

Coping Mechanisms of Nurses Facing the Death of Pediatric Patients

A Literature Review

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<p>Abstract</p> <p>In 2015, 5.9 million children died worldwide. Although nurses face the death of both young and old patients regularly, the death of a pediatric patient is often perceived unfair and unexpected. Nurses struggle to deal with the death of a child patient, as it has physical, psychological, emotional and behavioral impacts on them. Additionally, this may have a negative impact on the outcomes of care. Yet, little research exists on the coping mechanisms of nurses.</p> <p>The aim of this study was to explore nurses' coping mechanisms when facing the death of a pediatric patient. The purpose was to provide information on how to encounter the death of a child patient and learn to acknowledge the idea of it. This was intended to provide information that could be used in educating future nurses and nurses working in various fields.</p> <p>The study was implemented as a literature review. The data was searched using the following two databases: Cinahl and JYKDOK. Overall, eleven articles were chosen to be reviewed. Content analysis was applied in the analysis of the data.</p> <p>Three main categories were generated: social support, institutional support and personal coping strategies. The applicability of these results might vary according to the individual and the nursing settings. Therefore, the results indicated the need for further research to determine what kinds of coping mechanisms would be best applicable for each particular nursing setting.</p>		
Keywords (subjects) nurse, pediatrics, child death, coping mechanism		
Miscellaneous		

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1 Introduction

Modern medicine aims to treat and cure, however, care of the dying and bereaved also remains as a role of health care professionals (Reynolds 2006). According to the World Health Organization's (WHO) Global Health Observatory (GHO) data (2017), 5.9 million children died in 2015, most of which happened in the WHO Africa region. In the European region, 11 children died out of every 1000 live births in 2015 (WHO 2017). Based on these statistics it can be deduced that a child dying in industrialized countries is uncommon. Nevertheless, when this rare phenomenon occurs it is normally at the hospital after the child has received complex, and often long-term, medical care aimed at curing or controlling a serious disease (Docherty, Miles & Brandon 2007; Papadatou 1997).

A child's death, in general, is perceived unfair and unexpected (Furingsten, Sjörgen & Forsner 2015). Compared to other health care professionals, nurses spend more time with the patients, especially if a patient's hospital stay is prolonged (Wilson & Kirshbaum 2011). Hence, taking care of patients who are dying, and simultaneously supporting their family, can be stressful and tasking for nurses. Furthermore, the anxiety and uneasiness of death can make nurses less comfortable when providing such care (Peters, Cant, Payne, O'Connor, McDermott, Hood, Morphet & Shimoinaba 2013). Therefore, nurses involved in the care of dying children experience various challenges and obstacles. (Furingsten, Sjörgen & Forsner 2015.) Due to death being a regular occurrence in a nurse's life, various coping mechanisms are essential, and the ability to cope when encountering death is a vital skill to have. Moreover, inability to cope with the death of a child has been proven to cause harm to the working abilities of nurses. (Peters et al. 2013.)

This research aims to explore the coping mechanisms of nurses when facing the death of a pediatric patient. The purpose of this research is to provide information

on how to encounter the death of a child patient and learn to acknowledge the idea of it.

2 Child mortality

2.1 Child mortality rates

The United Nation's Convention on the rights of the child defines a child as a person under 18 years old (YK 1989). Based on their age, children can be divided into different developmental groups as follows. Logically, as the first 28-day-period of a child's life is referred to as the neonatal period, children aged less than 28 days are referred to as neonates. Predominantly, during the first year of life, children are described as infants. Thereafter, they're toddlers up until the age of three years, and preschoolers at the age of three to six years. Children from 7 to 12 years of age are defined school aged, and finally, adolescents from 12 to 18 years of age. (Storvik-Sydänmaa, Talvensaari, Kaisvuori & Uotila 2012, 11.)

According to WHO (2016) globally, 5.9 million children died before reaching the age of 5 in 2015. The number is equivalent to about 16 000 fatalities every day. Although under-five mortality rates are decreasing globally, the rates remain remarkably unbalanced between high- and low-income countries. The sub-Saharan Africa is battling the highest risk for under-five mortality, the risk being about 14 times higher than in the developed, high-income regions (WHO 2016). Looking at the bigger picture, in high-income countries 7 out of 10 deaths are among 70-year-olds and older, with only 1 out of every 100 deaths among children under 15 years. In comparison, in low-income countries nearly 4 in every 10 deaths are among children under 15 years, and only 2 in every 10 among people aged 70 and older. (WHO n.d..)

Due to socioeconomic development and implementation of various interventions for the survival of the children (Black, Cousens, Johnson, Lawn, Rudan, Bassani, Jha, Campbell, Fischer Walker, Cibulskis, Eisele, Liu & Mathers 2010), child mortality rates in the African region have also decreased notably within the last 10 years (Ashorn 2016). Even though this positive change has been seen in the developing countries, there are still countries that haven't changed. The three principle factors essential for children's health are shelter, food and potable water. Nevertheless, these basic requirements are not fulfilled as well in the low-income countries as in the high-income countries. The absence of even one of these factors can endanger the health of a child. Without shelter, children are exposed to all kinds of environmental hazards such as cold, radiation, infections and, within war zones, even explosives. It is believed that about 200 million children, under the age of 5, live starving and without enough sources for clean water, thus predisposed to various medical conditions. (Ashorn 2016.)

2.2 Major causes of child mortality

A child's risk of dying is highest during the first 28 days of life, also known as the neonatal period. Furthermore, 45 percent of deaths under the age of 5 years occur within the neonatal period. Most of the neonatal deaths are due to prematurity, complications during birth or infections. The leading causes of death among children aged more than 28 days but less than 5 years are pneumonia, diarrhea and malaria. (WHO 2016.) Additionally, nearly half of all under-five deaths are consequent to undernutrition. Thus, most child deaths are subsequent to conditions that are either preventable or treatable. Statistics of the major causes of under-five fatalities in 2015 are presented in figure 1. (Levels and trends in child mortality 2015, 8.)

The risk of dying before reaching the age of five remains highest in the sub-Saharan Africa (WHO 2016). Nevertheless, in the European region under-five mortality is also due to preventable causes like pneumonia and diarrhea. In addition, there are warning signs of the recurrence of diseases such as diphtheria and tuberculosis. Non-communicable diseases, such as asthma, as well as morbidity from substance abuse are also increasing. (WHO/Europe n.d.) Looking at specific countries such as Finland, the leading causes of death among children under 1-year-olds are certain perinatal conditions, congenital malformations and chromosomal abnormalities. Among 1-4-year-olds the most common causes are accidents, tumors and infectious diseases, while at the age of 5-14 accidents and tumors. (Tapanainen & Rajantie 2016.)

