Original Article

Health Professionals' Views on Pediatric Palliative Care: A Mixed Methods Systematic Review

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Abstract

Introduction: Providing care for children in the end of life entails special challenges and exceptional requirements for all health professionals involved.

Aim: The aim of the study is to explore the views of health professionals about pediatric palliative care.

Methods: Systematic review of published relevant studies in PubMed and Scopus. The bibliography search took place for articles published from 2017 to 2022. The study included articles on qualitative, quantitative or mixed studies of health professionals in hospitals or in the community that provided pediatric palliative care to people <25 years of age, published from 2015 onwards, exploring their views on palliative care.

Results: The results of 15 studies performed on 1,505 health professionals showed that their views focused on the rewards gained and challenges experienced from providing pediatric palliative care, the relationship they develop with the child and family, the collaboration and role of the interdisciplinary team, the role of communication and education, and to the effect of the care on patients and their families as well as on their own personal lives. They identify barriers at individual, team, organizational, hospital, community, and policy level. To address these barriers, they used strategies to support health professionals, patients and families, work and care organization strategies, strategies to improve relationships, communication, education, collaboration and intercultural care.

Conclusions: Pediatric palliative care is considered both a reward and a challenge for health professionals but it is obvious that their poor and/or inadequate education and insufficient organization of work and care is in need of improvement in order to provide it effectively.

Keywords: pediatric palliative care, end of life, children, healthcare professionals, perspectives

Introduction

Worldwide estimated 21 million children with endstage disease (Marston, Boucher & Downing, 2018). The International Network for Palliative Care defines end-stage conditions as conditions for which there is no cure and death is inevitable, either in childhood or early adulthood where some life-threatening diseases develop rapidly and others can cause a slow deterioration for many years (Connor et al., 2014). The death of a child can have profound consequences for the parents, family members, and health care professionals who provided care for the child. Parents of the seriously ill child face unique challenges, as they must act as the legal authority for health care decisions for children, while in parallel the wishes of the child must be taken into account (Bradford et al., 2014). As a result of health professionals need to balance the core values of social work, the bioethical values and the psychosocial issues posed by such situations (Thieleman et al., 2016). The grief experiences of physicians and nurses caring for children dying of cancer showed for both groups, that the death process and the death of children were very stressful experiences and triggered a process of mourning. It seems that the grieving process of health professionals is influenced by how they perceive their role, their interventions and contribution to the care of the dying child, and by the social and cultural context in which care is provided to children with cancer. But at the same time, it seems that despite the anxiety caused by the death of children, both nurses and physicians have identified specific rewards from caring for children with end-stage disease (Papadatou et al., 2002). The aim of this study was to explore the views of health professionals about pediatric palliative care.

Methods

Study Design: This is a systematic review of the literature from 2017 to 2022.

Search strategy: The research articles were retrieved using keywords: "pediatric palliative care, end of life, children, healthcare professionals, perspectives" from PubMed and Scopus. The criteria for inclusion of articles in the study were presented in Table 1. For the purposes of the study, we defined specialized pediatric palliative care as services provided by trained and qualified health professionals providing health care as defined by the World Health Organization's palliative care (World Health Organization, 2018).

Article selection process: The PRISMA methodology was applied for the selection of articles that includes identification, screening, eligibility and included (Liberati et al., 2009).

Identification: The databases gave a total of 3,540 articles. After applying the bibliography search filters and examining the title, 1,997 articles that did not meet the inclusion criteria were rejected (Table 1). Also, 8 articles concerning duplicate registrations were rejected.

Screening: The title of 1,535 articles related to pediatric palliative care was evaluated and 1,308 articles were rejected. After evaluating the summary of these articles, 160 were rejected, as they concerned patients >25 years old or concerned only patients' caregivers.

Eligibility: The full text of 67 articles for eligibility with PICOS approach was evaluated. In these articles we examined the provision of palliative care by health professionals and the age of patients. Following the evaluation, 37 articles were rejected because they concerned patients >25 years of age or concerned only patient caregivers.

Included: After the thematic analysis of the full text of the articles, 15 articles were included in the study (Figure 1). The authors evaluated the quality of the articles using the PRISMA methodology (Liberati et al., 2009). They used the "Checklist of items to include when reporting a systematic reviews" (7 sections, 27 items) to evaluate the quality of the articles (Liberati et al., 2009). The 15 articles included in the study were considered to be of high (or moderate to high) quality and related to the aim of this systematic review.

Data analysis: The thematic analysis of the studies included 3 stages: preparation, organizing, reporting. In the preparation stage, the results of the full text of the articles were read several times in order to fully understand their meaning and conclusions drawn. Following the content of each article, on the views and experiences of health professionals about end-child palliative care, evaluated and the relevant information was highlighted for the second stage of data analysis. When organizing the data, we organized the content of the text using codes, creating categories and grouping the codes under headings. In the final step, we reported the results of the narratives concerning the views and experiences of health professionals about palliative care for end-stage children.

For each article, data was extracted from a preconfigured spreadsheet. Data fields include first author, year of publication, country, aim, sample/setting, methods, main inclusion criteria, main results. The findings of the studies included were summarized in Table 2.

