Unresolved pain in children: A relational ethics perspective

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Abstract

It is considered the *right* of children to have their pain managed effectively. Yet, despite extensive research findings, policy guidelines, and practice standard recommendations for the optimal management of paediatric pain, clinical practices remain inadequate. Empirical evidence definitively shows that the unrelieved pain in children has only harmful consequences, with no benefits. Contributing factors identified in this undermanaged pain include the significant role of nurses. Nursing attitudes and beliefs about children's pain experiences, the relationships nurses share with children who are suffering, and knowledge deficits in pain management practices, are all shown to impact unresolved pain in children. A relational ethics perspective is used to explore the need for nurses to engage in authentic relationships with children experiencing pain, and to use evidence-based practices to manage that pain, in order for the indefensible suffering of children to end.

Key words: undermanaged pain, professional ethics, knowledge translation

Undermanaged Pain in Children

Historically, infant and children's pain experiences went unrecognized. Prior to the late 1960's, a paucity of documentation and commentary about pain management existed within paediatric literature. Yet in spite of significant knowledge development during the last two decades, the management of children's pain remains inadequate.[1-3] As a result, children continue to suffer needlessly. Consensus guidelines by numerous organizations, including the World Health Organization, responded to the evidence on unrelieved paediatric pain by mandating the *rights* of children to have their pain alleviated.[4-9] These guidelines targeted the responsibility of health care organizations and the professionals working within them to manage pain effectively and declared it morally unjust to allow children to experience unrelieved pain.[10] Nurses, ethically bound by their professional Code of Ethics to practice "right behavior and right knowledge", play a requisite role in alleviating the pain of children.[11,12]

Although the rights approach to the relief of pain in children is now beyond challenge, this question emerges - how is it possible that children continue to endure unresolved pain, despite international and professional organizations mandates for effective paediatric pain management practice and evidence-based

solutions ? The acknowledgement of children's rights to evidence-based management of their pain has not been sufficient to effect meaningful change. This incongruence between rights and reality reflects the complexity of practice, including implementing research findings into clinical actions.[13] Nurses, being ethically and morally responsible for treating children's pain in their day-to-day practice, are caught amidst the complexity.

In this paper, historical perspectives on the undermanagement of pain in children will be reviewed, along with some of the major factors identified as influencing this unsettling trend. Unnecessary pain experienced by children in the care of nurses will be examined from two perspectives: 1) the need for authentic relationships to exist between children in pain and their nurse, and 2) the lack of integration of evidence-based practice into current nursing management of children's pain. A particular focus will be given to addressing unresolved pain in children through the lens of relational ethics and knowledge translation for practice change.

Historical Background

Pain, commonly defined, is “an unpleasant sensory and emotional experience associated with actual or potential tissue damage”.[5] For children, pain is *always* stressful and can be frightening - be it the threat of pain or the pain itself. A discovery in the mid-1980’s found that pre-term infants subjected to painful surgical procedures (with minimal anaesthesia), demonstrated distinct physiological changes in response to their pain.[14] Yet, literature as recent as 1968 documents infants routinely undergoing surgical procedures with *no* anaesthetic or analgesia given.[15] At that time, neonates’ neurological development was believed to make the perception of pain physiologically impossible.[15] Attention on this issue resurfaced in the mid-1970’s when Eland's landmark study on paediatric pain management identified a vast discrepancy between post-operative pharmaceutical interventions for children in comparison to adults. Children in this study received three per cent of the analgesia that adults did who had undergone similar surgeries.[16] It was another decade before accumulating research underpinned Eland’s findings, confirming the inadequate management of pain in children. These works were the foundation for prolific research on unresolved paediatric pain and its determinants.

A preponderance of today's empirical evidence on proper assessment and management of paediatric pain focuses on nurses' roles. Experts conclude that nursing roles, knowledge and attitudes with respect to paediatric pain management require close scrutiny. Despite recent advances in patient-controlled analgesia, the advent of paediatric pain nurse specialists and specialized paediatric pain teams, the problem of children's unrelieved pain remains. The distinction and challenges of acute pain versus chronic pain management have also been at the forefront of paediatric pain literature. Yet again, in the midst of these developments, the reality for children is that they continue to experience unnecessary pain.[1-3,13] Practice changes to resolve the current discrepancy between what is known about paediatric pain management and what is being practiced are required.