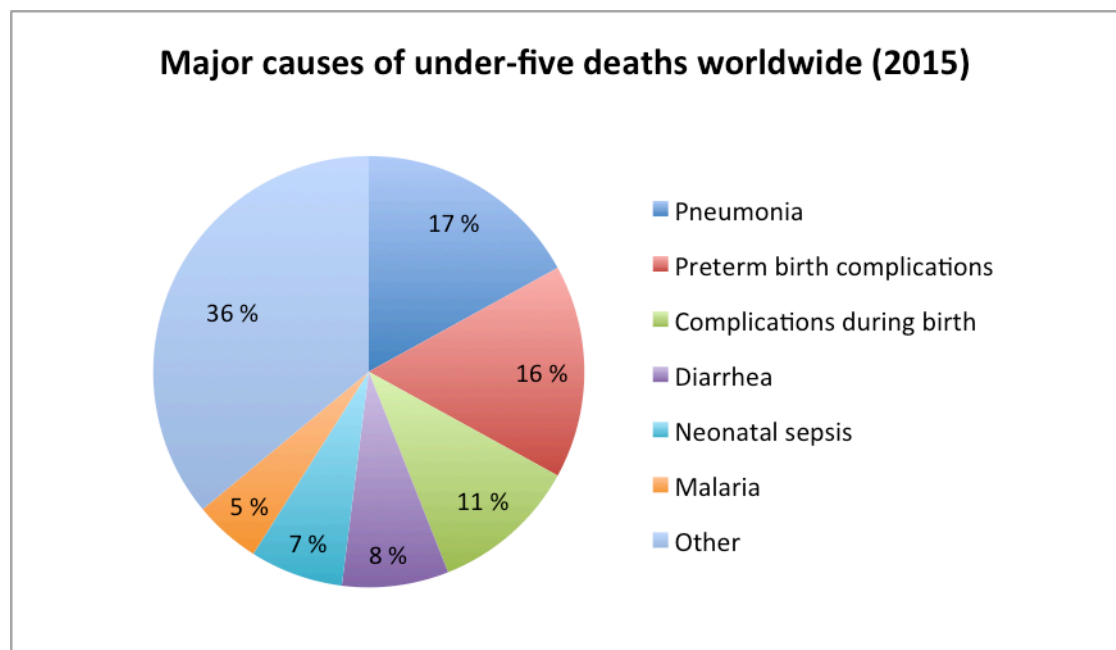


Figure 1. Major causes of under-five deaths worldwide (2015)

3 Pediatric nursing

3.1 Challenges in pediatric nursing

A pediatric nurse is a nurse who is involved in the health care of a child from infancy through adolescence. Pediatric nurses have an overall goal of providing optimal healthcare to their clients while taking into account the role families play in their client's wellbeing (Kyle 2008, Linnard-Palmer & Coats 2016, 283.) Pediatric nurses are present in all the three major levels of health care. In the primary level, they can provide care in places like health care centers, schools and even daycare centers. In the secondary level, pediatric nurses can be found providing care in pediatric intensive units, surgical units, and emergency departments. Lastly, in tertiary centers they can be found in rehabilitation centers, end of life care and home care agencies (Linnard-Palmer & Coats 2016, 284.) Although different types of nurses in all levels of care might have various roles and responsibilities, when caring for a child, all of them must ensure that communication is based on the child's age and development level (Kyle 2008).

Communication

Communication is the most common procedure in nursing. It is intimate because of the very private issues, such as hopes, fears, mental disorders and terminal illnesses, discussed. It is the foundation of therapeutic relationships between nurses and their clients. (Levetown 2008.) Despite communication being a critical component of care, it often faces challenges especially in pediatric care which requires considering the client's family as part of the holistic care (Blackstone & Pressman 2011). Another challenge is communicating with the child patient as consideration is required on cultural, ethical, relational and developmental levels (Levetown 2008). Perhaps the most challenging part of communication in pediatric nursing is when 'bad news' have to be given to a patient. Discussing the need to take medication for the rest of one's life for a chronic condition, an unanticipated blood test for a needle phobic child, or talking about hospice and palliative care for a child may feel uncomfortable to a nurse, resulting to emotional distress (Berlinger, Barfield & Fleischman 2013).

Emotional labor

Maunder (2008) as well as Bailey, Murphy and Porock (2011), refer to Hochschild's (1983) definition of emotional labor as the ability to display one's way of working in a way that makes others feel cared for, by managing one's own feelings and emotions. Nurses do this by making their clients feel safe, comfortable and by being available for them. However, it is of no doubt that nurses experience emotional stress when putting up this professional wall, especially if they take care of a child for many years as in the case of pediatric palliative care. (Maunder 2008.) This emotional stress may be accompanied by burnout and attrition if a nurse uses one of the two strategies used to perform emotional labor, called surface acting. Surface acting involves display of fake organizationally desired emotions, whereas deep acting involves modification of one's real emotions to align with emotional display rules. (Golfenshtein & Drach- Zahavy 2014.)

Grief

It is not uncommon for pediatric nurses to form a special bond when caring for their patients and their families. It is this unique caring role that can expose a pediatric nurse to frequent and intense experiences with unresolved loss and grief when their patients die (Adwan 2014). Grief is understood as the emotional state of intense sadness resulting from a reaction to a loss in its totality (Hall 2011). Due to the correlation between grief and burnout, nurses tend to experience both emotional and physical chronic exhaustion, depersonalization, and reduced personal accomplishment. If this grief is not well addressed, it may lead to feelings of depression, hesitation to engage or overinvestment with new patients, preoccupation with death and even resignation from work. Considering the demands of providing patient care,

there is less time for nurses to work through their own grief, and thus they tend to adapt inadequate coping strategies. (Shinbara 2009, 17-19.)

3.2 Nurses' experiences facing death of children

Few studies exist on the experiences of nurses caring for dying children. One interesting article that stands out is by Papadatou, Martinson and Chung (2001) where they compare pediatric hospice nurses' experiences in two different countries. Another study by Docherty, Miles and Brandon (2007) focuses on nurses' experiences when the 'dying point', where curative care ends and palliative care begins, is reached.

Due to children dying being against the order of nature, nurses are more affected by the death of children, even if massive efforts and heroic measures have been taken to save their lives (Morgan 2009). With the death of a child, the feelings of failure on the part of healthcare professionals are perceived in three parts. The providers of care feel they have failed the child because they could not save his life, and feel they have failed in their social role as adults to protect the child from harm. Lastly, they feel they have betrayed the parents who trusted them with the most valuable being in their life. (ibid.)