Results

Characteristics of studies

The articles included concerned qualitative (n = 12) and mixed studies (n = 3). The majority of studies were conducted in the USA and the rest in the United Kingdom (n = 3), Canada (n = 2) and one each in Italy, Ghana and Switzerland. Six articles were concerned monocentric studies and another 9 were multicenter studies (Table 2).

No article used pre- and post-measurements to compare the results of pediatric palliative care. No article compared the experiences of health professionals at the beginning of the application of pediatric palliative care with those of another group of health professionals at a more advanced stage of the application of palliative care.

The majority of studies (n = 10) were included an interdisciplinary approach by health professionals such as nurses, nurse assistants, physicians, social workers, physiotherapists, psychologists, social workers, other therapists, priests, music therapists and physiotherapists. The 6 studies were concerned only the views of nurses working in pediatric oncology care structures at the end of life and one study were concerned only social workers' views. Most studies (n = 11) were performed in a hospital setting, 2 studies in community settings and 2 in both above mentioned settings.

Evaluation of quality of studies

The methodological quality of the research designs was high. All studies (n = 15) were rated with high quality. The research questions were clear and the data collection methods appropriate.

Analysis

The qualitative and quantitative results of the 15 studies conducted on 1,505 health professionals (Table 2) were divided into 3 categories:

Views on pediatric palliative care

The health professionals in the studies we reviewed reported that the rewards and challenges of providing palliative care were related to child and family care, team and organizational strengths, individual resilience, and work motivation (Taylor & Aldridge, 2017). Most participants rated endstage care as a very important aspect of their work and emphasized its impact on their personal development (Muskat, Brownstone & Greenblatt, 2017). Participants report that the main goal of providing pediatric palliative care was the ability to build a relationship with the dying child and its family that enables the provision of high quality care (Bergsträsser, Cignacco & Luck, 2017; Montgomery, Sawin & Hendricks-Ferguson, 2017; Sisk et al., 2021).

It is highlighted through the results that the discussion within the interdisciplinary team is an important process for the management of nurses' suffering (Taylor & Aldridge, 2017; Taylor et al., 2020; Cappi et al, 2020; Montgomery, Sawin & Hendricks-Ferguson, 2017, Sisk et al., 2022; Sisk et al., 2021).

Health professionals consider the provision of palliative care as a privilege and report that it has an impact on their prospects, they value their connection to families, report that pediatric palliative care affects their personal relationships, has an emotional cost and they indicate a lack of support and information for pediatric palliative care (Montgomery, Sawin & Hendricks-Ferguson, 2017; McConnell & Porter, 2017).

The experiences they report relate to the balance between end-of-life and acute care, the impact of family relationships on themselves, and the opportunities for professional development (McConnell & Porter, 2017; Sisk et al., 2022). The perceptions they report relate to the impact on themselves of initial experiences of sadness and feelings, the continuous vigilance, the evaluation and optimization of family-centered care and the promotion of a competent, thoughtful and supportive workforce (McConnell & Porter, 2017; Muskat et al., 2020). Health professionals distinguish 5 common important perceptions of communication in palliative care: the evolution of palliative care at end-of-life, the skill of knowledge sharing, the broader concept of care, the nurse as experienced advocate, and the appreciation of the individual response to grief. All these experiences provided nurses with the knowhow to fulfill the roles of communication, care and advocacy for children and families (Taylor & Aldridge, 2017; Price et al., 2017; Jack et al., 2018; Taylor et al., 2020; Cappi et al., 2020; Montgomery, Sawin & Hendricks-Ferguson, 2017; McConnell & Porter, 2017; Sawin et al., 2019; Kaye et al., 2020; Sisk et al., 2022; Sisk et al., 2021).

The comfort of health care professionals in providing care to children was statistically significantly correlated with previous experience of end-of-life pediatric palliative care (P < 0.001), wirh receiving formal education in end-of-life pediatric palliative care (P < 0.001), with higher quality of care (P = 0.01) and with the individual level of providing pediatric palliative care at the end of life (P < 0.001) (Kaye et al., 2020).

The clinical experience of end-of-life pediatric palliative care was the most important variable for comfort with its overall provision and its provision at the end of life. Formal education was the most influential variable for comfort with the management of severe symptoms at the end of life (Taylor & Aldridge, 2017; Price et al., 2017; Cappi et al., 2020; Sawin et al., 2019; Kaye et al., 2020; Sisk et al., 2021).

Barriers in the application of pediatric palliative care

Health professionals in the studies examined reported quality care, teamwork, job sharing, parental expectations, care environment, educational needs and concerns, and work stress as stressors and rewards (Taylor et al., 2020; Cappi et al., 2020; Montgomery, Sawin & Hendricks-Ferguson, 2017; Sisk et al., 2022; Sisk et al., 2021).Health professionals mention the absence of a common and objective criterion for making difficult decisions about palliative care that deprive them of a common and objective criterion for managing the most difficult decisions. They compare pediatric palliative care with quality of life, overall care of the individual, proportionality of care, early recognition of the need for palliative care (Cappi et al., 2020).

