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Individual Determinants Shaping Nurses' Use of Distraction Techniques in Managing Children's Acute Procedural Pain

by

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Dedication

Being given the opportunity and privilege of listening to your professional colleagues' stories is a meaningful time of learning and reflection. The narratives of the pediatric nurses interviewed within this thesis work were both compelling and personal. I would like to dedicate this thesis to these compassionate and courageous nurses, who in their everyday practice are required to bear witness to the suffering of children in their care. I have lived in their interviews for many months – it has been a place of deep emotion and truths. I am indebted to them for participating in my research, as without their accounts, an enriched understanding of nurses' roles in children's pain management would not have occurred. It is my honour to present their insights and experiences, and I do so with respect and appreciation.

The journey that led me to this milestone in my professional life required the commitment and support afforded me by my family. It has been through their wholehearted encouragement and belief in the importance of this work that my research was made possible. And so, it is with profound gratitude that I also dedicate my thesis to my loving family – Asha, Jay and Dean.

Abstract

In order to eliminate the unnecessary suffering of children requiring painful procedures to diagnose and treat their illness, management of this pain must be a priority for nurses. The role nurses assume in the current undermanagement of children's pain requires further examination. In the first paper, a comprehensive review of the available literature on pediatric pain management was conducted in order to provide the context in which this issue is situated. The second paper is a qualitative inquiry seeking nurses' accounts of the individual level factors they identify that influence their choices for distraction to manage children's procedural pain. Nurses described the three key determinants of nursing knowledge, experience and relational capacity as influencing their practice. These descriptions provided an extended understanding on nurses' choices for using distraction to manage children's procedure-related pain. Nurses disclosed using distraction for themselves, as well as for the child experiencing a painful procedure.

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Chapter 1: Introduction

This thesis is a culmination of work completed for my master's degree in advanced pediatric nursing practice. Its purpose was to explore what underlies pediatric nurses' experiences and choices in their use of distraction methods to manage children's procedure-related pain. The findings from this research provided insight into individual level determinants that influence nurses' decision-making in their management of children's painful procedures. The determinants of knowledge, experience and relational capacity were found to be influential in pediatric nurses' decision-making on pain management. Through this research an expanded understanding of nurses' choices for the use of distraction to manage children's procedure-related pain emerged. Shared elements of the pain experience, both by the child having the painful procedure and the nurse performing the procedure, were also discovered.

This paper-based thesis includes four separate chapters. In this introductory chapter, an overview of my research is provided. This presents the framework for Chapters 2 and 3. Chapter 2 provides an integrated review of the literature on "the state of the science" of undermanaged pediatric pain, as it relates to nurses' use of distraction in the management of procedural pain in children. It provides the context within which my study is situated, and will be submitted for publication to a peer reviewed journal directed towards a clinical audience. Chapter 3 is the presentation of my research product. It includes the context, design and methodological background for my study, and presents the findings of my research. It highlights the need for further understanding of the individual factors shaping nurses' use of non-pharmacological methods of pain management.

It will be submitted for publication to a peer reviewed pediatric academic journal. Chapter 4 summarizes the entire thesis work and details potential implications for future research and nursing practice. The publication of Chapters 2 and 3 will facilitate the dissemination of my research findings to healthcare venues in which the non-pharmacological management of pediatric procedural pain has application.

Contextual Background

The nursing management of children experiencing procedure-related pain and distress is currently suboptimal (International Association for the Study of Pain, 2010; Stinson, Yamada, Dickson, Lamba, & Stevens, 2008; A. Taddio et al., 2009; Taylor, Boyer, & Campbell, 2008). Empirical evidence supports the use of non-pharmacological methods to manage this pain effectively (Buscemi et al., 2008; Uman, Chambers, McGrath, & Kisely, 2008). The current need for nurses to use evidence-informed practices in managing pediatric procedural pain is essential.

Research findings show that hospitalized children endure painful procedures in order to diagnose or treat their illnesses, and that this pain is often not adequately managed (Buscemi et al., 2008; Cummings, Reid, Finley, McGrath, & Ritchie, 1996; J. A. Ellis et al., 2002; Johnston, Abbott, Gray-Donald, & Jeans, 1992; Taylor et al., 2008). Nurses mandated by their profession to provide ethical care are implicated in this unresolved pain that children continue to experience when requiring invasive medical procedures (Canadian Nurses Association, 2002; Canadian Nurses Association, 2008; College and

Association of Registered Nurses of Alberta, 2005; International Council of Nurses, 2010).

In the past, children's pain experiences were unacknowledged due to beliefs that children could not experience pain at the same level as adults. Children were found to receive less treatment for their pain in comparison to adults having similar procedures (N. L. Schechter, Allen, & Hanson, 1986). Today, extensive empirical evidence exists on pediatric pain, and research shows that this pain frequently goes unrelieved. Procedure-related pain, routinely experienced by hospitalized children who require invasive diagnostic tests and medical treatments for their illnesses, is often found to be undermanaged (Cummings et al., 1996; J. A. Ellis et al., 2002; Johnston et al., 1992; Kennedy, Luhmann, & Zempsky, 2008; Mather & Mackie, 1983; Taylor et al., 2008). A significant gap currently exists between research evidence on optimal pediatric pain management, and what is reflected in clinical nursing practices. This results in children undergoing acute, painful procedures and suffering unresolved, yet preventable pain (American Academy of Pediatrics. Committee on Psychosocial Aspects of Child and Family Health & Task Force on Pain in Infants, Children, and Adolescents, 2001; Boughton et al., 1998; Broome, Richtsmeier, Maikler, & Alexander, 1996; Cummings et al., 1996; J. A. Ellis et al., 2002; J. A. Ellis et al., 2007; J. A. Ellis et al., 2003; Ely, 2001; J. P. H. Hamers, Abu-Saad, Van Den Hout, & Halfens, 1998; Johnston et al., 1992; Johnston et al., 2007; Kortesluoma & Nikkonen, 2004; Moulin, Clark, Speechley, & Morley-Forster, 2002; Scott-Findlay & Estabrooks, 2006; Stevens; Stinson et al., 2008; Taylor et al., 2008;

Uman et al., 2008; C. Van Hulle Vincent, 2005; Watt-Watson, Clark, Finley, & Watson, 1999). The need to understand the barriers that prevent the provision of optimal pain management for children, by nurses, is imperative in order to eliminate unnecessary pain experienced by children**.**

The Meaning and Consequences of Children's Pain

For children, pain or the threat of pain is stressful and fear-provoking (Buscemi et al., 2008; Kortesluoma & Nikkonen, 2004; Kortesluoma & Nikkonen, 2006; Stinson et al., 2008; C. L. von Baeyer, Marche, Rocha, & Salmon, 2004). Acute pain caused by medical procedures is reported by children as causing the most significant distress, fear and anxiety (Cohen et al., 2001; Kortesluoma & Nikkonen, 2004; Rocha, Prakachin, Beaumont, Hardy, & . Zumbo, 2003; Tsao et al., 2004; C. L. von Baeyer et al., 2004). Research documents that healthcare professionals frequently misinterpret children's self-reports, causing further undermanagement of their pain (Burokas, 1985; Griffin, Polit, & Byrne, 2008; Jacob & Puntillo, 1999; Kortesluoma & Nikkonen, 2004; Kortesluoma & Nikkonen, 2006; Lindeke, Nakai, & Johnson, 2006; Margolius, Hudson, & Michel, 1995; Polkki, Laukkala, Vehvilainen-Julkunen, & Pietila, 2003; C. Van Hulle Vincent, 2005; C. Van Hulle Vincent, 2007).

The negative consequences unresolved pain has for children can be significant and are well-documented throughout the research literature. These effects can be physiologically or psychologically-based, and can be either short or long-term. Physiological outcomes can include: increased heart rate and blood pressure; increased release of stress hormones such as cortisol and adrenaline;

delayed healing; and altered immune function - all directly related to the adverse impact of children's pain experience (N. L. Schechter, 1989; A. Twycross, Dowden, & Bruce, 2009). For procedural pain specifically, examples of negative outcomes include: 1) significant distress and trauma experienced by the child (Cohen et al., 2001; Kennedy et al., 2008; Rocha et al., 2003; A. Taddio, Ilersich, Ipp, Kikuta, & Shah, 2009); 2) higher pain intensities, along with fear and non-compliance during future interventions (Fitzgerald, 2005; A. Taddio, Katz, Ilersich, & Koren, 1997); and 3) avoidance of future medical care, even into adulthood (Chambers, Taddio, Uman, & McMurtry, 2009; Shah, Taddio, & Rieder, 2009; A. Taddio et al., 2009). The negative memories children have of previous painful events have been shown to lead to significant anticipatory distress and anxiety for *any* procedures, not just those evoking pain (Humphrey, Boon, van Linden van den Heuvell,G.F., & van de Wiel, 1992; Kennedy et al., 2008; Kortesluoma & Nikkonen, 2004; McMurtry, Chambers, McGrath, & Asp, 2010; Rocha et al., 2003; Tsao et al., 2004). Today, empirical evidence on unresolved pediatric pain is indisputable – this suffering has no benefits for children.

Influencing Factors

Nurses' practices are often correlated with the undermanagement of pediatric procedure-related pain. Factors specifically identified in the literature as influencing how nurses manage children's pain include: 1) myths and misconceptions about children's pain; 2) attitudes and beliefs about pediatric pain; 3) lack of knowledge about pediatric pain management – including the use of

analgesics and non-pharmacological interventions; 4) inadequate pain assessments in children; and 5) nursing goals for alleviating children's pain (Broome & Slack, 1990; Broome et al., 1996; Burokas, 1985; Buscemi et al., 2008; J. A. Ellis et al., 2002; J. A. Ellis et al., 2003; Gadish, Gonzales, & Hayes, 1988; Griffin et al., 2008; J. P. Hamers, Abu-Saad, Halfens, & Schumacher, 1994; Jacob & Puntillo, 1999; Johnston et al., 2007; Manworren & Hayes, 2000; Margolius et al., 1995; Polkki et al., 2003; Stinson et al., 2008; Taylor et al., 2008; A. Twycross & Powls, 2006; A. Twycross, 2007; Uman et al., 2008; C. Van Hulle Vincent & Denyes, 2004; C. Van Hulle Vincent, 2005; C. L. von Baeyer & Spagrud, 2007). Though evidence currently exists on the optimal management of children's procedure-related pain, according to research findings, these effective strategies have not yet been incorporated into nursing practices.

Non-pharmacological Management of Children's Pain

Empirical evidence has shown that non-pharmacological (non-drug related) methods are notably efficacious in managing children's anxiety, distress, fear and pain with painful procedures (Broome, Lillis, & Smith, 1989; Buscemi et al., 2008; Chambers et al., 2009; Cohen, 2008; Pölkki, Vehviläinen-Julkunen, & Pietilä, 2001; Stinson et al., 2008; A. Taddio, Ilersich et al., 2009; Uman et al., 2008). Categories of non-pharmacologic methods include: sensory, cognitive, behavioural and combined cognitive-behavioural (Vessey & Carlson, 1996). To date, distraction is the non-pharmacological method that has demonstrated the largest effect size for decreasing the negative impact of acute procedural pain (Buscemi et al., 2008; A. Taddio, Ilersich et al., 2009; Uman et al., 2008). Its

benefits for children experiencing pain are shown in the preparation, intervention, and follow-up stages of medical procedures. Distraction is a non-invasive, cost-free intervention, and an ideal tool for nurses to use when managing procedure-related pain in children (Kuttner, November 18, 2008; Uman et al., 2008; Vessey & Carlson, 1996).

Much of the literature on the use of non-pharmacological methods for pain management in hospitalized children focuses on post-operative nursing care. However, a recent Canadian multi-center pediatric pain study, that included medical, surgical and intensive care hospital settings, found only 13% of 3840 charts reviewed showed *any* documentation of the use of non-pharmacological interventions (including distraction), for managing children's pain (Stevens). Other researchers studying the management of *post-surgical* pain in children found pediatric nurses identified workload, time constraints, and their beliefs about children's pain experiences as influencing to their use of non-pharmacological methods (Hong-Gu He et al., 2010; Polkki et al., 2003). Descriptive data about nurses undermanaging children's pain has mostly focused on the influence of erroneous beliefs and attitudes about pain, along with a lack of knowledge about its management in pediatric settings (Stinson et al., 2008; A. Twycross, 2002; A. Twycross & Powls, 2006; C. Van Hulle Vincent, 2005). Clinical experience has been shown to influence nurses' decision-making within their practice, and so assumptions that guide these decisions would be of particular relevance to the issue of undermanaged procedural pain in children (Kavanagh, Watt-Watson, & Stevens, 2007; Rycroft-Malone et al., 2004).

Kavanagh et al., (2007) state "researchers should seek to facilitate nurses' articulation of their tacit knowledge to reveal any basic assumptions around pediatric acute pain and its management that may impede the use of evidence in practice. This information could be then be used to inform future interventions." (Kavanagh et al., 2007, p.315). Pediatric nurses' *themselves* need to be given the opportunity to provide descriptive accounts of what they experience and identify as the factors influencing their pain practices with children, when performing necessary, painful medical procedures. Exploring these individual level nurse factors could potentially help identify appropriate strategies to foster an increased use of distraction by pediatric nurses in their management of procedure-related pain. Ultimately, this could lead to the resolution of unnecessary pain and suffering experienced by children requiring painful procedures.

Implications for Future Research

As reported, current research provides direction for the efficacious management of children's pain using non-pharmacological methods such as distraction. Lack of uptake of these findings into clinical nursing practice presents ethical and professional conflicts for nurses. To effect the necessary changes to pediatric nurses' non- pharmacological pain management practices, consideration must be given to the individual level factors that are influencing the use of research knowledge by nurses (knowledge translation). The increased use of efficacious distraction methods to manage and eliminate unrelieved procedural pain in children would be the preferred outcome and anticipated outcome.

Reasons for the current underuse of these techniques by nurses are not clearly understood, resulting in a persistence of this problem.

Gaps in existing literature include a paucity of recent documentation of the descriptive accounts of nurses and the factors they identify as influencing their non-pharmacological pain practices. Qualitative research that presents the narratives and personal perspectives of individual nurses is limited. This valuable, embodied knowledge (revealed primarily through narratives), is acquired most powerfully from the nurses whose everyday practice requires them to perform painful, invasive procedures on children in their care (Bergum & Dosseter, 2005). Exploration of the individual level factors identified by pediatric inpatient nurses as determining their use or non-use of distraction was the focus of my study.