The discourse on the *rights* of children to have their pain managed effectively has been ongoing since the World Health Organization first developed it's guidelines focused on managing the pain in children with cancer (1998). It has been at the forefront of both international organizations including WHO, the United Nations Convention on the Rights of the Child (UNCRC), and the International Association for the Study of Pain (IASP) (Special Interest Group on Pain in Childhood),

alongside national and regional organizations involved with children, in countries around the world. [4,5,6,7,9] Children's' rights to efficacious management of their pain are addressed in nursing and medical professional codes of ethics across the globe. Linked to children's rights are the ethical responsibility and accountability for competence that we hold as nurses. The value nurses place on children's rights to effective management of their pain are therefore expressed in the decisions we make to manage pain, and reflected in the actions that follow.

Factors Influencing the Undermanagement of Children's Pain

Numerous factors have been identified as contributing to the undermanagement of children's pain including: 1) myths and misconceptions about the treatment of children's pain;[17-20] 2) healthcare professionals' attitudes and beliefs about paediatric pain;[8,18,21-24] 3) a lack of knowledge about paediatric pain management – from the use of narcotic analgaesics to non-pharmacological interventions;[5,25-28] 4) inadequate assessments of children's pain;[8,9,17,24,25,29,30] 5) expectations of pain outcomes for children (eliminate vs. relieve)[29] and 6) the lack of value placed on using research findings to lead nursing pain practices, found within the healthcare organizational culture and nursing management.[31,32] (Diagram 1)

Diagram 1 inserted about here

Nurses are often identified as the common denominator in the suboptimal management of paediatric pain. Studies identify that inadequacies in assessing and managing pain effectively in children are intricately linked to nursing care. As previously noted, knowledge about pain and pain practices, nursing attitudes, beliefs, education levels, and personal experiences with pain, all shape and contribute to the inadequate nursing management of children's pain.[17,18,21,23,24,26,33-36] Insufficient analgaesic use in paediatrics (narcotics in particular), has been frequently cited in the research and is reported to be associated with nurses' lack of knowledge about pain management practices.[17,26,27,33,34,36,37] Jacob and Puntillo documented two nursing concerns that commonly prevented the optimal management of pain in children: 1) nurses' fears of children becoming addicted to medications, and 2) concerns with respiratory depression in paediatric patients given narcotic analgaesics for pain relief.[23] These misconceptions, repeatedly cited in current and earlier research findings, target nurses, in particular, as commonly administering insufficient doses of analgaesics to children experiencing acute pain.[24,38,39]

Attitudes and beliefs nurses hold about the need for effectively managing children's pain also impact pain outcomes for children. In one study, 16 percent of children had no analgesia ordered post-operatively, while 40 percent who had analgesia orders never received any.[17] In light of these findings, researchers claimed nurses' interpreted p.r.n. (as necessary) to mean "as little as possible".[17] In another study, the most influential factor found in nurses' pain practices were individual goals for pain relief. Only 16 percent of nurses in the study reported a goal of complete pain relief for children, while 23 percent believed a child's pain relief needed to be sufficient only to make them functional.[33] Today, the empirical evidence on unresolved paediatric pain is indisputable – this suffering has *no* benefits for children. Rather, unnecessary pain results in negative outcomes for children – physiologically, emotionally and psychologically.[3,40,41]

A final look at how organizational and administrative structures impact nursing pain management must also be acknowledged. Support for nurses to pursue and utilize current knowledge to lead their practice is not inherent within many healthcare organizations.[32] Without a culture within nursing management that recognizes and

prioritizes the use of effective, evidence-based pain management practice, nurses continue to undermanage paediatric pain, and children continue to endure unrelieved, yet treatable pain.

