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Perceptions of intensive care unit nurses of therapeutic futility: A scoping review

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Abstract

Introduction: Intensive care units are contexts in which, due to the remarkable existence of particularly technological resources, interventions are promoted to extend the life of people who experience highly complex health situations. This ability can lead to a culture of death denial where the possibility of implementing futile care and treatment cannot be excluded.

Objective: To describe nurses' perceptions of adult intensive care units regarding the therapeutic futility of interventions implemented to persons in critical health conditions.

Method: Review of the literature following the *Scoping Review* protocol of the Joanna Briggs Institute. The Population, Concept, and Context mnemonic was used to elaborate the research question and the research was performed using the EBSCOHost search engine in the CINAHL *Complete* databases, MEDLINE *Complete*, *Cochrane Central Register of Controlled Trials*, and *Cochrane Database of Systematic Reviews* to identify studies published between 1990 and 2019. Seven studies were selected.

Results: Nurses consider that therapeutic futility, a current problem in adult intensive care units, may have a negative impact on persons in critical health conditions and that contributes directly to resource expenditure and moral conflicts and consequently leads to emotional exhaustion.

Conclusion: Due to the complexity of this concept, knowing and understanding people's and families' perceptions is crucial to the decision-making process, for which reason nurses can play a key role in managing these situations.

Keywords

Futility, nursing, intensive care unit, critical care, critical illness, critically ill patient

Introduction

Intensive care units are environments of clinical practice properly equipped with human, physical, and technological resources that enable care and treatment of people with increasingly complex pathological situations[1] meeting the standards of the "state of the art."[2] These units aim at providing care to critically ill patients with threatened or failing vital functions through advanced monitoring and supportive measures to provide adequate diagnostic and therapeutic measures that aim at improving outcomes.[3] In general, they support the admission of people in life-threatening conditions in intensive care units and focus their interventions on prolonging life.[4]

Normally, a person admitted in this context is subject to considerable risks of mortality and morbidity, depending on whether the patient presents a higher or lower critical condition, which induces the crucial need for a care practice that includes surveillance and intensive treatment.[2] However, regardless of the defined level of care, the nature of which results directly from the advanced or acute stage of illness these people are in, death is an event that often occurs in these units.[5]

The real availability of advanced technological and therapeutic resources in intensive care units not only promotes life-prolonging care, but also induces a

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culture of death denial, which in turn can lead to greater difficulty in defining the prognosis of critically ill patients[5] and of complex ethical dilemmas, including the eventual futility of established interventions and treatments.[6]

In the health field, therapeutic futility is a concept often used to describe therapies that have no immediate or long-term benefits.[6] This is a subject that has been widely debated, with records from the time of Hippocrates claiming that the definition of medicine generally includes ending people's suffering, reducing the violence of their diseases, and refusing treatment to those who are overwhelmed by their illness on the understanding that in such cases medicine is powerless.[6–8]

Over time, therapeutic futility has evolved into a predominant dilemma in many end-of-life situations.[6] Although issues surrounding the concept of therapeutic futility have long been discussed, the term "futile care" was first defined in 1980 and was introduced to the medical ethics literature in 1990, and in recent decades it has become a field of growing interest. This may be related to the increase in life expectancy, technological advances, the latest medical equipment, the rising costs associated with health care, and a growing concern for people's autonomy.[9]

Today, although it is generally agreed that therapeutic futility is a difficult concept to define whose meaning may vary in different countries, depending on existing culture, values, religion, beliefs, and medical advances,[10] some authors find "futile" to refer to care or treatment that has no benefit to the person,[11] consisting of the provision of inadequate treatments that may not contribute to improving prognosis, relieving symptoms, or prolonging life.[12] However, advancing a definition of therapeutic futility and knowing how to recognize it is a complex and sensitive process that raises questions for which concrete answers are difficult to find,[13] since futility is related to assumptions about quality and span of life and may be invoked in an ethically unjustifiable way.[14]

Without a clear and understandable definition, some authors consider the diagnosis of futility to be purely medical, while others claim that this concept is a moral judgment in which the person and family can play an important role in deciding what is futile and what is not.[13]

Alongside therapeutic futility, intensive care unit health professionals, particularly physicians and nurses, often identify concerns about therapeutic obstinacy, recognizing its responsibility for exacerbating ethical conflicts when providing care to the person in critical health conditions.