The challenges faced by pediatric oncology nurses in providing palliative care were: time-consuming care, poor work motivation, insufficient logistical support, work stress, poor workforce, lack of knowledge and lack of teamwork and the perception that they have cancer themselves (Bergsträsser, Cignacco & Luck, 2017; Nukpezah et al., 2021). Other challenges they report include supporting parents' hopes, revealing all possible outcomes to patients and their families, building

relationships while maintaining personal boundaries, revealing sensitive information, and validating parental beliefs, or decisions. Some challenges represented conflicts between different communication objectives. Others represented conflicts between one communication goal and another obligation (Taylor & Aldridge, 2017; Price et al., 2017; Sisk et al., 2021).

The effect that pediatric nurses reported from providing palliative care to children with cancer include a sense of privilege to care for these patients, the impact of care on their personal relationships, the physical and emotional cost of care, and the impact on their views on life (Muskat, Brownstone & Greenblatt, 2017).

Health professionals report 6 levels of communication barriers: barriers from the individual, the team, the management, the hospital, the community, and the policies. Several barriers were identified at each level. Some barriers, such as lack of comfort with difficult issues, cultural differences, lack of a common group mental model and time pressure, manifested themselves similarly among health professionals. Other obstacles, such as the need for boundaries, the fear or embarrassment of the family, the vague roles and authority and the excessive logistical demands, manifested themselves differently among health professionals (Nukpezah et al., 2021; Muskat et al., 2020; Sawin et al, 2019; Kaye et al., 2020; Sisk et al, 2022; Sisk et al., 2021).

Ethical dilemmas and problems of cooperation within the interprofessional team can hinder the provision of pediatric palliative care and lead to significant stress among health professionals (Bergsträsser, Cignacco & Luck, 2017; Jack et al., 2018; Sisk et al., 2022).

Problem solving strategies

The problem-solving strategies used by health professionals in providing palliative care include self-awareness, self-care strategies and boundaries, support from family and peers, the disconnection and evolution of coping strategies (Taylor & Aldridge, 2017; Bergsträsser, Cignacco & Luck, 2017; Price et al., 2017; Jack et al., 2018; Taylor et al., 2020; Cappi et al., 2020; Montgomery, Sawin & Hendricks-Ferguson, 2017; Muskat, Brownstone & Greenblatt, 2017).

Nurses report that the community setting is more conducive to support staff and improving the requirements of their role, as it includes support from colleagues/organizational services and ongoing training in key aspects of pediatric palliative care (Taylor & Aldridge, 2017). They also argue that they can improve their experience in providing pediatric palliative care with training in communication and knowledge sharing with other specialists (Taylor & Aldridge, 2017; Cappi et al., 2020).

Perceived ability to provide palliative care is significantly improved in intensive care unit nurses (P = 0.0001) compared to other nurses. The mean score of perceived ability to provide palliative care was significantly higher when nurses had >10 years of experience (P = 0.0001). Open-ended responses showed concerns about improving communication behavior, decision-making, and facilitating follow-up care (Price et al., 2017).

Health professionals mention that it is very important to plan palliative care, including waiting to build a family relationship, introducing parallel planning, and avoiding a crisis situation. They argue that support is needed for care planning to be effective (Bergsträsser, Cignacco & Luck, 2017; Pice et al., 2017; Jack et al., 2018).

Most health professionals recognize communication, symptom control, and acceptance as characteristics of a "good death". Compared to physicians, non-physicians focus on relationships (P = 0.007). Health professionals with ≤ 10 years of experience more often identify the benefits of the interdisciplinary team (P = 0.004) (Taylor & Aldridge, 2017; Bergsträsser, Cignacco & Luck, 2017; Taylor et al., 2020; Sisk et al., 2021).

Table 1. PICOS and criteria for including articles in the study

PICOS Question: What are the views and experiences of health professionals about palliative care for people <25 years of age?

Population (P): Health professionals in hospitals and/or the community caring for people <25 years old with end-stage cancer. The priests were also included.

Intervention (I): Views and experiences on pediatric palliative care.

Comparator (C): Without comparison or the usual (e.g. delayed) initiation of pediatric palliative care.

Outcomes (O): Qualitative, quantitative, or mixed data on the views and experiences of health professionals regarding child or family palliative care, challenges, problems, coping strategies, care-related processes or planning (such as communication, decision making and scheduling of specialist care, cooperation of the pediatric palliative care team, end-of-life care standards, mourning, initiation and implementation of pediatric palliative care, expediency and acceptance of pediatric palliative care care).

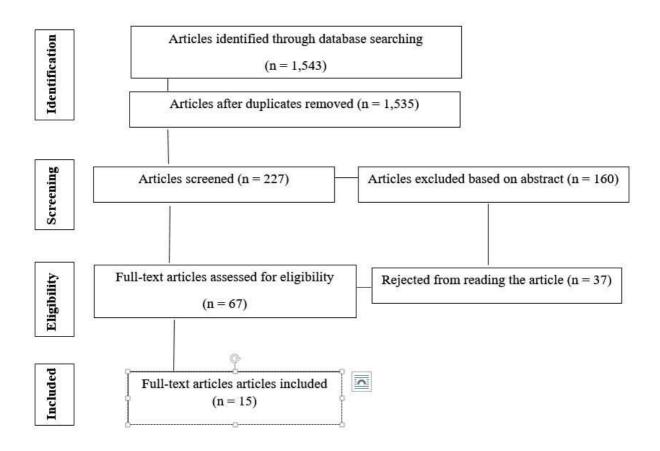
Setting (S): Hospital, community

Inclusion criteria

• Qualitative, quantitative or mixed studies.