According to Dunn, Otten & Stephens (2005), issues that affect nurses' attitudes towards caring for dying patients depends on their personal experiences (age, race, religion, attitudes towards death), past experiences (level of education, death training) and professional experiences (months of nursing experience, percentage of time spent in contact with terminally ill or dying patients). More experienced and competent nurses have coping strategies, intuitive awareness, and the ability to provide

holistic care to their dying patients whereas nurses beginning their careers still rely on a set of given rules and guidelines to provide care (ibid).

Feelings of fear and aversion are common among nurses. They feel helpless and unable to provide good quality care, when they are incapable to alleviate children's emotional and physical pain and suffering as well as the parents' fear and distress. They grieve over the suffering experienced by parents and over the loss of their personal goals and expectations in relation to the child's care. (Papadatou et al. 2001.) Alongside fear and grief, nurses can also feel anger intertwined with guilt and blame of self and others, especially if the manner in which a child dies is considered to be senseless or preventable. They blame themselves for not speaking up, for not doing what they could have done, for missing something or for doing something wrong. (Clements & Bradley 2005; McDevitt 2003; Rashotte, Bourbonnais & Chamberlain 1997.)

After the death of a pediatric patient, nurses commonly feel intense sorrow because they tend to form an emotional attachment with the child and the family (Durall 2011). Dissonance, which is the contradiction between nurses' beliefs or expectations to the reality surrounding a child's death, greatly intensifies the nurse's sorrow as well as the duration of grief (Alligood 2013, 201; Rashotte, Bourbonnais & Chamberlain 1997).

Death related activities like cleaning the body and transporting it to the morgue are part of a nurse's job. Nurses find it immensely difficult to leave the child in a cold barren environment, furthermore organization's procedures on caring for the deceased's body requires nurses to face the finality of the child's death before they are emotionally ready to do so. Because of this, nurses are forced by the reality of their situation to perform tasks they are not ready for.

"But the worst, the worst feeling, [pause] I had was when I brought him to the morgue [shudders]. We went into the morgue where they put the bodies, and there

was nobody in there, and it was cold. It was, [pause] horrific. Like I, I put [child's name] down, and I gave him a great big hug, and a big kiss [crying], and he was going to be alone in there, [pause] all night [sniffles]. And there was no more respect, there was no more love, there was no more feeling ... It was ruthless. I don't know if that's a good word to use, but [sigh]. It was bad.” (Rashotte, Bourbonnais & Chamberlain 1997.)

Nevertheless, some nurses feel significantly rewarded by their work. They gain deep satisfaction from their contribution in the care, as they perceive the work to be both very difficult and meaningful. Many of the nurses describe their role to be “unique or special”. (Papadatou et al. 2001.)

3.3 Coping mechanisms

The term coping comprehends all the efforts that a person does to manage, accept or reduce the internal and external demands and stressors that are perceived taxing, stressing or even threatening (Beh & Loo 2012). Furthermore, coping is the capacity to respond and recover from burdensome and stressful events. Coping mechanisms, therefore, are the remedial actions taken by a person whose survival is endangered. Coping strategies differ by a person's attitudes, region, community, gender, social group, age, religion, family and different seasons. (WHO/EHA, 1999.) Additionally, the level of experience, and the unit a nurse works in also affect the coping mechanisms (Wah Mak, Chiang & Chui 2013).

In health care settings, nurses are the ones who develop more personal relationships with their patients due to frequent and close contact when providing care (Peterson, Johnson, Halvorsen, Apmann, Chang, Kershek, Scherr, Ogi & Pincon 2010; Wilson & Kirshbaum 2011). Facing death can be a highly stressful, intense and challenging situation for nurses (Wah Mak et al. 2013) leading to various physical, cognitive, behav-

ioral, spiritual and emotional reactions. Coping mechanisms are essential for managing with the nursing profession. (Wilson & Kirshbaum 2011.)

Previous studies concerning coping mechanisms or strategies in nursing concern only adult deaths. Moreover, most studies focus on factors such as work related stress, burnout and PTSD (Hinderer, VonRuered, Friedmann, McQuillan, Gilmore, Kramer & Murray 2014; Chipas, Cordrey, Floyd, Grubbs, Miller & Tyre 2012). The study settings are mostly focused on hospice or palliative care (Chi Ho Chan, Fong, Lok Y Wong, Man Wah Tse, Shing Lau & Ngor Chan 2016; Desbiens & Fillion 2007) and critical environments (Wah Mak, Chiang & Chui, 2013; Shariff, Olson, Santos Salas & Cranley 2017). Furthermore, even within the field of pediatric nursing, commonly met points of view are those of a patient's family, mostly parents'. The family's coping with the death of a child, and the ways nurses are supporting the family are also frequent subjects of research. (Abib El Halal, Piva, Lago, El Halal, Cabral, Nilson & Garcia 2013.) Hence, research concerning nurses' coping mechanisms when dealing with child death is lacking.

4 Aim, purpose & research question

The aim of this study is to explore the coping mechanisms of nurses when facing the death of a pediatric patient. The purpose of this study is to provide information on how to encounter the death of a child patient and learn to acknowledge the idea of it. This information could be used to educate future nurses and nurses working in various fields.

Research question:

- What kinds of coping mechanisms are available for nurses when facing the death of a pediatric patient?

5 Methods and implementation of the study

5.1 Literature review

A review of literature is a written document presented in a logically argued manner leading to a comprehensive understanding of the current state of knowledge about a particular topic of study. It involves interpreting a selection of documents from various sources, both published and unpublished, with the aim of answering research questions (Williams & Vogt 2011, 184) and providing a sound base on which new research ideas can be founded. (Oliver 2012, 1.)

This method was chosen for this review to develop insights on the coping mechanisms of pediatric nurses when their clients die. The decision to not limit this study to a particular country allows for the results of the research to be used in evidenced based practice universally. This also provides the readers of this study a larger body of analyzed research in one text (Aveyard 2007, 4).

An evidence based literature review should be done in a systematic explicit manner with a reproducible method for identifying, evaluating and synthesizing existing work produced by previous researches (Fink 2010, 3). Unlike the narrative review that is likely to be influenced by a researcher's interest (Saks & Allsop 2007, 34; Bettany-Saltikov 2012, 9), a systematic review requires a rigorous research methodology with limited bias in all aspects of the review (Bettany-Saltikov 2012, 5-9). A systematic review calls for a stringent meta-analysis of data and requires researchers to include details of both used and not used studies that stay relevant with the research questions (Gaerish & Lathlean 2015).

