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QUALITATIVE META SYNTHESIS

Navigating tensions when life-sustaining treatment is withdrawn: A thematic synthesis of nurses' and physicians' experiences

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Abstract

Aim: To synthesise nurses' and physicians' experiences with withdrawing life-sustaining treatment in an intensive care unit.

Design: The chosen methodology is thematic synthesis. The Preferred Reporting Items for Systematic Review and Meta-Analyses and Enhancing Transparency are used in Reporting the Synthesis of Qualitative Research Statement.

Methods and Data Sources: A systematic search is conducted in APA PsycINFO, CINAHL Plus, EMBASE, PubMed and Web of Science following the inclusion and exclusion criteria in April 2023. Two reviewers independently screened and extracted the qualitative data. Subsequently, data analysis was conducted using thematic analysis of qualitative research. This study was not registered with any review registry due to the irrelevance of the data to health-related outcomes.

Results: From the 16 articles, 267 quotes were extracted and analysed. The findings of the study revealed five analytical themes: (1) tensions between interdependent collaboration and hierarchical roles; (2) tensions between dignified dying or therapeutic perspectives; (3) family members' reflections of patient's wishes; (4) tensions in family members' positions; and (5) double-sidedness of distress.

Conclusion: This study contributes to nursing knowledge by providing a more nuanced understanding of this complex phenomenon of withdrawing life-sustaining treatment. The findings of this study have revealed significant variations globally in the practices surrounding the withdrawal of life-sustaining treatment in intensive care units, emphasising the need for further research to inform clinical practices that cater to diverse contexts.

Reporting Method: Enhancing Transparency are used in Reporting the Synthesis of Qualitative Research Statement (ENTREQ statement).

Patient or Public Contribution: Since this study reported a potential collision between the patient's dignified dying and the family member's perceptions and interests, the

family member's wishes should be carefully distinguished from the patient's quality of end of life in practice.

KEYWORDS
critical care, cultural issues, death and dying, end-of-life care, end-of-life decision-making, intensive care, nursing, nursing roles

1 | INTRODUCTION

Although the critical care unit was designed to provide highly advanced care and treatment for patients with life-threatening illnesses, the achievement of a desired goal is not always possible due to the patient's severity of illnesses. When a critically ill patient is dying in a critical care, the care and treatment become futile and are no longer able to contribute to the patient's recovery. Futile treatment is not beneficial for the patient's recovery but harmful to their dignified and comfortable dying and death (Alliprandini et al., 2019). Additionally, ongoing intensive care may cause family members to suffer from psychological distress, anxiety, fatigue and sleep disturbance (Abdul Halain et al., 2022). Although the family member's suffering under intensive care can be temporary and be justified by the hope of the patient recovery, futile treatment extends their suffering only without meaning or hope. In addition, moral distress and burn out are often experienced by intensive care staff, triggering thoughts about leaving their jobs because of the futile treatment (Chamberlin et al., 2019; Lambden et al., 2019; Rostami et al., 2019; St Ledger et al., 2021; Wolf et al., 2019). Therefore, guideline was established that futile treatment, which sustains or prolongs only the patient's life, is recommended to be withheld or withdrawn because of the patient's comfortable and dignified death (Close et al., 2020; Ko et al., 2021).

Withdrawing life-sustaining treatment is defined as the removal of a medical intervention that aims to prolong life expecting the patient's imminent death due to their underlying illness (Ko et al., 2021). There are two key prerequisites for withdrawing life-sustaining treatment: treatment futility and the patient's wishes (Ko et al., 2021). Treatment futility indicates a medical consideration apart from the circumstantial or contextual meaning (Schneiderman et al., 2017; Ulrich, 2017). Therefore, the decision of treatment futility is led by clinicians, such as physicians and nurses, with the consideration of the potential consequences of the treatment (Ko et al., 2021). The other key prerequisite is the reflecting the patient's wishes in the decision-making process (Ko et al., 2021). The ideal to reflect the patient's wishes in the withdrawal life-sustaining treatment decision-making process stems from the patient's capacity; however, critically ill patients sometimes do not have the capacity to participate in the decision due to the rapid transition from curative to palliative treatment (Melhado & Byers, 2011). Therefore, the decision to withdraw life-sustaining treatment often invites the surrogates to reflect the patient's values and best interests in the decision-making process (Batteux et al., 2019; Elwyn et al., 2010; Kim et al., 2023; Ko et al., 2021; Melhado & Byers, 2011).

What does this paper contribute to the wider global community?

- The implementations of withdrawn life-sustaining treatment in intensive care units vary by region and context because treatment futility and patient's wishes, which are the key requisites of withdrawing life-sustaining treatment, are interpreted differently by cultural and legal context. Therefore, multidisciplinary decision-making is recommended for the decision to withdraw life-sustaining treatment.
- The study findings revealed wide variations in the process of withdrawing life-sustaining treatment process within five themes.
- Therefore, the study findings can inform healthcare professionals of the global diversity of culture and context. Additionally, researchers can be inspired to conduct research reflecting various contextual understandings.

The implementation of life-sustaining treatment withdrawal following treatment futility and following the patient's wishes varies according to the legal and cultural context. In terms of treatment futility, although the interdisciplinary collaboration among healthcare professionals is emphasised, each professional perceives and values other professional's participation differently (Durand et al., 2022; Jensen et al., 2011). Physicians' speciality and gender influence their perceptions of nurses' involvement in treatment decision-making (Durand et al., 2022; Jensen et al., 2011). Therefore, nurses' roles in the decision-making process in the critical care unit are often limited by an individual physician's perceptions (Brooks et al., 2019; Durand et al., 2022). Accordingly, nurses' involvement in the end-of-life decision-making process in the critical care unit varies by region from collaborative decision-making to vagueness in the communication (Brooks et al., 2017; Lind et al., 2012).

On the other hand, the contextual differences in the practice of withdrawing life-sustaining treatment in practice are larger than the gap in the communication of treatment futility. The variety of prevalence following the cultural similarities and national income levels showed a large difference in withdrawal from life-sustaining treatment by context (Lobo et al., 2017; Mark et al., 2015; Phua et al., 2016). Additionally, the legalisations of withdrawing life-sustaining treatment, which increase uncertainty in practice, vary by country (Ko

et al., 2021; Tanaka et al., 2020). Legalisation is not one of the prerequisites for withdrawing life-sustaining treatment since studies about withdrawing life-sustaining treatment in practice were conducted in countries where life-sustaining treatment was not legally withdrawn (Kim et al., 2009; Tanaka et al., 2020). Nonetheless, legalisation is beneficial to clinicians because it provides certainty in their practice (Ko et al., 2021; Tanaka et al., 2020).

One of the largest differences in withdrawing life-sustaining treatment decision-making by context is the reflection of the patient's wishes. The choice of surrogate in the withdrawing life-sustaining treatment decision-making varies from next-of-kin to legal family members (Batteux et al., 2019; Kim et al., 2023). Patient's responses to the surrogate decision-making involving withdrawing life-sustaining treatment also vary. While the patients in North American and European countries were not willing to participate in the surrogate decision-making, surrogates, family members in particular, were willing to participate in withdrawal life-sustaining treatment decision-making by the patients in the East-Asian culture (Kim, 2015; Melhado & Byers, 2011).