Therapeutic obstinacy refers to disproportionate and futile therapeutic procedures without benefit to the person that can themselves cause suffering.[15] Some authors claim that therapeutic obstinacy, as it shows no evidence of benefit to the person, conflicts with quality of life.[16] Due to therapeutic incarnation, a concept commonly referred to in the literature as dysthanasia, most authors allude to a usually painful practice that aims only at prolonging biological life without concern for the quality of life or dignity.[17]

In intensive care units, ethical debates over these conceptions are frequent, since it is admitted that in these contexts many people have no significant probability of survival and are subject to the implementation of futile therapies.[13] In addition to all the consequences for the person and the family, it is argued that therapeutic futility may negatively impact professional satisfaction and lead nurses in intensive care units to emotional exhaustion.[18]

Objective

To describe nurses' perceptions of adult intensive care units on the therapeutic futility of interventions implemented to patients in critical health conditions.

Method

A literature review adhering to the *Scoping Review* protocol of the Joanna Briggs Institute,[19] including the development of the research question, research in scientific databases, identification of inclusion and exclusion criteria, selection of studies, analysis and interpretation of the selected studies, and synthesis and presentation of results.

In order to formulate the research question, the Population, Concept, and Context mnemonic was used: (P) Population, (C) Concept, and (C) Context. The following question was asked to answer the outlined objective that served as the guiding principle for this literature review: For nurses in adult intensive care units (Population), what are their perceptions regarding the therapeutic futility of interventions implemented (Concept) in the critically ill patients admitted to the intensive care unit (Context)?

The research strategy included a search for studies published in French, English, Spanish, and Portuguese carried out by the two authors between January 1990 and September 2019 to identify studies published in the last three decades via the EBSCOHost search engine in the CINAHL *Complete*, MEDLINE *Complete*, *Cochrane Central Register of Controlled Trials*, and *Cochrane Database of Systematic Reviews* databases. The authors chose this period because it was in the 1990s that the medical literature adopted the concept of futile care.

The search included the descriptors *Futility*, *Nursing*, *Intensive Care Units*, *Critical Care, Critical Illness* and *Critically Ill patients*. The descriptors were connected with the *Boolean operators* "AND" and "OR" in the following arrangement: "Futility" *AND* "Nursing" *AND* "Intensive Care Units" *OR* "Critical Care" *OR* "Critically Illness" *OR* "Critically Ill." All descriptors used were extracted from the *Medical Subject Headings* (MeSH) and Vocabulary Descriptors in Health Sciences (DeCS).

The privileged studies focused exclusively on nurses who developed their professional practice in adult intensive care units, with methodologies focused on the object of study, in academic journals with expert analysis and with available references. All studies in which no exclusive results on nurses' perceptions were presented, with ambiguous methodology, or no correlation with the object of study were excluded.

The initial survey identified 242 results and 45 duplications. The evaluation of the remaining results, carried out by both authors independently, proceeded in three phases, namely: the phase of selecting the studies to be analyzed after reading the titles, which allowed the identification of 48 studies; the phase of reading and interpretation of the abstracts of all selected studies, which enabled the identification of 12 studies with potential interest for the review; and the last phase, which was the full reading of all studies, after which, once the inclusion criteria and analysis of the levels of evidence and methodological quality were applied, seven studies were selected (Figure 1). Literature search process (preferred items presented in the Joanna Briggs Institute Guidance).

Results

It was decided to present the results obtained by analyzing the studies included in this review in table format (Table 1) in order to facilitate and simplify their reading and interpretation.

