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Individual Nurse and Organizational Context Considerations for Better Knowledge Use in Pain Care☆

Margot A. Latimer RN, PhD[a,*], Judith A. Ritchie RN, PhD[b], Celeste C. Johnston RN, DEd[c,d,e]

[a]*Dalhousie University, and IWK Health Centre, Halifax, Nova Scotia, Canada*
[b]*Nursing Research, McGill University Health Centre, Montreal, Quebec, Canada*
[c]*McGill University, Montreal, Quebec, Canada*
[d]*School of Nursing Wilson Hall, Montreal, Quebec, Canada*
[e]*McGill University Health Centre, Montreal, Quebec, Canada*

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Nurses are involved in many of the painful procedures performed on hospitalized children. In collaboration with physicians, nurses have an exceptional responsibility to have knowledge to manage the pain; however, the evidence indicates this is not being done. Issues may be twofold: (a) opportunities to improve knowledge of better pain care practices and/or (b) ability to use knowledge. Empirical evidence is available that if used by health care providers can reduce pain in hospitalized children. Theory-guided interventions are necessary to focus resources designated for learning and knowledge translation initiatives in the area of pain care. This article presents the Knowledge Use in Pain Care (KUPC) conceptual model that blends concepts from the fields of knowledge utilization and work life context, which are believed to influence the translation of knowledge to practice. The four main components in the KUPC model include those related to the organization, the individual nurse, the individual patient, and the sociopolitical context. The KUPC model was conceptualized to account for the complex circumstances surrounding nurse's knowledge uptake and use in the context of pain care. The model provides a framework for health care administrators, clinical leaders, and researchers to consider as they decide how to intervene to increase knowledge use to reduce painful experiences of children in the hospital.

THE GAP BETWEEN what we know from research and what we use in practice is at the center of the knowledge translation problem. Researchers have identified effective nurse-directed strategies to reduce pain in hospitalized infants and children; however, this evidence is not effectively used in practice (Mark, Harless, & Berman, 2007). Translating this knowledge will have benefits for nurse, system, and patient outcomes. In preterm infants, exposure to painful procedures has been shown to alter subsequent pain response (Johnston & Stevens, 1996) and contributes to the resetting of the basal arousal stress response (Grunau, Weinberg, & Whitfield, 2004). Anand and Scalzo (2000) have suggested that behavioral outcomes for children exposed to repetitive painful experiences as infants may include increased anxiety, altered pain sensitivity, stress disorders, and attention deficit disorder. Children who had experienced increased invasive procedures in an intensive care unit (ICU) setting had more medical fears and posttraumatic stress disorder symptoms 6 months post-discharge (Rennick, Johnston, Dougherty, Platt, & Ritchie, 2002). These effects have been found to linger into adulthood. Pate, Blount, Cohen, and Smith (1996) reported a relationship between high childhood pain and fear at

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* Corresponding author: Margot A. Latimer, RN, PhD.
E-mail addresses: mlatimer@dal.ca (M.A. Latimer), judith.ritchie@muhc.mcgill.ca (J.A. Ritchie), celeste.johnston@mcgill.ca (C.C. Johnston).

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medical procedures with high adult fear, pain, and avoidance of health care. These potential adverse outcomes are real because there are consistent findings that analgesics are not used or used infrequently for most procedures (Fernandez & Rees, 1994; Johnston, Collinge, Henderson, & Anand, 1997; Latimer, Johnston, Ritchie, Clarke, & Gilin, 2009; Reyes, 2003; Van Hulle Vincent, 2005). The purpose of this article is to describe a conceptual model that links theory and evidence from clinical and administrative perspectives; the implementation of activities based on the combination of these perspectives is required to enhance pain care and outcomes.

The reasons for slow translation of research into clinical practice in pain management are complex. Research to date has focused on enhancing the individual health care provider's knowledge. Yet as accreditation and professional associations begin to target pain management as a quality-of-care indicator, this issue expands from an individual to an organizational and health policy issue.

