Sigma's 30th International Nursing Research Congress Developmentally Appropriate Holistic Comfort Interventions in the Pediatric Population

April A. Bice, PhD

Nursing, University of North Carolina Wilmington, Wilmington, NC, USA Introduction

Children regularly experience fear, anxiety, distress, and pain as a part of routine and episodic healthcare (Author & Wyatt, 2017). In fact, evidence suggests that poor management of discomfort does not discriminate based on age, gender, race, or socioeconomic status and it can lead to future negative physical and psychosocial outcomes including depression, anger, insomnia, poor concentration, and future distrust of health care providers (Czarnecki et al., 2011). Nurses caring for infants, children, and adolescents have a unique but complex responsibility to provide what Kolcaba (2013) calls *holistic comfort*- an immediate experience of being strengthened through feeling relief, ease, and transcendence. For nurses to provide optimal holistic comfort, a focus on developmentally appropriate interventions must be implemented.

Background

One unique aspect of pediatric holistic comfort is the necessary consideration of child development. Given the wide range of cognitive, emotional, physical, and neurological growth as well as the effects of various diseases leading to delays in this growth, children require holistic comfort needs to be met in a way that is developmentally appropriate to them as an individual. According to Piaget (1964; 1972), humans belong to one of four stages of development as they grow from infancy to adulthood: (a) sensorimotor- birth to 24 months, (b) preoperational- age 2-7 years, (c) concrete operational- age 7-11 years, and (d) formal operational- from adolescence to adulthood. Piaget's stages provide chronological guidance on human cognition- the ability to engage in object permanence, symbolic thought, operational thought, and abstract thought, respectively. Holistic comfort interventions in the pediatric population must be tailored to these developmental stages for optimal patient outcomes. There are four main contexts where holistic comfort exists: the physical, psychospiritual, sociocultural, and environmental domains (Kolcaba, 1994; Kolcaba, 2013; Kolcaba & DiMarco, 2005). Providing developmentally appropriate comfort in these contexts is important to caring for the whole child-mind, body, and spirit.

Purpose

The purpose of this session is to critically present an evidence-based collection of nursing pearls focused on the provision of developmentally appropriate holistic comfort for infants, children, and adolescents in Kolcaba's four comfort contexts.

Methods and Evaluation Strategies

For this symposium session, a critical appraisal of evidence related to developmentally appropriate pediatric holistic comfort interventions was conducted using the *Johns Hopkins Nursing Evidence Based Practice Model* of evaluation. The appraisal was guided by Kolcaba's (1992; 1994; 2013) theory of holistic comfort with the aim of integrating theory into the clinical practice evidence appraised and presented. Evidence in this appraisal was found in CINAHL, PubMed, Google Scholar, and PsycINFO and includes seminal studies, seminal theory, and/or research conducted within the last 5

years. Both qualitative and quantitative research as well as international evidence was included.

Comfort Context Evidence Appraisal Physical.

Evidence shows that infants, children, and adolescents benefit from a variety of interventions to enhance comfort of their physical bodies. Breastfeeding and swaddling for infants has demonstrated a reduction in pain during heel lancing procedures (Erkut & Yildiz, 2017; Zhu et al., 2015). Additionally, in a recent meta-analysis, authors showed topical anesthetics in combination with breastfeeding decreases painful responses to vaccine injections (Shah et al., 2015). Researchers have also investigated animal-assisted therapy on the bodies of children- showing that 20 minutes of play time with a dog yields lower pain scores, increased vigilance and activity, and induced emotional prefrontal responses on electroencephalogram after anesthesia (Calcaterra et al., 2015). Enhanced sleep comfort has also been shown in children with autism spectrum disorder after exposure to a brief education sleep intervention (Loring et al., 2016).

Psychospiritual.

Many interventions have outcomes on the psychospiritual domain of children. For instance, caregivers and children describe "clinician secrets" and having a "good nurse" as an important part of procedural holistic comfort (Author, Hall, & Devereaux, 2018. p. 114). Additionally, spirituality and spiritual education has been shown to increase resilience in children of divorced parents (Pandya, 2017) while pet therapy with a live dog has been shown to decrease: (a) distress in children during needle procedures (Vagnoli, 2014), and (b) stress in children undergoing a forensic interview for suspected child abuse (Krause-Parello et al., 2018).

Sociocultural.

One of the most essential sociocultural comfort practices in pediatrics involves consideration of the complete family unit. This is often referred to as family-centered care. The American Academy of Pediatrics (2015, p. 1451) defines a family-centered approach as one where care is coordinated in a compassionate way-forming links among the patient, family, healthcare provider, nurses, educators, hospitals, and other important collaborators. Children and caregivers have described social presence of loved people in a child's life to be an important part of procedural holistic comfort (Author et al., 2018). Additionally, evidence shows that adolescents who have high family conflict and less social support at home, engage in more risky behaviors that negatively affect both themselves and their parents (Guassi, Moreira & Telzer, 2017).