Although the implementations of treatment futility and patient's wishes were diverse in practice by context, the withdrawal of life-sustaining treatment fundamentally shared the principles of treatment futility and patient's wishes. Therefore, studies have been conducted to synthesise qualitative experiences related to the withdrawal of life-sustaining treatment process in intensive care units (Heradstveit et al., 2023; Meeker & Jezewski, 2009; Vanderspank-Wright et al., 2018; Zhong et al., 2022). However, those studies focused on different populations, such as paediatric patients and family member or the topic of nurses' roles in withdrawing life-sustaining treatment (Heradstveit et al., 2023; Meeker & Jezewski, 2009; Zhong et al., 2022). Additionally, the studies that synthesised evidence about nurses' roles in the withdrawing life-sustaining treatment included nurses' experiences only, which lacked physicians' perspectives on nurses' roles (Heradstveit et al., 2023; Vanderspank-Wright et al., 2018). In addition, no study achieved diverse contextual backgrounds across the continents of the included studies; in particular, studies conducted in Asia were not included, whereas a study conducted in Africa was included in a qualitative synthesis (Vanderspank-Wright et al., 2018). Therefore, this thematic synthesis study aims to expand the diversity of the current knowledge and to provide insights into the contextual differences in the process of withdrawing life-sustaining treatment process by synthesising nurses' and physicians' perceptions and experiences.

2 | METHODS

2.1 | Study design

The chosen methodology for this study is thematic synthesis, which is rooted in meta-ethnography and grounded theory (Barnett-Page & Thomas, 2009). The thematic synthesis adapts the reciprocal translation of meta-ethnography and constant comparisons of grounded theory when developing themes (Barnett-Page & Thomas, 2009; Thomas & Harden, 2008). Additionally, thematic synthesis shares an inductive approach with grounded theory, contributing to a higher order of analytical themes (Barnett-Page & Thomas, 2009; Nicholson et al., 2016).

This thematic synthesis was conducted following the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) (Page et al., 2021) and Enhancing Transparency in Reporting the synthesis of Qualitative research (ENTREQ) statement (Tong et al., 2012). See Figure 1. However, this study was not registered with the PROSPERO since it accepts only reviews that include health-related outcomes.

2.2 | Search strategy

The search terms were used by the authors considering the topic of withdrawing life-sustaining treatment, perspectives of nurses and physicians, the setting of critical care units, and the characteristics of the data on experience and perceptions. The full search terms used are provided in Appendix A. The search was conducted in APA PsycINFO, CINAHL Plus, EMBASE, PubMed and Web of Science from inception to April 2023. The search results did not limit the time frame. The inclusion criteria were as follows: (1) presented nurses' and physicians' quotations about withdrawing life-sustaining treatment in critical care units; (2) from adult critical care units; and (3) published in a peer-reviewed journal in the English language. Accordingly, studies that did not present participants' quotes to evidence the findings were excluded.

2.3 | Study selection, data extraction and study appraisal

Two reviewers independently screened the search results following the inclusion criteria. Reviewers used EndNote to eliminate the duplicates and screen the title and abstract. A total of 531 studies were screened and narrowed down to 22 to check for eligibility in full-text. The 22 full-text studies were evaluated and guided by the modified critical appraisal skills programme (CASP) qualitative checklist tool, which was developed to provide a quality appraisal of qualitative research in health research (Long et al., 2020). The modified CASP checklist was selected due to its enhanced consideration of the theoretical foundations of qualitative research, as compared to the standard CASP checklist. Additionally, the modified CASP checklist distinguishes 'somewhat' from 'yes' when a study does not fully meet the appraisal criteria. However, the evaluation for this synthesis used only 'yes' and did not use 'somewhat' since the appraisal criteria were not used for the decision to include studies. The results of the quality appraisal of the included studies were presented in Table 1. However, studies were not excluded from the quality appraisal. Subsequently, the authors performed the data extraction. The extracted data were direct quotations of nurses' and physicians' experiences and perceptions of withdrawing life-sustaining treatment.

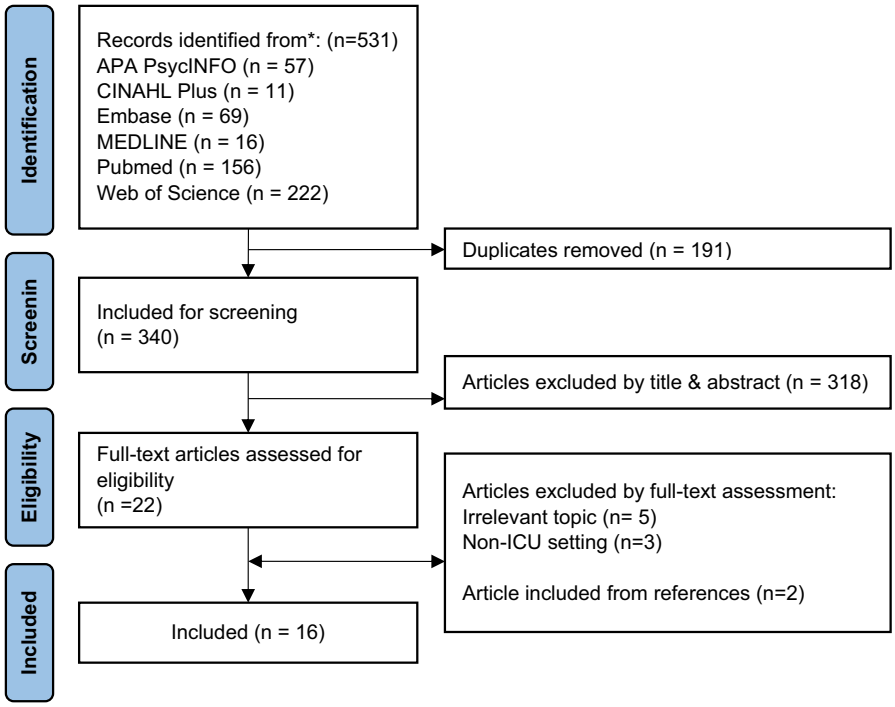

FIGURE 1 PRISMA flow chart of searching literature (Search date: 2 May 2023).

TABLE 1 Modified CASP appraisal for included studies.

No	Included studies	1	2	3	4	5	6	7	8	9	10	11
1	Aita and Kai (2010)	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes
2	Blythe et al. (2022)	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
3	Brooks et al. (2017)	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
4	Choi et al. (2022)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Efstathiou and Ives (2018)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	Espinosa et al. (2010)	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
7	Gallagher et al. (2015)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
8	Hsieh et al. (2006)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
9	Jensen et al. (2013)	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes
10	Orr et al. (2022)	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes
11	Pattison et al. (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	Robertsen et al. (2019)	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes
13	Taylor et al. (2020)	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	Vanderspank-Wright et al. (2011)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
15	Wiegand et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
16	Workman et al. (2003)	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes

Note: The following 11 criteria were included: 1. Was there a clear statement of the aims of the research? 2. Is a qualitative methodology appropriate? 3. Was the research design appropriate to address the aims of the research? 4. Are the study's theoretical underpinnings (e.g., ontological and epistemological assumptions; guiding theoretical framework(s)) clear, consistent and conceptually coherent? 5. Was the recruitment strategy appropriate to the aims of the research? 6. Was the data collected in a way that addressed the research issue? 7. Has the relationship between researcher and participants been adequately considered? 8. Have ethical issues been taken into consideration? 9. Was the data analysis sufficiently rigorous? 10. Is there a clear statement of findings? 11. How valuable is the research? (1: yes, 0: no).

2.4 | Data synthesis

This study followed the three steps of thematic synthesis (Nicholson et al., 2016; Thomas & Harden, 2008). First, line-by-line coding was conducted for the extracted data. Subsequently, the codes were organised into descriptive themes. Finally, analytical themes were developed with further interpretations from descriptive themes (Barnett-Page & Thomas, 2009; Thomas & Harden, 2008). The first author conducted the thematic synthesis, which was then reviewed and validated by the other authors regarding both the process and the findings.

2.5 | Rigour, trustworthiness and reflexivity

All the details of the review process were transparently shared among the authors following the Enhancing Transparency in Reporting the Synthesis of Qualitative Research (ENTREQ) statement. An encrypted cloud folder supported by an affiliated university of all three authors was used to share the review files. All experienced nursing researchers who have research expertise in critical care and end-of-life care research. The first author, who has experience as an intensive care unit nurse and is an experienced qualitative researcher, guided the review process. The second author, who is an experienced researcher in critical care, played a reviewer role in screening and evaluating the studies. The corresponding author supervised the entire process of this thematic synthesis with her considerable research experience in end-of-life care.

