 2011 | Hendry et al. 2013; Rodríguez-Prat et al. 2019 | European |
| Koenig et al. 1996 | Scheeres-Feitsma et al. 2023; Tomlinson et al. 2015 | European |
| Lavery et al. 2001 | Hendry et al. 2013; Rodríguez-Prat et al. 2019 | Non-European |
| Mak and Elwyn. 2005 | Hendry et al. 2013; Rodríguez-Prat et al. 2019 | Non-European |
| Pearlman et al. 2005 | Hendry et al. 2013; Rodríguez-Prat et al. 2019 | Non-European |
| Roscoe et al. 1999 | Scheeres-Feitsma et al. 2023; Tomlinson et al. 2015 | Non-European |
| Rurup et al. 2006 [39] | Beck et al. 2017; Scheeres-Feitsma et al. 2023; Tomlinson et al. 2015 | European |
| Tomlinson et al. 2015 (included as a systematic review) [30] | Scheeres-Feitsma et al. 2023 | European |

* Articles are listed by the first author's surname and year of publication. Please note that these studies are not fully cited in the References section, as they are reported here exclusively to illustrate the overlap among the reviews

Quality Assessment Questionnaire (OQAQ) [22], a validated tool for assessing the quality of research reviews to ensure methodological rigor. Two independent reviewers (CR and SM) used the OQAQ for each paper, and any discrepancies in scoring were resolved through discussion with a third reviewer (PR) until consensus was reached.

The data synthesis followed a narrative approach [23], implemented in two iterative phases:

Initial synthesis development: PR, CR, and SM used the data extraction form to create a textual summary for each study. An inductive thematic analysis, guided by the framework proposed by Braun et al. [24], was performed to identify key, recurring, and significant themes across the studies, directly addressing the research question. To integrate both qualitative and quantitative data from the included systematic reviews, a convergent synthesis design was adopted. This approach allowed qualitative and quantitative findings to be analysed in parallel and then brought together during the interpretive phase. Quantitative data – where available – were narratively summarised and used to contextualise or reinforce the qualitative insights.

Interpretation and findings: in the final stage, the identified themes were integrated into a cohesive narrative aligned with the research question. PR, CR, and SM independently reviewed the thematic analysis and collaboratively developed the interpretive synthesis. Emerging findings were thoroughly discussed, and consensus was reached to ensure that the final synthesis was both comprehensive and robust. The findings were then organized into thematic topics, namely attitudes toward withdrawal or withholding of life-sustaining treatments, euthanasia, PAS, palliative sedation, and ACP. For each thematic area, the perspectives of physicians, nurses, and the general public were explicitly highlighted.

Results

The search strategy yielded a total of 587 records, from which 229 duplicates were removed. During the initial screening phase, 332 records were excluded because their titles and/or abstracts did not meet the eligibility criteria. A total of 26 full-text articles were then reviewed in the second-level screening, resulting in the selection of 8 articles for inclusion. An additional 3 articles were identified through reference screening, bringing the final count to 11 articles addressing the attitudes of physicians, nurses, and the general public regarding EoL decisions in European countries. Details of the study selection process are illustrated in Fig. 1.

Of the eleven included studies, six addressed euthanasia and PAS in combination [25–30], three focused on ACP [31–33], one on palliative sedation [34], and one on the withdrawal or withholding of life-sustaining treatments [35]. A summary table of the extracted data is provided in Table 4.

Five reviews [28–30, 34, 35] achieved a methodological quality score of five, while four reviews [26, 27, 32, 33] scored four, reflecting minor methodological flaws. Two reviews [25, 31] scored three, indicating major methodological shortcomings. Overall, all the included studies were of generally good quality. However, a common limitation across all reviews was their failure to meet criterion 4, which pertains to avoiding bias in the selection of studies. The methodological quality scores for the included reviews are presented in Table 5.

Withdrawal or withholding of life-sustaining treatments

Our review identified a single review on the withdrawal or withholding of life-sustaining treatments [35]. This study specifically focused on the withdrawal of treatments, exploring the experiences of intensive care nurses caring for patients during the cessation of life-sustaining