As outlined by Machi and McEvoy (2012), the process of a literature review consists of six basic steps. First, selection of a topic, followed by searching the literature, then developing an argument, and surveying the literature. Critiquing the literature comes next and finally, writing the review. As the first step, a subject that originated from the interests of the researchers was formulated into a topic of research. As the second step, the literature was searched by managing data, scanning and skimming literature, mapping material and creating subject memoranda that lead to refining the research topic.

The third step, developing an argument, included building the case for the literature review by understanding claims, building evidence and logically connecting evidence and claim. Thus, multiple claim arguments were formed to be used in writing the review. The fourth step consisted of implicative reasoning, formulating argument patterns and backing the arguments in order to avoid fallacies. Finally, the last step, writing the review, involved two principles of writing: to understand and to be understood. (4-159.)

5.2 Literature search

The literature search was conducted during late February and early March 2017, after defining the research question, search terms and the inclusion and exclusion criteria. The literature was reviewed by three individual researchers to minimize bias. The process of selecting the relevant studies for a review consists of two phases (Betany-Saltikov 2012, 84). Accordingly, the search results were first processed based on title and abstract to exclude irrelevant results. In the second phase, full texts of the results passing the first phase were read to further determine whether the inclusion criteria was met. Figure 2 demonstrates the inclusion criteria for this literature review. The inclusion criteria was selected in order to find current, relevant and high

quality research material. The results not fulfilling the inclusion criteria were automatically excluded.

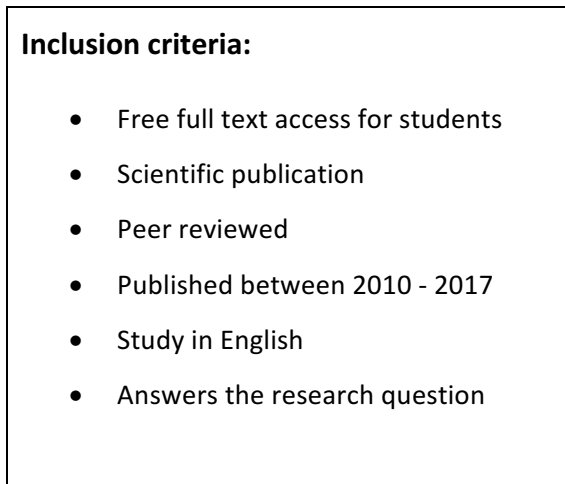


Figure 2. Inclusion criteria

The data for the literature review was gathered using the following two databases: Cinahl and JYKDOK. The search terms used were pediatrics AND death AND nurse, and coping AND child death AND nurses. Boolean search was used. Two options of search words were chosen and applied in order to gain more results within the different databases. Both options of search terms were used to conduct a search in each database. Based on the search, a total of 11 articles were chosen to be reviewed. Duplicates were excluded from the final number of articles. Table 1 demonstrates the data search. A table of all the reviewed articles can be found in Appendix 1.

Table 1. Data search (duplicates excluded)

Database	Search terms	Results	Chosen based on the title and abstract	Relevant studies
Cinahl	pediatrics AND death AND nurse	41	9	7
Cinahl	coping AND child death AND nurses	6	2	0
JYKDOK	pediatrics AND death AND nurse	34	4	0
JYKDOK	coping AND child death AND nurses	122	6	4

5.3 Data analysis

The purpose of data analysis is to bring together the findings provided by the articles reviewed and thus produce an interpretation that is more substantive than those resulting from individual articles (Aveyard 2010, 124). Content analysis is commonly used in nursing studies either in the form of inductive or deductive analysis. Moreover, content analysis is an option for qualitative approaches when providing evidence concerning sensitive topics. Inductive content analysis can be used when no previous studies about the phenomenon in hand exist, or when it's fragmented. (Elo & Kyngäs 2008, 107, 114.) Therefore, an inductive content analysis method was chosen and followed to conduct the data analysis for this research.

An inductive content analysis was conducted following the three main phases: reduction, clustering and abstraction. (Tuomi & Sarajärvi 2009, 108). It was further divided into three systematic phases: open coding, creating categories and abstraction. Open coding involved highlighting the main findings within the articles reviewed, and coding them according to the content. (Elo & Kyngäs 2008, 109-111; Tuomi & Sarajärvi 2009, 109.) The codes were words that summarized the main points of each particular finding (Aveyard 2010, 129-130). In the second phase, similar codes were clustered together to form sub-categories and furthermore main categories. Finally, in the abstraction phase the categories were further synthesized and named using content-characteristic words (Elo & Kyngäs 2008, 111), therefore forming theoretical concepts and conclusions (Tuomi & Sarajärvi 2009, 111). The data analysis process is demonstrated in figure 3.

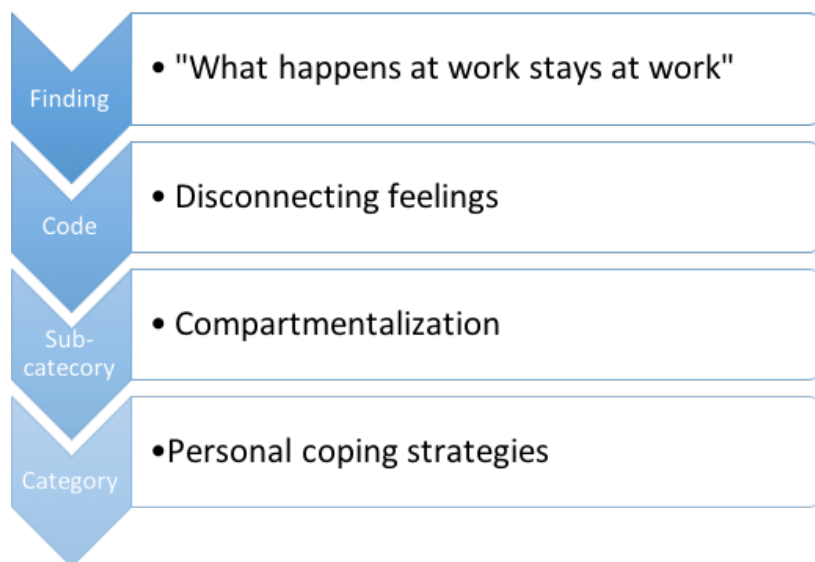


Figure 3. Example of data analysis process

6 Results

The results are further presented within three main categories: social support, institutional support and personal coping strategies. Figure 4 illustrates the main categories and their subcategories. The results are further explained in the text.