3 | FINDINGS

After searching the literature from five databases, APA PsycINFO, CINAHL Plus, EMBASE, Pubmed and Web of Science, 531 peer-reviewed studies were identified. A total of 191 articles were removed as duplicates. Subsequently, the titles and abstracts of 340 articles were screened and narrowed down to 22 for the full-text eligibility check. After the results of the full-text appraisal, eight studies were excluded due to incorrect identification, such as irrelevant research topics and different contexts from the critical care unit. In addition, two studies were included from the references in the full-text review. Therefore, 16 articles were ultimately chosen for the thematic synthesis (Aita & Kai, 2010; Blythe et al., 2022; Brooks et al., 2017; Choi et al., 2022; Efstathiou & Ives, 2018; Espinosa et al., 2010; Gallagher et al., 2015; Hsieh et al., 2006; Jensen et al., 2013; Orr et al., 2022; Pattison et al., 2013; Robertsen et al., 2019; Taylor et al., 2020; Vanderspank-Wright et al., 2011; Wiegand et al., 2019; Workman et al., 2003).

This study participants were nurses and physicians who were providing care and treatment in critical care units and who had experienced withdrawing life-sustaining treatment. Six studies were conducted in North America (four in the United States and two in Canada), six studies were conducted in Europe (two each in Norway and the United Kingdom and one each in Denmark and France), two studies were conducted in Asia (one each in South Korea and Japan), and one study was conducted in Oceania (Australia). A study was conducted in five different countries (Brazil, England, Germany, Ireland and Palestine). In terms of methodology, nine of the included studies did not specify the qualitative methodology but used exploratory qualitative or qualitative inquiry studies. However, six studies specified the data collection or analysis methods; such as two used focus groups, two used thematic analysis and two used content analysis. Among the included studies that specified qualitative methodology, four used phenomenology. One of each included study used focused ethnography and grounded theory. Finally, one included study was the secondary qualitative data analysis. A summary of the included studies is presented in Table 2.

From the 16 articles, 267 quotes were extracted and coded into 114 codes. Subsequently, descriptive themes were developed from the codes. By integrating and weaving those descriptive themes, five analytical themes were developed: (1) tensions between interdependent collaboration and hierarchical roles; (2) tensions between dignified dying or therapeutic perspectives; (3) family members' reflections of patient's wishes; (4) tensions in family members' positions; and (5) double-sidedness of distress. Each theme represents an aspect of different dimensions in the process of withdrawing life-sustaining treatment process. The dimension of each aspect shows diversities and discrepancies across the contexts. See Figures 2–6.

3.1 | Tensions between interdependent collaboration and hierarchical roles

The first theme, 'Tensions between interdependent collaboration and hierarchical roles', regards the nurses' and physicians' experiences with their roles in the process of withdrawing life-sustaining treatment in the critical care unit. From the decision-making process to end-of-life care, physicians' and nurses' roles vary across the process of withdrawing life-sustaining treatment. However, nurses' roles vary according to physicians' hierarchical attitudes. See Figure 2.

When the nurses and physicians respected each other's opinions, they achieved interdependent collaboration in the process of withdrawing life-sustaining treatment. The decision to withdraw life-sustaining treatment was discussed while the nurses' voices were valued. In addition, the collaboration enabled the delivery of coherent messages to family members from either nurses or physicians.

Interdisciplinary team decision-making was taken for granted in the collaborative work among nurses and physicians during the process of withdrawing life-sustaining treatment. The nurses and physicians relied on each other throughout the process. Although the decision was not always fully agreed upon by each professional on the decision-making team, the decision-making process was transparently shared with the professionals. Accordingly, the professionals understood the reasons for the withdrawn life-sustaining treatment decision.

> It's definitely one of those things where you truly need interdisciplinary collaboration.
>
> (nurse) (Orr et al., 2022)

> Sometimes we know that it's not easy to make the decision and sometimes … we don't fully agree with everybody. But we understand why a final decision is made. … When we agree to something with everybody, I think this is the best solution … most of

TABLE 2 Summary of included articles.

No	Author (first), year	Setting, country	Aim	Participants	Methods	Findings (themes)
1	Aita & Kai, 2010	Emergency and critical care settings, Japan	Exploring physicians' psychological barriers regarding the withdrawal of some specific life-sustaining treatment by focusing on their relevant perceptions, recognitions and experiences	35 emergency and critical care physicians	A qualitative, exploratory study using in-depth, face-to-face interviews	• The length of time from withdrawal of life support till cardiac arrest • Differences in the modes of withdrawal • Desire for a 'soft landing' • Paradoxical situation created by the desire for a soft landing

2	Blythe et al., 2022	Intensive care unit, France	Characterising intensive care unit interprofessional team decision-making and consensus-building practices regarding withholding and withdrawing of life-sustaining treatments	25 participants (10 senior physicians, seven junior physicians and eight nurses)	An exploratory qualitative study using semi-structured and in-depth interview, and thematic analysis	Architecture of the LAT (limitation et arr^et des traitements) Process
						• Features that encourage interprofessional interactions
						  • Incorporation of various members of the treatment team
						  • Proactive inclusion of nurses
						  • Empowerment of all members of the treatment team to initiate meetings
						  • Emphasis on achieving consensus
						  • Feeling of shared responsibility for final decision
						• strategies employed in the LAT process
						  • Stepwise progression toward cessation of potentially non-beneficial high-intensity LSTs
						  • Utilisation of postponement for managing disagreements
						  • Creation and utilisation of coordinating documents
						• Roles of patients and families in the LAT process
						  • Consideration of patient preferences
						  • Involvement of family after consensus has been reached among the interprofessional team
						Perceived influence of the LAT process
						• Maintaining a unified message with patients and family members
						• Empowering nurses
						• Reducing moral distress
						• Production and maintenance of an ethical environment

3	Brooks et al., 2017	24-bed intensive care unit, Australia	Exploring the experiences and perspectives of nurses and physicians when initiating end-of-life care in the intensive care unit	17 ICU nurses and 11 ICU physicians	An interpretative, qualitative Inquiry using focus group	Communication • Timing of end-of-life care discussions • Difficult conversations Shared decision-making • End-of-life care plans • Multidisciplinary acceptance of end-of-life care plans • Collaborative decisions involving patients and families

TABLE 2 (Continued)

No	Author (first), year	Setting, country	Aim	Participants	Methods	Findings (themes)		
4	Choi et al., 2022	Intensive care unit, South Korea	Exploring nurse's, physician's and family member's experiences of withholding or withdrawing life-sustaining treatment in an intensive care unit	23 nurses, 10 physicians and four family members	Focused ethnography using semi-structured interview and thematic analysis	Constructing death	Family member's power	Family value
								Legal requirement
								Key family member
								Financial issues
								Continuation of Life-sustaining treatment
								The value of family presence
							Medical consideration	Treatment futility
								Compromised decisions
							Patient's dignity	Visualising patient's suffering
								Desiring a comfortable death
								Patient's consciousness
								Patient's wishes
							Customer ideology	Customer-service provider relationship
5	Efstathiou & Ives, 2018	Intensive care unit, United Kingdom	Examining how concepts of compassion are framed, utilised and communicated by intensive care nurses in the context of treatment withdrawal	13 nurses	Secondary analysis using framework method	Compassion through dignity		Symptom control
								Physical cleanliness
								Removal of technical apparatus
						Compassion through care and emotional support to family		

(Continues)

TABLE 2 (Continued)