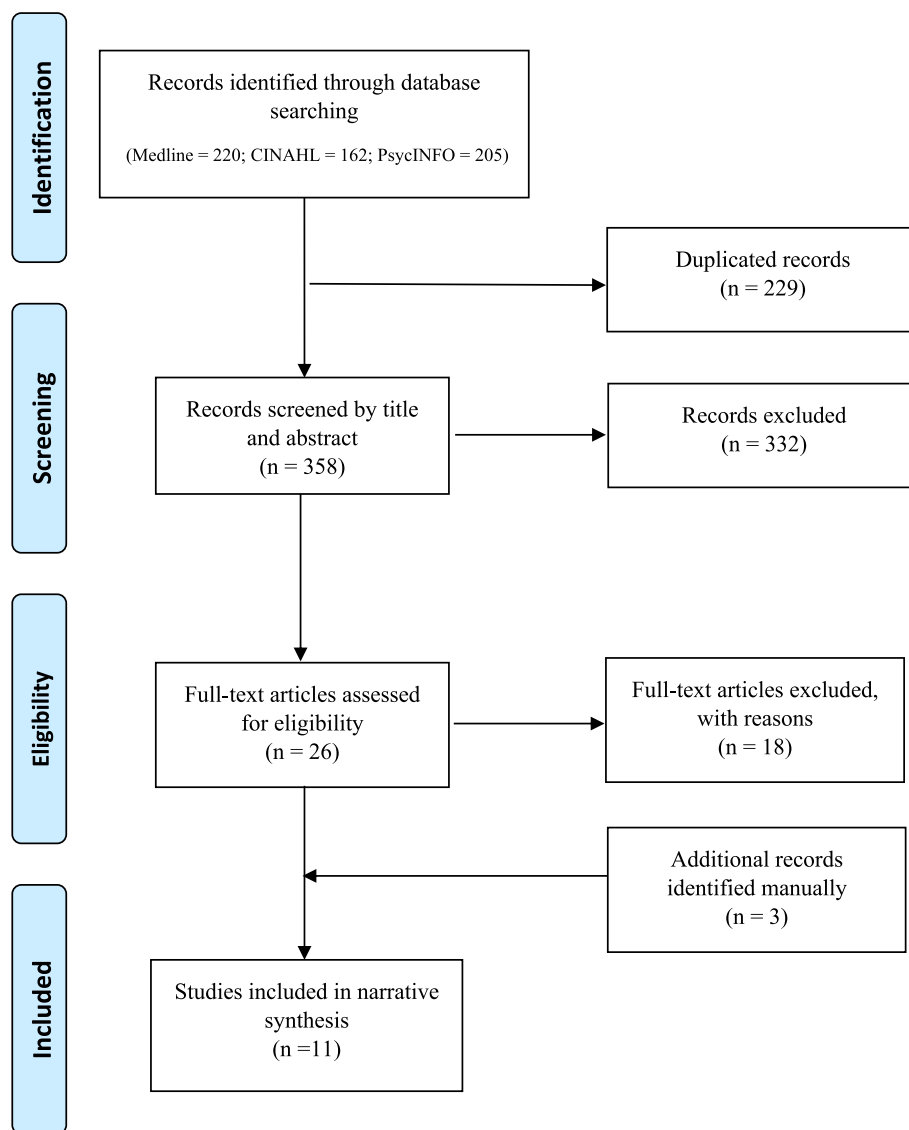


Fig. 1 Prisma flow diagram – Identification of relevant studies

interventions. The review synthesized data from 13 studies conducted across eight countries, including three European nations (United Kingdom, Norway, and Sweden).

A central finding was the inherently complexity of the withdrawal process, which requires well-coordinated communication among nurses, physicians, and families to facilitate a dignified EoL experience for the patient. Nurses frequently assumed a mediator role, balancing the needs and wishes of patients and their families with their personal beliefs and institutional requirements. This intermediary position posed significant challenges, as procedural, organizational, contextual, and relational factors often lead to conflicts that complicated

decision-making. Nurses were required to carefully navigate these tensions to uphold patient dignity while addressing family needs.

Delays in treatment withdrawal, especially stemming from communication and decision-making issues between nurses and physicians, emerged as a common source of tension. While a gradual discontinuation of life support was generally recommended to approximate a natural death, intensive care nurses did not always perceive these delays as beneficial, as they could prolong patients' suffering. Further conflict arose from insufficient communication and absence of explicit guidance, particularly when physicians were unavailable or formal withdrawal protocols were lacking. These gaps

Table 4 Summary of the included studies

| Source of literature | Type of EoL practice(s) or issue(s) | Aim of the study | Countries | Type of participant(s) | Setting | Type of studies included | Attitudes of general public | Attitudes of physicians | Attitudes of nurses |
|-----------------------|-------------------------------------|--|---|--|-------------------------------|--------------------------|--|-------------------------|---|
| Beck et al. 2017 [21] | ACP | ACP for patients with dementia in long-term care | EU: Belgium (1) Holland (1) Belgium & Holland (1) UK (8) Non-EU: Australia (1) USA (2) | Physicians and nurses | Long-term care setting | Qualitative | | | Nurses perceive the unpredictable disease trajectory as a significant barrier to both palliative care and the initiation of ACP, as ACP and the palliative approach are conceptually interconnected Staff members often experience discomfort regarding ACP, which has been described as "reluctance" or "reserve." Possible reasons for this discomfort include hesitation to discuss death and fear of distressing the individuals under their care One study suggests that staff members view their role as primarily focused on the preservation of life, even when this contradicts the wishes of the patient and their family Overall, evidence from the studies indicates that nurses generally exhibit reluctance to engage in ACP within this context |
| Cox et al. 2013 [15] | Euthanasia and PAS | Public attitudes to death and dying in UK from 1990 on, and variability according to age, gender and ethnicity | EU: UK (22) | Citizen: majority of respondents were older adults with samples ranging from 50 to over 80 years old | Not in hospital/care settings | Qualitative | Levels of support for euthanasia appear relatively stable, rising from 75% in 1984 to 82% in 1994 and then falling to 80% in 2005 It appears that people make clear distinctions between the acceptability of assisted dying in different circumstances depending on the nature of a person's illness and/or who would be involved in the process When a physician is involved, public support towards voluntary euthanasia can be as high as 80% when asked in relation to a request from a person suffering with an incurable and painful illness from which they will die Non-voluntary euthanasia (when a patient cannot ask for herself at the moment, due to physical and cognitive limitations): one study reports that there is little support when relatives are in disagreement with physicians (34%), while there is more support when there is an agreement (79%); 76% support is reached when there are advanced directives from the patient, despite relative's opinion | | |

Table 4 (continued)

| Source of literature | Type of EoL practice(s) or issue(s) | Aim of the study | Countries | Type of participant(s) | Setting | Type of studies included | Attitudes of general public | Attitudes of physicians | Attitudes of nurses |
|----------------------------|-------------------------------------|--|--|---|--|--------------------------|---|--|---------------------|
| Evans et al. 2012 [22] | ACP | Attitudes, use and Physicians' compliance | EU: Germany (32) | Physicians | EoL care setting | Mix-methods | Respondents are more conservative towards others than themselves | German physicians experience discomfort when discussing ACP Physicians desire a high degree of bindingness to remove any legal uncertainties related to their use | |
| Hendry et al. 2013 [16] | Euthanasia and PAS | People's views, opinions, perceptions, attitudes and experiences in relation to assisted dying | EU: Belgium (2) Finland (2) France (4) Greece (2) Ireland (1) Norway (1) Poland (1) Sweden (2) Switzerland (1) The Netherlands (7) UK (1) Non-EU (98) | General public of adults 18 years old or older, including patients and carers | Hospital and non-hospital settings | Qualitative | The review takes into account a great number and variety of studies. Four themes of concerns are found among people through the qualitative studies and surveys: Concerns about poor quality of life, meaning unbearable pain and suffering, becoming a burden to oneself and others, hopelessness of not seeing a future for oneself Concerns about good quality of death, meaning having control and autonomy over one's death Concerns about abuse if assisted dying is legalized, meaning that vulnerable groups could be discriminated, there could be financial pressures and lack of safeguards Relevance of individual stance, such as one's personal view (or religious), one's experience of suffering and death From qualitative studies, between 30 and 77% of the participants supported assisted dying Relatives are more supportive (58%–77%) compared with dementia patients (46%) and terminal cancer patients (47%). People with disabilities expressed the lowest level of support (30%–33%) | | |
| Jabbarian et al. 2018 [23] | ACP | ACP practice in chronic respiratory disease | EU: Portugal (1) The Netherlands (2) UK (5) Non-EU: Australia (3) Canada (2) USA (8) | Physicians and nurses (HCPs) (undifferentiated) | Outpatient, inpatient clinics, General practices | Mix-methods | Two quantitative studies involve patients with Chronic obstructive pulmonary disease and chronic lung diseases in an outpatient setting and find that 68% and 99% of the patients, respectively, are interested in discussing EoL care preferences In five qualitative studies, patients with a variety of chronic respiratory diseases express willingness to discuss EoL care preferences Two of these qualitative studies reveal some hesitation of patients to talk about EoL care preferences, mainly due to uncertainty about the stability of their preferences and the sensitive nature of the topic | Two high-quality studies and the pilot study of lower quality find that 42%–77% of HCPs recognizes the importance of discussing EoL care topics, since not discussing EoL care would limit patient choice A study from Portugal reveals that 89% of HCPs find it difficult to engage in discussions on EoL care preferences Two qualitative studies find that HCPs have doubts about the right moment to initiate these discussions on EoL care, and they emphasize that the timing of engaging is dependent on the patients' disease The role of different HCPs does not seem to make a difference | |