Overview of Paper 1: Nurses' Management of Children's Procedural Pain: An Integrative Review

The purpose of this paper was to provide an integrative review of the literature on pediatric pain from a nursing perspective, with a particular focus on non-pharmacological pain management. This review presents the context within which the need for my study is located. A search was conducted of the available literature. Language restrictions were not imposed on any of the database searches, however only manuscripts written in the English language were reviewed. Seven electronic databases were accessed. Major concepts were identified from within the research question and guided the database-specific search strategies. The keyword searches included: pain, suffering, fear, distress,

child, pediatric hospitalized, nurse, distraction, non-pharmacological, and combinations of these terms.

The findings of this review identified an undermanagement of pediatric procedural pain. Within this review, a paucity of qualitative knowledge was identified. The evident need for more descriptive accounts from pediatric nurses on the factors influencing their use of these methods was revealed, and the potential for these sources of knowledge to contribute a greater understanding of this practice issue.

Overview of Paper 2: Influences Shaping Nurses' Use of Distraction to Manage Children's Procedural Pain: An Interpretive Description

The purpose of Paper 2, using qualitative inquiry, was to acquire knowledge from pediatric nurses of the individual determinants influencing their use of distraction for managing children's procedure-related pain. An interpretive description was the research method chosen for this work (Thorne, 2008). Seven nurses working on two pediatric oncology units within a children's hospital were interviewed. These nurses' experiences of being responsible for performing painful procedures on children in their care within their everyday nursing practice were considered relevant to the study purpose. Data collection and analysis occurred concurrently. As the research progressed, the emergence of themes facilitated exploration of the research question. The outcome was a rich description of individual nurse determinants that influenced distraction use in the nursing management of children's procedure-related pain and distress. Nursing

knowledge, experience and relational capacity were identified as being key determinants for nurse decision-making for procedural pain management.

Also within this interpretive description, common elements of the pain experience were discovered, that were shared by the nurses responsible for performing the painful procedure as well as by the child experiencing the pain.

Purpose

This purpose of this thesis was to describe individual determinants that shape nurses' use or non-use of distraction techniques when performing painful procedures on hospitalized children. It utilized qualitative methods in order to acquire nurses' personal perspectives on the factors influencing their practice. In acquiring nurses' descriptions of what influences their choices when managing children's acute pain, the knowledge acquired was meant to extend the current understanding of facilitators/barriers for using this technique in the nursing management of pediatric procedural pain.

Research Question

The research question being explored was "What are the individual determinants of nurses' use of distraction techniques in managing children's acute procedural pain?"

Study Significance

This qualitative study was focused on eliciting inductive accounts from pediatric nurses who care for hospitalized children. As stated, this insight is currently lacking within the research literature, and the narratives of nurses performing painful procedures on children in their everyday practice have not

been well represented in the literature. The current state of nurses' management of children's procedure-related pain indicates that evidence is not being used to inform their pain management practices. Identifying individual-level nursing factors that may be implicated in this ongoing practice dilemma may add insights into barriers not previously identified. Though knowledge and attitude surveys have been done, and quantitative research involving nurses has been completed, there has been no resolution to this issue. Extending our understanding through inductively acquired nursing descriptions could contribute to the facilitation of evidence into pediatric pain management practices by nurses.

Design

An interpretive description (ID) approach was selected for this qualitative inquiry. Interpretive description is a qualitative research approach utilized when seeking an understanding of a clinically-based phenomenon, and holds the potential to inform nursing practice (Thorne, 2008). Interpretive description was chosen to capture pediatric nurses' personal beliefs, understanding and perceptions of what factors influence their use of distraction to manage painful procedures. Interpretive description generates inductive knowledge and therefore fit the purpose of my study, as the insights of pediatric nurses was the perspective sought. Rigor of the research design (specifically suited to interpretive descriptions), was addressed through consideration of the four elements identified by Thorne (2008): epistemological integrity, representative credibility, analytic logic and interpretive authority (Thorne, 2008).

Summary

Research into the undermanagement of pediatric procedure-related pain continues to accumulate, as children's unresolved pain continues. The efficacy of distraction methods for the management of this pain in children is also well documented in the research literature. Nurses' responsibility for the underuse of distraction methods to manage this acute pain continues to be highlighted. Within this research project, the voices and accounts of pediatric nurses were captured, revealing the individual level factors that nurses described as influencing their choices for distraction methods to manage children's procedure-related pain. Nurses' knowledge, experience and relational capacity were identified as the overarching themes of nurse determinants influencing these choices. Nurses' narratives in this research allowed for the collection of unique and rich insights within these determinants, some not captured in current nursing literature. Within the context of pediatric nurses' non-pharmacological management of children's procedure-related pain, future qualitative inquiry examining this clinical practice perspective would provide additional evidence to support the findings of this thesis work.

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Chapter 2: Nurses' Management of Children's Procedural Pain: An Integrative Review

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Potential Venue: Journal for Specialists in Pediatric Nursing

Introduction

In today's healthcare climate, nurses are mandated to provide not only technologically sophisticated care, but also humanistic care. This expectation is most evident when the patients come from a vulnerable population – namely, children. When nursing care involves children's pain, this obligation escalates. The ethical responsibility nurses hold as a profession to provide "safe, compassionate, competent and ethical care" is well delineated in both national and international nursing mandates (Canadian Nurses Association, 2008; College and Association of Registered Nurses of Alberta, 2005; International Council of Nurses, 2010). There is a significant and growing concern within the international healthcare community today surrounding the issue of undermanaged pediatric pain. This discourse is widely published within both scientific and popular literature. It is also a topic of considerable interest to health care organizations as pain management utilizes significant financial resources each year in Canada and throughout the developed world (Moulin, Clark, Speechley, & Morley-Forster, 2002).

An urgent focus on the need for better management of pain, particularly in relation to pediatric pain, has gained momentum in the scientific community. Previously, consensus guidelines by numerous organizations, including the World Health Organization (WHO), have responded to the evidence on undertreated pediatric pain by mandating the *rights* of children to have access to the best possible pain relief (American Academy of Pediatrics. Committee on Psychosocial Aspects of Child and Family Health & Task Force on Pain in

Infants, Children, and Adolescents, 2001; K. J. Anand & International Evidence-Based Group for Neonatal Pain, 2001; International Association for the Study of Pain, 2010b; Joint Commission on Accreditation of Healthcare Organizations, 2010; Watt-Watson, Clark, Finley, & Watson, 1999; World Health Organization, 2010). The responsibilities of health care professionals have been targeted. Most recently, scientists, healthcare professionals and multidisciplinary practitioners escalated their commitment to see changes enacted through "The Declaration of Montreal" (International Association for the Study of Pain, 2010a). This document decrees that access to appropriate and effective management of pain is a fundamental human right. It has been declared morally unjust to allow children to experience unrelieved pain (G. A. Walco, Cassidy, & Schechter, 1994).

Pediatric procedure-related pain (pain evoked by an invasive procedure), is a major health concern which continues to affect children around the globe and the nurses who care for them. Each day in Canada hospitalized children endure numerous painful procedures in order to diagnose or treat their illnesses (Ellis et al., 2002; Johnston, Abbott, Gray-Donald, & Jeans, 1992; Taylor, Boyer, & Campbell, 2008). Research findings show that these painful and distressing experiences are often not adequately managed, and so children suffer unacceptable levels of pain (Buscemi, Vandermeer, & Curtis, 2008). In a recent Canadian pediatric pain study, only 13% of 3840 charts reviewed showed *any* documented use of non-pharmacological interventions for managing children's pain (Stevens).

Nurses are often the focus for the undermanagement of children's pain (Manworren & Hayes, 2000; Margolius, Hudson, & Michel, 1995; Mather & Mackie, 1983; Polkki, Laukkala, Vehvilainen-Julkunen, & Pietila, 2003; C. Van Hulle Vincent & Denyes, 2004; C. Van Hulle Vincent, 2005). Currently, the need is not for more research or "proof" on how to optimally manage children's pain, but rather on using the available research evidence to inform better pain practices for those health care professionals who are involved with the management of children's acute pain experiences (Scott-Findlay & Estabrooks, 2006). As a result, questions that automatically surface are, "what underlies the persistence of this problem of unresolved pain in children?" and, "what is the accountability of nurses for what is seen as inadequate care of pediatric patients?" Furthermore, how are nurses, as part of the international health care community today, being pulled into the urgency of resolving this issue of children experiencing acute, unrelieved pain?

This paper will identify key issues on the current state of nursing management of children's pain, with a particular focus on the non-pharmacological pain management strategies of distraction. To date, empirical evidence has shown distraction to be the most efficacious in managing children's procedure-related pain (Buscemi et al., 2008; A. Taddio et al., 2010; Uman, Chambers, McGrath, & Kisely, 2008a). However, research has also identified the underuse of this effective method by nurses. Quantitative and survey research has identified some of the potential barriers to nurses' use of distraction, however there remains a need for more qualitative perspectives. The contribution of

nurses' descriptive accounts of what they identify as promoting or preventing the use of distraction methods to manage painful procedures in children will be presented in relation to acquiring a more extensive understanding of this continuing nursing practice dilemma. Recommendations for future nursing research will be discussed. A review of the historical background of pediatric pain management that lead to the challenges currently faced by nurses will begin this paper.

Historical Background

The empiric literature clearly documents the historical undermanagement of children's pain (K. Anand & Aynsley-Green, 1985; Cummings, Reid, Finley, McGrath, & Ritchie, 1996; Ellis et al., 2002; J. P. H. Hamers, Abu-Saad, Van Den Hout, & Halfens, 1998; Johnston et al., 1992; Mather & Mackie, 1983; Schechter, Allen, & Hanson, 1986; Stinson, Yamada, Dickson, Lamba, & Stevens, 2008; Swafford & Allan, 1968). A landmark study on pediatric post-operative pain in the mid-1970s discovered that children received much less medication management of their pain as compared with adults receiving similar surgeries, due to beliefs that children did not experience adult-type pain levels (Eland & Anderson, 1977). This was the origin of a concerted effort to recognize, examine and manage children's pain. Throughout the past three decades, the proliferation of empiric knowledge on pain assessment and management in the field of pediatrics has provided the backdrop for the current call for pain relief to be designated as a human right (Cummings et al., 1996; Ellis et al., 2002; Johnston et al., 1992; Taylor et al., 2008). The discourse on the "rights" of children to have

access to effective pain management, first put forth by the 1998 WHO mandate, has now integrated the voices of children and their pain experiences, and the responsibility of pediatric nurses (Canadian Nurses Association, 2008; College and Association of Registered Nurses of Alberta, 2005; International Association for the Study of Pain, 2010a; International Council of Nurses, 2010; Watt-Watson et al., 1999).

Factors Influencing the Undermanagement of Children's Pain

Current research provides direction for efficacious management of children's pain using pharmacological and non-pharmacological methods. Though Huth and Moore's (1998) prescriptive theory of acute pain management in infants and children was developed over a decade ago to provide nurses with guidance on the management of pediatric pain (based on research), the limitations in this field of nursing persist (Huth & Moore, Jan-March 1998). As stated, professional and ethical issues arise from this lack of implementation of evidence into pain management practices by pediatric nurses (Greipp, 1992; Walco et al., 1994). Over the past three decades, factors shown to influence nursing practice in relation to children's pain management have included: 1) lack of knowledge of pain management in children – including both the use of analgesics, as well as the use of non-pharmacological interventions (Broome, Lillis, & Smith, 1989; Broome, Lillis, McGahee, & Bates, 1992; Burokas, 1985; Gadish, Gonzales, & Hayes, 1988; Salantera, Lauri, Salmi, & Helenius, 1999; Stinson et al., 2008; C. Van Hulle Vincent & Denyes, 2004; C. Van Hulle Vincent, 2005); 2) myths and misconceptions about the management of children's pain and its consequences

(Ellis, Sharp, Newhook, & Cohen, 2004; Margolius et al., 1995; Mather & Mackie, 1983; C. L. von Baeyer, Marche, Rocha, & Salmon, 2004); 3) inadequate assessments of children's pain (J. P. Hamers, Abu-Saad, Halfens, & Schumacher, 1994; Mann, Jacobsen, & Redd, 1992; Manne, Jacobsen, & Redd, 1992; P. A. McGrath, 1987; O'Rourke, 2004; Taylor et al., 2008; Zeltzer, Bush, Chen, & Riveral, 1997); 4) nursing beliefs, values and expectations around pediatric pain (Griffin, Polit, & Byrne, 2007; Griffin, Polit, & Byrne, 2008; Jacob & Puntillo, 1999; Le May et al., 2009; Manworren & Hayes, 2000; Margolius et al., 1995; C. Van Hulle Vincent, 2005; Woodgate & Kristjanson, 1996); 5) nurses' personal experiences with pain (Burokas, 1985; Ely, 2001; Gimbler-Berglund, Ljusegren, & Enskär, 2008; Griffin et al., 2008; C. Van Hulle Vincent & Denyes, 2004); and most recently, 6) nurses use of evidence to inform their pediatric pain management practices (Buscemi et al., 2008; Johnston et al., 2007; Scott-Findlay & Estabrooks, 2006).

In two early pivotal studies, children's pain was shown to be grossly undermanaged by nurses. In one study, 40 percent of children with analgesia orders never received *any* pharmacological interventions (Mather & Mackie, 1983). In light of these findings, researchers described nurses' interpretation of p.r.n. (as necessary) orders to mean "as little as possible". The second study, found the most influential factor in nurses' pain practices were the nurse's individually-based goals for pain relief. Only 16 percent of nurses reported a goal of 100 percent pain relief for their pediatric patients. Twenty three percent of the nurses believed a child's pain relief needed to be sufficient only to make the child

functional (Burokas, 1985). Later research revealed that nurses continued to report that *some* pain was expected and acceptable in their pediatric patients (Hamers, Abu-Saad, van den Hout, & Halfens, 1998; A. Twycross, 1999; Woodgate & Kristjanson, 1996).

These influencing factors illustrate how today, in effectively managing children's procedure-related pain, nursing practice falls short. Despite accessibility to the clinical and technological means for expertly managing this pain in children, it continues to be unrelieved (Chambers, Taddio, Uman, & McMurtry, 2009; Shah, Taddio, & Rieder, 2009; Stinson et al., 2008; A. Taddio, Ilersich, Ipp, Kikuta, & Shah, 2009; A. Twycross, 2007; Uman, Chambers, McGrath, & Kisely, 2008a; C. Van Hulle Vincent, 2007). The seemingly self-evident question becomes "Why?"