No	Author (first), year	Setting, country	Aim	Participants	Methods	Findings (themes)	
6	Espinosa et al., 2010	Intensive care units, United States	Exploring the experiences of intensive care nurses who provide terminal care in the ICU	18 registered nurses	A descriptive phenomenological approach	Barriers to optimal care	Lack of involvement in the plan of care
							Differences between the medical and nursing practice models
							Disagreement among physicians and other healthcare team members
							Perception of futile care and unnecessary suffering
							Unrealistic expectations of the family
							Lack of experience and education of the nurse
						Internal conflict	Feelings of relief
							Desire for patient comfort and good memories for family
							Abandonment and powerless
							Medication administration
							Difficulty with younger patients
						Coping	Building trust with the family
							Crying
							Humour
							Talking to others about terminal care
							Avoiding care for the terminal patients
7	Gallagher et al., 2015	Intensive care units, Brazil, England, Germany, Ireland and Palestine	Understanding nurses' decision-making practices in intensive care units in different cultural contexts	15 nurses	Grounded theory	Consensus seeking	Coaxing
							Information cuing and voice enabling
						Emotional holding	Creating time–space
							Comfort giving
8	Hsieh et al., 2006	Intensive care unit, United States	Identifying inherent tensions that arose during family conferences in the intensive care unit, and the communication strategies clinicians used in response.	51 patients and 36 physicians	A naturalistic, exploratory qualitative design using content analysis	• Killing or allowing to die • Death as a benefit or a burden • Honouring the patient's wishes or following the family's wishes • Weighing contradictory versions of the patient's wishes • Choosing an individual family member as decision-maker or the family as a unit as decision-maker	

TABLE 2 (Continued)

No	Author (first), year	Setting, country	Aim	Participants	Methods	Findings (themes)
9	Jensen et al., 2013	Intensive care unit, Denmark	Examining the challenges Danish nurses, intensivists and primary physicians experience when making end-of-life decisions in ICUs and how these challenges affect the decision-making process	11 nurses and 10 intensivists	Focus group and individual interview, meaning condensation method and content analysis	Collaboration • Treatment potential • Changes and postponements of withholding and withdrawing therapy orders • The decision-making process Future perspectives for patients • Patient's wishes • Outcome • Treatment suffering
10	Orr et al., 2022	Intensive care unit, United States	Exploring ICU clinicians' experiences of terminal weaning/extubation in order to better understand the process, and clinicians' feelings about the process	20 ICU clinicians (nurses = 10, physicians = 5, Acute care nurse practitioners = 3, respiratory therapists = 1, physician assistants = 1)	An exploratory descriptive qualitative design	Fine-tuning the process of terminal weaning of mechanical ventilation (TWMV) • Communication • What happens during TWMV • Coordination during TWMV Focusing on the family • Preparing the family for TWMV • Ensuring family-centred care Ensuring patient-centred care • Actualizing individualised • Care and the transition to comfort care Impact on health care clinicians and support needs • Effect on health care • Clinicians and support and training for health care clinicians

11	Pattison et al., 2013	A specialist hospital, United Kingdom	Exploring the meaning of the issues around end-of-life care, of dying, and those caring for, and witnessing the dying of critically ill cancer patients, as explored through family, practitioner and patient experiences	Seven critical care consultants, seven critical care nurses, two oncologists, two palliative care consults, seven patients, six patient's spouses, six bereaved families	Heideggerian phenomenology using van Manen and Attride-Stirling's (2001) thematic network analysis	Essence: Continuum of moving to end of life in cancer critical illness
						• Global Order themes
						  • Dual prognostication
						  • The meaning of decision-making
						  • Care practices at end of life: choreographing a good death
						• Organising themes
						  • Family vs patients split loyalties
						  • A good death
						  • Involvement in care
						  • Personal dissonance
						  • Reaching the defining futility
						  • Thinking the unthinkable
						  • Domains of knowledge
						  • Story of cancer and critical care
						• Emotions of end-of-life work

(Continues)

TABLE 2 (Continued)

No	Author (first), year	Setting, country	Aim	Participants	Methods	Findings (themes)
12	Robertsen et al., 2019	Trauma centre, Norway	Exploring clinicians' doubt related to dealing with devastating brain injury cases and the strategies they use when end-of-life decisions are made	Nine neurosurgeons, seven intensive care physicians and two rehabilitation physicians	Qualitative study using thematic analysis	Strategies applied by physicians to address uncertainty and doubt • Treatment trials Taking time as a coping strategy Collegial counselling and consensus seeking Medical framing • Variability between individual physicians
13	Taylor et al., 2020	Intensive care unit, Norway	Exploring the experiences of ICU nurses when participating in the process of withdrawing life-sustaining treatment with ICU patients	Nine intensive care nurses	A descriptive and explorative qualitative design using semi-structured interviews	• ICU nurses' experiences of stress in the process of treatment withdrawal • A requirement for interdisciplinary support and cooperation • Elements to achieve a dignified treatment withdrawal process
14	Vanderspank-Wright et al., 2011	Critical care unit, Canada	Exploring the experience of critical care nurses who care for patients during the process of withdrawal of life-sustaining treatment	Six critical care nurses	Interpretive phenomenology	• A journey: creating comfort along the way • Working in professional angst • Providing memories
15	Wiegand et al., 2019	Intensive care unit, United States	Exploring and describing the experience of critical care nurses and physicians participating in the process of withdrawal of life-sustaining therapy	Five critical care nurses and five physicians	A hermeneutic phenomenological approach	Seeing the patient and family through • From novice to expert • Ensuring ethical care • Uncertainty to certainty • Facilitating the process • Preparing and supporting families
16	Workman et al., 2003	Six university-affiliated intensive care units, Canada	Developing an empiric description of ICU physicians' and nurses' (participants) experiences providing life-sustaining treatments at the insistence of family members, treatments that they believed should have been withheld or withdrawn	Six nurses and six physicians	A qualitative study using semi-structured, open-ended interview	• The suffering of dying patients • Distressed family members • A breakdown in the relationship with family members

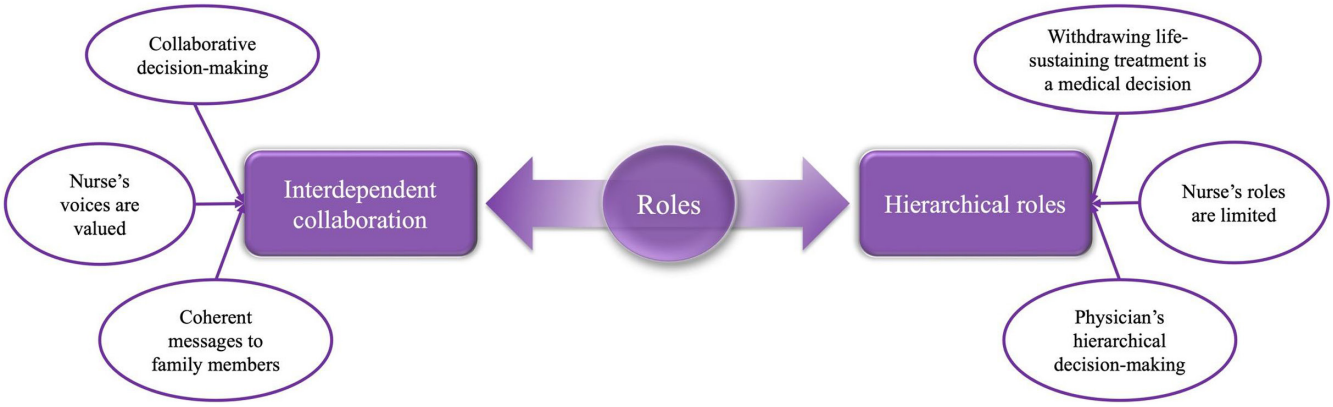

FIGURE 2 Tensions between interdependent collaboration and hierarchical roles.