Table 4 (continued)

| Source of literature | Type of EoL practice(s) or issue(s) | Aim of the study | Countries | Type of participant(s) | Setting | Type of studies included | Attitudes of general public | Attitudes of physicians | Attitudes of nurses |
|----------------------------|-------------------------------------|--|--|------------------------|---------------------------------|--------------------------|-----------------------------|--|---------------------|
| McCormack et al. 2011 [17] | Euthanasia and PAS | Exploring the attitudes of UK physicians towards euthanasia and physician assisted suicide | EU: UK (15) | Physicians | General practices and hospitals | Mix-methods | | <p>Eleven out of fifteen studies examined euthanasia, ten out fifteen studies examined PAS</p> <p>The majority of physicians opposed euthanasia in all studies, except one</p> <p>The majority of physicians opposed PAS in eight studies</p> <p>Six studies looked at the percentage of physicians willing to perform euthanasia if it was legalized, and the mean was 22.7%</p> <p>Eight studies looked at the percentage of physicians willing to perform PAS if it was legalized, and the mean was 24.9%</p> <p>Only one paper compared attitudes towards assisted dying in terminal versus non-terminal patients (the latter having instead 'an incurable and painful illness'); physicians opposed both, but there was less support in the case of non-terminal patients</p> | |
| Rodrigues et al. 2020 [24] | Palliative sedation | Palliative sedation for patients with existential suffering | EU: Belgium (1) Germany (1) The Netherlands (2) Switzerland (2) Multiple countries (3) Non-EU: Canada (3) Japan (1) USA (4) | Physicians | Hospital setting | Mix-methods | | <p>There are three kinds of attitudes among physicians: 'for', 'against' and 'neutral/undecided'</p> <p>The percentages vary:</p> <p>In the one European study, German physicians showing positive attitudes are 37%–61% those showing negative attitudes are 23%–42%, and those showing neutral or undecided attitudes are 16%–20%</p> <p>Positive attitude towards palliative sedation for patients with existential suffering grounded on the belief psychological interventions are not appropriate for all patients</p> | |

Table 4 (continued)

| Source of literature | Type of EoL practice(s) or issue(s) | Aim of the study | Countries | Type of participant(s) | Setting | Type of studies included | Attitudes of general public | Attitudes of physicians | Attitudes of nurses |
|-----------------------------------|-------------------------------------|---|--|--|--|--------------------------|--|--|---------------------|
| Rodríguez-Prat et al. 2019 [18] | Euthanasia and PAS | What motives the wish to hasten death, and how is that related to requests for euthanasia and/or PAS? | EU: Germany (2) Switzerland (3) The Netherlands (1) Non-EU: Australia (1) Canada (3) China (1) Thailand (1) USA (4) | Patients of 18 years old or older, excluded those with advanced diseases | Hospitals, nursing homes, hospices, outpatient clinics | Qualitative | The fear of causing loved ones to suffer and the expectation of a future in which they would be a burden to others were primary motives for wanting to end their lives, even in patients who were not suffering at that particular moment in life | Some physicians say that it would be unethical to refuse palliative sedation if patients request it Palliative sedation for patients with existential suffering is a more humane solution than euthanasia and PAS, because physicians can accompany and care for their patients until death Negative attitudes: physicians against palliative appeal to the inconsistency in symptom classification and the complex interaction between physical and psycho-existential suffering For other physicians, palliative sedation represents abandonment of the patient, as if it was a semi-euthanasic act or a form of PAS Palliative sedation for patients with existential suffering can also be difficult to manage when the prognosis suggests the patient will live for a long time | |
| Scheeres-Feitsma et al. 2023 [19] | Euthanasia and PAS | How family is involved in situations of euthanasia or PAS and dementia, and how people with dementia and their family perceive this involvement | EU: Switzerland (1) The Netherlands (3) UK (5) Non-EU: Australia (1) Canada (2) New Zealand (1) USA (4) | Patients with dementia, family caregivers, family members | | Qualitative | Findings are very different as the review collects studies from different moments in time and different geographical areas Patients with dementia do not want to be a burden and fear to be a burden in the future. Being a burden (especially to their children) can be a driving force for requesting euthanasia and PAS At the same time, in other studies euthanasia and PAS are not mentioned when talking about good care at EoL | | |

Table 4 (continued)

| Source of literature | Type of EoL practice(s) or issue(s) | Aim of the study | Countries | Type of participant(s) | Setting | Type of studies included | Attitudes of general public | Attitudes of physicians | Attitudes of nurses |
|----------------------------|-------------------------------------|--|--|--|---------|--------------------------|--|---|--|
| Tomlinson et al. 2015 [30] | Euthanasia and PAS | Focused on people affected by dementia | EU: Finland (1) The Netherlands (5) UK (2) Non-EU: Australia (1) Brazil (1) USA (8) | General public, mild dementia patients, nurses, physicians | | Mix-methods | <p>One study in the UK from 1996 shows that patients affected by dementia more likely opposed PAS (for incompetent patients who had designated person assigned in advance) than non-patients</p> <p>For patients, reasons to request euthanasia/PAS are: relieving pain and having it as a choice</p> <p>A more recent study (2020) in the Netherlands shows that patients with dementia may anticipate euthanasia request for a later stage but then decide to postpone it when the time comes</p> <p>Family of patients with dementia become aware that they would not want to be a burden for others, so they tend to be in favor for euthanasia/PAS for themselves. Being a caregiver induces a more positive attitude towards euthanasia/PAS</p> <p>Most studies find that family members can feel a moral obligation to act the euthanasia wish of their loved ones, initiating the conversation and making sure that they establish a consistent will over time</p> <p>Some even wish, in retrospect, that they should have helped their loved ones themselves</p> <p>One study shows that there are members feeling they should prevent euthanasia/PAS</p> <p>Support grows in presence of advanced directive, when patients is in a terminal stage, when there is pain or distress that cannot be relieved</p> <p>Lack of good quality of life and diminishing dignity due to a loss of decorum often correspond to a positive attitude toward euthanasia/PAS</p> | <p>Six studies investigating both primary and hospital physician</p> <p>All consistently report opposition to euthanasia and PAS for dementia patients</p> <p>Four studies indicate that less than 10% of physicians would support or provide euthanasia, even where it is legal</p> <p>One study shows increased support, provided that the person had advanced directives</p> | <p>The majority of the six studies indicates that approximately one third (or just under) supports euthanasia in dementia patients</p> <p>A recent study in the Netherlands indicates higher levels of support for euthanasia in advanced dementia patients, if they have advanced directives for euthanasia (58% in favor)</p> <p>Fewer nurses (31%) are in favor of PAS for mild dementia patients</p> |