The Meaning of Pain to Children

The interpretation and experience of pain by children is complex and multifaceted. Children aged five to 14 often see pain as a punishment for “past misdeeds” or misbehavior, and sick children believe they became ill as a punishment.[25] This type of moral reasoning has a significant impact on the *meaning* that children place on their pain. Noteworthy is that the word pain originates from an ancient Greek work “poena” which means punishment. Children identify pain as being the worst aspect of their hospital experience.[37]

Over the past two decades research shows unequivocally that children’s experiences of pain are real, and that pain practices remain inadequate partly as a reflection of the *subjective* nature of pain itself. Research findings consistently indicate that children’s self-reports of pain are most accurate, and in fact are described as being the “gold standard” for paediatric pain assessment.[39,42]

Regrettably, healthcare professionals often misconstrue children's self-reports of their discomfort as inaccurate or invalid, leading to further mismanagement of their pain.[8,9,17,24,25,29,30] Several studies have shown that 55 to 90% of paediatric nurses believe that children over-reported their pain levels.[26,37,39,43,44] Empirical evidence proves, however, that children are able to accurately report their pain, and that unrelieved, this pain is detrimental in both human terms (children's pain, anxiety and distress), and economic terms (longer hospital stays, avoidance of medical care).[2,6,17,24,37,38,45]

The Consequences of Unresolved Pain

As stated, the cost of unrelieved pain is high, and can have both short and long-term consequences for children.[2,17,18,33,39,41,43,44] When a child is in pain, the body releases stress hormones that cause several systemic changes such as increased heart rate and blood pressure, weakened immune function, and delayed healing.[14] These changes, in turn, can lengthen hospital stays for a child. Unsuccessful procedures with resultant increases in procedural time can create significant distress and trauma for children. The development of maladaptive responses to future painful procedures has also been well- documented and include: 1) higher

pain intensities with fear and non-compliance during future interventions;[30,46-49] 2) conditioned anxiety responses to all procedures;[47,49,50] 3) diminished analgaesic effectiveness with subsequent procedures and avoidance of medical care; [21] 4) predisposition to persistent or chronic pain states,[51] and 5) negative memories of previous painful events leading to significant anticipatory stress and anxiety for future procedures.[20,49] Overall, the significant, well-documented outcomes of unresolved pain leave nurses facing an ethical dilemma as they care for children experiencing pain.

The Ethics of Unrelieved Paediatric Pain

Ethics involves not only making sound decisions on important issues, but making such decisions in a way that is genuinely respectful of others. [52] From Immanuel Kant's deontological or "duty-based" perspective, nurses are obligated to alleviate the pain of *all* children.[53] According to his categorical imperative, nurses using best practices in the assessment and management of children's pain set the precedent for the elimination of unnecessary suffering in children. Ethically and morally, when the knowledge and tools to do so exist, poorly managing children's pain is wrong.[4]

Nurses' ethical obligations are also highlighted in professional codes of ethics that mandate the provision of compassionate and optimal care for all patients. These directives for "safe, compassionate, competent and ethical care" uphold nurses' responsibilities for "right behavior and right knowledge".[11] Therefore, according to the duty-based approach to ethics, when children's pain is unresolved, nurses are providing what would be considered 'unethical' care. However, this ethical perspective alone seems insufficient to fully address the issue of children in pain. A relational ethics approach places emphasis on communication and relationship-building. It is founded in the "assumption that ethical practice is situated in relationship".[54] This approach seems more meaningful when seeking to understand the distress and suffering of children experiencing pain, and addressing this issue from an ethical perspective. While not negating the relevance of duty and children's rights to effective pain management, relational ethics' parameters of embodiment, engagement, mutual respect and environment directly relate to children's needless suffering. One component of the framework, embodiment, is found in a relationship when compassion, emotion and knowledge work together. This means not only addressing the physiological bases of pain, but simultaneously being connected to the distress and fear that the pain may evoke in a child. As nurses practicing within

the current healthcare system, a balance between objective/thinking skills with subjective/feeling abilities is required in order to be in a relational place with children who are experiencing pain.[54,60] It is important to acknowledge however, that caring for children who are suffering pain is also distressful for the nurses caring for them – both at a professional and a personal level.