- Published from 2017-2022
- Exploring views and experiences of health professionals about pediatric palliative care
- Published in English language.
- Published in peer reviewed journals.

Figure 1. Articles selection flowchart



Author, year /	tics of the studies <u>International Journal of Ca</u> Sample / setting	Methods	Main inclusion	Main results
country/ aim			criteria	
Taylor et al., 2017,	Physicians, nurses n=20,	Qualitative perspective	Previous service in	Rewards & challenges are related to
UK,	other health professionals	study with 3 focus groups	pediatric palliative	caring for children & families, team
Investigating the	n = 27, heads & staff	& group with semi-	care	dynamics & organizational structures,
rewards & challenges	community settings n =	structured interviews		individual resilience & work
of health	4. Total $n = 51$			motivation. Stress factors & rewards
professionals from	(convenience sampling			included quality of care, teamwork, jol
pediatric palliative	with judgement sampling			sharing, meeting parents' expectations,
care.	of the groups).			community setting, educational needs
	Single-center study.			& work stress.
Bergstrasser et al.,	Physicians $n = 17$,	Quality, multicenter study,	Caring for at least	Most participants value end-stage care
2017, Switzerland,	pediatric nurses $n = 18$,	with inductive approach,	one dying child last	as a very important aspect of their wor
Exploring the	community nurses $n = 6$,	with 6 inter-professional	year	& for its impact on their personal
experiences & needs	social workers $n = 4$,	focus groups		development. They believe in the
of health	psychologists $n = 1$,			ability to build a relationship with the
professionals for	music therapists $n = 1$,			dying child & family that allows for
institutional support	ιερείς $n = 1$. Total $n = 44$.			high quality care. Ethical dilemmas &
& training in	Single-center study.			collaboration problems within the
communication &				inter-professional team can hinder this
dealing with				goal & lead to significant stress among
emotional distress &				health professionals.
inter-professional				
work in pediatric				

end-of-life care units.				
Prise & al., 2017,	Nurses from: adults ICU	Quantitative non-invasive		Perceived ability to provide palliative
USA,	n = 182, adults HDU n =	comparative study with		care is significantly improved in ICU
Evaluation of nurses'	227, PICU n = 89,	online use of the revised		nurses ($P = 0.0001$). The mean scores
knowledge, attitudes	children HDU n = 85.	End-of-Life Care		were significantly higher when the
& behaviors	Total $n = 583$.	Questionnaire		nurses had >10 years of experience (P
regarding the	Single-center study.			= 0.0001). Open-ended responses
provision of pediatric				showed their concerns about improving
palliative care &				communication behavior, decision-
identification of				making & facilitating follow-up care.
deficiencies for the				
provision of quality				
pediatric palliative				
care.				
Jack & al., 2018, UK,	Nurses $n = 8$, physicians	Qualitative study with	Health professionals	Health professionals report that it is
Investigating the	n = 5, other health	semi-structured telephone	providing pediatric	very important to plan for palliative
views & experiences	professionals $n = 6 \&$	interviews (judgement	palliative care at:	care, including waiting to build a
of health	other therapists $n = 2$,	sampling)	• children with cancer	family relationship, introducing
professionals	Total $n = 21$ from 3		0-18 years old,	parallel planning & avoiding a crisis
regarding the design	hospitals, a community		• who had died in the	situation. They argue that support is
of pediatric palliative	setting for children & its		last 18 months,	needed to make care planning
care in the hospital.	services.		• participated in the	effective.

Multicenter study.

study >3 months

Taylor & al., 2020,	Physicians $n = 8$,	Cross sectional	Most health professionals have
USA,	specialized nurses $n = 4$,	comparative mixed study	recognized communication, symptom
Identifying the	physiotherapists $n = 1$,	(online questionnaire &	control & acceptance as characteristics
factors that pediatric	clinical nurses $n = 2$,	semi-structured interview).	of a 'good death'. Compared to
oncology health	music therapists $n = 2$,		physicians, non-physicians focused on
professionals	teachers n=1, priests n =		relationships ($P = 0.007$). Health
consider important	1. Total $n = 19$ health		professionals with ≤ 10 years of
for the positive death	professionals providing		experience most often identified the
experience of	pediatric palliative care		benefits of the interdisciplinary team (P
children, adolescents	(snowball sampling).		= 0.004).
& young adults &	Single-center study.		
their families.			
Cappi & al., 2020,	Physicians $n = 6$, nurses	Qualitative study (semi-	Health professionals report the absence
Italy,	n = 6, psychologists n =	structured interviews)	of a common & objective criterion for
To investigate the	5. Total n = 17		making difficult decisions. Health
perception that	(convenience sampling).		professionals compare pediatric
doctors, nurses &	Multicenter study.		palliative care with quality of life,
psychologists,			overall care, proportionality of care,