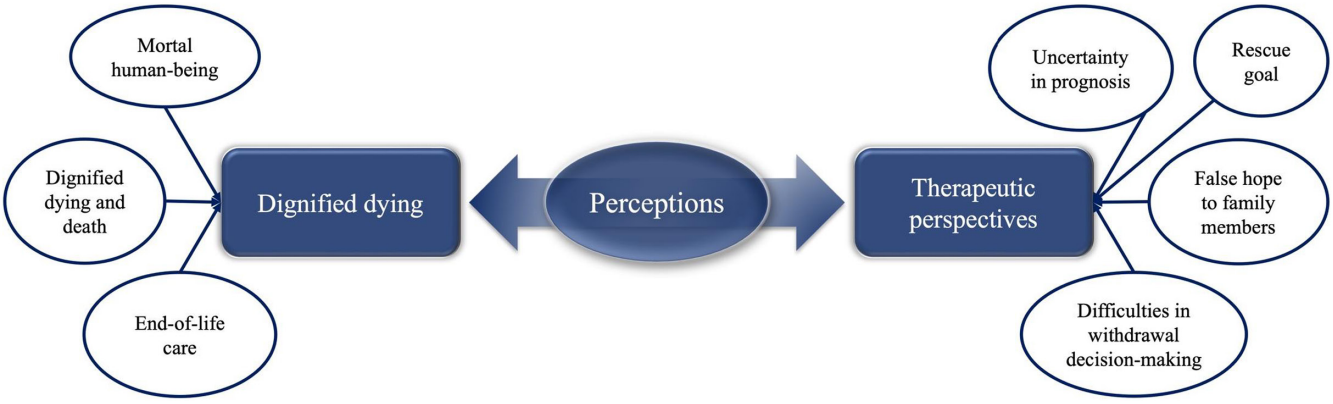

FIGURE 3 Tensions between dignified dying or therapeutic perspectives.

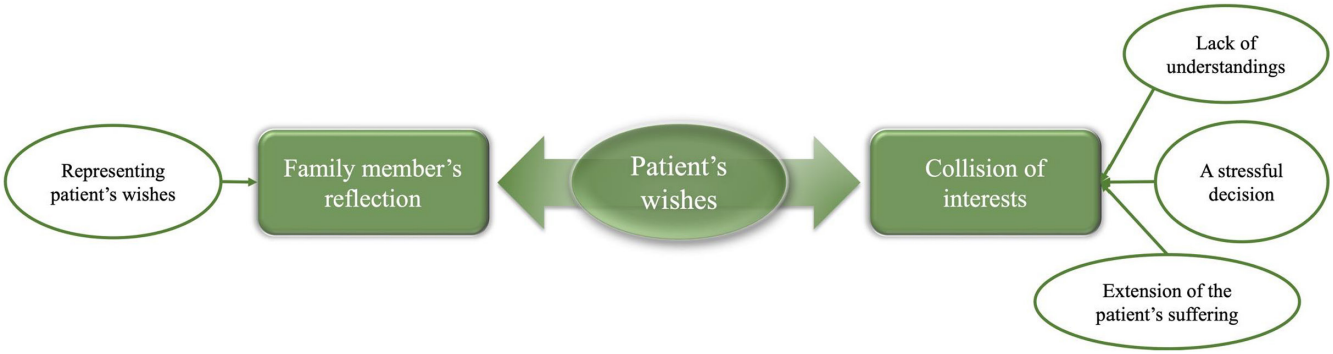

FIGURE 4 Family members' reflections of patient's wishes.

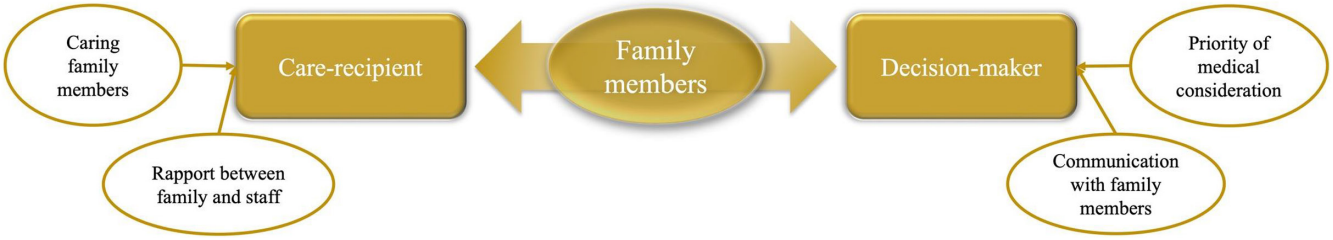

FIGURE 5 Tensions in family members' positions.

FIGURE 6 Double-sidedness of distress.

> the time even if we don't agree fully with everything that has been decided, we can understand why it has been decided and it's not a problem to go by this decision
>
> (physician) (Blythe et al., 2022)

> Nurses' voices were valued in the process of withdrawing life-sustaining treatment under respectful relationships among professionals. Nurses' opinions contributed to withdrawing the life-sustaining treatment process, as they work closely with the patient and family members. Nurses are often the first to notice signs of a patient's decline and advocate for the concerns of family members while withdrawing life-sustaining treatment.

> We almost always get to the decision to withdraw before the physicians. … I think it is because we are close to the patient all the time. They have more a snapshot picture of the patient.
>
> (nurse) (Jensen et al., 2013)

> I've had family that you know are ready for the overtures to talk about it and were just, 'I can't see them like this. Why can't we stop?'. Then you (the nurse) say (to the physician) 'hey, they are talking about this, they are really ready to talk, we need to do something' The nurse serves as the mediator. Either recognizing the situation, what needs to happen, the discussion needs to happen and going to the patient's provider or that family can see the nurse as the mediator to do that (help the family with that).
>
> (nurse) (Wiegand et al., 2019)

Interdependent collaboration enables nurses and physicians to work towards a shared goal in the process of withdrawing life-sustaining treatment. Although their perspectives may differ, the direction of treatment and care should be recognised by all professionals to support the patient and family members. In particular, when nurses and physicians establish a collaborative decision-making process, coherent messages can be delivered to family members.

> We do need to work as a team… there's nothing worse than walking into a family conference when you think you're going in there for one thing and the doc starts talking and he's going in a completely different direction… we need to be all on the same page at the same time… it's number one.
>
> (nurse) (Vanderspank-Wright et al., 2011)

> it's the nurse who's going to be there beside the patient and the families, so it's really important that the nurse is there. Because there has to be a coherent shared position among the whole team, otherwise the families get mixed up and aren't going to understand.
>
> (nurse) (Blythe et al., 2022)

Conversely, there was a hierarchical phenomenon in the process of withdrawing life-sustaining treatment between nurses and physicians. This phenomenon was reinforced by the perception that withdrawing life-sustaining treatment was solely a medical decision, resulting in physicians initiating and leading the discussions on the matter.

> In most cases, the ICU (intensive care unit) physician starts the conversation.
>
> (nurse) (Choi et al., 2022)

> I think the ultimate decision is the consultant's, of what is going to be done.
>
> (nurse) (Pattison et al., 2013)

Under the hierarchical phenomenon, nurses' roles were accordingly limited in the process of withdrawing life-sustaining treatment. Nurses cannot participate in the withdrawing life-sustaining treatment communication unless the physicians invite them to participate. Additionally, communication with family members about withdrawing life-sustaining treatment was considered to be the responsibility of physicians.

> Participating in the decision-making related to care at end of life depends on the personality of the doctor. Some doctors will allow nurses to participate in the process and listen to their opinions. They might agree

> with it or not. But some doctors will not allow nurses to participate in the process.
>
> (nurse) (Gallagher et al., 2015)

The hierarchical phenomenon also influenced patient's likelihood of dying. Relying on a professional's consideration may not be supported by other professionals. However, due to the hierarchical atmosphere, communication among professionals lacked interactivity, as each voice was not equally valued. Therefore, in the hierarchical structure of decision-making regarding the withdrawal of life-sustaining treatment, a physician's decision can even override that of the team.