Environmental.

Essential needs of infants, children, and adolescents exist in the environment. For example, infants in the neonatal intensive care unit are sensitive to harsh noise and have been shown to experience lower activity level, decreased heart rate, and decreased respiratory rate with recorded maternal voice and soft lullaby (Wirth et al., 2016). Additionally, children and caregivers have described the comforting effects of a decorated room, soft pillows, chairs around them, and being comfortably warm during times of venipuncture procedures (Author et al., 2018). Temperature reduction in a classroom of a tropical climate has also shown increased thermal comfort and performance enhancement of school-aged children (Porras-Salazar et al., 2018).

Implications and Conclusion

Providing developmentally appropriate holistic care in the pediatric population has the potential to be globally impactful. Comfort is an optimistic result that theoretically permits children and their families to take part in health seeking behaviors, which are good for nursing productivity, cost effectiveness, and overall patient outcomes (Kolcaba, 2013). Moreover, cognitive, emotional, and physical responses to discomfort are learned in childhood and can later affect responses to discomfort as an adult (Institute of Medicine, 2011). Hence, appropriate enhancement of holistic comfort in childhood is vital- having important implications for nursing practice, health policy, and future patient health outcomes. The strength of our future depends on the wellbeing our children (First Focus, 2018)- the same children who will be making up the future of world health in years to come.

Title:

Developmentally Appropriate Holistic Comfort Interventions in the Pediatric Population

Keywords:

Child Development, Holistic Comfort and Nursing

References:

American Academy of Pediatrics (2015). Patient- and family-centered care coordination: A framework for integrating care for children and youth across multiple systems. *Pediatrics*, *133*, e1451-e1460. doi: 10.1542/peds.2014-0318.

Author, Hall, J., & Devereaux. (2018). Exploring holistic comfort in children who experience a clinical venipuncture procedure. *Journal of Holistic Nursing*, *36(2)*, *108-122*. doi: 10.1177/0898010117692719

Author, & Wyatt, T. (2017). Holistic comfort interventions for pediatric nursing procedures. *Journal of Holistic Nursing*, *35*(3), 280–

295. doi: 10.1177/0898010116660397

Calcaterra, V., Veggiotti, P., Palestrini, C., De Giorgis, V., Raschetti, R., Tumminelli, M., and ...Pelizzo, G. (2015). Post-operative benefits of animal-assisted therapy in pediatric surgery: A randomised study. *PLOS*, 10(6), e0125813, doi: 10.1371/journal.pone.012 5813

Czarnecki, M. L., Turner, H. L., Collins, P. M., Doellman, D., Wrona, S., & Reynolds, J. (2011). Procedural pain management: A Position statement with clinical practice recommendations. *Pain Management Nursing*, *12*(2), 95–

111. doi: 10.1016/j. pmn.2011.02.003

Erkut, Z. & Yildiz, S. (2017). The effect of swaddling on pain, vital signs, and crying during heel lance in newborns. *Pain Management Nursing*, *18*(5), 328-336. doi: 10.1016/j.pmn.2017.05.007

First-Focus (2018). *Pediatric Toxic Stress Fact Sheet*. Handout: 2018 American Academy of Nursing Conference.

Guassi Moreira, J.F. (2017). Family conflict shapes how adolescents takes risks when their family is affected. *Developmental Science*, *21*, 1-9. doi: 10.1111/desc.12611 Institute of Medicine (2011). *Relieving pain in America: A blueprint for transforming prevention, care, education, and research*. Retrieved

from: http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2011/Reliev ing-Pain-in-America-A-Blueprint-for-Transforming-Prevention-Care-Education-

Research/Pain%20Research%202011%20Report%20Brief.pdf

Kolcaba, K. (1992). Holistic comfort: Operationalizing the construct as a nurse-sensitive outcome. *Advances in Nursing Science*, *15*(1), 1-10.

Kolcaba, K. (1994). A theory of holistic comfort for nursing. *Journal of Advanced Nursing*, 19, 1178–1184.

Kolcaba, K. (2003). Comfort theory and practice: A vision for holistic health care and research. New York: Springer.

Kolcaba, K. (2013). Comfort. In *Peterson & Bredow's: Middle Range Theories: Application to Nursing Research.* Philadelphia: Lippincott Williams and Wilkins. Kolcaba, K., & DiMarco, M.A. (2005). Comfort theory and its application to pediatric nursing. *Pediatric Nursing*, *31*(3), 187-194.