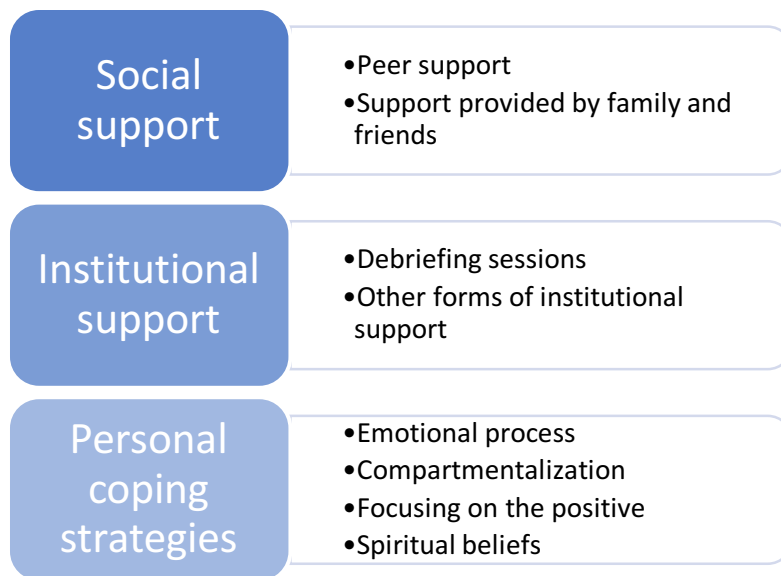


Figure 4. Categories and subcategories

6.1 Social support

Peer support

The opportunity to share experiences, feelings and hardships with colleagues is considered crucial for nurses facing the death of pediatric patients (Cook, Mott, Lawrence, Jablonski, Grady, Norton, Liner, Cioffi, Hickey, Reidy & Connor 2012, 18; Kellogg, Parker & McCune 2014, 298). Moreover, this form of social support, referred to as peer support, is one of the most common coping strategies applied by nurses involved in the care of dying children (Forster & Hafiz 2015, 295; Maloney 2012, 112; Reid 2013, 33). Discussing experiences with colleagues is helpful when facing sudden

overwhelming emotions, and during the process of grieving the losses (Cholette & Gephart 2012, 17; Kellogg et al. 2014, 298; Pardoe 2011, 27).

Peer support allows pediatric nurses to, informally, share their experiences, and furthermore express their feelings related to particular cases involving child death (Kellogg et al. 2014, 298; Maloney 2012, 112; Reid 2013, 33). Colleagues are seen as a valuable source of support due to their unique ability to relate to the experiences. Furthermore, peers are perceived to have gone through the same things, to be familiar with the environment and to 'be in it with you'. (Cook et al. 2012, 18; Forster & Hafiz 2015, 295; Kellogg et al. 2014, 300; Stayer & Lockhart 2016, 354.) The study by Reid (2013, 33) suggests that colleagues are helpful in "*figuring things out*", whereas Stayer and Lockhart (2016, 354) identify situations where "*colleagues try to cheer you up*". Additionally, Kellogg et al. (2014, 300) introduce a physical form of collegial support: "*some people will fall apart -- they are a sobbing mess, and somebody goes in there to hug them and talk to them*".

As a result of the sense of shared experience, the comfort gained from peer support is seen to have the means to provide the affected, grieving nurses with positive validation, closure, sense of purpose, enhanced self-confidence and thus the ability to continue working in their units (Forster & Hafiz 2015, 296; Stayer & Lockhart 2016, 354). Finally, this form of social support can lessen work-related stress (Maloney 2012, 112) and as described by Ångström-Brännström, Dahlqvist, Strandberg and Norberg (2014, 7), the positive effect can also be seen helpful in being present for the dying child and the family. In spite of the various positive effects found, Forster and Hafiz (2015, 295-296) explain that a possible negative impact of peer support is that the distress rather exacerbates as a result.

Support provided by family and friends

Few of the studies reviewed describe that some nurses find comfort in their families when caring for a dying child (Forster & Hafiz 2015, 297; Kellogg, Barker & McCune 2014, 300; Pardoe 2011, 28; Stayer & Lockhart 2016, 354). Although not encountered in the review as often as peer support, some nurses also seek social support, and furthermore comfort, by confiding in their partners. This form of social support is described for example as debriefing with supportive partners, talking to spouses about bad cases and having one's family members there to listen and talk with. (Forster & Hafiz 2015, 297, 300; Kellogg et al. 2014, 300; Stayer & Lockhart 2016, 354.) A spouse's experience from similar settings and thus ability to relate can also be found useful (Kellogg et al. 2014, 300).

Furthermore, the study by Kellogg et al. (2014, 300) also specifies children as a source of comfort as follows: "*the first thing I want to do [after a case of patient death] is climb into bed and hug my own child*". Finally, one of the articles reviewed also gives insight into harnessing support by talking with one's friends (Pardoe 2011, 28). Although family can be considered as a tool for coping, nurses' professional confidentiality remains an issue with this type of social support (Forster and Hafiz 2015, 297).

6.2 Institutional support

Debriefing sessions

One institutional resource, created by a pediatric palliative care program (Harriet Lane Compassionate Care) in Johns Hopkins Children's Center, is the bereavement debriefing session, which aims to provide emotional support, increase the ability to manage one's grief and find meaning when caring for children with life-threatening conditions. These voluntary debriefing sessions are offered for all health care providers after each patient death, and can be held within a week after the incident in a private setting. The purpose of these sessions is to compare and share different

health care providers' emotions, experiences and responses to death and, furthermore, coping methods. Ultimately, these debriefing sessions lead to providing support and sharing wisdom from more experienced colleagues to the newer ones. (Keene, Hutton, Hall & Rushton 2010, 185-186.)

Another quite similar, structured process is Critical Incident Stress Debriefing (CISD), which was specifically designed for the health care professionals encountering traumatizing events and emergencies (Maloney 2012, 111). CISD can be applied after various kinds of events, not only those dealing with a patient death (Keene et al. 2010, 185). Therefore, this debriefing method supports dealing with the physical and psychological symptoms evoked by a traumatic incident (Maloney 2012, 111). The timing for CISD should be within hours after the incident, and located near to the site of the trauma incident. Thus, compared to Bereavement Debriefing sessions, the CISD sessions are more acute. CISD is considered a review of the incidents before, during and after the crisis. It allows the health care professionals to process and reflect the incident, and furthermore allows to ventilate thoughts and emotions associated with the traumatizing event, thus supporting the healing process of the staff. (ibid, 110-111.)