> it's also dependent on the subjectivity of how those clinicians are feeling at that particular point in time, whether it's a personal reflection on them or the organization or the external medical team's inability to successfully see this person through their illness and get them better, as opposed to successfully manage their illness to an end
>
> (nurse) (Brooks et al., 2017)

> Have experienced cases where WLST(withdrawing life-sustaining treatment) was decided on and commenced by the team, but another physician told the nurses to resume treatment. That is terribly wrong.
>
> (physician) (Taylor et al., 2020)

3.2 | Tensions between dignified dying and therapeutic perspectives

The second theme regards the nurses' and physicians' perceptions about the withdrawing life-sustaining treatment. The perceptions of patients varied in two directions: dignified dying or therapeutic failure. On the one hand, withdrawing life-sustaining treatment was perceived as respect for the patient's wishes, as it contributes to the patient's dignified dying and death. On the other hand, withdrawing life-sustaining treatment was perceived as a failure of treatment regardless of the patient's suffering at the end of life from the therapeutic perspective. Please, see Figure 3.

The perception of withdrawing life-sustaining treatment as the patient's dignified dying and death starts from the notion of mortal human beings. The patient's death was not because of the withdrawal of life-sustaining treatment. Instead, a patient's dying is considered a consequence of a poor prognosis and the limited treatment.

> When the liver shows no sign of recovery while using the device and there is no chance of liver transplant either, we have to withdraw the treatment because it is the limitation of the treatment.
>
> (physician) (Aita & Kai, 2010)

> It is so hard for a family member to make, this is the hardest decision you may make in your life, it probably is the hardest, and it, I continue to think of these kind of decisions as, you know, you making the decision to end his life and it's easy to think of it that way, but you should not think of it that way. He's very, very, very sick, and we are supporting almost every organ, his heart, his lungs certainly, and his kidneys... Basically, it would just be a withdrawal of the maximum things we're doing... it would not be you ending his life.
>
> (physician) (Hsieh et al., 2006)

The purpose of withdrawing life-sustaining treatment was perceived as respect for the patient's dignified dying and death. By recognising patients' suffering from the invasive intensive and critical care, the continuation of life-sustaining treatment is perceived as an extension of suffering and undignified dying. In particular, nurses who care for patients at the bedside vividly witness the suffering of patients and their family members. Therefore, nurses' perspectives could be more positive for withdrawing life-sustaining treatment decisions for patient's dignified dying and death.

> The nurses are usually more pessimistic than the physicians, because they are the ones who typically are with the patients and see the suffering connected to it and they are with the relatives and see their pain.
>
> (physician) (Jensen et al., 2013)

Once the decision to withdraw life-sustaining treatment is made, the goal of care and treatment is immediately changed from the patient's recovery to their comfortable end of life. The transition of care goals begins with the removal of intensive care equipment. Nurses removed monitors and ventilators to provide a humane environment for the patients and family members.

> So I think it's nice to get rid of equipment and things if you can, just deliver the patient back to their family, but sometimes that's not always so.
>
> (nurse) (Efstathiou & Ives, 2018)

> We took out a lot of all the clinical equipment ... you know left him on the monitor ... we took the vent out ... taking all the machinery out, to make a more human thing and put chairs in for the family and the music going ... it was fantastic and I still to this day ... think, that's the way to me that it should be done.
>
> (nurse) (Wiegand et al., 2019)

End-of-life care was provided not only for the patients but also for the family members. Nurses wash the patients for their dignity at the end of life. Additionally, nurses tried to look after family members,

prohibiting their feelings from being abandoned and arranging time for family members with the patient by allowing extra visits.

> "Come on, you know, why don't you come and be with him and you can help me give him a wash." and we spent about two hours washing him and I took away as much of the equipment as I could and, you know, she washed his hair and she finally got that sort of hands on that she wanted with him and, you know, I mean he was absolutely pristine by the time we finished'
>
> (nurse) (Efstathiou & Ives, 2018)

> Once the patient is deteriorating, we always try our best to allow extra visits until the patient passes away.
>
> (nurse) (Choi et al., 2022)

On the other hand, intensive care and treatment are therapeutic priorities and may collide with the decision to withdraw life-sustaining treatment. The consideration of therapeutic priority was predominantly shared among physicians, particularly surgeons, since they have a clear goal for the patient's recovery.

> As a physician, I would not draw the line between life and death by my own hands.
>
> (physician) (Aita & Kai, 2010)

> Some surgeons are very aggressive. They are always pursuing the goal to rescue life. Others more often say; this will not work. It is linked to personality.
>
> (physician) (Robertsen et al., 2019)

However, the perspectives of therapeutic priorities did not always contribute to the patient's recovery, but physicians had to face the uncertainty in patient's prognosis when the patient's illness was critical. In particular, the timing of a patient's dying and death is unpredictable. Therefore, these uncertainties make it difficult for physicians to consider withdrawing life-sustaining treatment.

> There are health care clinicians who will recognize death, or the processes that are leading towards death, but it's acknowledging those processes are in place and acknowledging when to draw a line in the sand. That line might be somewhat wavy and move, the goal posts move a little bit sometimes, as to when to change or implement alternative therapies and alternative management strategies
>
> (nurse) (Brooks et al., 2017)

> And try to avoid any predictions of when someone is going to die, because you can lose your credibility right then and there by saying it is going to be this evening and the person is looking a little bit better in the morning. But doc you said he would be dead last night. So, I try to avoid those …. I can predict that someone will die, but I can't predict when.
>
> (physician) (Wiegand et al., 2019)

While dealing with the uncertainty between the patient's life and death, physicians are also responsible for communicating with the family members. Informing family members of the patient's dying was a very stressful job, especially when the physicians had to initiate the conversation about withdrawing life-sustaining treatment because family members often consider withdrawal to be killing the patient.

> In many cases, family members feel that they are killing the patient so they decide not to consent to WWLT.
>
> (nurse) (Choi et al., 2022)

> Sometimes talking with families about treatment withdrawal, I ask myself 'Am I a monster?' Because the questioning and the attitude of some families [about withdrawing treatment] really makes me wonder if I am perceived as a monster, as if I am trying to kill their loved one.
>
> (physician) (Workman et al., 2003)

From the perspective of nurses, physicians' conversations about therapeutic priorities in withdrawing life-sustaining treatment from family members were perceived as a false hopes. Although the continuation or imitation of life-sustaining treatment may provide relief to family members, the relief is temporary since the treatment only postpones the patient's death.

> I find that the families aren't well informed by the physicians. …they're given a lot of false hope…. And, understandably, the physicians want to make everybody better. …but some give a lot of false hope. And you feel bad. I mean I have a patient tonight who will never get off dialysis we just started. And she said, "Oh, he'll be fine." The family just doesn't understand yet. And I don't think the education is there. They [families] look at the nurses as knowing everything.
>
> (nurse) (Espinosa et al., 2010)

3.3 | Family members' reflections on patient's wishes

Family members are often invited to the decision-making process regarding the life-sustaining treatment of critical care unit patients. They are expected to reflect patient's wishes in the decision-making process to achieve a comfortable and dignified dying and death. However, family members' involvement in the process of withdrawing

life-sustaining treatment decision-making process may not always contribute to patient's dignified dying and death. See Figure 4.

Critically ill patients in the critical care unit did not have the capacity to make end-of-life decisions, regardless of their level of consciousness. Since seriously ill patients are often unconscious or sedated in intensive care, withdrawing life-sustaining treatment decisions are difficult because of the patient's capacity. Although the patients might be conscious, it is difficult to consider that they have the capacity to represent their own wishes due to their illness.