Non-pharmacological Methods for Pain Management

Empirical evidence has shown that non-pharmacological (non-drug related) methods, are significantly efficacious in managing children's anxiety, distress, fear and pain with procedures (Blount, Piira, & Cohen, 2003; Blount, Piira, Cohen, & Cheng, 2006; Broome et al., 1989; Buscemi et al., 2008; Chambers et al., 2009; Cohen, 2008; Ellis et al., 2007; Kleiber & Harper, 1999; Pölkki, Vehviläinen-Julkunen, & Pietilä, 2001; Stinson et al., 2008; A. Taddio, Ilersich et al., 2009; Uman, Chambers, McGrath, & Kisely, 2008a). Categories of non-pharmacologic methods include: sensory, cognitive, behavioural and combined cognitive-behavioural. Some examples of sensory methods include the use of thermal regulation (application of heat/cold), pressure, positioning

(swaddling, hugging), and non-nutritive sucking (Buscemi et al., 2008; Uman, Chambers, McGrath, & Kisely, 2006; Uman, Chambers, McGrath, & Kisely, 2008a; Uman, Chambers, McGrath, & Kisely, 2008a; Uman, Chambers, McGrath, & Kisely, 2008b; Vessey & Carlson, 1996). Cognitive methods used in managing pediatric procedure-related pain include imagery, hypnosis, cognitive distraction (such as counting), thought-stopping and parental training (Buscemi et al., 2008; Uman, Chambers, McGrath, & Kisely, 2008a). Behavioural methods include muscle relaxation, breathing exercises (blowing bubbles), rehearsal, behavioral distraction (listening to music, playing videos/movies), desensitization and virtual reality technology (Buscemi et al., 2008; Uman, Chambers, McGrath, & Kisely, 2008a). Combined cognitive and behavioral methods include the use of at least one cognitive method combined with at least one behavioural method. Two recent Cochrane reviews (one an abbreviated intervention review and one an overview of reviews) focused specifically on procedure-related pain management using non-pharmacologic methods. The review of the management of needle-related procedural pain and distress in children and adolescents by Uman et. al. (2008), found that of the 28 randomized controlled trials (RCTs) included, combined cognitive-behavioral interventions, hypnosis and distraction demonstrated the largest effect sizes, with the evidence for distraction being the strongest (Uman, Chambers, McGrath, & Kisely, 2008a). In 2008, Buscemi et al., in another Cochrane review (that combined four systematic reviews - two for neonate, two for older children), found that distraction was an effective non-

pharmacological method for managing procedure-related pain in children (Buscemi et al., 2008).

Barriers that were identified by pediatric nurses as influencing their use of these efficacious, non-pharmacological methods exclusively focused on managing *post-surgical* pain. These barriers have included: workload/time constraints, nurses' beliefs about children's pain experiences, a lack of confidence in the use of non-pharmacological methods, and children's inability to cooperate (Hong-Gu He et al., 2010; Polkki et al., 2003). The generalizability of these findings to the management of acute, painful medical procedures has not been determined. A qualitative study by Twycross & Powls (2006) examined how nurses made clinical decisions using a "think aloud" technique. Their studies discovered that pediatric nurses made non-expert type clinical decisions regarding post-operative pain management, regardless of their nursing experience or expertise. They found all the participants used a form of backward reasoning, whereby deductive, analytic methods were used to make nursing care decisions, as opposed to more intuitive, expert-type decision-making (A. Twycross, 2002, p. 1324; A. Twycross, Dowden, & Bruce, 2009; A. Twycross & Powls, 2006). The authors concluded that these non-expert level decisions adversely affected the quality of pediatric nursing practice. Their recommendation was for further qualitative study of the individual factors that influence nurses' clinical decisions (A. Twycross & Powls, 2006).

Distraction for Pain Management

Recent research findings from a Canadian multi-center pediatric pain study found only 13% of 3840 charts reviewed had *any* documentation of the use of non-pharmacological interventions (including distraction), for managing children's pain (Stevens). One non-pharmacological method shown in the research evidence to be particularly efficacious for managing acute pain in children was the use of distraction techniques. Distraction, a cognitive and behavioral intervention, acts by shifting a child's attention away from the painful procedure and focusing it on something pleasant, such as bubbles, a toy, or a movie (Buscemi et al., 2008). It functions on the premise that the brain has a limited capacity to focus attention on more than one stimulus at a time. Therefore if a child is attending to a pleasant activity, there is little attention left for attending to painful stimuli (Melzack & Wall, 1965; A. Twycross et al., 2009; Vessey & Carlson, 1996). To date, distraction has demonstrated the largest effect size for non-pharmacological methods of decreasing the negative impact of acute procedural pain (Buscemi et al., 2008; Kleiber & Harper, 1999; Uman et al., 2006; Uman, Chambers, McGrath, & Kisely, 2008a). Its positive effects have also been demonstrated in the anticipatory stage of medical procedures, as well as during and following the procedures (C. Van Hulle Vincent, 2005). Interestingly, not only is distraction documented as being the most efficacious non-pharmacological method for managing children's acute pain, but it is also non-invasive, with minimal associated costs, making it an ideal tool for use by nurses managing acute, pediatric procedure-related pain (Kuttner, November 18, 2008).

The Meaning of Pain to Children

What is the significance of nurses managing children's procedural pain optimally? According to the literature, pain is identified by children as being the worst aspect of their hospital stay (Ellis et al., 2002), and is often frightening for them, be it the threat of pain or the pain itself (Carter, 2004; Kortesluoma & Nikkonen, 2006; Lindeke, Nakai, & Johnson, 2006). By definition, pain is "an unpleasant sensory and emotional experience associated with *actual* or *potential* tissue damage" (International Association for the Study of Pain, 2010b). The potential for or anticipation of pain is identified within this definition, and for children, their anticipatory anxiety and fear accompanies most of their procedural pain experiences (Kahn & Steeves, 1986). In fact, acute procedural pain is documented as causing the most significant distress and anxiety when self-reported by children (Cohen et al., 2001; Kortesluoma & Nikkonen, 2004; Rocha, Prakachin, Beaumont, Hardy, & . Zumbo, 2003; J. C. Tsao et al., 2004b; C. L. von Baeyer et al., 2004), with needle-related pain being the most hurtful (Hamilton, 1995; Kennedy, Luhmann, & Zempsky, 2008; G. A. Walco, 2008).

Children suffer when having to endure painful, invasive medical procedures. Suffering as defined by Carnevale is, "the state of severe distress associated with events that threaten the intactness of the person" (Carnevale, 2009, p.174). In Eric Cassell's pioneering work on suffering, he described the "anguish" experienced when someone becomes so overwhelmed at the possibility

of not being able to cope with their pain - "I won't be able to take it"[1] (Cassell, 1999, p.531). Children who endure painful procedures often feel "trapped" and "voiceless" in their experiences (Ferrell & Coyle, 2010, p.109). They wonder *why* they have to feel pain. How children interpret and experience painful experiences is both complex and personal (subjective), and influences the meaning they bring to their pain. Children between the ages of five and 14 years interpret their pain as being a form of punishment for "past misdeeds" (moral reasoning) (Gaffney & Dunne, 1987). Interestingly, the word "pain" actually originates in the Greek word "poena" meaning punishment (Ellis et al., 2002). In one study capturing children's descriptions of pain, they claim it as "the most disgusting ever" (Kortesluoma & Nikkonen, 2006).

Empirical evidence has supported the accuracy of children's self-reports of their pain experiences, and recognized that children's pain narratives add further understanding to the meaning pain holds for children having painful procedures (P. A. McGrath, 1987; P. A. McGrath et al., 2000; C. Van Hulle Vincent, 2007; C. L. von Baeyer et al., 2004). However, research findings show that healthcare professionals often misinterpret children's self-reports as inaccurate or invalid, leading to further undermanagement of children's pain. In fact, studies have shown that 55 to 90% of pediatric nurses believed that children over-reported their pain levels (Burokas, 1985; de Tovar et al., 2010; Griffin et al., 2008; Jacob & Puntillo, 1999; Margolius et al., 1995; C. L. von Baeyer & Spagrud, 2007; G.

[1] At a recent influenza immunization clinic, a 9 year old boy, refusing to let the nurse give him the needle cried out in despair "I'd rather die than get that needle!" (as observed by the author November 20, 2010)

A. Walco et al., 1994). Parents' assessment of their child's self-reported pain experiences have also been shown to be inaccurate, contributing further to the unresolved procedural pain of children (Chambers, Giesbrecht, Craig, Bennett, & Huntsman, 1999; J. P. H. Hamers, Huijer Abu-Saad, Van Den Hout, Halfens, & Kester, 1996; Manne et al., 1992; Singer, Gulla, & Thode, 2002). The consequences of, and memory for this unrelieved pain experience is damaging not only to the child in the present, but has also been shown to impact the health and health care choices made by these same children well into adulthood (Chambers et al., 2009; Shah et al., 2009; A. Taddio et al., 2010).

The Consequences of Undermanaging Children's Pain

Empiric evidence, as previously stated, has demonstrated that for children experiencing pain associated with medical procedures, the negative short and long term consequences of their unrelieved pain are irrefutable. Documented physiological consequences include: increased heart rate; increased blood pressure; increased stress hormones (e.g. cortisol, adrenaline) which in turn reduce healing and immune function; as well as altered functions of the gastrointestinal and urinary tracts. For procedural pain specifically, other effects of unresolved pain seen in children include unsuccessful procedures, with resultant increases in procedural time, along with significant distress and trauma experienced by the child (Cohen et al., 2001; Kennedy et al., 2008; Rocha et al., 2003). The development of maladaptive responses to future painful procedures has also been well documented, including: 1) higher pain intensities (hyperalgesia and allodynia) (Fitzgerald, 2005; A. Taddio, Katz, Ilersich, & Koren, 1997); 2)

fear and non-compliance during future interventions (Cohen et al., 2001; Hamilton, 1995; Humphrey, Boon, van Linden van den Heuvell,G.F., & van de Wiel, 1992; Kennedy et al., 2008; Rocha et al., 2003); 3) conditioned anxiety responses to all procedures (Rocha et al., 2003; J. C. Tsao et al., 2004b); 4) diminished analgesic effectiveness with subsequent procedures and avoidance of medical care (A. Taddio et al., 2009; Taylor et al., 2008; C. Van Hulle Vincent, 2005); 5) predisposition to persistent or chronic pain states (Schechter et al., 1986); and 6) negative memories of previous painful events leading to significant anticipatory stress and anxiety for future procedures (Humphrey et al., 1992; Kennedy et al., 2008; Kortesluoma & Nikkonen, 2004; McMurtry, Chambers, McGrath, & Asp, 2010; Rocha et al., 2003; J. C. Tsao et al., 2004a; C. L. von Baeyer et al., 2004). These harmful outcomes of unrelieved pain for children are far reaching.

Currently these negative consequences of undermanaged pain in children are identified as resulting from the significant gap that exists between research findings on optimal pediatric pain management, and what is reflected in nursing practices (Cummings et al., 1996; Ellis et al., 2004; J. P. Hamers et al., 1998; International Association for the Study of Pain; Johnston et al., 1992; Mather & Mackie, 1983; Moulin et al., 2002; Scott-Findlay & Estabrooks, 2006). Children undergoing acute, painful procedures suffer unrelieved yet preventable pain, due to the suboptimal management of this pain by their nurses. An urgent solution is required to understand why nursing practice falls short. What is the next step?

Using Evidence to Change Pediatric Pain Practices

Current research suggests that in order to effect necessary change in pediatric nurses' non-pharmacological pain management practices, consideration must be given to the transfer of research knowledge into the day-to-day practice of nurses (knowledge translation). Knowledge translation (KT) is defined as "the exchange, synthesis and ethically-sound application of knowledge" into clinical practice (Bisby & Stirling, 2006). In other words, it brings defensible research findings directly into nursing care practices. The need to change behavior as an element of using knowledge to inform practice is a multifaceted process requiring an understanding of the individual level factors, such as attitudes and beliefs that impact change. The persistent underuse of non-pharmacological techniques such as distraction to manage children's procedure-related pain is one example where there is extensive empiric knowledge, yet nursing practice has not shown significant change. The reasons remain unclear. The need exists to identify the contextual factors affecting this practice issue (Scott-Findlay & Estabrooks, 2006; Thompson, Estabrooks, Scott-Findlay, Moore, & Wallin, 2007). Clinical experience has been shown to influence nurse's decision-making within their practice, and so assumptions that guide these decisions would be of particular relevance to the issue of undermanaged procedural pain in children (Kavanagh, Watt-Watson, & Stevens, 2007; Rycroft-Malone et al., 2004). Recognition and examination of the individual level factors identified by pediatric nurses who care for hospitalized children, and how these factors influence their management choices of children's procedure-related pain needs to be studied (Estabrooks,

Floyd, Scott-Findlay, O'Leary, & Gushta, 2003). Kavanagh et al. (2007) state "researchers should seek to facilitate nurses' articulation of their tacit knowledge to reveal any basic assumptions around pediatric acute pain and its management that may impede the use of evidence in practice. This information could be then be used to inform future interventions." (Kavanagh et al., 2007, p.315) Pediatric nurses' *themselves* need to be given the opportunity to provide descriptive accounts of what they experience and identify as the factors influencing their pain practices with children, when performing necessary, painful medical procedures. Exploring these individual level nurse factors could potentially help identify appropriate strategies to foster an increased use of distraction by pediatric nurses in their management of procedure-related pain. Ultimately, this would lead to the resolution of unnecessary pain and suffering experienced by children requiring painful procedures.

Future Research Approaches

Qualitative methods enabling an exploration of nurses' ideologies or assumptions may contribute to a deeper understanding of the issues surrounding pediatric nurses' non-pharmacological pain practices. It is imperative to have individual pediatric nurses, who on a daily basis are responsible for providing care to children that includes painful procedures, define their experiences. Who better to describe and give meaning to this issue than pediatric nurses who in the "everydayness" of their practice are required to perform medical procedures that may be life-saving, yet at the same time are painful and distressing for children. In Twycross & Powls (2006) study, as previously mentioned, the need for further

identification of the individual level factors of nurses that affect clinical decision-making in the management of children's pain needs further study (A. Twycross & Powls, 2006). There is currently a paucity of qualitative evidence that has captured the experiences and narratives of nurses about these individual level factors and how they shape nurses use of non-pharmacological methods such as distraction, to manage painful procedures on children.