Krause-Parello, C.A., Thames, M., Ray, C.M., Kolassa, J. (2018). Examining the effects of a service-trained facility dog on stress in children undergoing forensic interview for allegations of child sexual abuse. *Journal of Child Sexual Abuse*, 27(3), 305-320. doi: 10.1080/10538712.2018.1443303

Pandya, S.M. (2016). Spirituality to build resilience in primary caregiver parents of children with autism spectrum disorders: A cross country experience. *International Journal of Developmental Disabilities*, *64*(1), 1-12. 10.1080/20473869.2016.1222722 Porras-Salazar, J.A., Wyon, D.P., Piderit-Moreno, B., Contreras-Espinoza, S., & Wargocki, P. (2018). Reducing classroom temperature in a tropical climate improved the thermal comfort and the performance of elementary school pupils. *International Journal of Indoor Environment*, *28*(6), 892-904. doi:10.1111/ina.12501 Piaget, J. (1964). Part I: Cognitive Development in Children. *Journal of Research in Science Teaching*, *2*, 176-186.

Piaget, J. (1972). *Intellectual evolution from adolescent to adulthood. Human Development*, 16, 346-370.

Wirth, L., Dorn, F., Wege, M., Zemlin, M., Lemmer, B., Gorbey, S.,... Maier, R.F. (2016). Effects of standardized acoustic stimulation in premature infants: A randomized controlled trial. *Journal of Perinatology*, *36*(6), 486-492. doi: 10.1038/jp.2016.1

Vagnoli, L., Caprilli, S., Vernucci, C., Zagni, S., Mugnai, F., & Messeri, A. (2014). Can presence of a dog reduce pain and distress in children during venipuncture. *Pain Management Nursing*, *16*(2), 89-95. doi: 10.1016/j.pmn.2014.04.004

Zhu, J., He, H., Zhou, X., Wei, H., Gao, Y., Ye, B.,... Chan, A. W. (2015). Pain relief effect of breast feeding and music therapy during heel lance for healthy term neonates in China: A randomized controlled trial. *Midwifery*, *31*, 365-372. doi: 10.1016/j/midw.2014.11.001.

Abstract Summary:

In this session, the author will critically present an evidence-based collection of nursing pearls focused on the provision of developmentally appropriate holistic comfort for infants, children, and adolescents in the four comfort contexts.

Content Outline:

Title

- I. Developmentally Appropriate Holistic Comfort Interventions in the Pediatric Population **Introduction**
- I. Children regularly experience fear, anxiety, distress, and pain as a part of routine and episodic healthcare
- II. The purpose of this session is to critically present an evidence-based collection of nursing pearls focused on the provision of developmentally appropriate holistic comfort for infants, children, and adolescents in the four comfort contexts.
- III. Nurses caring for infants, children, and adolescents have a unique but complex responsibility to provide *holistic comfort*.

Background

- I. One unique aspect of pediatric holistic comfort is the necessary consideration of child development
- II. According to Piaget, humans belong to one of four stages of development as they grow from infancy to adulthood: sensorimotor, preoperational, concrete operational, or formal operational.
- III. Holistic comfort interventions in the pediatric population must be tailored to these developmental stages for optimal patient outcomes.

Evaluation Strategy

- I. Johns Hopkins Nursing Evidence Based Practice Model of evaluation
- II. The appraisal was guided by Kolcaba's theory of holistic comfort.
- III. Evidence in this appraisal was found in CINAHL, PubMed, Google Scholar, and PsycINFO

Appraisal of Findings

- I. Physical interventions: breastfeeding, swaddling, pet therapy, education
- II. Psychospiritual interventions: Having a good nurse, clinician secrets, spirituality, presence of live dogs
- III. Sociocultural interventions: Family centered care, social support, complete family unit, interpersonal relationships
- IV. Environmental interventions: noise, pillows, positioning, temperature

Implications and Conclusion

- I. Holistic comfort for children has Implications for nursing practice, pediatric enhanced comfort experiences, health policy, patient health outcomes.
- II. The strength of our future depends on the wellbeing our children (First Focus, 2018)the same children who will be making up the future of world health in years to come.

First Primary Presenting Author

Primary Presenting Author

April A. Bice, PhD University of North Carolina Wilmington Nursing Assistant Professor Wilmington NC USA

Author Summary: Dr. April Bice is an Assistant Professor, Certified Pediatric Nurse Practitioner, and Pediatric course coordinator in the FNP program at the University of North Carolina Wilmington. Her research focuses on the enhancement of holistic comfort in the pediatric population. She has presented at the state and national level and has various disseminated works focused on child comfort enhancement. As a Shot@Life champion she is also an advocate for the advancement of global health through immunizations.