> Most of our patients seem to understand what is going on, you can communicate with them at the ICU because they are awake, but in reality, when you talk to them a few days later … they can't remember anything of what happened. So it can frighten me a bit what we sometimes ask them. … If they are shaking their head and saying: "I do not want this any more," if this is always taken for gospel truth it really is not certain that it is correct.
>
> (physician) (Jensen et al., 2013)

Therefore, life-sustaining treatment decision-making invites family members to represent the patient's wishes. Family members are expected to have an understanding of the patient's current life-sustaining status and illnesses. Subsequently, decisions regarding the withdrawal of life-sustaining treatment rely on the family member's input, which is considered to be representative of the patient's wishes.

> They (the family) had discussions about what would happen if something were to happen to you. And that was a little more in depth, thank God, than what was written. So they were … concerned about carrying out what he would want and so that was hard … the family, the brothers, and the children were all, basically, had the same feelings about it and had conversations also with him that they all had the same spin on what he wanted.
>
> (nurse) (Wiegand et al., 2019)

However, family members' representation of the patient's wishes when the decision to withdraw life-sustaining treatment is made may not always contribute to the patient's quality of dying and death because withdrawing life-sustaining treatment is a very stressful decision for family members, and the patient's illnesses in the critical care unit cannot be fully understood by family members.

> It is so hard for a family member to make, this is the hardest decision you may make in your life, it probably is the hardest, and it, I continue to think of these kind of decisions as, you know, you making the decision to end his life and it's easy to think of it that way, but you should not think of it that way. He's very, very, very sick, and we are supporting almost every organ, his heart, his lungs certainly, and his kidneys… Basically, it would just be a withdrawal of the maximum things we're doing… it would not be you ending his life.
>
> (physician) (Hsieh et al., 2006)

> They asked, 'Is he or she still sleeping?' But I know the patient is not sleeping, but is unconscious due to a very severe illness.
>
> (nurse) (Choi et al., 2022)

Likewise, when family members refuse to withdraw life-sustaining treatment and instead choose to continue treatment, this decision can conflict with the patient's ability to have a comfortable and dignified dying process. Intensive care, including resuscitation to restore the cardiopulmonary system, is enormously invasive and painful. Accordingly, a family member's decision to continue life-sustaining treatment extends the patient's suffering at the last moment.

> It was horrible because he's a very large guy, and we coded him and he's keeping going on and off, on and off. I left and they coded him six more times, and he ended up dying about 11:23 last night. But they didn't want to give up. The son said, "I cannot live with it if you just extubate him and let him go." So they wanted us to do everything, and he was hemorrhaging from his lung. It was pretty bad. Blood was just pouring from the tube, we kept pumping on his chest, it was really very traumatic. It was a bad situation.
>
> (nurse) (Espinosa et al., 2010)

> That is always very difficult …I mean from the patient's point of view, you are keeping somebody alive just for the relative's benefit but conversely we do know or we think we know that being here at the time of death does aid the grieving process…I do feel a bit uncomfortable sometimes keeping patients going for the sake of relatives turning up.
>
> (nurse) (Efstathiou & Ives, 2018)

3.4 | Tensions in family members' positions

Family members are considered very important in the process of withdrawing life-sustaining treatment. Nurses and physicians had two key perceptions of family members: care recipients and decision-makers. Since family members were witnessed the patient's critical illness and dying in the critical care unit, they were considered vulnerable by nurses and physicians. Accordingly, nurses and physicians prioritise caring for family members in the process of withdrawing life-sustaining treatment. On the other hand, family members are also considered key decision-makers in the process of withdrawing life-sustaining treatment. Withdrawing life-sustaining treatment decisions is made

following the family member's opinions. Therefore, how family members perceive their current circumstances is important in the process of withdrawing life-sustaining treatment. See Figure 5.

From the perspective of family members as care recipients, nurses and physicians made every effort to provide the utmost support to them. The participants carefully observed family members and constructed an environment for the patients and family members. Family members' needs varied according to their culture and religion. However, nurses and physicians shared that family members need time to accept these circumstances.

> However, nurses and physicians shared that family members need time to accept the circumstances. 'We are concerned about how the final phase of the patient looks in the eyes of the family'.
>
> (physician) (Aita & Kai, 2010)

> I mean, for the patient, I know it doesn't really matter if you can hear them rattling but, for the family, I think it's really important that they don't see that the patient is suffering.
>
> (nurse) (Efstathiou & Ives, 2018)

While caring for family members in the process of withdrawing life-sustaining treatment, nurses and physicians share the importance of rapport, which helps family members to trust the medical staff. In the process of withdrawing from life-sustaining treatment process towards the patient's death, rapport contributes to easing the emotional distress of both family members and medical staff.

> you lose the trust of the family and that's a really distressing situation for staff, for the family, and patient, which really contributes to their grief
>
> (physician) (Brooks et al., 2017)

> [it] can be a little more challenging emotionally and if you… step in on a situation where you're withdrawing care and you're just stepping into it, and you don't know the patient, it's always a little more awkward… you don't want to be coming in as the death nurse
>
> (nurse) (Vanderspank-Wright et al., 2011)

However, family members play a significant role in the decision-making process regarding the withdrawal of life-sustaining treatment. As demonstrated in the previous theme of the patient's wishes, family members are expected to reflect the patient's wishes in the process of withdrawing life-sustaining treatment decision-making. Sometimes, family members' opinions about either continuing or withdrawing life-sustaining treatment overwhelm the implementation of care and treatment decision-making.

> …we never implement a decision when one of the caregivers disagrees and expresses disagreement.
>
> (physician) (Blythe et al., 2022)

However, excessive involvement of family members in withdrawing life-sustaining treatment decision-making was perceived as inappropriate. Since the decision about life-sustaining treatment is a medical decision, physicians asserted that the medical decision to withdraw life-sustaining treatment should transcend the family member's opinions. Whereas the timing of withdrawal can be adjusted following the readiness of family members, medical consideration is a firm professionality of medical staff.

> The family is different because, unless the family is giving us very clear insight on what the patient wants for himself not what the family wants for the patient that is really taken into account. But I think the family's opinion… only changes the timing of the de-escalation. If we see that the family is really not ready at all we will take time, but it won't change what we think.
>
> (nurse) (Blythe et al., 2022)

> If I was building a bridge, I'd want the engineer to be deciding how to do it. If I'm deciding medical treatment, it should be the doctors and nurses looking after the patient who do it, and I don't think it's fair on nonprofessionals to be doing it
>
> (physician) (Brooks et al., 2017)

3.5 | Double-sidedness of distress

The last theme revealed different dimensions of distress experienced by nurses and physicians in the process of withdrawing life-sustaining treatment process. The withdrawal of life-sustaining treatment provides certainty and assurance to nurses and physicians, which can help to decrease moral distress and to provide end-of-life care. Additionally, nurses and physicians alleviate their distress by supporting each other. However, the withdrawal of life-sustaining treatment decisions causes different types of distress due to the gravity of the decision. See Figure 6.

While the nurses and physicians faced and had to address the tensions between active treatment and potential consideration of life-sustaining treatment of the patient, the withdrawal of the life-sustaining treatment reduced ambiguity and confirmed the direction of care and treatment. Therefore, nurses and physicians viewed the decision to withdraw life-sustaining treatment as providing them with certainty and assurance for transitioning to end-of-life care.

> very proscriptive about aspects of end-of-life care, and leaves little ambiguity about the pathway intended, and I think [that] makes it easier for all team members to manage the patient during that phase of their care
>
> (physician) (Brooks et al., 2017)

> Sometimes it's a relief because you're seeing that the treatment or the interventions that you're doing are just not working or … they may be working just to keep this person alive, but they're not saving the person or the person that they were before. So, when you switch to palliative, it's almost a sense of being able to breathe or to relax and not be so rushed.
>
> (nurse) (Espinosa et al., 2010)

The alleviation of distress during the life-sustaining treatment withdrawal process was also associated with peer support. Nurses and physicians share their experiences with others and sometimes use humour to take care of themselves by making the atmosphere lighter.