Conclusion

As discussed, the undermanagement of children's procedural pain has been recognized by science, and confirmed through children's narratives, to be detrimental for children. Nursing practice and the well-being of children are being compromised by the lack of adequate pain relief for children. The consequences for the professional discipline of nursing and the children experiencing unrelieved pain are significant. As the pursuit of effective pain management as a human right escalates, nurses will be centrally located within this debate (International Association for the Study of Pain, 2010a). Until the undermanagement of children's procedural pain is resolved, the potential exists for the nursing profession to be caught in a contentious position. Potentially, nurses could be identified as a barrier to children's *rights* to effective pain management. The technology and means to improve children's pain management are available to nurses. A practice and disciplinary priority has become necessary in order to realize this change. This progress requires an understanding of the context and practice realities of this issue which can only be acquired from nurses themselves, within their everyday practice settings of managing children's painful procedures.

It is now the narratives of nurses that are required in order to gain an understanding of the individual level factors that shape their choices for non-pharmacological pain management practices such as distraction. Quantitative methods have examined nursing practice issues in the undermanagement of children's procedural pain; however there is still a lack of understanding of why this practice dilemma persists. The stories and voices of nurses are needed to fill this gap, and facilitate the means for nurses to use current evidence to lead their practice in successfully managing children's procedure-related pain using non-pharmacological methods such as distraction. Only then can the unnecessary pain of children be resolved.

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Chapter 3: Influences Shaping Nurses' Use of Distraction to Manage Children's Procedural Pain: An Interpretive Description

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Potential Venue: *TBD*

Introduction

> *"… unrelieved pain diminishes the human to profound depths of emotional and physical dependence. Our [nurses] ability to relieve pain should be the litmus test of our value as healthcare professionals… it is the mandate of our privilege to be nurses."* (Ferrell & Coyle, 2008, p. 52.)

Every day in Canada hospitalized children endure painful procedures in order to diagnose or treat their illnesses. Research findings show that these painful experiences are often not adequately managed, and as a result children suffer unacceptable levels of pain (Buscemi, Vandermeer, & Curtis, 2008; Ellis et al., 2002; Taylor, Boyer, & Campbell, 2008). Consensus guidelines by numerous organizations, including the World Health Organization (WHO), have responded to the evidence on unrelieved pediatric pain by mandating the *rights* of children to have their pain alleviated (American Academy of Pediatrics. Committee on Psychosocial Aspects of Child and Family Health & Task Force on Pain in Infants, Children, and Adolescents, 2001; Anand & International Evidence-Based Group for Neonatal Pain, 2001; Brennan & Cousins, 2004; International Association for the Study of Pain, 2010a; International Association for the Study of Pain, 2010b; Joint Commission on Accreditation of Healthcare Organizations, 2010; Watt-Watson, Clark, Finley, & Watson, 1999; World Health Organization & International Association for the Study of Pain, 1998). These guidelines target the responsibilities of health care professionals in identifying and managing pain effectively and declare it morally unjust to allow children to experience unrelieved pain. Consequently, nurses, bound by their professional Code of Ethics

to practice “right behaviour and right knowledge”, are often seen as a responsible party within children’s undermanaged pain (Canadian Nurses Association, 2008; College and Association of Registered Nurses of Alberta, 2005; Greipp, 1992; International Council of Nurses, 2010; Walco, Cassidy, & Schechter, 1994).

Today, in the management of children’s pain, nursing practice is shown to be suboptimal. The means to manage and resolve acute, procedure-related pain exists, yet remains unrelieved in the pediatric population (Chambers, Taddio, Uman, & McMurtry, 2009; Shah, Taddio, & Rieder, 2009; Stinson, Yamada, Dickson, Lamba, & Stevens, 2008; Taddio, Ilersich, Ipp, Kikuta, & Shah, 2009; A. Twycross, 2007; Uman, Chambers, McGrath, & Kisely, 2008; C. Van Hulle Vincent, 2007). Current research identifies the availability of pharmacological and non-pharmacological methods for the efficacious management of children's pain. There is also substantial evidence revealing the lack of uptake /transfer of these measures into current nursing practice. Factors influencing nursing practice in relation to children’s acute pain management include: 1) lack of knowledge of pain management in children – including both the use of analgesics, as well as the use of non-pharmacological interventions (Broome, Lillis, & Smith, 1989; Broome, Lillis, McGahee, & Bates, 1992; Burokas, 1985; Gadish, Gonzales, & Hayes, 1988; Salantera, Lauri, Salmi, & Helenius, 1999; Stinson et al., 2008; C. Van Hulle Vincent & Denyes, 2004; C. Van Hulle Vincent, 2005); 2) myths and misconceptions about the management of children’s acute pain and its consequences (Ellis, Sharp, Newhook, & Cohen, 2004; Margolius, Hudson, & Michel, 1995; Mather & Mackie, 1983; von Baeyer, Marche, Rocha, & Salmon,

2004); 3) inadequate assessments of children's pain (Hamers, Abu-Saad, Halfens, & Schumacher, 1994; Mann, Jacobsen, & Redd, 1992; Manne, Jacobsen, & Redd, 1992; McGrath, 1987; O'Rourke, 2004; Taylor et al., 2008; Zeltzer, Bush, Chen, & Riveral, 1997); 4) nursing beliefs, values and expectations around pediatric pain (Burokas, 1985; Griffin, Polit, & Byrne, 2007; Griffin, Polit, & Byrne, 2008; Jacob & Puntillo, 1999; Margolius et al., 1995; C. Van Hulle Vincent, 2005); 5) nurses' personal experiences with pain (Burokas, 1985); and most recently, 6) nurses use of evidence to inform their pediatric pain management practices (Buscemi et al., 2008; Eizenberg, 2011; Johnston et al., 2007; Rycroft-Malone et al., 2004; Scott-Findlay & Estabrooks, 2006). Much of this work has focused on post-operative pain management, using quantitative and survey-based research methods. For a more in-depth review of current literature in this area, see Olmstead & Scott (2011) (Chapter 2).

Nursing issues preventing the integration of best practices into the care of children experiencing pain are being examined. The need to identify the individual-level perspectives of pediatric nurses that influence their pain management practices is also necessary. In particular, procedure-related pain has been shown to be a significant part of children's hospital experiences. As with post-operative pain, methods exist to manage this type of pain more effectively through the use of pharmacological and non-pharmacological methods. In particular, according to recent systematic reviews, the efficacy of distraction (a non-pharmacological method for managing acute procedural pain) has been clearly identified, yet according to research, continues to be underutilized by

nurses (Broome, Richtsmeier, Maikler, & Alexander, 1996; Buscemi et al., 2008; Ellis et al., 2002; Johnston, Abbott, Gray-Donald, & Jeans, 1992; Johnston et al., 2007; Polkki, Laukkala, Vehvilainen-Julkunen, & Pietila, 2003; Pölkki, Vehviläinen-Julkunen, & Pietilä, 2001; Scott-Findlay & Estabrooks, 2006; B. Stevens; B. J. Stevens & Pillai Riddell, 2006; Stinson et al., 2008; Taylor et al., 2008; A. Twycross, 2002; Uman et al., 2008; C. Van Hulle Vincent, 2005).

Purpose

The purpose of this study was to gain an extended understanding about the individual level influences that shape pediatric nurses' management of children's acute procedure-related pain.

Methods

Design

A qualitative method of inquiry was utilized in the study to inductively obtain insights into what nurses identified as influencing their choice to use distraction techniques to manage children's procedure-related pain. An interpretive description was chosen to answer the research question, and to acquire nurses' personal perspectives on the factors influencing their practice. Interpretive description is an approach to qualitative inquiry utilized when seeking to understand a clinically-based phenomenon, with the potential to inform practice (Thorne, 2008). It is specifically tailored towards capturing knowledge within clinical practice disciplines such as nursing science, and therefore was a method that fit with the research purpose. Descriptions from pediatric nurses on their choice to use or not use distraction were intended to extend the current

understanding for using this technique in the nursing management of pediatric procedural pain. The study was approved by the Health Research Ethics Board at the University of Alberta, and administrative approval received from Alberta Health Services. Informed consent was obtained from each research participant prior to the commencement of their interview (Appendix A).

Study Sampling

Purposive sampling of seven registered nurses working in pediatric oncology in a tertiary children's hospital, who had a minimum of six months experience, comprised the key informants for this study (see Table 3.1). The uniqueness of these nurses provided a sampling that fit with the research question. The nature of pediatric oncology entails children undergoing recurrent hospitalizations over a number of years, in the management of their illness. As painful, repetitive, medical procedures are required for the diagnosis and treatment of cancer in children, pediatric oncology nurses assume responsibility for performing and managing these procedures within their everyday practice. Though not seeking to be "representative", these nurses' accounts were anticipated to "ring true" for other pediatric nurses whose roles required the routine performance of painful procedures (Thorne, 2008, p.91).

Data Collection and Analysis

Data collection and analysis occurred concurrently. A constant comparative method of analysis was utilized (Glaser & Strauss, 1967), with data analysis commencing with the first data collection. With each successive interview, data collection and analysis continued to inform one another (Thorne,

2008, p.11), allowing for the identification of emerging concepts and patterns along with relationships and insights (data synthesis).

Study participants were interviewed using a semi-structured interview guide (Appendix B). Interviews ranged from 40 to 75 minutes. Interviews took place over a four month period, and were set up according to nurses' schedules, and in the setting of their choice. Interview questions became more structured and focused as the interviews unfolded. The interviews were audio taped and transcribed verbatim. They were coded line by line and analyzed by the first author and discussed with the second author to substantiate findings and meanings. Codes were developed by the first two authors to capture the essence in the data. Detailed analytic and methodological notes were completed throughout the analysis process. Triangulation of the interview data with analytic and methodological notes occurred. NVivo 8 computer software program for qualitative research was used to manage the analyzed data codes, once all interviews and associated transcripts had been analyzed.

Fidelity of the data from the research interviews was addressed through Thorne's four components of rigor specifically suited to interpretive descriptions: epistemological integrity, representative credibility, analytic logic, and interpretive authority (Thorne, 2008). The research question, identified from within existing research findings, was situated within the context of pediatric nurses' pain management practices. Representative credibility demonstrates that the source of data was based on the phenomenon being studied and was addressed through the choice of experienced pediatric nurses, and the development of

triangulation of data sources, both in the collection and analysis of the data. Analytic logic encompasses the generation of an audit trail that would allow others to follow the direction of the analysis in an explicit way (i.e. allowing another researcher to replicate the process and the findings) (Thorne, 2008). This transparency of analytic decisions within the context of the research question, along with the use of verbatim accounts of the research participants, brought credibility to the data outcomes. The final element of rigor is interpretive authority, which proves the trustworthiness of the researcher's interpretations and conclusions. This was accomplished through the use of interview notes, methodological and analytic memos and two researchers working in the data throughout the study period (first author and second author).

Findings

Through pediatric nurses' accounts of their experiences performing painful procedures on hospitalized children, individual level influences on their decision-making in the use of distraction for the management of procedure-related pain were elicited. Key meanings in relation to nurses' decision-making in their everyday nursing practices were unveiled. The three overarching themes of nurse determinants identified were: Knowledge, Experience, and Relational Capacity.

Knowledge

Nurses shared their knowledge and insights on the uniqueness of children's pain experiences, within the context of their illness and hospitalizations (see Table 3.2). Through these accounts, nurses used practical wisdom and perceptiveness, technical nursing knowledge, and also experiential knowledge in

the management of each child's pain experience. This knowledge was imperative within three key decisions nurses made for procedural pain management: 1) the decision to use or not use distraction (efficacy of distraction); 2) the "what, when and how" of distraction methods, based on a child's age and developmental level (developmental considerations); and 3) an "executive" form of decision-making required to manage painful procedures within particular circumstances (executive decision-making).

Efficacy of distraction.

All of the nurses interviewed acknowledged using distraction as their standard of practice for managing children's procedural pain. They recognized the positive influence distraction methods had for children experiencing painful procedures. "I think that the majority of people will use some sort of distraction, and even if the kid doesn't want you to. 'Cause you don't want to just hold them down - and even holding, you still will talk to the child." The nurses described how distraction strategies were incorporated into their practice over time, as they acquired nursing knowledge and experience. Nurses also identified specific circumstances in which, according to their knowledge and nursing judgment, distraction methods were less successful, ineffective or even a barrier in managing children's procedure-related pain (see Figure 3.1). For example, nurses' experiential knowledge revealed that, in children whose anxiety was heightened even prior to the procedure, the waiting and distracting strategies could perpetuate a child's anticipatory anxiety around having the procedure. The child was

typically unable to "de-escalate" their distress and fear, leaving distraction strategies ineffective.

Nurses' different types of knowledge on distraction effectiveness were exhibited in their descriptions of situations in which children "lost control" during a painful procedure. Nurses identified this as a turning point in the painful procedures, where they determined (through both tacit and experiential knowledge), that distraction was no longer the right choice for managing the child's distress and pain. Nurses disclosed purposely choosing to "just get it done" and complete the procedure as quickly and expertly as possible (i.e. forfeiting distraction). Nurses used this same form of knowing to choose to expedite other painful procedures described by the nurses as "no win" or "it never goes well". In these circumstances, nurses shared how no matter what they tried, attempts to use distraction methods within these contexts were unsuccessful. These situations were not always anticipated by the nurses. The unpredictable nature of painful procedures also resulted in nurses choosing to "just get it done" in an effort to minimize the amount of *time* the child experienced pain.

Nurses identified how not all distraction methods were effective for every child, or every procedure. This was true even when the distraction tool was considered to be a "gold standard" strategy for distraction. This was captured in a nurse narrative from one young child's response to the special bubble-making machine brought into his room. The child exclaimed, "When the bubble machine comes into my room, I know that it's gonna be bad!" What was considered to be

the ideal distraction tool on this unit, for this child now held a very negative connotation, making it an inappropriate choice.

Nurses' knowledge was also revealed in their narrative descriptions on the unpredictable nature of painful procedures and the effectiveness of distraction methods. Distraction techniques that worked one day on a child did not predict the same outcome an hour or a day later - "it's different every time". How the pain experience could change for children was well illustrated in one nurse`s tearful reflection. A child who normally coped well with her procedures, one day unexpectedly fell apart during the procedure, and sobbed, "You don't know how hard it is to have all this done all the time…". The nurse shared how this experience served to remind her that no matter how well a child seemed to cope with their pain, what these children endure over years of medical treatments should never be considered "routine". The nurse exhibited a tacit understanding of how the meaning of a painful procedure could change in a moment`s notice for a child, and how this made the successful management of *all* children`s pain essential.