Engagement, from a relational ethics viewpoint, requires the sharing of an experience in an empathetic and connected manner. Its meaning lies in the ability of the nurse to 'suffer *with*' the child who is in pain, in a way that requires a deep personal connection with that child. As nurses, openness to the possibility this may result in a child's pain being hurtful on a personal level is required. To remain distant and disconnected, solely to be shielded from being hurt by the child's pain, can be interpreted as unethical and morally inappropriate. A willingness to take this risk is necessary, in order to truly understand the child's pain.[55]

Mutual respect is the central theme in a relational ethics framework. It is about "walking in their shoes". The literature states that when genuine respect exists between individuals, there is the capacity for authentic dialogue.[56] An environment

of acceptance and respect is created as the nurse comes to understand and honour the meaning pain has for that child, and how the child copes with this suffering. It allows a child to feel safer in their experience of pain, as their pain is not only validated by the nurse but also understood. Carter suggests that nurses allow children who are in pain to be the *teachers* of their experience, and believes nurses need to hear children's stories about the *meaning* pain has for them, in order to fully assess and effectively manage their suffering.[55]

The final component in relational ethics is the environment in which the relationship takes place - the place where ethical and moral healthcare exists. Nurses caring for patients "*are* the healthcare system".[54,56] Nurses represent the space in which children's pain is cared for, and children depend on nurses to be the guardians of their painful experiences. As a result of this dependence, and children's inherent right to quality pain management, the need for improvement in paediatric nurses pain practices are both central and critical.

The Need for Change - Treating Children's Pain More Effectively

Significant advances have been made in the field of paediatric pain management, yet this knowledge has not been transferred into nursing practice. Children's *rights* to have their pain managed effectively must be in the forefront of nursing practice. In order to effect a practice change that results in optimal pain management, research findings report that nursing attitudes, beliefs and alongside nursing knowledge about children's pain, require attention. Consideration of the translation of research knowledge into the daily practice of nurses is necessary in order for children's unresolved pain to be eliminated.

Knowledge translation is defined as "the exchange, synthesis and ethically-sound application of knowledge" into clinical practice.[57] Research shows that nurses "lament" the persistence of unresolved pain in children.[13] A recent systematic review on research use in practice ascertained that the process required to change nursing practice is complex, and the individual determinants that consistently and positively correlate with the use of research findings are nurse's *beliefs* and *attitudes*.[58] Though more recent studies report nurses' beliefs and attitudes about effective pain management in children are changing, progress has not been reflected in clinical practices.[3,49] Consequently, the discrepancy between research

and practice remains, and children continue to suffer needlessly at the hands of their nurse caregivers. As noted, there are unmistakable ethical issues surrounding the detrimental impact this continuing nursing practice gap in paediatric pain management has for the children who are suffering unresolved, yet treatable pain.

Discussion

The obligation for nurses to know and use research evidence is not only a clinical practice issue, but also an issue of professional ethics. Children have an inherent *right* to have their pain manage effectively. Current research findings provide direction for efficacious assessment and management of children's pain. Recognition of the significant ethical issues that arise from the lack of implementation of these findings into nursing practice have been acknowledged. In order to arrest the pattern of unrelieved pain in children, evidence-based nursing practice is required.

At the same time, nurses are being challenged to examine and take responsibility for personally held attitudes and beliefs surrounding pain, and how these impact their paediatric pain management practices. Pain hurts and scares children. When

a child experiences pain, nurses are cognizant of the efficacy of the care they are providing for that child. Bergum & Dosseter state, “as we ‘feel’ the other person in this common space, it is difficult to be immune to the effects our actions have on the other”.[56] This is particularly true for nurses who are providing compassionate and ethical care to children in pain. Sharing the meaning of the pain experience, and understanding how that impacts a child’s suffering, leaves nurses morally uncomfortable with ineffective management of that pain. Engagement in a relationship with children in pain requires an ability and commitment to sharing in the pain experience of that child, despite the challenges this poses for nurses. Traditionally in healthcare, maintaining an objective and professional distance with patients was expected, in order to prevent any emotional consequences for the patient or the nurse.[59] However, experts in the field of relational ethics, today counsel nurses to recognize this expectation as irrelevant and unethical when caring for children in pain. When evidence-based solutions exist that allow more successful management of children’s distress and pain, nurse’s discomfort with unnecessary suffering culminates in a moral and ethical dilemma.