> Kind of just sitting down, like debriefing with other nurses who are experienced and know what you're going through helped a lot. Having like other nurses and staff that have experience come in and say like, 'You did a great job, you know?' So, just positive affirmations help.
>
> (physician) (Orr et al., 2022)

> If we don't mix the humor in—a lot of times even in a code, we're bantering a little bit, just trying to keep it light hearted. We're focused on what we're doing, but its okay if we smile or chuckle during a code because we're not being insensitive to the patients needs. We're taking care of ourselves to keep our frame of mind in the right frame.
>
> (nurse) (Espinosa et al., 2010)

Nonetheless, the decision to withdraw life-sustaining treatment is a serious and has been a consequence of the patient's death. The patient's dying and death after the withdrawal proceeded drastically, which provoked physicians to think of the consequences of their decision-making. In particular, physicians were aware of the importance of their decision-making and concerned about the potential for error.

> I know the withdrawal of mechanical ventilation would drastically lower the blood pressure and could cause cardiac fibrillation soon. I am sure that the drastic changes would make me feel that it is me who is driving the patient to his death. It would be very painful for me.
>
> (physician) (Aita & Kai, 2010)

> It is seldom easy. When is there no doubt? When there is cessation of cerebral blood flow (brain death), but in all other cases, doubt is inevitable. Even though I have worked in the field for a long time, I feel humble and I am afraid to err.
>
> (physician) (Robertsen et al., 2019)

4 | DISCUSSION

This thematic synthesis study explored nurses' and physicians' perceptions and experiences of withdrawing life-sustaining treatment in critical care units by synthesising the extracted data from the 16 qualitative studies. This study focused on the contextual diversity in the perceptions and experiences of withdrawing life-sustaining treatments from the perspectives of nurses and physicians. Although guidelines and review studies supporting the withdrawal of life-sustaining treatment practices have been well established, the applications of these practices in different contexts can vary according to culture and religion (Ko et al., 2021; Lobo et al., 2017; Mark et al., 2015). This study provided the variations in life-sustaining treatment withdrawal practices through the synthesis of the qualitative studies.

The five themes identified in the findings of this study included a wide spectrum of roles, perceptions, patient's wishes, family members and distress when the life-sustaining treatment was withdrawn in various contexts. The first and second themes, 'tensions between interdependent collaboration and hierarchical roles' and 'tensions between dignified dying or therapeutic perspectives', showed different perceptions of professional roles and life-sustaining treatment by nurses and physicians. In particular, physicians' perceptions of nurses' involvement and treatment futility influenced the value of nurses' voices in the process of withdrawing life-sustaining treatment process and the patient's dignified dying and death. Indeed, the hierarchical relationships make communication between nurses and physicians difficult, which hinders interdisciplinary collaboration (Lancaster et al., 2015). Considering that second theme regards a physician's therapeutic perspectives, critical care unit physicians' drive towards the rescue goal without the nurse's perceptions of the patient's dying may not contribute to the patient's comfortable death or the family member's psychological well-being.

The third and fourth themes were also closely linked because of the family members' roles and positions in withdrawing life-sustaining treatment. Reflecting patient's wishes and the family members' positions in the withdrawing life-sustaining treatment is very cultural and contextual. When family members are expected to reflect on patient's wishes in the withdrawing life-sustaining treatment decision-making process, family members could be given power in the decision-making process. The perceptions of family members' reflections on patients' wishes are pervasive in Asian countries, which is justified by the culture of familism (Lee, 2015). In South Korea and Taiwan, withdrawal of life-sustaining treatment was legalised in East Asia, and legal family member's consent to withdraw life-sustaining treatment in intensive care units was stipulated at the initial bill (Republic of Korea, 2018; Taiwan, Hospice and Palliative Act, 2000). However, the family members' power in the process of withdrawing life-sustaining treatment is at risk due to their psychological vulnerability. Although family members could be cared for and supported by nurses and physicians, this support should not compromise the extent of the patient's suffering. Accordingly, nurses' and physicians' professional boundaries in

the decision-making process related to withdrawing life-sustaining treatment were crucial for the patient's dignified dying and death.

Finally, the withdrawal of life-sustaining treatment had a double-sidedness in distress, alleviation and intensification. However, the alleviation and intensification of distress were not simultaneous but sequential. The distress and tension are alleviated when the patient cannot achieve the treatment goals and when the treatment is considered futile. However, the decision to withdraw eventually provided certainty in care and treatment for the patient's dignified dying and death. Withdrawing life-sustaining treatment is a challenging decision since it changes the direction of care and treatment from therapeutic to palliative (Heradstveit et al., 2023).

4.1 | Limitations

Qualitative synthesis studies have been criticised for a potential thin abstractions by using the extracted quotations from the qualitative studies rather than entire qualitative data (Bergdahl, 2019). Accordingly, the research paradigms may collide while approaching qualitative data from the quantitative paradigm of positivism (Sandelowski & Barroso, 2006). Therefore, this study reinterpreted and compared the extracted quotes apart from the authors' analysis of the included studies.

5 | CONCLUSION

This thematic synthesis study synthesised different dimensions of experiences of withdrawing life-sustaining treatment in critical care units by synthesising qualitative studies. Accordingly, this study contributes to nursing knowledge by enhancing the complexity of the phenomenon. The findings reveal discrepancies in the practices surrounding the withdrawal of life-sustaining treatment, highlighting the need for further investigation to inform the clinical practices that cater to diverse cultures and religions. This up-to-date knowledge can help healthcare professionals, including nurses and physicians, deliver person-centred care and treatment. However, it is important to note that the distribution of studies across countries and regions is uneven, resulting in the underrepresentation of certain regions and countries. Therefore, future studies should be conducted to encompass a broader range of contexts and cultures.

AUTHOR CONTRIBUTIONS

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Hye Ri Choi and Mu-hsing Ho. The first draft of the manuscript was written by Hye Ri Choi, and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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APPENDIX A

Search strategy

Six databases, with last searched on 2 May 2023.

APA PsycINFO

S1. (life-sustaining treatment*) OR (life-prolonging treatment*)
S2. (experience*) OR (perception*)
S3. (intensive care*) OR (critical care*)
S4. (nurse*) OR (physician*)
S5. S1 AND S2 AND S3 AND S4

CINAHL Plus

S1. (life-sustaining treatment*) OR (life-prolonging treatment*)
S2. (experience*) OR (perception*)
S3. (intensive care*) OR (critical care*)
S4. (nurse*) OR (physician*)
S5. S1 AND S2 AND S3 AND S4

EMBASE

S1. (life-sustaining treatment* OR life-prolonging treatment*).mp
S2. (experience* OR perception*).mp
S3. (intensive care* OR critical care*).mp
S4. (nurse* OR physician*).mp
S5. S1 AND S2 AND S3 AND S4

MEDLINE

S1. (life-sustaining treatment* OR life-prolonging treatment*).mp
S2. (experience* OR perception*).mp
S3. (intensive care* OR critical care*).mp
S4. (nurse* OR physician*).mp
S5. S1 AND S2 AND S3 AND S4

Pubmed

1. life-sustaining treatment*
2. life-prolonging treatment*
3. 1 OR 2
4. experience*
5. perception*
6. 4 OR 5
7. intensive care*
8. critical care*
9. 7 OR 8
10. nurse*
11. physician*
12. 10 OR 11
13. 3 AND 6 AND 9 AND 12

Web of Science

S1. (life-sustaining treatment*) OR (life-prolonging treatment*)
S2. (experience*) OR (perception*)
S3. (intensive care*) OR (critical care*)
S4. (nurse*) OR (physician*)
S5. S1 AND S2 AND S3 AND S4