The unique contexts in which children's pain experiences were situated were revealed in nurses' descriptions of their decision-making processes. The need for nurse's experiential, perceptual, and formal nursing knowledge in determining how to manage a painful procedure with any particular child was imperative. One nurse reflected, "I don't really know when you can tell that it's reached that point. It's just kind of a sense that you get that you know it's not going to work anymore for that child. I compare it to a parent knowing that

there's something wrong with their child but they can't put a finger on it. So it's that sense that I get or that they might get… in that situation, where you just sort of sense that this is not going to go well."

Developmental considerations.

The second key area in which nurses' levels of knowing influenced decision-making was a child's age and developmental level. Formal, tacit and experiential knowledge were reflected in nurses' descriptions of different distraction methods chosen for infants, for children and for teenagers. Nurses identified the unique challenges for the different ages and developmental capacities of the children in their care. Nurses described infants as having the best response to distraction methods, while several nurses specifically cited school-age children as the most difficult age group for using distraction successfully. "At a certain age [4 to 9 years], they're so conscious of what's going on around them that it's hard for distraction to keep them preoccupied." When describing distraction use in teenagers two interesting disclosures emerged within the interviews: 1) the sense that "teens just want you to get it done"; and 2) nurses preferred to "just talk to them [teens]" and not use any distraction. Unknowingly, these nurses were using verbal distraction.

Formal nursing knowledge about children's developmental needs, both physical and emotional, was reflected in nurses' dialogues about the importance of autonomy for children experiencing painful procedures. Every nurse disclosed the imperative for involving the child in choosing how to manage their procedural pain, and also in the preparation for painful procedures. One nurse commented,

"Because we are doing something *to* them that they can't control [a painful procedure], the choice of distraction method is something they have control over …it's important." Although for most children the key to the success of managing the procedure was preparation, nurses described how the opposite could also be true. For certain children, the preparation for a painful procedure heightened their distress and anxiety, rather than providing them with a sense of autonomy about the procedure.

Executive decision-making.

Executive decision-making occurred within the context of all three levels of nurse knowledge. In some circumstances, successful management of children's procedure-related pain was more complex, requiring nurses to change their practice choices. Children's refusal of distraction methods and the influence of time were two examples in which nurses' executive-type decisions emerged. When a child refused distraction for managing a painful procedure, most nurses chose to use distraction strategies despite the child's refusal ("executive decision-making"). Nurses disclosed an inherent need "to do something", as no pain management was not considered ethical practice. One nurse stated, "I think it's a nurse thing too though. That it gives you that, 'I'm still doing something for you even if you don't want me to do it for you, while I'm doing something to you'. You know, 'I'm going to poke you regardless if you want me to or not, so at least if I talk to you, or say wiggle your toes**,** *I'm doing something.'* "

Similarly, the influence of time on nurse's use of distraction strategies under certain circumstances resulted in executive nursing decisions being

necessary. Nurses identified a specific window of time during which distraction methods worked optimally. Outside that window of opportunity, nurses implicitly made decisions to complete the procedure as quickly and expertly as possible, in order to minimize the trauma to the child. This window of time also applied to procedures themselves, as certain procedures had strict timelines in which to be completed. In these clinical situations nurses described using their nursing expertise to make decisions on how and when distraction would be utilized. Sometimes this meant being unable to prepare the child, or provide distraction choices to manage a child's pain.

Throughout the interviews, nurses shared tacit and explicit knowledge about their decisions around pain management. They demonstrated different patterns of knowing when and with whom distraction methods were efficacious. Nurses also identified that distraction was normally their standard of care. They were also able to determine when abandoning distraction methods and expediting the procedure itself became the best choice for the child in pain. Nurses shared the impact of unpredictability within the performance and management of children's procedural pain, and how this was also a key factor in the success of managing a child's pain and distress during a medical procedure.

Experience

Though nursing experience could be considered a proponent of nursing knowledge, within this study nurses' experience has been considered independently. As with knowledge, different levels and types of experience were identified as impacting nurse's distraction choices for managing children's

procedure-related pain. The emergence of two key types of nursing experience found to influence practice - nurses' clinical experience and their personal experience.

Clinical experience.

Within this parameter, the impact of experience on nurse's technical expertise, the priority for using distraction methods to manage children's painful procedures, and the current context of painful procedures were all elements of nursing experience.

More experienced nurses were described as "expert" in terms of their technical skills, and in some interviews were considered to be a source of mentorship on the use of distraction for managing children's painful procedures. Conversely, more experienced nurses were also described in some interviews as being less likely to use distraction methods, and were seen to "really know what works well, and they just do their thing quickly" (i.e. don't take time for distraction). Interestingly, one of the more experienced nurses shared how the desire to "get the job done" in previous times was for the purpose of "causing the least amount of anxiety and the least amount of trauma to kids".

Newer nurses saw themselves as more unconventional and creative in their distraction practices in comparison with more experienced nurses, however this came only after they had mastered the technical components of the procedures. Initially, less experienced nurses focused on the technical aspects of doing procedures, which they found did not allow them the ability to incorporate distraction into their standard of practice for managing painful procedures in the

children they cared for. However, as these nurses became more skilled, they acknowledged being able to incorporate a focus on learning and using distraction strategies to manage painful procedures until it became "just a part of what you do every day". Nurses described their use of distraction as evolving into a habit or a routine over time. One nurse remembered that as a brand new nurse, "I was probably just as anxious as the child getting it [the painful procedure], and it was like 'Let's just get this done'."

More experienced nurses contextualized their view of procedural pain management by the types of painful procedures they had managed in children throughout their nursing career. Their experiences caring for oncology children in the years when lumbar punctures (LPs) and bone marrow biopsies/aspirates (BMAs) were done without any analgesia, put a unique perspective on how they view children's experience with today's procedures (e.g. IVAD accesses, l'asparginase injections, and nasogastric (NG) tube insertions). "These are minorly painful procedures versus what we used to do." More experienced nurses acknowledged the different context in which newer nurses view painful procedures, having not seen the LPs and BMAs done without pain control. "They just get a little snapshot" of the pain experienced by children in previous years.

Personal experience.

The impact of personal experience, both pain experiences and parental experiences, were identified as influencing pediatric nurses' management of painful procedures. Several nurses who had experienced pain or suffering as a child, or as an adult, shared how they felt these experiences made them better

nurses when doing painful procedures on children, and strengthened their commitment to optimize their pain management practices for all children. “It helps me help them [children having painful procedures] – it helps me become a better nurse… I rely a lot on those experiences”.

Personal experiences as a parent was another influence nurses identified as impacting their pain management in children. Nurses who disclosed not having children of their own shared how they felt this put limitations on their ability to provide optimal care to their pediatric patients, due to their lack of personal parenting experiences. “Sometimes I think I’ll be a better nurse in pediatrics when I’ve been a parent because I might understand what it’s like to have your child experience this. And maybe I would be better support to the patient and better support to the parent because, you understand that connection that you have with your child, and what you need at that time. … You really don’t know until you have been there.”

Experience in nursing practice and in nurses’ personal lives was shown to influence the choices nurses made for using distraction in their management of children’s procedure-related pain. Accounts by the nurses demonstrated the depth of these influences, and gave meaning to their pediatric nursing. Experience was shown to act as both a facilitator, but also a potential barrier in the optimal management of procedural pain using distraction.

Relational Capacity

Within the determinant of nurses’ relational capacity and its influence on nurses’ use of distraction in the management of children’s procedural pain, two

key elements emerged: 1) the engaged relationship between nurses and the children they cared for (caring), and 2) the advanced level of communication nurses established with these children (empathy). Though distinct, nurses' caring and nurses' empathy could also be appreciated as overlapping components of nurses' relational capacity, within the context of a child's experience of procedure-related pain.

Caring.

Within the relationship that pediatric oncology nurses shared with the children they cared for was a level of engagement well elucidated as the research interviews progressed. The attachment shared with children experiencing pain was a key component of nurses' practice choices for pain management, as disclosed by the nurses.

Nature o*f *child's illness.

The relationships between nurses and their pediatric oncology patients were described by the nurses interviewed as evolving over time. The unique challenges presented for nurses in the management of pain in this population of children, arose from within the nature of the illness itself. The years of rotating hospitalizations and painful therapies required to treat, manage and potentially cure these children, were identified by the nurses as having a powerful impact on their care choices for these children, and for their pain. "This is going to be a terrible journey, you know it's terrible news they just got … and some families are looking at the next three years of their life." Nurses described their awareness and anticipation of the journey these children would be required to take in order to

treat their illness. This insight made having to cause pain in order to care for these children emotionally difficult for nurses. During hospital stays when children were very ill, nurses found them less able to cope with any additional pain, and also less amenable to distraction techniques. The extent of nurses' caring was heightened during these periods, as their need to manage painful procedures optimally became paramount.

The ongoing nature of the medical therapy required by pediatric oncology patients also meant that children received the *same* painful procedures "over and over and over again" throughout a period of years. The consequence of knowing this, both for the child and the nurse, was significant and was disclosed throughout all the nurse interviews. Nurses readily identified the "worst" procedures that children endured (intramuscular l'asparginase injections and nasogastric tube insertions), and also the anticipatory anxiety for these painful procedures, experienced by both the child and the nurse. This anticipation was clearly a key influence on nurses' pain management practices and directly related to the engaged and caring relationship shared within these children's pain experiences.

Fostering engagement and trust.

The relationship nurses entered with their pediatric patients evolved over years of shared experiences during children's hospital stays and treatments. Some nurses interviewed felt that this "knowing" relationship made it easier to perform painful procedures on the children, because of the connection that they shared. "When you have relationships with people, things get easier over time". Other

nurses, however, described this ongoing attachment with the child and family as making it more difficult and stressful for them. "… 'Cause we see these kids so often, most of them, you build up a relationship with them and the family and you can have a great relationship and then you have to do something painful to these kids, and it affects [the relationship] – they view you differently. It's tough." Several nurses used the term "the Bad Guy" when describing their role as the one causing the child pain. Other nurses described the "holding down" role required from nurses helping with painful procedures as causing more distress. Nurse statements such as "you feel like a bully" and "it causes the most distress", reflected sentiments shared by most of the nurses interviewed. One more experienced nurse shared a poignant reflection from years of holding down children for lumbar punctures and bone marrow aspirates with such force that she claimed, "You just literally held these kids down, and you were holding them so hard that you could feel their breath on your side. And the distress that they must have felt each time … the anxiety, the fear… I just, I can't even comprehend."

Nurses' engagement and relationship with the children requiring painful procedures also encompassed the child's parent(s). Nurses described parents as most often playing a facilitative role in the management of their child's pain. All nurses identified parents' goals for their child as aligning with their nursing goals i.e. to minimize the child's distress and pain with procedures. "I found that the kids that had the support of their parent were the ones that did better, of course." The significant relationship parents had with their children extended to a relationship with the nurses caring for their child during the treatment of their

illness. Nurses disclosed the importance of this relationship particularly when it came to managing a painful procedure.

Empathy.

The capacity for empathy as an advanced form of communication (Campbell-Yeo, Latimer, & Johnston, 2008; Kunyk & Olson, 2001), was clearly portrayed within the nurse interviews. Nurses' abilities to understand and be sensitive to children's procedural pain experiences were captured throughout the interviews. Nurses identified the meaning that painful procedures had for children, and also the memory for pain that children demonstrated throughout their repeated hospital stays. The impact of this understanding on how nurses managed a child's procedure-related pain was described throughout the interviews.

Valuing the meaning of children's pain.

The meaning that procedure-related pain experience held for children, nurses' empathy for this experience, and its influence on their nursing management of this pain was underscored throughout all interviews. This empathetic capacity for a child's pain experiences was reflected in nurses' disclosures around the choices they made when performing painful procedures on these children. All the nurses acknowledged that having to hurt children every day in order to help them was the "worst part of the job". Mirrored in their descriptions of children's pain experiences was the angst and distress experienced by nurses themselves, when having to cause children pain as part of their nursing care. One nurse reflected, "We probably dread them [painful procedures] as much

as the kids do." The meaning of painful experiences for children, and nurses' compassion for these children, was shared by all nurses and impacted their commitment to, and priority for, using distraction for the optimal management of children's procedure pain.

Perceptions of children`s memory for pain.

In pediatric oncology, as previously discussed, the repetitive and ongoing nature of their medical care, years of hospital stays and painful treatments have significant impacts on children's pain experiences. Alongside the unpredictability and unknown outcomes of painful procedures for any particular child, on any particular day, children's memories for these experiences were identified by nurses as having a significant influence on their use of distraction when managing these procedures. Nurses' connection to children's pain experiences over years of treatment, and their understanding of children's memory for those pain experiences, were articulated by all of the nurses interviewed. Nurses acknowledged how one bad experience with a painful procedure, would elicit a permanent memory for that child – "they never forget". Nurses tacit awareness of children's memory for painful procedures lead to their concern for, and commitment to, optimizing not only a child`s first painful procedure, but all subsequent procedures through expert nursing care. "When you do it [the painful procedure] that many times, I am sure they remember. You wonder what are they gonna be like when they're teenagers. They will remember one negative event for sure".

The awareness of, and compassion for, the impact painful procedures held for children years and sometimes decades later, was described by the nurses as an impetus for meeting "the gold standard" of eliminating any unnecessary pain. Use of distraction strategies in meeting this standard were described by the nurses interviewed. The challenge to get it right every time in order to not cause a child pain, alongside knowing that children always remember the one procedure that went bad, was revealed by nurses as being an enormous responsibility.

The meaning of causing pain.

Significant emotion was shared by nurses around the role of performing pain-evoking, necessary procedures on children. One nurse interviewed used the words "horrible" and "terrible" twelve times within a brief reflection on one particularly difficult painful procedure she performed. The sense of the burden and distress described by the nurses showed an unmistakable sense of their empathy for children's pain experiences, and the sense of responsibility and the pressure they felt to provide the most expert, pain-free care possible. Their depth of sharing about their feelings around this part of their nursing role with children, including a sense of "never feeling you did well enough" was pervasive throughout the interviews. "We want it to be not traumatic, for our own sense of wanting to do it again and go back to work the next day, and not feel like we're just a *torture chamber for kids.*"

Interestingly, all nurses disclosed their use of distraction for themselves, as well as for the child having the procedure. They described specifically how they used it to focus and calm themselves in the preparation stages for the procedure,

as well as to distract themselves from the pain they were causing the child during the procedure. “I don’t know if it’s [distraction] more for my sake or for their sake.”