Researchers have responded to this gap and are working to understand the role that the organization plays in enhanced knowledge use (Estabrooks, Kenny, Adewale, Cummings, & Mallidou, 2007; Rycroft-Malone et al., 2002; Scott-Findlay & Golden-Biddle, 2005; Stetler, Ritchie, Rycroft-Malone, Schultz, & Charns, 2007; Wallin, Estabrooks, Midozi, & Cummings, 2006). In terms of policy, the authors of national health care consensus reports on nurse retention and well-being have recommended the creation of healthier work environments that will ultimately affect both patient and professional outcomes. The Institute of Medicine (IOM) has highlighted the importance of organizational culture and workplace on the delivery of quality, safe patient care (Agency for Healthcare Research and Quality [AHRQ] 2003). The Health Council of Canada's first annual report (2005) identified the key area for improving and sustaining Canada's health care system is the immediate attention to human resource management and accelerating the development of collaborative health care teams. These national health care agendas, although arising from different sources, demonstrate the necessity of a more comprehensive approach to translate knowledge to practice and, thereby, to enhance both the quality of care and the work context.

In a systematic review examining interventions aimed at increasing knowledge translation in nursing, Thompson, Estabrooks, Scott-Findlay, Moore, and Wallin (2007) recommended that theoretically informed interventions are necessary to enhance research use in practice. Theory that is specific to the translation of pain knowledge in the work context is underdeveloped, and for this reason, the Knowledge Use in Pain Care (KUPC) conceptual model has been created.

Two processes that influence knowledge use for better patient care are identified. The first is the acquisition of relevant practice knowledge, and the second is the context that facilitates use of the knowledge. Hakkennes and Green (2006) recommend that researchers decide whether they want to assess changes in provider practice or changes in patient outcomes. This model primarily focuses on testable and modifiable factors believed to influence the provider and the provider's practice. First, a brief overview of each of the four model components will be provided and then the theoretical and research evidence that supports their inclusion will be discussed. In this model, nurses' knowledge is defined as the knowledge gained from the three different sources of evidence: research, clinical experience, and patient preferences (Rycroft-Malone et al., 2002).

KUPC Conceptual Framework

The KUPC model, presented in Figure 1, provides a conceptual schema linking the four components (organizational, nurse, child, and sociopolitical) to knowledge utilization and positive work context attributes anticipated to influence optimal pain care outcomes. The first KUPC factor, the *organizational* context, has been derived from the concepts of power and opportunity in Kanter's (1993, 1977) Structural Theory of Organizational Behavior. Kanter proposes that social structures such as access to power and opportunity at work influence employee attitudes and behaviors more than personality predispositions. Kanter defined *power* as the individual's capacity to mobilize organizational factors to accomplish their work. Employees are considered to have power if they have access to opportunity, information, support, and resources at work.

The second KUPC component, specific individual *nurse* characteristics may predict better pain care practices. These include factors such as educational preparation, critical thinking disposition, knowledge of current pain care, years of experience, empathy for patient pain and mental/physical wellness. Argote and Ingram (2000) have suggested that individual members play a significant role in organizational effectiveness. This is because the knowledge-related factors, especially the tacit knowledge (knowledge unlike that conveyed formally through verbal or written formats), is naturally embedded in the individual members that make organizations function well.

The third KUPC factor, *child* or patient characteristics, although not directly modifiable, may have implications for hiring skill-mix and patient assignment decisions. This factor

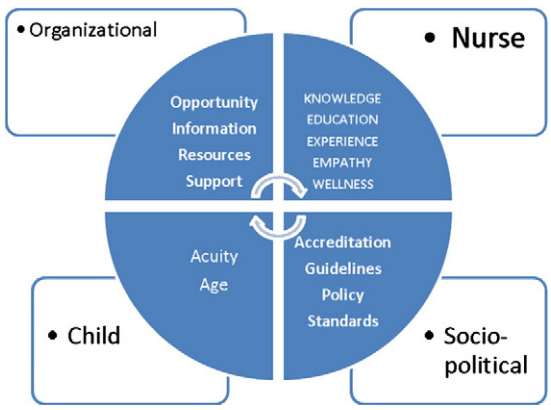

Figure 1 KUPC model components.