Table 4 (continued)

| Source of literature | Type of EoL practice(s) or issue(s) | Aim of the study | Countries | Type of participant(s) | Setting | Type of studies included | Attitudes of general public | Attitudes of physicians | Attitudes of nurses |
|-------------------------------------|--|---|---|--|---|--------------------------|-----------------------------|---|---|
| Vanderspauk Wright et al. 2018 [25] | Withholding or withdrawing life-sustaining treatment | Experiences of intensive care nurses who care for patients during the process of withdrawal of life-sustaining treatments | EU: Norway (1) Sweden (1) UK (3) Non-EU Australia (1) Canada (3) New Zealand (2) South Africa (1) USA (1) | Nurses most of them were female, with an experience in the ICU from 4 months to 35 years | Critical care units, specifically, intensive care units | Mix-methods | | Physicians may be more supportive of PAS in mild dementia than euthanasia in severe dementia without advanced directive | <p>One cross-cultural study found that across seven countries only 23% respondents felt able to 'ethically justify' euthanasia; however, this may not indicate that they would not be in favor of it</p> <p>Coordinating treatment withdrawal requires effective communication between nurses, physicians, and families to ensure a dignified death for the patient</p> <p>Nurses find themselves 'in between', balancing patients' and families' wishes, their personal beliefs and organizational demands</p> <p>Conflict and/or discordance is common during the withdrawal process due to procedural, organizational, contextual and relational factors affecting decisions</p> <p>Decision-making delays and prolonged withdrawal of treatment are major sources of conflict between nurses and physicians, and gradual withdrawal is at times perceived by nurses as not beneficial for the patient</p> <p>Lack of clear communication and guidance contribute to said conflicts</p> <p>Nurses prefer that the withdrawal occurs with a nurse who knows the patient and has cared for her previously</p> <p>Grief and emotional distress had long lasting impact to most of the nurses</p> <p>Debriefing sessions (or others) may help nurses cope with the challenges and distress</p> |

Table 4 (continued)

| Source of literature | Type of EoL practice(s) or issue(s) | Aim of the study | Countries | Type of participant(s) | Setting | Type of studies included | Attitudes of general public | Attitudes of physicians | Attitudes of nurses |
|----------------------|-------------------------------------|------------------|-----------|------------------------|---------|--------------------------|-----------------------------|-------------------------|--|
| | | | | | | | | | Training on withdrawal and frequent updates should be provided to all nurses in intensive care units Implementation of guidelines for the withdrawal of life sustaining treatments could decrease conflicts and discordance |

Table 5 OQAQ Scores for the methodological quality of included reviews (yes = y; no = n; can't tell = c; partially; p)

| Quality criteria | Beck 2017 [31] | Cox 2013 [25] | Evas 2012 [32] | Hendry 2013 [26] | Jabbarian 2018 [33] | McCormack 2011 [27] | Rodrigues 2020 [34] | Rodriguez-Prat 2019 [28] | Scheeres-Feitsma 2023 [129] | Tomlinson 2015 [30] | Vanderspank Wright 2018 [35] |
|---|----------------|---------------|----------------|------------------|---------------------|---------------------|---------------------|--------------------------|-----------------------------|---------------------|------------------------------|
| Search methods used to find evidence stated | y | y | y | y | y | y | y | y | y | y | y |
| Search for evidence reasonably comprehensive | y | y | y | y | y | y | y | y | y | y | y |
| Criteria used for deciding which studies to include reported | y | y | y | y | y | y | y | y | y | y | y |
| Bias in the selection of studies avoided | c | c | c | c | c | c | c | c | c | c | c |
| Criteria used for assessing validity of included studies reported | p | n | n | p | p | n | y | y | y | y | y |
| Validity of included studies assessed appropriately | n | p | p | p | p | p | y | y | y | y | y |
| Methods used to combine the findings of studies reported | y | y | y | y | y | y | y | y | y | y | y |
| Findings of studies combined appropriately | y | y | y | y | y | y | y | y | y | y | y |
| Conclusions made by authors supported by analysis | p | y | y | y | y | y | y | y | y | y | y |
| Overall Quality Score | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 |

underscored the need for clear, consistent communication, and for the implementation of comprehensive protocols to support all parties involved.

Nurses also expressed a preference for managing the withdrawal process with patients they had previously cared for, as familiarity allowed for a compassionate, personalized approach to care. However, the emotional toll on nurses during the withdrawal process was considerable, often resulting in lasting grief and distress. This emotional burden highlighted the need for supportive measures, such as formal debriefing sessions, to assist nurses in processing these experiences and managing the associated stress that comes with these sensitive responsibilities.

Specialized training on life-sustaining treatment withdrawal was deemed essential for new intensive care nurses, with regular updates to enhance skills and build confidence. Additionally, the implementation of standardized guidelines for life-sustaining treatment withdrawal was proposed as a means to reduce conflict, streamline communication, and ultimately improve the quality of EoL care. Such measures aim to foster a more compassionate and organized experience for patients, families, and HCPs.

Euthanasia

We identified six systematic reviews [25–30] addressing attitudes towards euthanasia. Two of these focused on the specific, yet ever more frequent, context of patients with dementia [29, 30]. Two reviews investigated the topic exclusively in the UK, one focusing on the general public [25], and the other one on physicians [27]. The remaining two reviews explored the attitudes, views and feelings of patients [28] as well as carers and general public [26] towards the different forms of assisted dying.

Nurses

Only one systematic review [30] addressed the attitudes of nurses towards euthanasia, specifically in the context of patients with dementia. Findings revealed that nurses generally held cautious and restrictive attitudes towards euthanasia in such cases. Approximately one-third of nurses supported euthanasia in case of dementia, though views varied depending on the severity of the condition and the presence of an advance euthanasia directive (AED). Notably, a higher proportion of nurses (58%) supported euthanasia in cases of advanced dementia when an AED was in place, suggesting that clear prior directives reduced ambiguity regarding patient wishes, making nurses possibly more open to euthanasia. However, the issue of patient capacity at the time of euthanasia remained problematic for many. One cross-cultural study [36] included in Tomlinson et al. [30] found that

only 23% of the respondents across seven countries felt able and comfortable to ethically justify euthanasia. Although nurses seemed to be quite cautious about this practice, their attitudes were less conservative compared to physicians.