The caring and empathy required within nurses’ relationships with children enduring painful procedures, may have been best illustrated in one nurse’s reflection, “… you finally take a breath –it is exhausting [performing a painful procedure on a child] – emotionally, physically, mentally exhausting ... you have tapped into every part of yourself to get you through that experience… and it’s part of your job.”

The relational capacity of the nurses to engage with children and empathize with their pain experiences was perhaps one of the most powerful themes conveyed within the interviews.

Discussion

The underuse of non-pharmacological methods to manage children’s acute pain has been highlighted throughout the research literature, citing numerous influencing nurse factors in this ongoing practice dilemma. Through qualitative inquiry, this study sought to capture the personal accounts of pediatric nurses as to their experiences performing painful procedures on children in their care, and their use of distraction methods to manage that pain. The findings within this interpretive description identified three key themes of nurse determinants that served to organize and bring meaning to the data collected within the nurse interviews. These determinants were shown to influence nurses’ decision-making in the use of distraction to manage children’s procedure-related pain. A

discussion of the findings will be presented, along with how these findings relate to and contrast with previous research.

Knowledge

Evidence on pediatric acute pain management describes distraction as one of the most successful non-pharmacological methods for acute pain management in children. Most research also shows that it's uptake into pediatric nurses' routine clinical practice is inconsistent (Jacob & Puntillo, 1999; Twycross 2007). Two recent studies, however, suggest that nurses' use of non-pharmacological pain method for managing children's acute pain may be increasing (Griffin et al., 2007; Le May et al., 2009). Much of the pediatric literature continues to focus on children's post-operative pain management, using quantitative or survey methods of inquiry.

In the current qualitative study, all nurses acknowledged using distraction for children's procedural pain as being the standard of practice, and described it as an essential component of their pain management. Research on the influence of nurses' knowledge on their use of non-pharmacological methods to manage children's acute pain has been conflicting. Some studies have shown a positive relationship between nurses' knowledge and their nursing practices (Gimbler-Berglund, Ljusegren, & Enskär, 2008; Pölkki et al., 2001), while other studies have found no relationship exists (Hoffman, Donoghue, & Duffield, 2004; A. Twycross, 2008; A. Twycross, 2007; C. Van Hulle Vincent & Denyes, 2004). An earlier Canadian study, using grounded theory methods of participant observation and interviews, found nurses primarily provided more technical nursing care,

which failed to provide children with adequate pain relief (according to child and parent interviews) (R. Woodgate & Kristjanson, 1996b).

One classic study, frequently cited in the pediatric nursing literature on pain management, is Manworren's Pediatric Nurses Knowledge and Attitudes Regarding Pain Survey (PNKAS). The original study examined the nursing attributes of 274 nurses, and how these related to nursing pain practices. Nurses revealed knowledge deficits in many areas including the use of non-pharmacological methods for relieving children's acute pain (Manworren & Hayes, 2000). Others have since used Manworren's survey to study nurses' pain practices, finding similar results (Le May et al., 2009; Salanterä, 1999; C. Van Hulle Vincent, 2005).

Nurses' decision-making in this qualitative study revealed that nurses required several different forms of knowledge in their management of a child's procedure-related pain. The choice for using distraction was complex, requiring several different forms of knowing by the nurses. These findings differed from Twycross & Powls (2006) qualitative study which revealed that nurse participants (regardless of experience), used novice-level, deductive forms of decision-making (backward reasoning) to make choices on pain management, rather than more expert-type, intuitive decision-making (forward reasoning) (A. Twycross & Powls, 2006).

Several elements within nursing knowledge were unique to this study. The first was nurses' explicit and tacit understanding that distraction methods were not always effective. Nurses were able to clearly delineate the specific

circumstances in which this held true. Interestingly, all nurses shared similar nursing decisions around these clinical situations in which they found distraction to be ineffective.

The second unique aspect of nursing knowledge identified by nurses interviewed was again described by all of the nurses, and related to the unpredictability of every procedure, on every child, on any particular day. As nurses explained, "it's different every time". This understanding by the nurses significantly influenced both their choices for pain management, as well as the emotion of performing procedures on children that were painful.

Experience

Within the determinant of nurses' experience, the research literature is once again contradictory in its findings. Some studies demonstrated that clinical experience positively influenced pediatric nurses' non-pharmacological pain practices (Pölkki et al., 2001; C. Van Hulle Vincent & Denyes, 2004; R. Woodgate & Kristjanson, 1996a). Other studies were unable to discern any relationship between nurses' experience and their pain management choices (Hoffman et al., 2004; Pölkki et al., 2001). When examining nurses' personal pain experiences, there were discrepancies in the findings between different studies, with some showing a positive relationship between a nurse's personal experience and pain practices (Burokas, 1985; Ely, 2001; Gimbler-Berglund et al., 2008), while other studies found no relationship (Griffin et al., 2008; C. Van Hulle Vincent & Denyes, 2004).

Newer nurses within this qualitative inquiry (one to three years of experience), expressed difficulty focusing simultaneously on the technical elements and distraction techniques when performing painful procedures on children, when they first began their pediatric nursing practice. Nurses described that initially, they could only focus on technical skill acquisition. They identified that learning distraction was displaced by their need to provide technically competent and safe procedural care, and that distraction techniques were incorporated once this competency was achieved. In alignment with Benner's work on novice versus expert nursing roles, these less experienced nurses shared their inability to deal with the more intuitive and emotional aspects (less critical) of performing painful procedures, while learning the *necessary* technical components of procedural care (Benner, 2000).

A unique finding within this qualitative inquiry was elicited from the narratives of more experienced nurses. They described how the different contextual aspects of painful procedures today, versus years ago, influenced their perceptions of painful procedures they performed within their current practice. Their descriptions of the procedures previously done without any pain management illustrated how they viewed the level of pain children coped with in today's oncology care. This was a perspective not found within the pediatric pain literature.

Relational Capacity

Though conceptual analyses of nurse empathy specifically, have been examined by several authors (Campbell-Yeo et al., 2008; Kunyk & Olson, 2001),

the relational capacity of nurses is not well studied within the pediatric pain literature. In an early study of 27 practicing pediatric nurses from a pediatric burn facility, nurses responded to an open-ended pain questionnaire (Atchison, Guercio, & Monaco, 1986). The conflicting role of these nurses who were responsible for hurting children in order to help them was presented. Nurses shared their feelings of guilt and "emotional exhaustion" around their roles of performing painful burn dressing changes on children in their care. Similar descriptions were reflected in the narratives of the oncology nurses interviewed within the current study, despite Atchison's work now being twenty five years old. Other earlier qualitative work also revealed similar findings (Nagy, 1999). Descriptions emerged on different kinds of coping strategies identified by nurses, used to deal with the emotional effect of causing children pain within their everyday nursing practice.

Coping strategies utilized by pediatric nurses was also presented in these two earlier qualitative studies. Nurses performing painful dressing changes on children were found use distancing strategies in order to cope with inflicting pain on their pediatric burn patients (Atchison et al., 1986; Nagy, 1999). In Nagy's study, 94% of nurses used emotional as well as physical distancing to cope with causing children pain. A different form of coping was revealed within the current study. Pediatric nurses choices to "just get it done" when referring to painful procedures, was a theme shared by all of the nurses interviewed. It was a strategy used by nurses for particularly challenging painful procedures. In situations where a child was not coping well, nurses described performing the procedures as

expertly and quickly as possible as being the best alternative for the child (and for themselves). They chose this over using distraction to manage the child's procedural pain in order to reduce the amount of time the child was in pain. It was the nurse's way to minimize the trauma and suffering the child had to experience from the painful procedure. All nurses described similar clinical situations in which they made these choices. This perspective on nurses purposefully abandoning the use of distraction for managing children's procedural pain could not be found within the literature.

The quality of relationships nurses shared with the children in their care was well illustrated in the nurses' accounts of their experiences performing painful procedures on these children. In the literature, nurses who were "engaged" and "in relation" with a child's pain experience, have been described as being motivated by that connection, to provide expert evidence-informed care (Bergum & Dosseter, 2005; Carter, 2004; Olmstead, Scott, & Austin, 2010). This engaged relationship with the children means nurses "experience with" the child's pain, feeling the anguish and suffering of the child. Within this interpretive description, nurses' narratives around the personal impact of causing pain in children clearly demonstrated their engagement with the children in their care. Nurses described this as "the worst part of our job", repeatedly using words such as "terrible" "horrible" and "horrific" to describe their feelings around causing children pain. Nurses disclosed that having to hurt children every day in order to help them, created distress and anguish around this part of their nursing roles. In another qualitative study (observational) on a pediatric surgery ward, underuse of non-

pharmacological methods to manage children's pain was thought to be caused by the inherent stress nurses experienced around having to hurt children, and was described as a way of creating distance in order to cope with this role (A. Twycross, 2002). Earlier findings in Nagy's qualitative work found that 59% of nurses used "engaging" as a coping strategy when causing children pain (Nagy, 1999). Other qualitative studies also described nurses' feelings of "helplessness" and "guilt" around causing children pain (Atchison et al., 1986; R. Woodgate & Kristjanson, 1996b).

One of the most distinctive insights revealed within this research was nurses' descriptions of how they *all* chose distraction methods as much for themselves, as for the children they were causing pain. Nurses described their use of distraction as a means by which they dealt with their own anxiety and suffering around having to perform painful procedures on children within their everyday nursing responsibilities.

A shared goal described by nurses within this study was their expectations to not cause children any unnecessary pain during medical procedures. Nurses were cognizant that, though not always a realistic goal, it remained something they hoped to achieve in their everyday practice. Within the interviews, it was identified as an underlying pressure or burden that nurses identified, which they expressed in a variety of ways. These findings were similar to Ely's study (Ely, 2001)**,** however contrasted with findings from several other studies. Some studies showed that nurses' expectations for pain outcomes revealed their expectations that a certain level of pain was anticipated and acceptable, and that not *all*

children's acute pain could be relieved (Hamers et al., 1994; A. Twycross, 1999; R. Woodgate & Kristjanson, 1996b).

A unique finding in the current study, not found in the literature, was nurses' disclosures around their perceptions of children's memory for pain. They described how if they were unsuccessful at managing a child's pain during a procedure, the child "never forgot". Nurses disclosed how the children would "look at you differently", an aspect of procedural pain management that nurses found difficult to cope with. Their overwhelming sense of responsibility and obligation for providing the best pain care *every* time was shared by all of the nurses interviewed.

The findings within this interpretive description revealed rich and detailed accounts of pediatric nurses' experiences with having to cause children pain. Nurses' descriptions were found to both share common elements of previous research, as well as contrast with earlier works. Several unique insights from this qualitative inquiry were identified and warrant further discovery.

Implications and Further Research

The findings of this study provide an enriched perspective of nurses' descriptions on their use of distraction to manage children's acute procedural pain. Grounded within the experiences of pediatric oncology nurses' everyday nursing practices, these findings may share common elements with other pediatric nurse populations. The insights and individual level influences disclosed by these nurses on their distraction practices can potentially be informative to pediatric nurses from diverse clinical settings in which children's procedural pain occurs.

Identifying how to successfully integrate nurses' knowledge and use of efficacious distraction methods early in their practice, is an area that would benefit from further investigation. Newer nurses within this current study repeatedly disclosed their initial inability to incorporate distraction practices, while mastering the technical skills required to safely and expertly perform medical procedures on children. Addressing this issue is paramount if the unnecessary pain experienced by children having painful procedures is to be resolved.

Nurses' disclosures about using distraction for themselves as well as for the child experiencing pain, revealed the clear impact this role has on nurses who are required to perform painful procedures on children in their everyday practice. Deliberation on the potential for emotional and moral distress to be experienced by pediatric nurses, whose roles require them to hurt children in order to care for them, deserves consideration for future research. Identification of how pediatric nurses can be supported within these everyday practice challenges would also be imperative.

Finally, further research within diverse clinical pediatric settings, directed at extending the understanding of the influences nurses describe as affecting their pain management practices - specifically their use of distraction to manage acute, procedural pain, would be beneficial.

Conclusion

Research into the undermanagement of pediatric pain continues to accumulate, as children's unresolved pain continues. Nurses' roles in this ongoing

problem continue to be highlighted. The benefits and underuse of distraction for the management of pediatric pain are well documented in the research literature. Located within the context of pediatric nurses' clinical practice, the purpose of this research was to uncover knowledge that could potentially contribute information and understanding of nurse's use/underuse of distraction techniques in the management of children's procedure-related pain. Within this interpretive description, a unique and insightful dialogue with pediatric nurses on their management of procedure-related pain occurred. Future qualitative inquiry could contribute further understanding of these individual level influences on nurses' use of distraction for managing acute procedural pain, with the potential for eliminating unnecessary pain in children who are requiring medical procedures to diagnose and treat their illness.