Conclusion

Children have a *right* to not suffer unrelieved pain. Because of this, children's pain and its outcomes are ultimately "a moral and ethical obligation for nurses".[45] In order to uphold professional mandates to provide safe, competent and ethical care to children who are experiencing pain, nurses will be required to update their knowledge and skill base - utilizing research findings to lead their everyday practice of assessing and managing children's pain. An exploration of personal values and beliefs about pain, alongside how these may present barriers to the alleviation of children's suffering, will also need to be addressed. And perhaps most importantly, nurses will be challenged to acknowledge the value and significance of sharing engaged and embodied relationships with children who are experiencing pain. Ethical, competent nursing practice will be essential to ensuring that unnecessary pain does not follow children into the next decade.

> *Pain caused by disease or accident is a natural or physical phenomenon. But pain caused or allowed as the result of human attitudes and practices, as the result of human value judgments in the absence of other proportionate human values, becomes a matter of ethics.*
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> *(Lisson, 1987, p. 654)*

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References

(1) Stinson J, Yamada J, Dickson A, Lamba J, Stevens B. Review of systematic reviews on acute procedural pain in children in the hospital setting. Pain Res Manag2008 Jan-Feb;13(1):51-7.

(2) Taylor EM, Boyer K, Campbell FA. Pain in hospitalized children: a prospective cross-sectional survey of pain prevalence, intensity, assessment and management in a Canadian paediatric teaching hospital. Pain Res Manag 2008 Jan-Feb;13(1):25-32.

(3) Buscemi N, Vandermeer B, Curtis S. The Cochrane library and procedural pain in children: an overview of reviews. Evidence-Based Child Health 2008;3:260-79.

(4) World Health Organization, International Association for the Study of Pain. [Online]. 2008 Sept 23; Pain in Children with Cancer: The World Health Organization-IASP Guidelines. Available from: URL:http://whocancerpain. wisc.edu/oldsite/eng/121/IASP guidelines.html

(5) International Association for the Study of Pain. IASP Pain Terminology [On-line]. 2008 Sept 15; Available from: URL:http://www.iasp-pain.org/AM/Template.cfm?Section=Pain_Definitions

(6) American Academy of Paediatrics. Committee on Psychosocial Aspects of Child and Family Health, Task Force on Pain in Infants, Children, and Adolescents. The assessment and management of acute pain in infants, children, and adolescents. Paediatrics 2001 Sep;108(3):793-797.

(7) Anand KJ, International Evidence-Based Group for Neonatal Pain. Consensus statement for the prevention and management of pain in the newborn. Arch Pediatr Adolesc Med 2001 Feb;155(2):173-80.

(8) Watt-Watson JH, Clark AJ, Finley A, Watson CP. Canadian Pain Society position statement on pain relief. Pain Res Manag 1999;4(2):75-8.

(9) Phillips DM. JCAHO pain management standards are unveiled. Joint Commission on Accreditation of Healthcare Organizations. JAMA 2000;284:428-9.

(10) Walco GA, Cassidy RC, Schechter NL. Pain, hurt, and harm -- the ethics of pain control in infants and children. N Engl J Med 1994;331:541-4.

(11) Canadian Nurses Association. Code of Ethics for Registered Nurses 2008 Centennial Edition [Online]. 2008 Nov 21; Available from: URL:http://www.cna-nurses.ca/CNA/documents/pdf/publications/CodeofEthics2008e.pdf

(12) Greipp ME. Undermedication for pain: an ethical model. Adv Nurs Sci 1992;15(1):44-53.

(13) Scott-Findlay S, Estabrooks C. Knowledge translation and pain management. In: Finley A, McGrath P, Chambers C, editors. Bringing pain relief to children: a guide to practical management. Totowa, NJ: The Humana Press; 2006. p. 199-228.

(14) Anand K, Aynsley-Green A. Metabolic and endocrine effects of surgical ligation of patent ductus arteriosus in the human preterm neonate: are there implications for further improvement of postoperative outcome? Mod Probl Paediatr 1985;23:143-57.

(15) Swafford L, Allan D. Pain relief in the paediatric patient. Med Clin North Am 1968;52:131-6.

(16) Eland JM, Anderson JE. The experience of pain in children. In: Jacox AK, editor. Pain: a source book for nurses and other health professionals Boston: Little, Brown; 1977. p. 453-73.