operating in pediatric				early recognition of the need for
hospices, have of the				palliative care. Discussion within the
appropriateness of				group emerges as a privileged place for
the care they provide				managing the suffering of health
& to understand what				professionals.
repercussions the				
perception of non-				
appropriateness has				
at individual & team				
level.				
Montgomery et al.,	Nurses $n = 27$ from 3	Qualitative study	Nurses with >5	Nurses report 5 common perceptions of
2017, USA,	pediatric hospitals.	(empirical	years' experience	communication during palliative care:
A description of	Multicenter study.	phenomenological), using		the evolution of end-of-life palliative
nurses' perceptions of		12 focus groups & semi-		care, knowledge skills, the expanded
communication		structured interviews		concept of care, the experienced nurse
during pediatric				advocate & the assessment of
palliative care & their				individual response to grief. The
perceptions of				experience provided to nurses with the
barriers & facilitators				know-how to fulfill the roles of
of effective				communication, care & advocacy for
communication.				children & families.
Muskat et al., 2017,	Social workers n = 9	Qualitative study with	Social workers who	As experiences are mentioned: work is

Canada,	(snowball sampling).	semi-structured interviews.	often provided end-	considered a privilege, it has an impact
To investigate the	Single-center study.		of-life pediatric	on their perspective, in the connection
experiences of			palliative care were	with families, in personal relationships,
pediatric social			included in the	it has an emotional cost & they indicate
workers working			sample, while those	a lack of support & information of the
with dying children			who occasionally	team.
& their families in a			provided no.	Coping strategies include: self-
pediatric acute care				awareness, self-care strategies &
hospital & the coping				boundaries, family & peer support,
strategies they use.				disconnection & evolving coping
				strategies.
McConnell et al.,	Clinical nurses $n = 8$,	Qualitative study using 12		The nurses state that the environment
2017, UK,	registered nurses $n = 3$,	semi-structured interviews		of the hospice is suitable for the
Exploring the	nurse assistants $n = 3$,	& a focus group		support staff & the mitigation of the
experiences of end-	head nurses $n = 1$.			demanding aspects of its role, which
of-life care team staff	Total n = 15 (judgement			includes support from colleagues /
in a pediatric hospice.	sampling).			organizational services & regular
	Single-center study.			continuous training in basic aspects of
				pediatric palliative care. Key
				recommendations for improving their
				experience include training in
				communication & knowledge sharing

				with other specialists in pediatric
				palliative care.
Nukpezah & al.,	Pediatric oncology nurses	Qualitative study using	 Pediatric oncology 	The challenges that pediatric oncology
2021, Ghana,	n = 14 (judgement	semi-structured interviews.	nurses.	nurses face are: time-consuming care,
Investigating the	sampling).		• Nurses with at least	poor work motivation, insufficient
challenges faced by	Single-center study.		2 years of experience.	logistical support, work stress, reduced
pediatric oncology				workforce, poor level of knowledge,
nurses in child care in				lack of teamwork & perception that
Ghana.				they are suffering from cancer.
Muskat & al., 2020,	Physicians $n = 8$, nurses	Qualitative study using	Health professionals	Experiences are about the balance
Canada,	n = 8, & social workers n	semi-structured interviews.	who often provided	between end of life & acute care, the
The investigation of	= 9. Total n = 25		end-of-life pediatric	impact of family relationships & career
the experiences of	(judgement sampling).		palliative care were	development opportunities. Personal
pediatric social	Single-center study.		included in the	impacts include a sense of privilege,
workers working			sample, while those	the impact on personal relationships,
with dying children			who occasionally	the physical & emotional cost of care
& their families in a			provided no.	& the impact on participants' views on
pediatric acute care				life.
hospital & the coping				
strategies they use.				
Sawin & al., 2019,	Managers of pediatric	Qualitative study		Perceptions concern the impact of
USA,	oncology nurses $n = 11$.	(empirical		initial experiences of grief & feelings,

A description of the	Multicenter study.	phenomenological) with 3		the constant vigilance, evaluation &
perceptions of		focus groups & semi-		optimization of family-centered care &
pediatric oncology		structured interviews		the promotion of a competent, thinking
nurse directors about				& supportive workforce.
end-of-life palliative				
care communication.				
Kaye & al., 2020,	Community nurses n =	Cross sectional study with	 Pediatric oncology 	Nurses' comfort in providing palliative
USA,	551 from 71 hospices	qualitative analysis (mixed	nurses providing	care to children was statistically
Identification of	Multicenter study.	study) using an electronic	palliative care	significantly correlated with previous
factors related to the		questionnaire	• >18 years old	experience of end-of-life pediatric
improved comfort of			• With formal	palliative care (P < 0.001), formal
community nurses,			education in pediatric	education in end-of-life palliative care
by providing			palliative care	(P < 0.001) & higher level of
pediatric palliative				hospitalization ($P = 0.01$) & individual
care in the hospital &				level of frequency of pediatric
in the community.				palliative care at the end of life (P $<$
				0.001). The clinical experience of end-
				of-life pediatric palliative care was the
				most important variable for comfort
				with total & end-of-life provision.
				Formal education was the most
				influential variable for comfort with th