Other forms of institutional support

Some institutions offer mentoring programs, where a newly graduated nurse is matched with an experienced nurse for support and learning coping mechanisms (Maloney 2012, 111). Additionally, other mentoring programs, peer or team support meetings and clinical supervision are mentioned (Maloney 2012, 112-113; Pardoe 2011, 28). A study by Cook, Mott, Lawrence, Jablonski, Grady, Norton, Liner, Cioffi, Hickey, Reidy and Connor (2012) introduces the Pediatric Advanced Care Team (PACT) as a major form of support in the pediatric setting, when dealing with dying children and their families. The team assists both the families and the professionals. PACT is composed of a nurse practitioner, physicians, a social worker and a coordina-

tor, who have all received additional training for palliative and end-of-life care. PACT facilitates discussions about death, and assists the healthcare team with decision-making and exploring treatment options and goals. Moreover, PACT provides a guide to quality and meaningful end-of-life care and assessing proper pain and symptom management for the child. As a result, many nurses express feelings of relief and diminishment of pressure in care, because of the presence and support of the PACT. (18.)

Finally, an issue that is pointed out as lacking in many systems is education. Nevertheless, some of the articles also discuss education provided for health care professionals. Palliative care education (Keenan & Mac Dermott 2016, 22; Keene, Hutton, Hall & Rushton 2010, 186), forums and conferences for clinical support and rituals for remembrance (Keene et al. 2010, 186), are mentioned as educational resources. Psychological support as well as sessions with the hospital's psychologist are also sources for supporting nurses coping (Pardoe 2011, 28).

Some institutions also provide different kinds of relaxation methods, such as tranquility rooms, therapies (aromatherapy) and massage chairs. Some arrangements requested by nurses themselves, such as reflexology and other type of therapies are also mentioned in the reviewed articles. (Forster & Hafiz 2015, 297; Maloney 2012, 112). Nevertheless, working intensively with families and their dying children has a high influence on some of the professionals, leading to the need of sick leave. This personal coping strategy provided by the institution is vital for some health care professionals. (Forster & Hafiz 2015, 297.)

6.3 Personal coping strategies

Emotional process

The need to take care of oneself is expressed by many nurses. Some nurses do this by exercising after experiencing a loss of their patients, some by relaxing, eating well and basically pampering themselves. (Kellogg et al. 2014, 300; Pardoe 2011, 29.) Knowing that they have done all they could for their patients and having had established a trustful relationship with the child and their family also helps nurses to personally cope with the death of their clients. In the case that this trust is established throughout the course of treatment the nurse feels comforted because she knows that her care has made a difference and she has helped alleviate the child's pain. (Ångström-Brännström et al. 2014, 6.)

Acknowledgement of loss while expressing grief and sorrow is used by nurses to cope with the death of their child patients. Accepting that death is part of a nurse's life allows nurses to face the reality and move on to caring for new patients. (Cholette & Gephart 2012, 298.) Some nurses express their sorrow openly by crying when they lose a child patient, and some even cry with the bereaved families (Kellogg et al. 2014, 299). It is noted by Kellogg et al. (2014) that although nurses are prepared to deal with families during illnesses and loss, their release of emotions when they lose a child patient is minimal and this may lead to frustration and career fatigue. For this reason, nurses should have the ability to manage their grief to avoid negative implications on their professional practice (298).

Compartmentalization

Compartmentalization is done to maintain an outward professional demeanor and to continue caring for the bereaved families. It involves setting one's feelings aside in order to go on with the job, but then working on those feelings later. Nurses feel that this coping skill affords them time to work through their emotions and conflicting feelings of the death of a child at a later time (Forster & Hafiz 2015, 296-297, 300; Kellogg et al. 2014, 299-300.) Compartmentalization is different from disconnecting which involves turning off one's emotional side and doing one's job of caring and

supporting the living, the bereaved families, and not working on those emotions (Cholette & Gephart 2012, 17-18; Cook et al. 2012, 17). To some nurses, this coping skill is extended home as they avoid taking work home with them and thus employ strategies such as labelling to protect their families. Therefore, they answer to questions such as 'how was work' by, for example, saying they had a bad day instead of saying they lost their patients (Cook et al. 2012, 18.)

Finally, setting professional boundaries, by placing the professional and personal line between family members and staff, is also a way some of the nurses cope. Nurses use this line as a guide on how involved they should be. Furthermore, they use this to maintain an emotional separation thus avoiding burnout. Nevertheless, these nurses acknowledge that the professional line is somewhat fluid, as the level of involvement changes from one patient to another. The term professional boundaries is described as uncomfortable for some nurses, as to them the term implies 'not caring'. Therefore, this is simply not an option to all nurses. (Cook et al. 2012, 15-18.)

Focusing on the positive

When personally dealing with the death of a pediatric patient, nurses find focusing on the positive to be a useful coping mechanism (Keenan & Mac Dermott 2016, 21-22). Some nurses describe the need to make some good out of a bad situation, even before a child passes on. They do this by providing as much comfort to the child and the child's family as they can. (Stayer & Lockhart 2016, 353.) Furthermore, nurses describe the need to create a peaceful ending for the child and the family, as this helps them find and make meaning of the death of a pediatric patient (ibid., 354-355).

To some nurses, focusing on the positive means that they take it upon themselves to study about palliative care, or to develop their practice on caring for the dying (Keenan & Mac Dermott 2016, 19). These nurses acknowledge that although these

measures do not change their previous experiences, it enables them to know that they have the ability to prevent similar situations from happening and, hence, both reduces their potential guilt and builds their confidence (ibid., 21).

Focusing on memories by using bedside photos of a child patient is described helpful by some nurses when coping with the death of their patients. However, some nurses find the use of bedside photos more distressing than helpful as seeing the complete transformation their patient has made from a happy child to a dying child makes them sad. (Cook et al. 2012, 17.) Finally, the promise of tomorrow bringing with it a clean slate, a new child to care for, an opportunity to get back on and to keep trying is described by some nurses as a new beginning, a way to focus on the positive (Cholette & Gephart 2012, 16-17).

Spiritual beliefs

Spirituality can be seen as a form of personal coping strategy. Spiritual beliefs, religion and attending the child's funeral for closure are recognized as coping mechanism when facing the death and loss of a child patient. (Forster & Hafiz 2015, 298; Keenan & Mac Dermott 2016, 21-22; Reid 2013, 33, 35-36.) For some nurses, spirituality is helpful when coping with patient death, as meaning making and existential questions about life's purpose are reviewed (Forster & Hafiz 2015, 297-298). Likewise, meditation is used as a coping mechanism by some nurses to process the death, and find meaning and comfort (Kellogg, Barker & McCune 2014, 300).