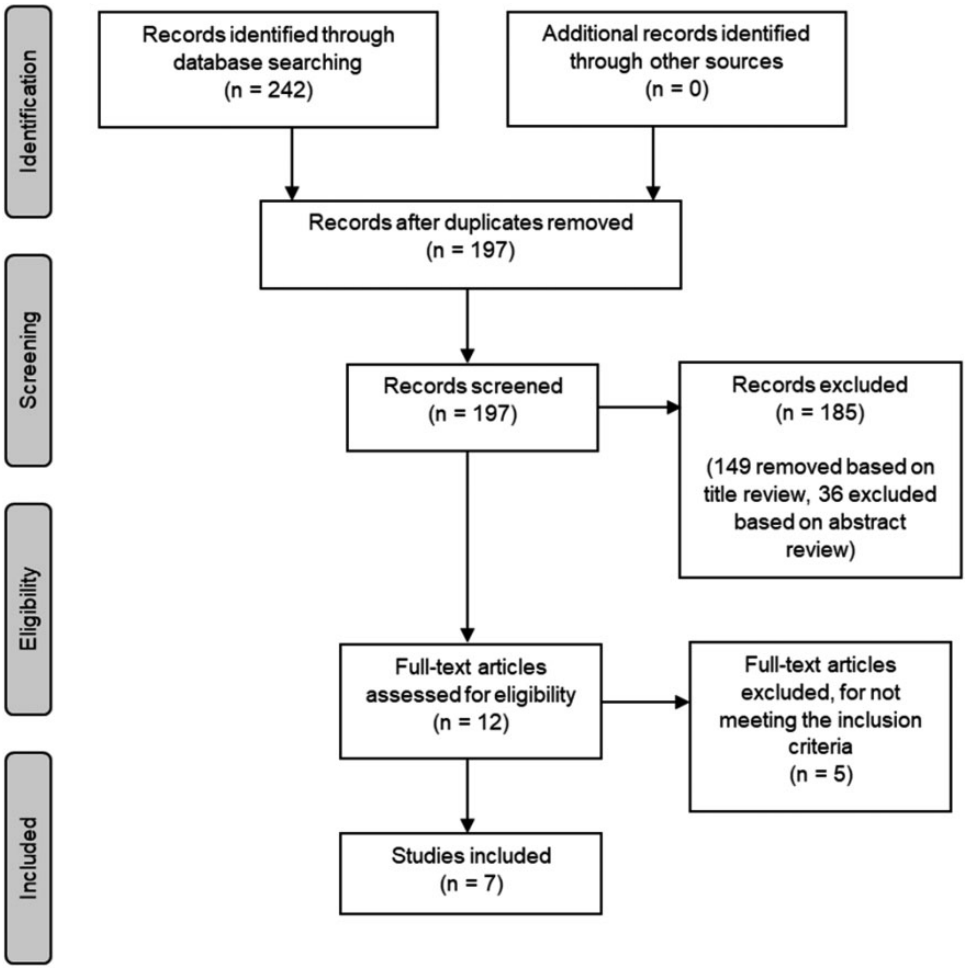

Figure 1. Literature search process (preferred items presented in the Joanna Briggs Institute Guidance).[19]

Table 1. Synopsis of the analyzed studies.

Authors (date)	Title	Drawing	Population/sample	Objective	Main conclusions	Strengths/limitations
Carvalho and Lunardi[20]	Therapeutic futility as an ethical issue: intensive care unit nurses.	Qualitative, exploratory, and descriptive	Six nurses with more than one year of professional experience in intensive care.	To understand how nurses view the implementation of therapeutic interventions that they consider futile to critically ill patients.	Therapeutic futility is a current problem in intensive care units that possess technological equipment to preserve life. It is crucial to assume that the evaluation of therapeutic interventions to be implemented in persons going through a dying process is a complex ethical challenge, as a guarantee of quality for end-of-life patients. When healing is no longer possible, concern for the person and respect for his or her integrity is essential.	The sample size and the short professional experience time.
Heland[21]	Fruitful or futile: intensive care nurses' experiences and perceptions of medical futility.	Qualitative, exploratory, and descriptive	Seven nurses with at least one year of professional experience in intensive care who have not treated patients and who considered it futile.	To investigate the perceptions and experience of intensive care unit nurses about therapeutic futility.	The definition of therapeutic futility is complex. To define a treatment as futile, nurses' resort to the need of knowing and understanding people's perceptions regarding the limitation or continuity of treatment. In situations of unilateral decision of the medical team whether to continue or suspend interventions, questions revolve around value judgments. Nurses express frustration when they promote a treatment with which they disagree and assume the possibility of leaving the profession due to moral conflict. There are opportunities for nurses to participate in decision making and, when treatment is considered futile, nurses play a key role in their suspension and can have a significant impact on the person/family experience.	The sample size and the short professional experience time.
Hsu *et al.*[22]	The medical futility experience of nurses in caring for critically ill patients.	Phenomenological	Eight nurses with at least one year of professional experience in intensive care.	To understand the experiences of intensive care unit nurses related to therapeutic futility.	Nurses' experiences regarding therapeutic futility can be divided into four main categories: definitions of therapeutic futility and types of patients; considerations of therapeutic futility; occurrence of therapeutic futility; nurses' responses to therapeutic futility. Nurses identify two situations for therapeutic futility to occur: When there is no evidence that a treatment promotes improvement or contributes to an improvement in quality of life; and when treatment is determined to facilitate the death process. The greatest challenge in these situations is communication	The sample size and the short professional experience time.