Physicians

The attitudes of physicians towards euthanasia were examined in two reviews [27, 30]. McCormack et al. [27] analyzed eleven studies focusing solely on the UK, while Tomlinson et al. [30] reviewed studies from multiple countries but was limited to patients with dementia. Both reviews included both primary and secondary care physicians.

The two reviews consistently reported negative attitudes towards euthanasia: in McCormack et al. [27], ten studies out of eleven indicated that the majority of physicians shared a negative attitude, and in Tomlinson et al. [30] all five studies in the European context consistently recorded a widespread negative attitude. However, the most recent study considered [37] noted increased support (33%) for euthanasia for patients with dementia in the Netherlands, granted that an AED was in place. In McCormack et al. [27], reported that only 22.7% of physicians, on average, would be willing to perform euthanasia if legalized, with support ranging from 12 to 46% in the six studies. This was consistent with Tomlinson et al. [30], which (as gathered from four studies) found that less than 10% of physicians would support or provide euthanasia even if it was legal. The most recent study of both primary and secondary care physicians showed an increased support towards the practice (33%) if an AED was present [37]. Without an AED, physicians did not show an open attitude towards the practice of euthanasia for patients with advanced dementia: rather, they were more supportive of PAS in case of mild dementia.

One study included in McCormack et al. [27] compared attitudes to euthanasia for terminal versus non-terminal patients (with non-terminal defined as having “an incurable and painful illness”) and indicated that – although physicians were opposed in both cases – opposition was significantly stronger for non-terminal patients.

General public

The general public exhibited most favorable attitudes toward euthanasia, supported by the largest volume of studies. One UK-focused review investigated attitudes towards death and dying of the general public [25], with eight sources specifically addressing the topic of euthanasia: it reported constant support, which ranged from 75% in 1984 to 82% in 1994, before stabilizing at 80% in 2005. Public support reached its peak (80%) for physicians-administered euthanasia requested by “a person suffering

with an incurable and painful illness, from which they will die – for example, someone dying of cancer”. Tomlinson et al. [30] found that public attitudes towards euthanasia in dementia cases were less favorable compared to other terminal illnesses. However, data available was not univocal: attitudes varied geographically and temporally. For example, one study from the Netherlands [37] reported 77% of the public supporting euthanasia in severe dementia, a percentage much higher than the 62% reported in 2005, and 48% reported in 1998 in the same country. A UK-based study [38] included in Tomlinson reported the attitudes of a sample of 725 members of the public: they showed higher acceptance (up to 55%) of euthanasia in mild dementia for themselves, while the same choice for their partner in the same condition received a lower acceptance (52%). The positive reception towards such practice decreased as the level of severity of dementia increased: in case of severe dementia, 50% would choose it for themselves, and 48.7% for their partner, indicating a consistent tendency to adopt a more conservative stance when making decisions for a relative compared to oneself.

The same review [30] detected that caregivers generally had higher acceptance of euthanasia: one study based in the Netherlands [39] found that 77% of caregivers would be in favor of it for patients with advanced dementia who had AEDs.

The issue of implementing AEDs when the patient is incompetent was reported to be crucial also by the other review discussing the specific scenario of dementia: Scheeres-Feitsma et al. [29] investigated specifically the family involvement in euthanasia and how their attitude affected choices in patients with dementia. Findings varied but, overall, strong support for euthanasia was found among families of people who suffered from dementia, which increased when AEDs were in place. One Dutch study showed that 73% of families believed that an AED should be honored when the patient had become incompetent. However, the AED implementation often required agreement with physicians, which appeared to be both challenging and crucial. Support for euthanasia was higher when the patient was in the terminal stages of the disease or faced unrelievable pain or distress. Two studies included in the review by Scheeres-Feitsma et al. [29] showed that families generally preferred limiting life-sustaining treatments over euthanasia. Other studies did not present such strong support but concluded that the lack of a good quality of life and the diminishing autonomy and control could be compatible with a positive attitude towards euthanasia.

This finding is consistent with the results of Rodríguez-Prat et al. [28], which emphasized that patients' wish to hasten death (WTHD) often stemmed from a fear

of burdening loved ones, even when patients were not experiencing suffering in that specific moment in time. Choosing death may be seen as a way of controlling one's life: making a choice for the present time when future is so unknown, as it can be for a patient. This approach was evident also in the data reported by Scheeres-Feitsma et al. [29]: the most recent study reviewed highlights that individuals with dementia may want to anticipate the challenges of late-stage dementia by articulating a request for euthanasia. However, they often postpone the actual implementation of euthanasia, ultimately finding themselves in the very situation they sought to avoid.

The perception of the burden and pain felt by the patients themselves and by the carers was an important topic discussed also in the review of Hendry et al. [26], which encompassed 16 qualitative studies and 94 surveys. In studies reporting opinions of patients and their relatives, relatives held more favorable attitude towards assisted dying (58%–77%) compared to patients with dementia (46%), terminal cancer patients (47%), and people with disabilities, who expressed the lowest level of support (30%–33%).

Overall, the review by Henry et al. [26] showed that attitudes towards euthanasia, and assisted dying, were shaped by concerns about the quality of life (including aspects such as pain, suffering, as well as autonomy), the quality of death (with an emphasis on the ability to make a choice), and potential abuse stemming from the practice (specifically regarding discrimination towards vulnerable populations and the need for safeguard). Additionally, individual stances on assisted dying played a critical role. While opinions differed marginally based on population group, the specific illness scenario, and the type of assisted dying considered, about two-thirds of participants overall found assisted dying acceptable. Similar levels of support were found among individuals with terminal illnesses and the general public. However, slightly fewer participants felt that assisted dying should be legalized, and approximately one-third indicated that they would consider it for themselves under certain conditions. Notably, support for euthanasia diminished when discussing scenarios of individuals who were not terminally ill or those with mental health problems.

Lastly, one review [25] explored public attitudes towards “non-voluntary euthanasia”, defined as euthanasia conducted on individuals unable to express their wishes due to physical or cognitive limitations, such as being in a coma and reliant on life support. In this context, public attitudes were significantly influenced by the relatives' view; specifically, 79% of respondents supported the practice when relatives and physicians were in agreement, whereas 34% supported the practice when relatives disagreed with physicians. Support increased to

76% when an advance directive of preferences (including refusal) was present, even when relatives opposed such decision.