				management of severe symptoms at the
				end of life.
Sisk & al., 2022,	Nurses $n = 10$, nurse	Qualitative study with 2-3	• Pediatric	The challenges mentioned are
USA,	assistants n = 18,	focus groups per specialty	oncologists who have	supporting parents' hopes, revealing all
The description of the	physicians $n = 17$,	of health professionals	dedicated >20% of	possible outcomes, building
challenges	psychologists $n = 3$,	(total of 10 focus groups)	their professional	relationships while maintaining
experienced by	social workers $n = 4$,	& use of semi-structured	effort to clinical work	personal boundaries, revealing
physicians &	other therapists $n = 3$,	interviews.	• Nurses, nurse	sensitive information & validating
psychosocial	priests $n = 3$, music		assistants &	parental beliefs or decisions. Some
professionals that	therapists $n = 1$ from 2		psychosocial	challenges represented conflicts
affect communication	hospitals.		professionals with >1	between different communication
in pediatric oncology.	Total n = 59 (judgement		year of clinical	objectives. Others represented
	sampling).		experience.	conflicts between one communication
	Multicenter study.			goal & another obligation.

Nurses n = 10, nurse	Qualitative study with 2-3	Pediatric	Six levels of communication barriers
assistants n = 18,	focus groups per specialty	oncologists who have	were identified by physicians:
physicians n = 17,	of health professionals	dedicated >20% of	individual, team, organization,
psychologists $n = 3$,	(total of 10 focus groups)	their professional	collaborating hospital, community &
social workers $n = 4$,	& use of semi-structured	effort to clinical work	policy. Several barriers were identified
other therapists $n = 3$,	interviews.	• Nurses, nurse	at each level. Some obstacles, such as
priests $n = 3$, music		assistants &	lack of comfort with difficult issues,
therapists $n = 1$ from 2		psychosocial	cultural differences, lack of a common
hospitals. Total $n = 59$		professionals with >1	group mental model & time pressure,
(judgement sampling).		year of clinical	manifested themselves similarly in
Multicenter study.		experience.	professions & institutions. Other
			obstacles, such as the need for
			boundaries, the fear or embarrassment
			of the family, the vague roles & the
			power & the excessive logistical
			demands, manifest themselves
			differently between professions.
	assistants $n = 18$, physicians $n = 17$, psychologists $n = 3$, social workers $n = 4$, other therapists $n = 3$, priests $n = 3$, music therapists $n = 1$ from 2 hospitals. Total $n = 59$ (judgement sampling).	assistants $n = 18$, physicians $n = 17$, psychologists $n = 3$, social workers $n = 4$, other therapists $n = 3$, priests $n = 3$, music therapists $n = 1$ from 2 hospitals. Total $n = 59$ (judgement sampling).focus groups per specialty of health professionals (total of 10 focus groups) & use of semi-structured interviews.	assistants $n = 18$, physicians $n = 17$, psychologists $n = 3$, social workers $n = 4$, other therapists $n = 3$, priests $n = 3$, music therapists $n = 1$ from 2 hospitals. Total $n = 59$ focus groups per specialty of health professionals dedicated >20% of their professional effort to clinical work effort to clinical work enter the effort to clinical work enter the effort to clinical work enter the effort to clinical work effort to clinical work enter the effort to clinical work enter to clinical work effort to clinical work enter to clinical enter to clinical enter to clinical enter to clinical enter to clinical

ICU: intensive care unit, PICU: pediatric intensive care unit, HDU: high dependency unit

Discussion

It has been argued by the results of other studies that pediatric palliative care requires the organized effort of an interdisciplinary care team of physicians, nurses, psychosocial staff and other health professionals (McConnell, Scott & Porter, 2016; Swinney et al., 2007). Several researchers have shown that the views of health professionals on pediatric palliative care are symptom control, self-care (Slater & Edwards, 2018), cultural issues (Atout, 2020), religious guidance (Plante & Cyr, 2011), spirituality and communication (Kearney et al., 2009).

Studies on the barriers health professionals face when providing pediatric palliative care have found that health professionals report uncertainty, insufficient knowledge, low selfesteem and experience in discussing end-oflife care with patients (Hendricks-Ferguson et al., 2015; Yoshida et al., 2014). Adequate training of nurses helps them feel comfortable with death and enables them to reflect on their feelings about end-of-life care (McConnell, Scott & Porter, 2016; D'Antonio, 2017).

Results from other studies suggest that the quality of communication between children with cancer and their families, when providing pediatric palliative care, is a reward and privilege for health professionals. Health professionals believe that rewards and privileges are the open and honest discussions about scheduling end-of-life care, preventing conflicts with patients and their families, exploring their future desires and developing trusting relationships (Bowden et al., 2015; Ranse Yates & Coyer, 2012; Gulati, Dix & Klassen, 2014). In several studies in which health professionals described their most difficult experiences with caring for a dying child, they referred more often to personal pain (McConnell, Scott & Porter, 2016) and inadequate support (McConnell, Scott & Porter, 2016; Contro et al., 2004). End-of-life child caregivers seek support from their peers, their relatives, the hospital, society, institutions and the state. Support is vital for the

development of resilience assisting and health professionals to remain in care settings for dying children (McConnell, Scott & Porter, 2016; Slater & Edwards, 2018).