(continued)

Table 1. Continued

Authors (date)	Title	Drawing	Population/sample	Objective	Main conclusions	Strengths/limitations
					among doctors, nurses, and patients when rapid and unexpected changes occur in their health. Therapeutic futility may be anticipated and previous experience may serve as a reference to guide care services.	
Rostami and Jafari[9]	Nurses' perceptions of futile medical care.	Review	16 articles published between 1994 and 2005.	To review and identify nurses' perceptions of care futility.	Nurses play a key role in care giving and decision making in end-of-life situations and can significantly influence the attitudes of people and families. To understanding the experiences of people and families regarding the futility of care is the first step in care planning in intensive care units. The provision of futile care contributes to wasted economic resources, moral and emotional conflicts, and professional exhaustion. Nursing leaders should acquire skills on the topic to promote adequate support for nurses.	
Rostami *et al.*[11]	Perception of futile care and caring behaviors of nurses in intensive care units.	Analytical	181 nurses from intensive care units.	To determine the relationship between nurses' perceptions of futile care and their behavior toward end-of-life people admitted to intensive care units.	There is a negative relationship between the perception of futile care and the behavior of nurses in caring. About 65.7% of nurses have a moderate perception of futile care and the vast majority, 98.9%, show desirable behaviors in caring for end-of-life patients. Given the moderate perception of futile care, it is imperative to implement interventions that aim at reducing its occurrence.	
Yekefallah *et al.*[10]	Nurses' experiences of futile care at intensive care units: a phenomenological study.	Phenomenological	25 nurses from intensive care units.	To define the concept of futile care according to nurses' perceptions of intensive care units.	Nurses play a key role in futile care management. When asked about the definition of futile care, they define it as ineffective care that contributes to the waste of resources and causes distress to patients and nurses.	The nurses who participated in this study are part of highly specialized units. Results cannot be generalized to all intensive care units.
Yildirim *et al.*[23]	A scale-development study: exploration of intensive-care	Exploratory	315 nurses from intensive care units.	To understand the attitudes of intensive	For most nurses, when deciding to perform futile treatments and interventions, the rational use of resources, the ethical principle of non-	The authors consider that the results obtained are limited

(continued)

Table 1. Continued

Authors (date)	Title	Drawing	Population/sample	Objective	Main conclusions	Strengths/limitations
	nurses' attitudes toward futile treatments.			care unit nurses toward futility.	maleficence, and national, ethical, and legal criteria should always be considered. There is no consensus as to whether the responsibility for deciding whether to continue or discontinue futile treatment should lie with the patient/family. Due to advances in technology and care delivery, nurses face dilemmas when asked to implement care and interventions for end-of-life people. These dilemmas are influenced by their considerations of respect for life, the care they implement, their role as "advocates" of patients, and their instinct to keep patients alive.	to the nurses who participated in the study and cannot be generalized. The authors recommend testing the validity and reliability of the scale with different groups of health professionals and in different cultures.

Discussion

This review certifies that there are few studies of nurses' perceptions regarding the therapeutic futility of nursing interventions implemented to patients in adult intensive care units.