Physician-assisted suicide

The same six systematic reviews that addressed euthanasia [25–30] explored the topic of PAS, since both fall into the broader category of assisted dying. Additionally, the review on the WTHD [28] was relevant to PAS, as such wish can be a premonitory sign of a request to die.

Nurses

Only one systematic review [30] investigated the attitudes of nurses towards PAS, focusing on both primary care and hospital setting nurses. Nurses generally exhibited cautious and more restrictive attitudes towards PAS for people with dementia. A study included in this review surveyed a sample of 1243 nurses in the Netherlands [37], finding that 31% supported assisted dying in the early stages of the disease, a lower percentage compared to those supporting euthanasia in advanced dementia. As with euthanasia, nurses' conservative attitudes were exceeded by those of physicians.

Physicians

Two systematic reviews assessed the physicians' attitude towards assisted suicide [27, 30]. In McCormack et al. [27], ten studies examined attitudes towards PAS: eight reported a majority of physicians holding a negative attitude, one study, involving intensive care physicians, found a majority supporting PAS, and one study reported unclear or divided attitudes due to question phrasing. Eight out of ten studies reported the percentage of physicians willing to perform PAS if legalized: the average willingness was 24.9%, with individual studies ranging from a high of 43% to a low of 10%.

In Tomlinson et al. [30], the one study focusing on physicians' attitude towards PAS in the European context found that 28% expressed agreement with the practice for patients with mild dementia. Physicians showed greater support for PAS in cases of mild dementia, than for euthanasia in cases of severe dementia but without an explicit AED.

In McCormack et al. [27], one paper compared physicians' attitudes to PAS for terminal versus non-terminal patients (with non-terminal defined as having "an incurable and painful illness"), and although physicians were opposed in both cases, there was significantly less support in scenarios involving non-terminal patients.

General public

As for the general public, more comparative data were available, but the findings did not depict a univocal

scenario. Nevertheless, as for euthanasia, the general public emerged as the most favorable category among the three investigated. In Tomlinson et al. [30], a review focused on patients with dementia, two studies investigated public attitudes. A study conducted in the Netherlands [37] found a low positive attitude, with only 24% of the 1960 respondents supporting PAS for mild dementia patients. Similarly, a UK-based study [38] confirmed that respondents tended to be more conservative towards others than themselves: 55.3% of respondents stated they would choose PAS for themselves in the case of mild dementia, while 52.3% would choose it for their partner in the same condition. Support increased with the severity of dementia: 55.2% would choose it for themselves in moderate dementia and 52% for their partner in the same condition, rising to 59.5% and 57.4%, respectively, in severe dementia. This upward trend for PAS contrasted with the pattern observed for euthanasia, as reported in the same study, where support decreased with increasing dementia severity.

The review by Tomlinson et al. [30] investigating patients' attitudes toward PAS revealed limited support, with only 14% in favor of PAS for a patient with dementia lacking capacity [37].

Another review [29] referenced an earlier qualitative study carried out in the UK in 1996, which involved a sample of older people; when asked about permissibility of PAS for incompetent patients at the request of the designated relative, respondents affected by dementia were significantly less favorable to the practice than the others. The review [29] also showed that, in overall, caregivers tended to be more supportive of assisted suicide practices, though their attitudes were not unanimous. Support among family members and caregivers increased when patients had clear advanced directives, when the illness was painful and terminal, and left no chance for relief. Besides the physical condition of the patient, the review emphasized the crucial role of the perceived burden on others, particularly on one's children, as a significant factor in play.

This finding aligned with Rodríguez-Prat et al. [28], who noted that while patients often grappled with physical challenges and the loss of autonomy, the WTHD should not be univocally interpreted as an explicit desire to end their life. Instead, it often reflected underlying needs, such as a wish to forego life-sustaining treatments. The data suggested that family members and caregivers often viewed forgoing such treatments as a preferable option to PAS.

Also, Cox et al. [25] reported a consistent support towards PAS, citing data that relayed a positive attitude in up to 80% of respondents when considering it for a person who is living a painful, incurable, terminal illness.

This review, once again, highlighted the influence of the nature of the illness on public attitudes and emphasized the relevance of the people who would be involved in the process. Specifically, PAS appeared to be more accepted when a physician was directly involved.

Hendry et al. [26] identified four primary concerns influencing attitudes towards PAS, as previously mentioned in the “euthanasia” section: concerns about quality of life, concerns about quality of death, concerns about potential abuses of the practice, and the importance of personal beliefs. The review found that patients and individuals with disability generally exhibited less favorable attitudes towards PAS and assisted dying overall. However, Hendry et al. [26] noted conflicting data: a recent poll conducted by the UK disability charity Scope revealed that 70% of disabled individuals were concerned about potential coercion if assisted suicide were legalized, and, conversely, the 2007 British Social Attitudes Survey reported that 75% of people with disabilities supported a change in the law to permit assisted dying. One frequently discussed topic, closely related to discrimination and fear of coercion, was trust in the medical profession and in the medical field if assisted dying were legalized.

Advance care planning

Three reviews [31–33] addressing attitudes towards ACP were identified, two of which examined the topic in specific contexts: chronic respiratory failure in outpatient or clinical settings [33] and dementia in long-term care settings [31]. The third review adopted a broader focus, exploring advance directives in EoL settings [32].

While the articles reviewed did not provide a clear and unambiguous definition, ACP was generally understood as a process enabling patients to reflect on their future care and communicate their wishes, values, and preferences about it [31–33]. This process typically involved sharing these preferences with family members and the healthcare team, particularly in the event of a serious illness or the potential loss of decision-making capacity. All three articles highlighted the critical role of both physicians and nurses in initiating and guiding this collaborative planning process with the patient.

The research was geographically limited to a few European countries (Belgium, Germany, Portugal, the Netherlands and UK). Only one article [33] explored the attitudes of patients and family caregivers, while all three examined the perspectives of HCPs (physicians, nurses or a combination of them) on ACP.

Regarding patients’ attitudes towards ACP, Jabbarian et al. [33] reviewed several qualitative studies, including two focusing on patients with chronic obstructive pulmonary disease. These studies reported that patients were open to discussing their EoL care preferences, with

only two studies highlighting a certain reluctance among patients to engage in such discussions.