Religion and faith, being a part of some nurses' everyday life, are also seen as a comforting coping strategy (Keenan & Mac Dermott 2016, 22). Religious beliefs and resources, God and prayer, are used as coping methods when support and meaning making after a child's death is needed (Forster & Hafiz 2015, 298; Keenan & Mac Dermott 2016, 21-22). Finally, for some nurses, funerals contribute to the emotional coping (Reid, 2013, 35). There are cases where the nurses are not present when a

child patient dies, and thus they feel they are not there to support the child and the family. This can lead to not getting the sense of personal closure. In these situations, the support from the institution for nurses to attend the patient's funeral is very valuable. (Keenan & Mac Dermott 2016, 21.) Moreover, funerals are seen as rituals and settings where nurses could grieve openly, acknowledge the death of the child and get the sense of closure. (Keenan & Mac Dermott 2016, 21; Reid 2013, 33, 35.)

7 Discussion

7.1 Ethical considerations, validity and reliability

Ethics in research is described as the norms for conducts that guides methods, procedures or perspectives when analyzing and presenting complex problems and issues (Resnik 2011). Main principles of ethics include respect for human dignity, privacy and autonomy. These principles also include honesty in reporting data, results and procedures and avoiding misrepresentation, fabrication or falsification of data. One has to be careful of their own work and keep good records of research activities (ibid).

As this study was based on the methodology of literature review where previous studies were used as raw materials, one major ethical issue arose around interviewing children (Ångström-Brännström et al. 2014). The authors of this research debated the ethics of interviewing a dying child and the mother. They also wondered if it was sufficient to consider the child's consent to the original researchers (Ångström-Brännström et al. 2014) as a permission for them to use the data. However, because this study was done from a nurse's perspective, this did not present a challenge.

By ensuring appropriate referencing and avoiding misrepresentation of other author's works as their own, the writers of this research practiced the principle of honesty through avoiding **plagiarism** and **fabrication** (Price 2014, 46). Presentation of data and results that arose from this research was done in an honest and careful manner, and records of the research process was kept in the form of photographs. This was done to avoid any claims of **falsification**.

The degree to which a research is likely to be free of bias, believable and true is what defines **validity** (Buckingham, Fisher & Saunders 2008). In order to adhere to this principle and avoid bias, the authors scrupulously researched literature and accurately documented research data and results. This was done to allow for reviewal, evaluation and reproducibility of the research. Although unintentional, publication bias is evident in this research, as the authors being students had limited access to existing literature.

The literature reviewed in this study is from six countries: The United States, Australia, New Zealand, Scotland, Ireland, and the UK. The language used is English and the research methods were all qualitative. This limits the generalization of the results taking into account the similarities in culture that the 6 countries share. The methodology being the same in all the reviewed literature, presents a limitation in the variations within the studies themselves.

The articles reviewed in this study had been researched on different settings: pediatric intensive care units, pediatric palliative care units, oncology care settings, perinatal care units, pediatric burn care units, emergency, trauma units, and general acute care units. The study by Keenan and Mac Dermott (2016) was open to nurses working in any field who had cared for a child who had died in the past seven years. This variety of settings allow for the results of this research to be applied in different fields of nursing and increases its credibility.

This research was done with the theme of stability in mind. Care was taken to ensure that the steps of the research were clear enough to allow for duplication of the results by another researcher if all the other factors remained constant. Literature inclusion criteria was plainly outlined, ideas and thoughts precisely credited, and reviewed literatures were put under the same ethical guidelines a primary research study would have been put through. This was done to employ the principle of **reliability** in research. (Houser 2008; Roberts, Priest & Traynor 2006, 41.)

The number of authors of this research being three also increases the reliability of the study as openness in terms of data sharing, discussions and criticisms (Resnik 2011) was employed. This allowed for review even during the research period. However, all three authors being beginners in conducting a research may affect the quality of the study in terms of data presentation and reliability.

7.2 Discussion of the results

Nurses working in pediatric palliative or critical care where children die every day, some unexpectedly and some after a long end-of-life care, often have overwhelming experiences. Encountering these situations daily has an emotional, physical, spiritual, behavioral and cognitive impact on nurses (Cui, Shen, Ma & Zhao 2011, 403; Keene, Hutton, Hall & Rushton 2010, 185). If these experiences are not dealt with, the nurses' professional practice and outcomes of care can be affected negatively (Cui, Shen, Ma & Zhao 2011, 403; Keene et al. 2010, 185; Maloney 2012, 111). Therefore, death as an event should be confronted rather than avoided (Cui, Shen, Ma & Zhao 2011). Nevertheless, as of these results, it was agreed by the authors of this study that all of the coping mechanisms introduced may not be applicable to every practicing nurse.

Simply the fact that every nurse is different from age, gender or nationality alone makes diversity in the coping behaviors. Additionally, the study by Cook, Mott, Law-

rence, Jablonski, Grady, Norton, Liner, Cioffi, Hickey, Reidy and Connor (2012), analyzed some specific factors that influence the coping behaviors of nurses. A few main components pointed out were the level of experience of nurses', the years of practice in a particular unit, and the length of time they had cared for a particular patient. (18.) Based on the results, it seems that having more experience might correlate to having more tools for coping. Then again, even though one can learn to accept death, it seems unlikely to get fully accustomed to it. Religion and one's own spirituality was seen to both support and disturb coping. Another factor affecting nurses' coping was if they had children of their own (ibid.). Yet, being aware of one's own needs, strengths and limitations is the key to finding the most suitable coping mechanisms (Furingsten, Sjörgen & Forsner 2015, 180).

Social support was introduced as a useful coping mechanism in 9 out of the 11 articles reviewed. Based on the results gained within this study, social support could be perceived as the most commonly used form of coping, due to its extensive availability. Furthermore, even for undergraduates, peer support seems to be the most natural, although sometimes subconscious, coping strategy. However, surprisingly, one of the articles also gave insight to a possible negative impact of it. Forster & Hafiz (2015, 295-296) explained that peer support, as in discussing with colleagues, might actually exacerbate the feelings of anxiety and distress. In demanding work environments, social support might, in some cases, contribute to distress rather than relief. Moreover, inadequate or poor support may even cause additional stress. (Button 2008, 509-510.)

Another issue raised within social support was maintaining professional confidentiality while applying family support (Forster & Hafiz 2015, 297). Confidentiality in health care is explained as the act of keeping patient information private or secret. Thus, only necessary patient information can be shared with other healthcare professionals who need the information in order to provide care. In relation to the concept of child death, it should also be noted that a patient's right to confidentiality remains after

death. (NMC 2015.) Discussing patient cases at home might breach too far from these regulations, and therefore one should be careful when sharing these experiences.

Within the category of institutional support, two USA-based articles explained the use of debriefing sessions, critical incident stress debriefing (Maloney 2012) and bereavement debriefing (Keene, Hutton, Hall & Rushton 2010). These two forms of debriefing, when accessible to distressed nurses, are a useful tool for coping with the cases of child death. However, in comparison to social support, the availability and application of these sessions remained a question to the authors of this study.