(17) Mather L, Mackie J. The incidence of postoperative pain in children. Pain 1983;15:271-82.

(18) Margolius FR, Hudson KA, Michel Y. Beliefs and perceptions about children in pain: a survey. Pediatr Nurs 1995 Mar-Apr;21(2):111-5.

(19) Ellis JA, Sharp D, Newhook K, Cohen J. Selling comfort: a survey of interventions for needle procedures in a paediatric hospital. Pain Manag Nurs 2004 Dec;5(4):144-52.

(20) von Baeyer CL, Marche TA, Rocha EM, Salmon K. Children's memory for pain: overview and implications for practice. J Pain 2004 Jun;5(5):241-9.

(21) Van Hulle Vincent C. Nurses' knowledge, attitudes, and practices: regarding children's pain. MCN Am J Matern Child Nurs 2005 May-Jun;30(3):177-83.

(22) Griffin RA, Polit DF, Byrne MW. Nurse characteristics and inferences about children's pain. Pediatr Nurs 2008 Jul-Aug;34(4):297-305.

(23) Jacob E, Puntillo KA. Pain in hospitalized children: paediatric nurses' beliefs and practices. J Pediatr Nurs 1999 Dec;14(6):379-91.

(24) Hamers JP, Abu-Saad HH, van den Hout, MA, Halfens RJG. Are children given insufficient pain-relieving medication postoperatively? J Adv Nurs 1998;27:37-44.

(25) Gaffney A, Dunne EA. Children's understanding of the causality of pain. Pain 1987 Apr;29(1):91-104.

(26) Van Hulle Vincent C, Denyes MJ. Relieving children's pain: nurses' abilities and analgaesic administration practices. J Ped Nurs 2004;19(1):40-9.

(27) Salantera S, Lauri S, Salmi TT, Helenius H. Nurses' knowledge about pharmacological and nonpharmacological pain management in children. J Pain Symptom Manage 1999 Oct;18(4):289-99.

(28) Broome ME, Lillis PP, McGahee TW, Bates T. The use of distraction and imagery with children during painful procedures. Oncol Nurs Forum 1992 Apr;19(3):499-502.

(29) Lindeke L, Nakai M, Johnson L. Capturing children's voices for quality improvement. MCN Am J Matern Child Nurs 2006 Sep-Oct;31(5):290-5; quiz 296-7.

(30) Humphrey GB, Boon CM, van Linden van den Heuvell, GF, van de Wiel HB. The occurrence of high levels of acute behavioral distress in children and adolescents undergoing routine venipunctures. Paediatrics 1992 Jul;90(1 Pt 1):87-91.

(31) Johnston CC, Gagnon A, Rennick J, Rosmus C, Patenaude H, Ellis J, et al. One-on-one coaching to improve pain assessment and management practices of paediatric nurses. J Pediatr Nurs 2007 Dec;22(6):467-78.

(32) Scott-Findlay S, Golden-Biddle K. Understanding how organizational culture shapes research use. JONA 2005;35(7/8):359-65.

(33) Burokas L. Factors affecting nurses' decisions to medicate paediatric patients after surgery. Heart Lung 1985;14:373-9.

(34) Gadish HS, Gonzales JL, Hayes JS. Factors affecting nurses' decisions to administer paediatric pain medication postoperatively. J Pediatr Nurs 1988;3(6):383-90.

(35) Broome ME. Preparation of children for painful procedures. Pediatr Nurs 1990 Nov-Dec;16(6):537-41.

(36) Broome ME, Richtsmeier A, Maikler V, Alexander M. Paediatric pain practices: a national survey of health professionals. J Pain Symptom Manage 1996 May;11(5):312-20.

(37) Ellis JA, O'Connor BV, Cappelli M, Goodman JT, Blouin R, Reid CW. Pain in hospitalized paediatric patients: how are we doing?. Clin J Pain 2002 Jul-Aug;18(4):262-9.

(38) Johnston CC, Abbott FV, Gray-Donald K, Jeans ME. A survey of pain in hospitalized patients aged 4-14 years. Clin J Pain 1992 Jun;8(2):154-63.