Table 3.1 Demographics of Study Participants

Nurse identifier	Years of pediatric nursing experience	Professional background	Age	Ethnic origin	Gender
A	>3 - 5 years	BScN	26 - 35 years	Caucasian	female
B	>3 - 5 years	RN	26 - 35 years	Caucasian	female
C	>1 - 3 years	BScN	20 - 25 years	Caucasian	female
D	>1 - 3 years	BScN	26 - 35 years	Caucasian	female
E	>10 years	BScN	36-45 years	Caucasian	female
F	>3 - 5 years	RN	26 - 35 years	Caucasian	female
G	>10 years	BScN	>45 years	Caucasian	female

Table 3.2 Nurse Narratives

DETERMINANT	NURSE QUOTES
Nursing Knowledge	*"I use distraction a lot more now without even thinking about it… every time you go in you're trying to distract them in some way, even just by talking to them."* *"In some form we're usually always using distraction."* *"I don't think I have ever done a 'silent injection' on a child."* *"We try to make [painful procedures] as least traumatic for everybody, including ourselves, I have to say we do."* *"You learn that distraction doesn't always work. Some kids are angry at you for trying to distract them during a procedure."* *"They associate those distraction methods with the procedure and it sort of causes more of an anxious response. So we have to be kind of careful of these associations we create for them."* *"… it's really a perception thing. On some kids, distraction works really well, and other kids it doesn't do anything for them."* *"… the child is totally revved up… there is just no win. And like we're not going to de-escalate this child, and so let's just get it on, and get it done".* *"It's awful, it's just not good. We try to distract them – it doesn't work… they know they're going to get poked and it's very traumatizing for them".* *"But I know that if we let that anxiety build and build, there's no win at the end. At that point you just need to get it done."* *"It's never a positive experience [doing a painful procedure] even if it goes well … it maybe went as well as it could have, but you always feel you should have done something more".* *"You sort of have to check your preconceived notions at the door. Because what you think is commonplace – they don't. Some of the easiest things can become the hardest".* *"… she's quite well versed in her IVAD needle and its' usually no big deal. But this one time she just had a complete breakdown, and was sobbing and she just said. "You don't know how hard it is to have all this done all the time… and it was just heart breaking".*

DETERMINANT	NURSE QUOTES
Nursing Knowledge (Cont'd.)	*"Every patient does so differently, and every patient is different every time you do [a painful procedure]" "It can be very, very unpredictable which adds an element that you have to be able to accommodate."* *"...no sneak attacks."* *"If you can encourage them to participate a little bit, then it [painful procedure] typically goes better, and they [the children] don't feel so blind-sided by the procedure"* *"If we let kids control their entire hospitalization, 90% of them would die, because they don't want any pain."* *"go slow ... no surprises ... build trust."* *"You really want to be able to make it better for them, and you just want to get in there and get it done and over quick and the give a reward and tell them "You've done really well".*
Nursing Experience	*"I've become more conscious of the patient's experience. When you are a new nurse, you are so ... you're kind of in a selfish place because you are so concerned about, you know, doing everything right and doing it safely ... and things take a lot longer when you are new because you're sort of fumbly - you're trying to remember all your steps. Once you sort of refine your skills you become more comfortable and more confident ... you become more conscious of what was going on before, during and after ... you become more creative in your methods of alleviating some of the discomfort or just making the experience easier."* *"I think going back to many years back, when we held down those kids for their LP's and their bone marrows, when they were awake. There was- there was no distraction, there was like nothing! You just literally just held these kids down, and kept saying "It's gonna be okay", and then thinking – "That was-that was hell for those kids".* *"I can remember coming out of procedures, and you could just feel the perspiration because you were holding this child so hard and they were crying and it was just horrible – absolutely horrible!"* *"Some of the best learning experience for myself is having other nurses reflect on the [painful procedure] experience with me."* *"When EMLA came out ... this magic cream was gonna make it all better. But the anticipation of the poke wasn't dealt with, so the kids were still screaming and crying and afraid. So the cream alone couldn't fix it, but the cream with a little distraction did."*

DETERMINANT	NURSE QUOTES
Nursing Experience (Cont'd.)	*"I find my spectrum kind of narrows. When you are the one performing the procedure everything around you can go quiet, regardless of how noisy it is in the room… because you really start to focus on the technical aspect of what you are doing … making sure to do it well and fast."* *"You're the one giving the needle. You're right there touching the child and you can feel that they are trembling … and they're quite anxious … and you just want to get it over and done with … you're the mean guy this time around."* *"If you haven't ever been through something painful … you can't relate on the same level I don't think."* *"I rely on those experiences [of pain] a lot. I just think about what I would've liked."* *"I had quite a bit of pain when I was in the hospital, and I think that kind of 'helps me help them'. I think it helped me become a better person and a better nurse."* *"Having that personal experience [as a parent] bold well to being able to support the patient … You really don't know until you've been there."*
Relational Capacity	*"If you don't take that time then it's going to get worse because every time you walk into that room, they're not going to trust you".* *"'Cause we see these kids so often, you build up a relationship with them … and you can have this great relationship, and then you have to do something painful to these kids … they view you differently. It's tough, yeah."* *"These kids are back for two and three years. If [parents] are linked to any painful procedure – the kids don't trust the parents. They don't want to come back to the hospital with the parents. They're scared to go out for errands with the parents because they're afraid they'll be coming to the hospital."* *"You work with these kids in such tragic circumstances – you're there for more than just the job… you want to minimize as much as possible the bad effects of - of their time with us."* *"It's hard for the patient [child] to separate the procedure from the nurse – you are affiliated with their pain."* *"We've had kids lock themselves in the bathroom and scream, and hit their limbs against the bed and like, hurt themselves, probably causing themselves more pain than the procedure would ... because their fear is so heightened."* *"You don't want to do it – you don't want to inflict pain upon children"*

DETERMINANT	NURSE QUOTES
Relational Capacity (Cont'd.)	*"We all come back [from a painful procedure] and take a big breath and talk about it."* *"It was absolutely horrific! … and she's screaming … it was terrible, it was absolutely terrible! That was a terrible day!"* *"'Cause you see it time and time again … one kid that has had a traumatic experience, a painful experience and they remember that for years."* *"On Day 1 of 21 [treatments] really, it's torturous for everybody!"* *"I remember a little kid said to me once, he's like "I don't want you to do this." And I remember just thinking in my head like, "I don't want to do it either." Neither one of us wants this'"* *"And those kids in those situations – those painful procedures for them are so, like they're so anxious. And their heart's beating out of their chest and it's-it's so heartbreaking right? And you're just thinking "This [distraction] is not helping."* *"The look on his face was like, "I trusted you and you hurt me!" And he was totally afraid, like totally afraid. You've just seen that total fear, and that always goes horribly! It was such a horrible experience."* *"He's not listening – he's fighting the whole time. He tries to hit us, he punches, he bites his mom … it's really sad!"* *"I felt like it-it was such a helpless feeling. But [restraint] needed to be done for her safety … Everyone has their thing, and I just hate restraining children … that is-is my thing…and we have to do it a lot. And it is really, really, really upsetting!"* *"The ones I find hard are the ones that you have to really hold them down, and with each consecutive time you do the procedure, it gets worse, and the child's more afraid and you feel like a bully! You feel like you're hurting them to help them, and it's difficult."* *"You do build relationships with these families and you see them over and over. But that's the thing – these kids are being treated for sometimes years … at times you look at them and they're – they look so tired and worn out and they've been through tons, and if you can make it any better along the way, like it's – that's our goal."*

Figure 3.1 Distraction: Effective or Not?

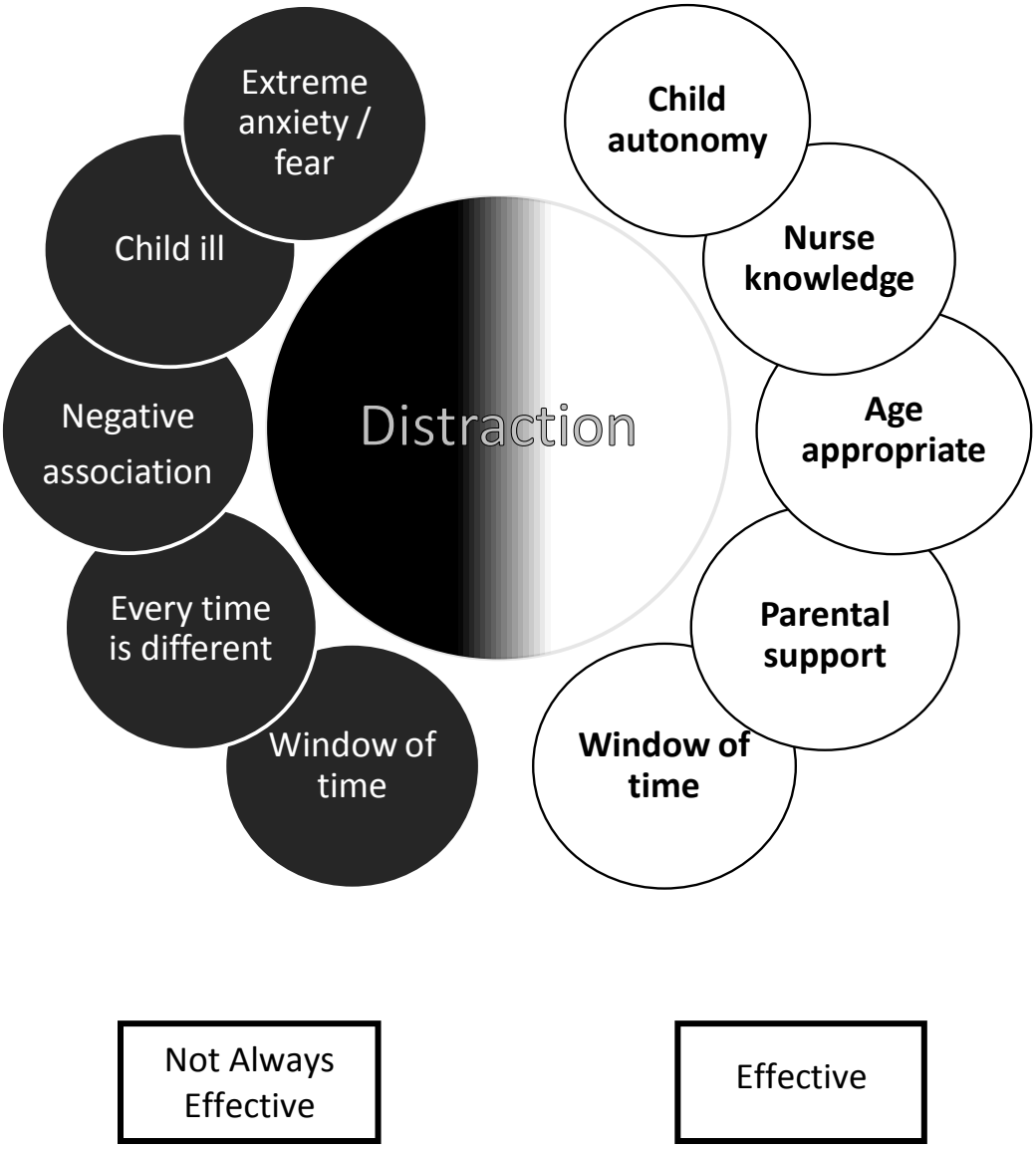

Figure 3.1 Distraction: Effective or not?

This diagram represents nurses' descriptions about their experiences using distraction. Nurses acknowledged the efficacy of distraction in children (white circles). They also disclosed circumstances in which they found distraction was not always effective at managing a child's pain (black circles). The grey area in between represents where the successful use of distraction is unpredictable.

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Chapter 4: General Discussion and Conclusions

"I think it all stems down to like, pain is different for everybody and it's an experience like sadness, like fear, like happiness that no one can really describe. It's different for everybody, for every child, for every parent and sometimes for every procedure."

(A nurse's description of the pain experience in children.)

The purpose of this master's thesis was to uncover knowledge and insights that could contribute information and understanding on nurses' use or non-use of distraction to manage children's procedure-related pain. The intent was to provide an integrative review of current research evidence that demonstrated the need for more qualitative and descriptive contributions from pediatric nurses themselves, on their pain management practices. In this chapter, I will give a brief summary of the outcomes of Papers 1 and 2, as they relate to the research question being posed. A discussion of the possible implications these findings have for future research and for nursing practice will follow.

Results: Paper 1

In Paper 1, available research literature was examined within the context of pediatric non-pharmacological pain management, with a particular focus on the use of distraction by nurses. Extensive searches of the literature in collaboration with a research librarian, underscored a paucity of qualitative nursing research within this practice issue. Though substantive quantitative, deductive knowledge was accessed, the lack of qualitative evidence compromised the understanding of this nursing issue. The narratives of pediatric nurses as to the influences *they* identified for their choices when managing children's procedure-related pain were lacking. This gap could potentially contribute to a misrepresentation of nurses'

non-pharmacological pain practices. The review of evidence documenting nurses' underuse of distraction to manage children's procedural pain and the need for more qualitative inquiry provided the framework for my research.

Results: Paper 2

Paper 2 provided a description of my research and its outcomes. In this paper I described the interpretive description qualitative research design chosen to answer my research question. As well, I addressed methodological issues such as sample selection, data collection and analysis processes. A presentation of study findings and a discussion of these findings as they relate to current research were included.

Pediatric nurses interviewed for this descriptive study worked on pediatric oncology units within one children's hospital. Semi-structured interview questions elicited rich and meaningful descriptions on the individual level influences nurses identified in their choice to use distraction for managing children's procedure-related pain. In alignment with interpretive descriptions, the collection and analysis of the data occurred concurrently and iteratively. As the interviews proceeded, the data and its analysis informed one another (Thorne, 2008).

Three key themes of nurse determinants emerged within the study interviews: nurses' knowledge, experience, and relational capacity. Within these themes, nurses' choices and decision-making around managing painful procedures were revealed. An extended understanding of nurses' choices for the use distraction in the management of children's procedure-related pain was gained through the narratives of the nurse participants. Some of the key influences on the

use of distraction identified through nurses' knowledge, experience and relationships with the children experiencing procedure-related pain were documented (Figure 4.1). The unpredictable elements within nurses' management of children's procedure-related pain were also acknowledged.

Several unique concepts were identified within this interpretive description, which were not previously captured within the research literature. Nurses' use of distraction for themselves, as well as for the child having the painful procedure was a unique insight into the pain experience, a perspective not identified within current research findings. Nurses' disclosures that distraction was not always effective for managing painful procedures in children, has also not been specifically discussed within the nursing literature. Finally, the depth of the engaged relationship that nurses shared with the children they were responsible for performing painful procedures on, was a poignant reminder of the challenges confronting nurses who care for children experiencing pain. This was found to be particularly true within the context of these pediatric nurses, who disclosed their responsibility for performing necessary procedures on children, when those procedures caused or contributed to a child's suffering.

Contribution

This qualitative work gave a voice to pediatric nurses, through their disclosures around the use of distraction for managing the painful procedures in hospitalized children. The inductive nature of nurses' narratives allowed for an extended understanding of their practice choices and experiences of managing painful procedures in children they care for. The identification of key individual

influences of nursing knowledge, experience and relational capacity allowed for a unique perspective of this nursing practice issue to be considered. Nurses' use of distraction to manage their own personal distress at causing pain to children was a finding not previously identified within current pediatric pain literature. This insight is a significant contribution towards understanding the impact this responsibility has for nurses' experience within their everyday practice. Overall, the richness and depth of the nurse narratives within this research provided extensive insight into current nursing use of distraction for pediatric procedural pain management.

Shared Elements of the Pain Experience

Though not defined within the individual level determinants of nurses, elements of the pain experience shared by the nurse and the child emerged within this qualitative work, and were captured within the nurses' narratives (Figure 4.2). The central concept of pain was identified as being experienced by both the child experiencing the pain, and the nurse causing the pain. In essence, children's experiences of painful procedures (e.g. anticipatory anxiety) were found reflected in the nurse's experience of having to *cause* a child pain, when performing necessary medical procedures. These shared concepts were found to include: the nature of the child's illness (cancer); the meaning of pain (both for the child and nurse); the memory for pain; the anguish caused by the pain (experienced by the nurse and the child); the relationship (shared by the nurse and the child); the experience (of the child and of the nurse); the use of distraction for the pain; and the role of parents in children's experiences of painful procedures. These common

elements of the pain experience revealed within the nurse interviews are situated within the overarching constructs of individual nurse factors, child factors and procedural factors.