The lack of education and thus preparedness considering the death of a pediatric patient was brought up by many of the articles reviewed (Forster & Hafiz 2015; Keenan & Mac Dermott 2016; Kellogg, Barker & McCune 2014; Reid 2013). Overall, nurses lack formal education in both undergraduate curriculums and during working life. Sufficient education that considers death from various, holistic, points of view could help nurses to confront death as a phenomenon more naturally and to provide good quality care. (Ciu, Shen, Ma & Zhao 2011, 403-404; Edo-Gual, Tomas-Sabado, Bardallo-Porras & Monforte-Royo 2014.) According to the article by Kellogg et al. (2014, 300), the physical aspect of caring for the dead might have been discussed, but coping with the psychological aspect was not processed. Furthermore, in some cases, the death of adult patients was addressed, but in pediatrics the process of dying was overlooked (Kellogg et al. 2014, 300). Thus, the research highlighted the need for more education in this particular, sensitive area of nursing.

In terms of personal coping strategies, an issue discussed by the authors was that in some cases setting strict professional boundaries might come across as not caring. Furthermore, as said in the article by Cook, Mott, Lawrence, Jablonski, Grady, Norton, Liner, Cioffi, Hickey, Reidy & Connor (2012, 15) *"the day we stop feeling is the day that we need to quit...if we don't get affected by a child's death, that's when you need to rethink your profession"*. It's vital to draw the line between oneself as a per-

son and as a professional. Therefore, it's also essential to know the difference between the real feeling of "not caring" and the dismissal of one's feelings due to professional boundaries. Secondly, as intense personal feelings such as grief and anxiety are considered a natural response to death (Cui, Shen, Ma & Zhao 2011, 403) it seems vital for nurses to recognize and accept such feelings, even though it might sometimes be perceived unprofessional.

Another dilemma arises when the families of the dying child expect the nurse to empathize and grieve with them, while the nurse tries to maintain professionalism (Cholette & Gephart 2012, 14). Hence, to support the parents, nurses must balance their own emotional expressions according to each unique situation and the family's wishes (Furingsten, Sjörgen & Forsner 2015, 179-180). The quality of the relationship formed with the dying child and the family might also influence the coping of both parties involved.

Finally, pediatric nursing always revolves around the whole family, and thus the phenomenon of a child passing encompasses the emotional process of both the family and the nurse. Although the death of a child is devastating, it could also be seen as a relief for a suffering child. Interestingly, there may be considerable differences to how a child's death is coped with when it's due to a long-term illness and when it's sudden. Therefore, coping with such overwhelming experiences is not only vital for the family but also for the nurses involved. The family's coping has been studied before, whereas less focus has been given to the nurses' point of view. Based on this research, various coping mechanisms are available for nurses facing the death of pediatric patients, but not all of them are suitable for each individual. These results could be applied to various nursing settings and for educational purposes for undergraduates.

The authors agreed that the availability and quality of institution-based coping mechanisms should be researched further. Additionally, to allow for efficient coping

in different nursing settings, further research is needed to determine what kinds of coping mechanisms would be best applicable for each particular setting. As an example, in the current world nurses might also work in areas of conflict and disaster where death of children can be a regular occurrence. Therefore, further research should be conducted on what kinds of coping strategies are applicable for such demanding settings.

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Appendices

Appendix 1. The reviewed articles in alphabetical order

Author(s)	Publishing year and country	Title	Research method	Main findings
Cholette, M., Gephart, S. M.	2012 USA	A Model for the Dynamics of Bereavement Caregiving	Qualitative research: case study	Importance of acknowledgement of losses, strong supportive teams, a safe venue to express and share feelings, and setting time aside for self-care and intrapersonal reflection.
Cook, K. A., Mott, S., Lawrence, P., Jablonski, J., Grady, M. R., Norton, D., Liner, K. B., Cioffi, J., Hickey, P., Reidy, S. & Connor, J. A.	2012 USA	Coping While Caring for the Dying Child: Nurses' Experiences in an Acute Care Setting	Qualitative research: focus groups	Nurses' specific needs while caring for dying patients and importance of supportive colleagues and other available resources.
Forster, E. & Hafiz, A.	2015 Australia	Paediatric death and dying: exploring coping strategies of health professionals and perceptions of support provision	Qualitative research: social constructionism	Nurses cope by using peer support, personal coping strategies, family support, and spiritual beliefs.
Keenan, P. & Dermott, K. M. OR is it Paterson, J. G.	2016 Ireland	How Nurses Grieve For Children Who Die In Their Care	Qualitative research: descriptive study	Nurses vary in the way they experience and manage their grief.

Keene, E. A., Hutton, N., Hall, B. & Rushton, C.	2010 USA	Bereavement Debriefing Ses- sions: An Inter- vention to Sup- port Health Care Profes- sionals in Man- aging Their Grief After the Death of a Pa- tient	Qualitative re- search: ethno- graphic	Opportunities for expression of grief and reflection allows nurses to continue to pro- vide care effec- tively.
Kellogg, M. B., Barker, M. & McCune, N.	2014 USA	The Lived Expe- rience of Pedi- atric Burn Nurses Follow- ing Patient Death	Qualitative re- search: phenome- nological design	Nurses develop individual coping mechanisms and seek peer support when dealing with a loss of a patient.
Maloney, C.	2012 USA	Critical Incident Stress Debrief- ing and Pediat- ric Nurses: An Approach to Support the Work Environ- ment and Miti- gate Negative Consequences	Qualitative re- search: case study	Debriefing is a model of coping to support staff healing following a critical incident.
Pardoe, P.	2011 UK	Psychological support for nurses on pae- diatric intensive care units	Qualitative re- search: case study	Nurses should be entitled to seek numerous psy- chological support when dealing with grief, and it's im- portant that nurs- es acknowledge their feelings.
Reid, F.	2013 Scotland	Grief and the experiences of nurses provid- ing palliative care to children and young peo- ple at home	Qualitative re- search	Nurses require considerable skills and reflection to manage their own coping strategies, in order to con- tinue caring for other patients.
Stayer, D. & Lockhart J. S.	2016 USA	Living with Dy- ing in the Pedi- atric Intensive Care Unit: A	Qualitative re- search: herme- neutic phenome- nological study	Nurses find pro- fessional satisfac- tion in providing palliative care,

		Nursing Perspective		and use support from colleagues to cope.
Ångström-Brännström, C., Dahlqvist, V., Strandberg, G. & Norberg, A.	2014 Sweden	Descriptions of comfort in the social networks surrounding a dying child	Qualitative research: case study	Nurses gain comfort from colleagues and relatives, and from making a difference to the dying child.