(39) Van Hulle Vincent C. Nurses' perceptions of children's pain: a pilot study of cognitive representations. J Pain Symptom Manage. 2007 Mar;33(3):290-301.

(40) Kortesluoma RL, Nikkonen M. 'I had this horrible pain': the sources and causes of pain experiences in 4- to 11-year-old hospitalized children. J Child Health Care 2004 Sep;8(3):210-31.

(41) Kortesluoma RL, Nikkonen M. 'The most disgusting ever': children's pain descriptions and views of the purpose of pain. J Child Health Care 2006 Sep;10(3):213-27.

(42) McGrath PA. An assessment of children's pain: a review of behavioral, physiological and direct scaling techniques. Pain 1987 Nov;31(2):147-76.

(43) Boughton K, Blower C, Chartrand C, Dircks P, Stone T, Youwe G, et al. Impact of research on paediatric pain assessment and outcomes. Pediatr Nurs 1998 Jan-Feb;24(1):31-5,62.

(44) Goodenough B, Addicoat L, Champion GD, McIerney M, Young B, Juniper K, et al. ‘Pain in 4-to 6-year-old children receiving intramuscular injections: a comparison of the Faces Pain Scale with other self-report and behavioral measures’. Clin J Pain 1997;13(1):60-73.

(45) Cummings EA, Reid GJ, Finley GA, McGrath PJ, Ritchie JA. Prevalence and source of pain in paediatric inpatients. Pain 1996 Nov;68(1):25-31.

(46) Cohen LL, Blount RL, Cohen RJ, Ball CM, McClellan CB, Bernard RS. Children's expectations and memories of acute distress: short- and long-term efficacy of pain management interventions. J Pediatr Psychol 2001 Sep;26(6):367-74.

(47) Hamilton JG. Needle phobia: a neglected diagnosis. J Fam Pract 1995 Aug;41(2):169-75.

(48) Kennedy RM, Luhmann J, Zempsky WT. Clinical implications of unmanaged needle-insertion pain and distress in children. Paediatrics 2008 Nov;122 Suppl 3:S130-3.

(49) Rocha EM, Prkachin KM, Beaumont SL, Hardy CL, Zumbo BD. Pain reactivity and somatization in kindergarten-age children J Pediatr Psychol 2003;28(1):47-57.

(50) Tsao JC, Myers CD, Craske MG, Bursch B, Kim SC, Zeltzer LK. Role of anticipatory anxiety and anxiety sensitivity in children's and adolescents' laboratory pain responses. J Pediatr Psychol 2004 Jul-Aug;29(5):379-88.

(51) Schechter NL, Allen DA, Hanson K. Status of paediatric pain control: a comparison of hospital analgaesic usage in children and adults. Paediatrics 1986;77:11-5.

(52) Shanner L. Ethical theories in bioethics and health law. In: Dykeman MJ, editor. Canadian health law practice. Toronto: Butterworths; 2000. p. 1.1-1.25.

(53) Kant I. Fundamental principles of the metaphysics of morals. New York: Liberal Arts; 1949.

(54) Austin W, Bergum V, Dossetor J. Relational ethics. In: Tshudin V, editor. Approaches to Ethics Woburn, Massachusetts: Butterworth-Heinemann; 2003. p. 45-52.

(55) Carter B. Pain Narratives and narrative practitioners: a way of working 'in-relation' with children experiencing pain. J Nurs Manag 2004;12(3):210-6.

(56) Bergum V, Dosseter J. Relational Ethics: The Full Meaning of Respect. Hagerstown, MD: University Publishing Group; 2005.

(57) Bisby M, Stirling L. Translating a broad term into real-world applications: CIHR's successful approach to knowledge translation. Healthc Q 2006;9(2):18-20.

(58) Estabrooks CA, Floyd JA, Scott-Findlay S, O'Leary KA, Gushta M. Individual determinants of research utilization: a systematic review. J Adv Nurs 2003 Sep;43(5):506-20.

(59) Schultz D, Carnevale F. Engagement and suffering in responsible caregiving: On overcoming maleficience in health care. Theor Med1996;17:189-207.

(60) Oberle, K. & Raffin, S. Ethics in Canadian nursing practice: Navigating the journey. Toronto: Pearson Education Canada; 2008.