Implications for Research and Practice

As stated, much of the literature identifying nurses' responsibilities for the undermanagement of children's procedure-related pain has been quantitative in nature. Within the research findings, constructs such as nursing knowledge, attitudes and beliefs about children's pain, have represented the main context of this inadequacy in nursing practice.

Influences on pediatric nurses' decision-making around procedural pain management were revealed throughout this study. A unique perspective on nurses' underuse of distraction for managing children's acute pain was presented, and demonstrated the need for further qualitative inquiry into nurses' practice choices. Currently, distraction is the non-pharmacological method demonstrating the strongest, evidence-based success in managing children's procedural pain. In this study, however, key contexts were elucidated in which nurses determined distraction to be ineffective. Further qualitative examination of these nursing decisions to use or not use distraction strategies to manage children's acute pain experiences need to occur in order to inform necessary practice changes.

Within this research, pediatric nurses' experience was also identified as influencing pain practices, with less experienced nurses providing key insights as to their uptake of distraction methods for managing children's painful procedures. The narratives of newer pediatric nurses revealed perceptions of their incapacity

to simultaneously learn the detailed technical components of procedures, alongside the distraction techniques. This information contextualized the ability of newer nurses to use distraction techniques, and requires further consideration for nurses' adoption of distraction within their pain management practices. Clinical knowledge, assumptions about children's pain and nursing experience have been shown to influence nurses' decision-making, and their use of evidence to guide their practice. Understanding how nurses make these decisions is of particular relevance to the issue of undermanaged procedural pain in children (Kavanagh et al., 2007; Rycroft-Malone et al., 2004). This information has the potential to inform future improvements in nursing pain management practices.

Nurse participants within this study also identified the challenges posed by their knowledge and experience as to the unpredictable nature of painful experiences in children. In the context of nurses practice reality, they disclosed how "every time was different – every day, every child, every procedure". This unpredictability had a strong influence on both the distraction methods chosen by the nurses, as well as whether distraction strategies were anticipated or found to be effective. What was found to be effective for managing one child's painful procedure could not be assumed to hold true for subsequent procedures, and left nurses having to make "minute by minute" decisions around their choices for pain management. Children's anticipatory anxiety and long-term memory of previous painful procedures also contributed to the unpredictability facing nurses and had a significant impact on nurses' choices around whether to use distraction methods. This area of influence requires further examination to determine how nurses' use

of distraction can be facilitated by addressing the needs of the nurses within the context of this unpredictability.

Perhaps one of the strongest influences shared by nurses within this interpretive description was situated within their relational capacity. The emotional consequences for nurses responsible for "hurting children to help them" were evident. Their use of distraction to manage their own angst within this paradoxical role was a significant and new insight uncovered within this study. The impact of this role within nursing has not been well represented within current nursing literature. Pediatric nurses' disclosures on the emotional consequences of having to cause children pain were pervasive throughout the interviews. Though nurses knew and understood that the painful procedures were necessary and sometimes even life-saving, the burden of and responsibility for hurting children was not absolved. "They look at you differently after you have hurt them". Providing nurses with the necessary resources to support them emotionally in these challenging roles, could ultimately improve the management of children's procedure-related pain.

Conclusions

To effect the necessary changes to pediatric nurses' non-pharmacological pain management practices, consideration must be given to the individual level determinants influencing the use of distraction by nurses. Pediatric nurses' *themselves* need to be given more opportunities to provide descriptive accounts of their experiences, and identify influences in their practice of performing necessary, painful medical procedures on children. Exploring these individual

level nurse factors further, could potentially help identify appropriate strategies to foster an increased use of distraction by pediatric nurses in their management of children's procedure-related pain. Ultimately, this could lead to the resolution of unnecessary pain and suffering currently experienced by children requiring painful procedures.

Figure 4.1 Facilitators and Barriers for Nurses' Use of Distraction in Managing Children's Procedural Pain

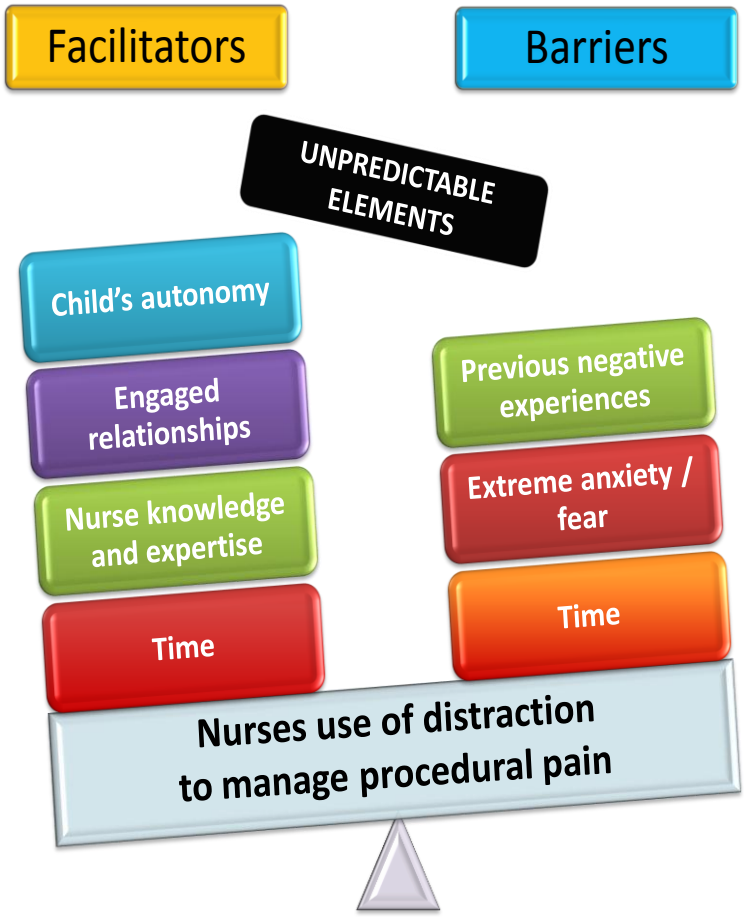

Figure 4.2 Shared Elements of the Pain Experience

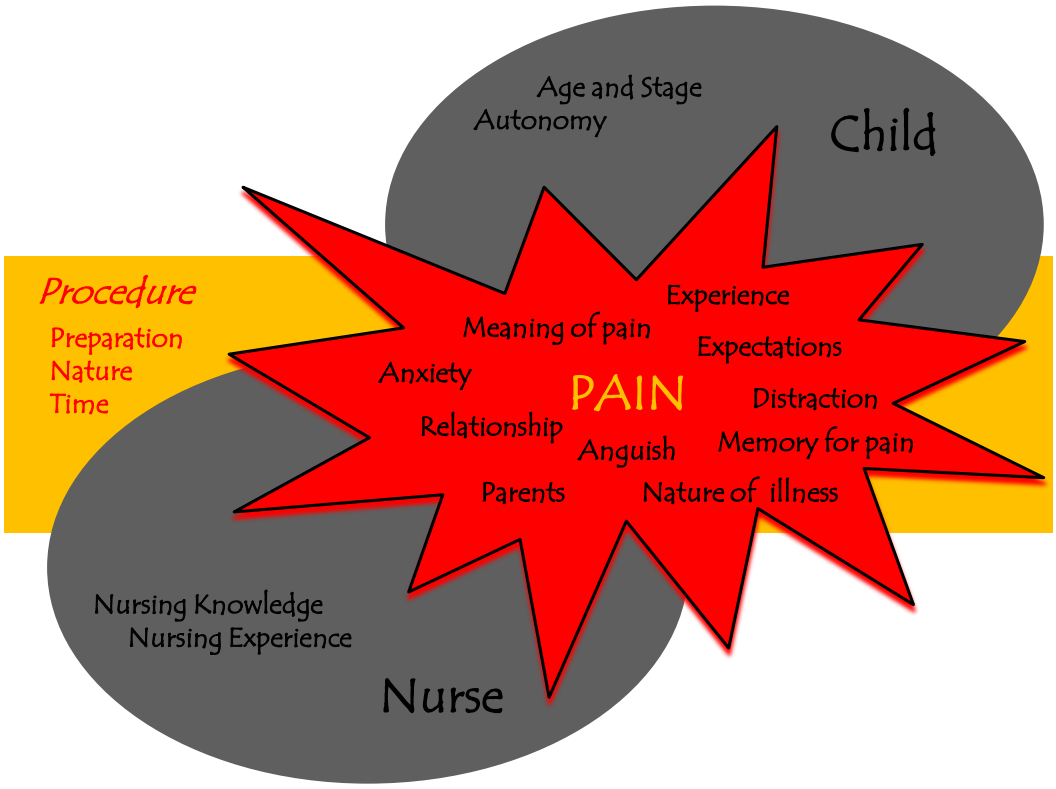

Figure 4.2. Shared Elements of the Pain Experience.

Children experiencing pain and the nurses performing the procedures were found to share common elements of that experience. Both had: anticipatory anxiety for painful procedures; a shared understanding of the meaning of pain i.e. didn't want it to happen, were anguished by the pain; the memory of how previous procedures had gone; had hopeful expectations that the pain would be well managed; shared a relationship with each other in the pain experience; sought support from parents for the procedure; understood the long-term nature of oncology and it's treatment; and used distraction to help with the pain. The elements distinct to nurses were their knowledge and experience, while factors for the child included age and autonomy. Procedural elements that played a role in the pain experience were: preparation for the procedure by the nurse and child; the nature of the procedure itself, and how time influenced the painful procedure – both in terms of the nurse and the child.

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Appendix A

Consent Form

Information Sheet and Letter of Initial Contact

UNIVERSITY OF ALBERTA

CONSENT FORM

Title of Project: Individual determinants shaping nurses' use of distraction techniques in managing children's acute procedural pain

Nurse Researcher: Deborah Olmstead, MN student

Faculty of Nursing,
University of Alberta

Supervisor: Dr. Shannon Scott, Assistant Professor
Faculty of Nursing, University of Alberta

Part 2 (to be completed by the research subject):

Do you understand that you have been asked to participate in a research study? **□Yes □ No**

Have you read and received a copy of the attached Information sheet? □ Yes □ No

Do you understand the benefits and risks involved in taking part in this research study? □ Yes □ No

Have you had an opportunity to ask questions and discuss this study? □ Yes □ No

Do you understand that you are free to withdraw from the study at any time without having to give a reason? □ Yes □ No

Do you understand who will have access to the study interview data? □ Yes □ No

Has the issue of confidentiality been explained to you? □ Yes □ No

Who explained this study to you?

_____

Study Participant's Name _____

I agree to take part in this study: YES □ NO □

Signature of Study Participant _____

Date &Time _____

(Printed Name) _____

Signature of Nurse Researcher_____

Date & Time _____

(Printed Name) _____

THE INFORMATION SHEET MUST BE ATTACHED TO THIS CONSENT FORM AND A COPY GIVEN TO THE RESEARCH PARTICIPANT.

Information Sheet and Letter of Initial Contact

Individual determinants shaping nurses' use of distraction techniques in managing children's acute procedural pain

Researcher: Deb Olmstead, MN Student, Faculty of Nursing, University of Alberta

Supervisor: Dr. Shannon Scott, Assistant Professor, Faculty of Nursing, University of Alberta,

What is this study about?

Research has shown that hospitalized children continue to experience unrelieved pain. This is both frightening and distressing for children, and has short and long term consequences. Pain associated with procedures, such as needle-related pain, can be particularly difficult for children.

This study is asking registered nurses who care for hospitalized children to identify the factors that influence their choices when managing procedural pain. By capturing these personal insights on what influences nurses' use of distraction methods to relieve children's pain, we hope to develop a greater understanding of how to improve the care of children undergoing painful procedures.

Who is eligible to participate?

Pediatric registered nurses who work at the Stollery Children's hospital are eligible to participate. These nurses must be willing to be interviewed by the researcher (Deb Olmstead, MN student) about their personal management of children's procedural pain. In order for nurses to be invited to participate in the study, a minimum of six months of experience in caring for hospitalized children will be required.

What are you being asked to do?

Study participants will be interviewed by Deb Olmstead. The interview will be informal, lasting approximately 30-60 minutes. The purpose of the interviews will be for nurses to share their experiences and thoughts about pain management for children during procedures. All interviews will take place at a time and place that is most convenient for the nurse being interviewed.

The interviews will be audio taped and then transcribed (typed out word for word), to allow the nurse researcher to interpret the information and highlight any common themes. At the request of the study participant, the tape recorder can be shut off at any time during the interview.

What are the potential benefits or risks to participants?

Though there may not be direct benefits to you from participation in this research, your contributions may help initiate beneficial changes in how children's pain is managed. . There are no anticipated risks involved with participation in this research.

Confidentiality:

All interviews will be kept strictly confidential, and all personal identifying information will be removed and put into anonymous codes for analysis purposes. Any research data collected about you during this study will be kept confidential, with only the nurse researcher and her thesis supervisor having access to your identity. Any report published as a result of this study will not identify you.

Who should you contact if you are interested in participating in this Study?

If you are interested in this study, please contact the nurse researcher, Deb Olmstead at deb.olmstead@ualberta.ca or by phone. If you have any concerns or questions about this study, or any questions about your rights as a research participant, please contact the University of Alberta Health Research Ethics Board at (780) 492-0302.

Appendix B

Sample Interview Questions

1. Tell me what it has been like for you working with children who are having painful procedures?
2. What influences your choices about how to manage a child's pain when you have to perform a procedure that is painful?
3. How do you decide which pain management strategies you will use?
4. Tell me about a situation where you felt the procedure went well/did not go well. What made these situations different?
5. Tell me about your use of distraction techniques.
6. What *helps* you use these techniques and what *interferes with* your use of these techniques?
7. Since you started as a pediatric nurse how has your practice of managing children's pain for procedures you are performing changed over time? What factors have influenced this change or lack of change in your practice?
8. Describe how the long-term nature of your relationship with pediatric oncology patients influences how you manage painful procedures on them.
9. Is there anything else you'd like to elaborate on or add to what you have shared with me?