Whether active or passive, health professionals report in other studies that they implement strategies that allow them to manage their emotions when providing care to children at various levels of health, including children with end-of-life cancer (Slater & Edwards, 2018; Kearney et al., 2009). Numerous studies have also shown that palliative care requires the implementation of strategies that allow health professionals to continue their roles, benefiting from information and support, planning, work organization and training guidance, to avoid tensions and burnout (Ekberg et al., 2015; Davis, Lind & Sorensen, 2013; Cavaye & Watts, 2012).

Our findings have some important implications for practice. The articles included are in English language and there may be studies in other languages that were not included in this study. Most of the studies concerned qualitative or mixed studies. The lack of quantitative studies with strong methodology in bibliography is obvious in order to show strong indications.

Conclusions: Health professionals recognize several barriers in providing pediatric palliative care and have developed several strategies to address them. Pediatric palliative care is seen as a reward/challenge for health professionals but there is a clear lack of education and insufficient organization of work and care, in order to provide it effectively.

References

- Atout, M. (2020). Experience of nurses who work with children with palliative care needs: A mixed-method systematic review. Palliat Support Care, 18(4), 473-485.
- Bergsträsser, E., Cignacco, E., Luck, P. (2017). Health care Professionals' Experiences and Needs When Delivering End-of-Life Care to Children: A Qualitative Study. Palliative Care, 10, 1-10.

- Bowden, M. J., Mukherjee, S., Williams, L. K., DeGraves, S., Jackson, M., McCarthy, M. C. (2015). Work-related stress and reward: an Australian study of multidisciplinary pediatric oncology healthcare providers. PsychoOncology, 24(11), 1432–1438.
- Bradford, N., Herbert, A., Mott, C., Armfield, N., Young, J., Smith, A. (2014). Components and principles of a pediatric palliative care consultation: results of a Delphi study. Journal of Palliative Medicine, 17(11), 1206–1213.
- Cappi, V., Riboni, S., Grana, M., Pierotti, E., Ravelli, A., Sutti, S., Testa, S., Spacci, A., Artioli, G., Sarli, L., Pallegatta, F. (2020). Health professionals' perception of appropriateness of care: a qualitative study in Italian pediatric hospices. Acta Biomed, 91(12-S), e2020013.
- Cavaye, J., Watts, J. H. (2012). End-of-life education in the pre-registration nursing curriculum: Patient, carer, nurse and student perspectives. Journal of Research in Nursing, 17(4), 317–326.
- Connor, S., Sisimayi, C., Downing, J., King, E., Lim Ah Ken, P., Yates, R., Marston, J. (2014). Assessment of the need for palliative care for children in South Africa. International Journal of Palliative Nursing, 20(3), 130–134.
- Contro, N. A., Larson, J., Scofield, S., Sourkes, B., Cohen, H. J. (2004). Hospital staff and family perspectives regarding quality of pediatric palliative care. Pediatrics, 114(5), 1248-52.
- D'Antonio, J. (2017). End-of-life nursing care and education: end-of-life nursing education: past and present. Journal of Christian Nursing, 34(1), 34-38.
- Davis, S., Lind, B. K., Sorensen, C. (2013). A comparison of burnout among oncology nurses working in adult and pediatric inpatient and outpatient settings. Oncology Nursing Forum, 40(4), E303–E311.
- Ekberg, S., Bradford, N., Herbert, A., Danby, S., Yates, P. (2015). Healthcare users' experiences of communicating with healthcare professionals about children who have life-limiting conditions: a qualitative systematic review protocol. JBI Database System Rev Implement Rep, 13(11), 33-42.
- Gulati, S., Dix, D., Klassen, A. (2014). Demands and rewards of working within multidisciplinary teams in pediatric oncology: the experiences of Canadian health care providers. The Qualitative Report, 19(18), 1-15.