The attitudes of physicians and nurses varied significantly across different contexts. Beck et al. [31] reported that in long-term care settings for patients with dementia, the unpredictable progression of the disease often discouraged HCPs from initiating discussions about ACP. Several studies included in this review highlighted a sense of discomfort among HCPs, manifested as reluctance or reservations. This feeling was attributed by the authors to the sensitive nature of discussing topics like death, as HCPs feared such discussions might distress patients in such vulnerable situations. This challenge was echoed in other reviews as well: Jabbarian et al. [33] noted the difficulty that physicians and nurses encounter when initiating conversations about EoL preferences, particularly in identifying the appropriate moment within the patient’s disease trajectory.

Beck et al. [31] suggested that in some cases this reluctance stemmed from HCPs’ perception of their role as protectors of life, even when this conflicted with the patient’s wishes. Evans et al. [32] further highlighted that German physicians often expressed discomfort in discussing advance treatment directives in EoL contexts, although they expressed desire for clearer legal guidelines to reduce uncertainty around their use. Despite these barriers, Jabbarian et al. [33] emphasized the importance of physicians and nurses initiating discussions on EoL issues with patients: by doing so, they could ensure that the patient’s choices were fully listened and supported.

Palliative sedation

Rodrigues et al. [34] reviewed physicians’ attitudes towards palliative sedation for existential suffering. From the seventeen studies included in the review, no consensus or uniform understanding and attitude towards this practice emerged, as many nuanced questions are embedded in the topic.

For some physicians, as revealed by a study conducted in Switzerland, palliative sedation for existential suffering was the most humane solution for accompanying a patient, preferable to euthanasia or PAS. Conversely, other studies reported that most physicians viewed palliative sedation as a form of patient abandonment, or even as a sort of hidden euthanasic act. Yet others thought that PAS and euthanasia would be more appropriate than palliative sedation for patients experiencing existential suffering. The most informative European-based study included in the review was published in 2006 and documented that 37%–61% of German physicians held a positive attitude towards the practice overall, 23%–42% held a negative attitude, and 16%–20% remained neutral or undecided about it [40].

Within this sphere of uncertainty, a few elements regarding physicians' attitude stood out. In the first place, given the complex nature of existential suffering, most studies reported that physicians were more inclined to palliative sedation when existential suffering was accompanied by physical suffering. The inability to objectively assess a patient's existential suffering, coupled with the inconsistency in symptom classification, posed significant limits to the openness of physicians towards the practice. From the one study that assessed the attitude of physicians towards palliative sedation for physical pain versus existential suffering, it emerged that French Swiss physicians were more favorable towards the former [41].

The assessment of the refractoriness of existential suffering also emerges as a critical issue: one study suggested that a psychiatrist should evaluate refractoriness, while another advocated for a multidisciplinary team approach.

Attitude varied also depending on the prognosis: some studies noted that palliative sedation for existential suffering was more supported if the patient presented physical deterioration and a short life expectancy. Also, the German study reported that the percentage of physicians having a favorable attitude increased to 52% for patients with an unfavorable prognosis. Still, 34% of physicians would consider it unacceptable [40]. The same study also reported that physicians-ethicists in a German setting were more supportive of palliative sedation for terminal patients (61%) than for non-terminal patients with an unfavorable prognosis (37%).

For patients with a long-term survival prognosis, instead, psychological, and spiritual interventions were often seen alternatives to palliative sedation. One study revealed that some physicians would consider using palliative sedation only all pharmacological and psychological interventions had been attempted unsuccessfully, or in cases where such interventions were not feasible (for instance, when the patient lacked energy, competence, or willingness to engage in psychotherapy). Additionally, close accompaniment of the patient was suggested as a resolution to existential suffering by some physicians. At the same time, data from a study conducted in the Netherlands, Belgium and UK indicated that physicians supported palliative sedation because drug treatment for psychological symptoms typically required 2 to 4 weeks to take affect and depended on the patient's ability to adequately metabolize the drugs, which was not always possible [42].

The only study addressing the attitude towards such practice when explicitly requested by the patient revealed that compliance with the patient's request was considered the most ethical behavior/the most ethical course of action.

Discussion

This umbrella review provides useful insights into the perspective of physicians, nurses, and general public concerning specific EoL practices, namely the withdrawal or withholding of life-sustaining treatments, euthanasia, PAS, palliative sedation, and ACP, enabling meaningful comparisons with the Italian context explored in the ELISI Project.

The most striking data, particularly given the number of studies reviewed, pertains to euthanasia and PAS, which remain the most debated EoL practices. Among the groups studied, the general public emerged as the most supportive one. This trend may reflect broader societal and cultural shifts that emphasize individual autonomy and self-determination, especially in personal health and EoL decisions [43]. Public attitudes are also likely influenced by media coverage, personal encounters with terminal illness, and public discourse increasingly framing these practices as matters of dignity and relief from suffering [44]. However, it is also important to acknowledge the political dimension surrounding euthanasia and PAS: public opinion may be shaped not only by ethical concerns or personal experiences, but also by advocacy efforts, policy debates, and the ways in which survey questions are framed – often influenced by the agendas of those funding or promoting such research [45]. Additionally, the general public may hold a more idealized or emotionally driven perception of EoL practices, focusing more on compassion and relief without pausing on the clinical, ethical, and procedural complexities faced by HCPs [46–48].

A notable finding is the tendency for individuals to adopt more conservative stances when making decisions for their relatives than for themselves. Concerns about causing suffering to loved ones and fears of becoming a burden to others can be primary motivators for those considering ending their own lives. These dualities suggest a complex interplay between empathy, fear, and moral duty, illustrating the profound influence of interpersonal relationships and emotional bonds on attitudes toward EoL decisions [49, 50].

Nurses and physicians generally hold a more conservative attitude than the general public, with physicians expressing less support than nurses toward assisted dying practices. This difference may stem from their distinct roles, responsibilities, and experiences in patient care [51]. Physicians, who are primarily responsible for diagnosing, treating, and managing patient outcomes, may adopt a more cautious approach due to the weight of their clinical responsibilities, including adherence to medical guidelines and potential legal implications [49, 50]. Conversely, nurses, who provide direct and continuous care, often build close emotional connections with

patients and their families. This proximity may heighten their awareness of the patient suffering and the limits of certain interventions, resulting in a slightly more open, albeit still cautious, attitude toward these practices [52].

Both categories show considerably less support for cases involving non-terminal patients. However, HCPs demonstrate greater acceptance toward euthanasia when clear advance directives are in place, as these reduce ambiguity about patient wishes. This highlights the importance of clarity and certainty for HCPs in navigating the complex moral and professional obligations inherent in EoL care. Moreover, it may suggest that respect for patient autonomy is paramount and may even take precedence over the specific clinical circumstances. However, it is important to acknowledge that individuals are often unreliable in predicting their future life satisfaction [53]. Moreover, numerous healthcare professionals lack a solid understanding of the ethical principles underlying informed consent [54]. These considerations raise important questions about whether advance directives genuinely capture patients' long-term values and preferences [55]. Additionally, a major limitation of survey-based studies lies in their frequent failure to assess the knowledge and experience of participating healthcare professionals, which can substantially affect the validity and interpretability of the results [56].