In the study of Carvalho and Lunardi,[20] nurses refer to intensive care units as having resources that help preserve life where situations of therapeutic futility are experienced. This capacity, together with the significant frequency with which end-of-life people are admitted to these units, makes it essential to keep in mind that the assessment of interventions implemented for these people is a complex ethical process to ensure quality in the final phase of life.[20]

In the opinion of the nurses included in Heland's study,[21] therapeutic futility is a complex concept for which it is not possible to present a definition. In such situations it is necessary to know and understand people's perceptions when making the decision to limit or continue treatment, because when this decision is purely unilateral, questions concerning value judgments arise. Nurses report that there are opportunities to participate in the decision-making process, considering that their participation can be of high importance and have a significant impact on the person's and family's experience.[21] These nurses also express a sense of frustration in implementing interventions with which they disagree, to the point of considering abandoning the profession in the face of the moral conflicts they generate. This feeling is similar to that reported by nurses in the study of Yekefallah *et al.*[10] who consider nurses to play a key role in the management of futile interventions, which contributes to the distress these nurses go through. The conclusions of Rostami and Jafari[9] match these results, as the authors confirm the importance of the role nurses play in healthcare provision and decision-making in end-of-life situations. Additionally, these authors acknowledge that this performance of nurses in end-of-life situations can significantly influence the attitudes of people and family members. Therefore, understanding their experiences in therapeutic futility should be part of the first step in care planning in intensive care units. These authors further argue that there is a direct relationship between the implementation of futile interventions and waste of economic resources, moral and emotional conflicts, and the exhaustion of nurses, which leads them to suggest that nursing leaders acquire skills regarding futility in order to provide adequate support to their professional colleagues.

The phenomenological study by Hsu *et al.*[22] found that nurses identify four categories of therapeutic futility, and provides nurses' definitions of therapeutic futility and patient types, considerations of therapeutic futility, occurrences of therapeutic futility, and responses

to therapeutic futility. Nurses consider that this phenomenon can occur in two situations, namely, when there is no evidence that improvement in health or quality of life can be guaranteed with the implementation of a treatment, or when the interventions implemented to support vital functions facilitate the death process. The authors of this study conclude that therapeutic futility can be anticipated and its occurrence can serve as a reference to guide care, identifying the communication between health professionals and the patient/family as the greatest challenge in these situations.

In a study exploring the attitudes of adult intensive care unit nurses toward futility, Yildirim *et al.*[23] concluded that most nurses agree that when the decision to implement futile interventions is taken, the rational use of resources, the ethical principle of non-maleficence, and national ethical and legal criteria should always be taken into account. However, there was no consensus as to whether the responsibility for deciding whether to continue or discontinue treatment should lie with the patient and family. The authors also found that due to advances in technology and care, nurses face ethical dilemmas when asked to implement end-of-life care and interventions, and that these dilemmas stem directly from their conceptions of respect for their care, their role as "advocates" of people, and their instinct to preserve life.

The study by Rostami *et al.*,[11] which sought to determine the relationship between nurses' perceptions of futile care and their behavior toward end-of-life patients in intensive care units, identified 65.7% of nurses as having a moderate perception of futile care, and although the authors identified a negative relationship between the perception of futile care and the behavior of nurses in caring, it was found that 98.9% demonstrate desirable behaviors in providing care to end-of-life patients.

Conclusion

When the critically ill patient loses decision-making power, the principle of autonomy becomes impossible to apply and the implementation of futile interventions violates the ethical principles of beneficence, non-maleficence, and justice.[13]

Therapeutic futility is associated with a highly complex ethical process,[20] for which reason it is difficult to present a definition.[21] When experiencing situations of therapeutic futility in adult intensive care units, it is imperative to know and understand the perceptions of individuals and families regarding the decision to limit or continue treatment.[21] However, when identifying irreversible situations where healing is not possible and treatments are expected to be futile, concern and respect for the integrity and dignity of the person is paramount.[21]

The care provided by nurses in end-of-life situations can be of high importance.[21] Even though nurses are not the main drivers of the implementation of futile interventions, thanks to their experience and clinical expertise; they can play a key role in their prevention.[24] This participation can have a significant impact on the person's and family's experience, significantly influencing the attitudes of people and family members.[9]

A direct relationship has been observed between therapeutic futility and resource waste, moral conflicts, and nurses' exhaustion,[9] and a negative relationship between the perception of futile care and the behavior of nurses in care has been highlighted.[11]

The authors of this review identify as limitations studies with unrepresentative samples, studies with participants with limited professional experience in caring for critically ill patients, and studies conducted in highly complex units. These limitations, associated with the gaps in the literature on the subject under review, lead the authors to conclude that the results of this review cannot be generalized to all adult intensive care units and to recommend further studies, with more significant samples.

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