- Hendricks-Ferguson, V. L., Sawin, K. J., Montgomery, K., Dupree, C., Phillips-Salimi, C. R., Carr, B., Haase, J. E. (2015). Novice nurses' experiences with palliative and end-oflife communication. Journal of Pediatric Oncology Nursing, 32(4), 240–252.
- Jack, B. A., Mitchell, T. K., O'Brien, M. R., Silverio, S. A., Knighting, K. (2018). A qualitative study of health care professionals' views and experiences of paediatric advance care planning. BMC Palliative Care, 17(1), 1-9.
- Kaye, E. C., Gattas, M., Kiefer, A., Reynolds, J., Zalud, K., Li, C., Baker, J. N. (2020). Investigation of modifiable variables to increase hospice nurse comfort with care provision to children and families in the community: a population-level study across Tennessee, Mississippi, and Arkansas. Journal of Pain and Symptom Management, 60(6), 1144-1153.
- Kearney, M. K., Weininger, R. B., Vachon, M. L., Harrison, R. L., Mount, B. M. (2009). Self-care of physicians caring for patients at the end of life: "Being connected... a key to my survival". JAMA, 301(11), 1155–E1.
- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: explanation and elaboration. BMJ, 339, b2700.
- Marston, J., Boucher, S., Downing, J. (2018). International Children's Palliative Care Network: A Global Action Network for Children with Life-Limiting Conditions. Journal of Pain and Symptom Management, 55(2S), S104–S111.
- McConnell, T., Porter, S. (2017). The experience of providing end of life care at a children's hospice: a qualitative study. BMC Palliat Care, 16(1), 15.
- McConnell, T., Scott, D., Porter, S. (2016). Healthcare staff's experience in providing endof-life care to children: A mixed-method review. Palliat Med, 30(10), 905-919.
- Montgomery, K. E., Sawin, K. J., Hendricks-Ferguson, V. (2017). Communication during palliative care and end of life: Perceptions of experienced pediatric oncology nurses. Cancer Nursing, 40(2), E47–E57.
- Muskat, B., Brownstone, D., Greenblatt, A. (2017). The experiences of pediatric social workers

providing end of life care. Soc Work Health Care, 56(6), 505-523.

- Muskat, B., Greenblatt, A., Anthony, S., Beaune, L., Hubley, P., Newman, C., Brownstone, D., Rapoport, A. (2020). The experiences of physicians, nurses, and social workers providing end-of-life care in a pediatric acute-care hospital. Death Stud, 44(2), 105-116.
- Nukpezah, R. N., Khoshnavay Fomani, F., Hasanpour, M., Nasrabadi, A. N. (2021). A qualitative study of Ghanaian pediatric oncology nurses' care practice challenges. BMC Nursing, 20(1), 1-10.
- Papadatou, D., Bellali, T., Papazoglou, I., Petraki, D. (2002). Greek nurse and physician grief as a result of caring for children dying of cancer. Pediatric Nursing, 28(4), 345–353.
- Plante, J., Cyr, C. (2011). Health care professionals' grief after the death of a child. Paediatr Child Health, 16(4), 213-6.
- Price, D. M., Strodtman, L., Montagnini, M., Smith, H. M., Miller, J., Zybert, J., Oldfield, J., Policht, T., & Ghosh, B. (2017). Palliative and end-oflife care education needs of Nurses across inpatient care settings. Journal of Continuing Education in Nursing, 48(7), 329–336.
- Ranse, K., Yates, P., Coyer, F. (2012). End-of-life care in the intensive care setting: A descriptive exploratory qualitative study of nurses' beliefs and practices. Australian Critical Care, 25(1), 4– 12.
- Sawin, K. J., Montgomery, K. E., Dupree, C. Y., Haase, J. E., Phillips, C. R., Hendricks-Ferguson, V. L. (2019). Oncology Nurse Managers' Perceptions of Palliative Care and End-of-Life Communication. Journal of pediatric oncology nursing: official journal of the Association of Pediatric Oncology Nurses, 36(3), 178–190.
- Sisk, B. A., Friedrich, A. B., Kaye, E. C., Baker, J. N., Mack, J. W., DuBois, J. M. (2021). Multilevel barriers to communication in pediatric oncology: Clinicians' perspectives. Cancer, 127(12), 2130-2138.

- Sisk, B. A., Schulz, G., Kaye, E. C., Baker, J. N., Mack, J. W., DuBois, J. M. (2022). Conflicting goals and obligations: Tensions affecting communication in pediatric oncology. Patient Education and Counseling, 105(1), 56-61.
- Slater, P. J., Edwards, R. M. (2018). Needs analysis of a staff well-being program in a pediatric oncology, hematology, and palliative care services group. Journal of Healthcare Leadership, 10, 55-65.
- Swinney, R., Yin, L., Lee, A., Rubin, D., Anderson, C. (2007). The role of support staff in pediatric palliative care: their perceptions, training, and available resources. J Palliat Care, 23(1), 44-50.
- Taylor, J., Aldridge, J. (2017). Exploring the rewards and challenges of paediatric palliative care work a qualitative study of a multidisciplinary children's hospice care team. BMC Palliat Care, 16(1), 73.
- Taylor, M. R., Barton, K. S., Kingsley, J. M., Heunis, J., Rosenberg, A. R. (2020). Defining a "Good Death" in Pediatric Oncology: A Mixed Methods Study of Healthcare Providers. Children (Basel, Switzerland), 7(8), 86.
- Thieleman, K. J., Wallace, C., Cimino, A. N., Rueda, H. A. (2016). Exhaust All Measures: Ethical Issues in Pediatric End-of-Life Care. J Soc Work End Life Palliat Care, 12(3), 289-306.
- World Health Organization. (2018). Integrating palliative care and symptom relief into paediatrics: a WHO guide for health care planners, implementers and managers. Geneva.
- Yoshida, S., Shimizu, K., Kobayashi, M., Inoguchi, H., Oshima, Y., Dotani, C., Nakahara, R., Takahashi, T., Kato, M. (2014). Barriers of healthcare providers against end-of-life discussions with pediatric cancer patients. Japanese Journal of Clinical Oncology, 44(8), 729–735.