The findings contrast somewhat with observations regarding ACP, the process enabling patients to reflect on and communicate their wishes, values, and preferences for future care. Although research on ACP was limited to a small number of countries, there is a growing interest among patients in discussing their EoL care preferences. The essential role of HCPs in initiating and collaboratively guiding these planning processes with patients is widely acknowledged. However, physicians' and nurses' attitudes vary significantly across different contexts. Factors such as the unpredictable progression of diseases, challenges in identifying the appropriate timing for such conversations, and the perception among HCPs of their role as life protectors contribute to a sense of discomfort, often causing hesitation in initiating ACP discussions [57].

The analysis identified only single systematic reviews for the other EoL practices investigated.

The only study on palliative sedation identified in this review specifically addressed palliative sedation for existential suffering – a distinct and particularly complex subtype within the broader spectrum of palliative sedation. A key point of ongoing debate is whether palliative sedation should be classified as an EoL practice. This uncertainty stems from definitional ambiguities, as well as the fact that the medications commonly used for this purpose (e.g., benzodiazepines, opioids) are frequently

administered for a wide range of therapeutic indications. In addition, the lack of clarity regarding the status of existential suffering as a possible indication for palliative sedation was acknowledged as a limitation in the 2009 definition provided by the European Association for Palliative Care (EAPC). While the recent EAPC framework – developed using a rigorous consensus methodology – has contributed to a more precise terminology, the distinction between somatic, psychological, and existential suffering remains under discussion [58]. The study identified in our review further illustrated the absence of a shared understanding or consensus within the healthcare community regarding palliative sedation. This lack of consensus may reflect the inherent complexity and sensitivity surrounding palliative sedation for existential distress. Specifically, concerns about its perceived overlap with euthanasia, issues of patient autonomy, and the challenge of defining clear indications complicate efforts to reach a unified stance [59]. Palliative sedation is generally viewed as a last resort, used only when conventional pharmacological and therapeutic approaches have failed to alleviate suffering. It is more widely accepted for patients with poor or terminal prognosis, where all other options have been exhausted and severe suffering persists. Additionally, patient compliance is another critical factor, underscoring the need for transparent and thorough communication between HCPs and patients during the decision-making process.

Finally, communication emerged as a central theme in the review addressing treatment withdrawal within the experiences of intensive care nurses. One particularly striking aspect was that delays in treatment withdrawal often arose from communication and decision-making challenges between nurses and physicians, generating significant tension. While a gradual discontinuation of life support was generally recommended to approximate a natural death, intensive care nurses do not always perceive these delays as beneficial, as they may prolong the patient suffering. Addressing and resolving these tensions may require aligning ethical considerations with effective communication strategies among healthcare teams to better support both patient comfort and adherence to EoL protocols.

Limitations

Our research has several limitations. First, the framing of our research question allows for multiple interpretations, encompassing a broad range of underlying topics, which may have influenced the focus and direction of our findings. Moreover, the included studies may themselves be affected by the way their respective research questions were originally formulated. For instance, the way a question is posed often depends on the interests of the

funding body: if a study is supported by a group advocating for assisted death, the research may be framed to emphasize relief of suffering and personal autonomy, while downplaying potential concerns such as the risk of premature death, suicidal ideation, or challenges related to informed consent. This variability in question framing across studies introduces a potential source of bias that must be taken into account when interpreting the overall evidence.

Second, there is potential overlap among themes such as attitudes, opinions, beliefs, and views, which may pose challenges in accurately categorizing and distinguishing these perspectives.

Third, there is a possibility that relevant systematic reviews were inadvertently excluded, along with a substantial number of non-systematic studies that, while outside the scope of this review, could have provided valuable insights into our research question.

Fourth, our review included only publications in English, which may have limited the cultural and contextual diversity of the evidence. This language restriction could reflect a predominantly Western perspective, potentially overlooking viewpoints and ethical considerations from non-English-speaking regions.

Our chosen approach aimed to offer a comprehensive overview of attitudes among the general public, nurses, and physicians, facilitating meaningful comparisons within the context of the ELISI project.

Future studies may benefit from adopting more precise definitions and selection criteria, to enable a broader and more inclusive examination of relevant studies.

Conclusions

From the studies reviewed, one of the most striking findings is that, across Europe, the general public demonstrates the highest level of support for EoL practices such as euthanasia and PAS. Nurses also exhibit a considerable level of support, while physicians tend to adopt a more cautious stance. This divergence underscores the intricate complexity of navigating ethical, cultural, and professional considerations in EoL care, as different perspectives can significantly shape care practices. For other EoL practices, such as treatment withdrawal, palliative sedation, and ACP, a recurring and critical theme is the imperative to enhance communication. Effective communication serves as a cornerstone for respecting patient autonomy and ensuring that healthcare decisions align with individual values, goals and preferences. Strengthening communication channels among physicians, nurses, patients, and their families can foster more coherent and ethically grounded care approaches, promoting patient-centered decision-making.

This represents an important challenge for the future of healthcare. As societies continue to grapple with evolving EoL issues, clear, compassionate, and collaborative communication will be essential for addressing complex ethical dilemmas and meeting patients' diverse needs in sensitive and respectful ways.

The need for clear and transparent communication within medical settings extends to the societal level, where public discussions around EoL decisions often focus on “what (legal) actions to take” rather than encouraging deeper reflection on the underlying challenges and values. Broader societal conversations should not only consider practical steps but also examine the fundamental values, potential consequences, and the complex moral landscape surrounding these decisions. Encouraging this kind of thoughtful dialogue can lead to a more nuanced understanding and help ensure that EoL policies and practices are aligned with both individual and collective values.

Abbreviations

| | |
|------|------------------------------|
| ACP | Advance care planning |
| AED | Advance euthanasia directive |
| EoL | End-of-Life |
| HCP | Healthcare professional |
| PAS | Physician-assisted suicide |
| WTHD | Wish to hasten death |

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Authors' contributions

Conceptualization, PR, FI and AGS; methodology, PR, CR, SSM; formal analysis, PR, CR, SSM; writing—original draft preparation, PR, CR, SSM; writing—review and editing, PR, CR, SSM, AA, EC, SC, SG, FI, GM, MP, PR, AGS. All authors read and approved the final manuscript.

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Data availability

All data generated or analysed during this study are included in this published article (and its supplementary information files).

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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