
REVIEW

Cultural influences on the assessment of children's pain

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Culture is commonly regarded as a factor in pain behaviour and experience, but the meaning of the term is often unclear. There is little evidence that pain perception is modified by cultural or ethnic factors, but pain expression by children and interpretation by caregivers may be affected by the culture of the patient or the caregiver. The present paper examines some of the research regarding cultural influences on children's pain assessment, and addresses directions for future research. A focus on cultural influences should not distract clinicians from the need to be sensitive to individual beliefs and attitudes.

Key Words: Adolescent; Child; Culture; Pain assessment

The arrival of new cultures, the ravages of war and of industrial upheavals, the shifts of political divisions and ethnic regroupings, the strategies of multinational companies and global trade, make it almost impossible to hold for long on to a shared definition of nationality. The terrible question that the Caterpillar asks Alice in Wonderland has always been difficult to answer; today, in our kaleidoscopic universe, it has become so precarious as to be almost meaningless: 'Who are you?'

Alberto Manguel – *The City of Words* (1)

Culture has been presumed to play an important role in pain experience and expression for adults and children. Unfortunately, 'culture' is a term that has been used loosely and imprecisely, incorporating concepts of ethnicity, race, skin colour, religion, language, national origin and other factors, without clear explanations of the determinants that were used to define it. Statistics Canada (2) defines ethnicity as including "...aspects such as race, origin or ancestry, identity, language and religion. It may also include more subtle dimensions such as culture, the arts, customs and beliefs and even practices such as dress and food preparation. It is also dynamic and in a constant state of flux." Even the concepts of origin or ancestry are indefinite: How far back does one go? Is the first author of the present paper a Caucasian-Canadian, an Anglophone, of English-Irish ancestry, a Protestant, a Christian (lapsed), a Scot, a Huguenot or all of those? Is self-identification the only criterion that counts, or is it more important to define how an individual is seen by others? Of the few studies of 'cultural' influences on pain perception, assessment or treatment, most defined culture in terms of a racial or ethnic group, such as 'Arab-American' (3) or 'Chinese' (4). Membership in these groups is

Influences culturelles dans l'évaluation de la douleur chez l'enfant

La dimension culturelle de l'expérience de la douleur et du comportement à son endroit est un paramètre généralement accepté, mais sa portée reste souvent imprécise. On dispose de peu de preuves sur l'influence des facteurs culturels ou ethniques sur la perception de la douleur, mais l'expression de la douleur chez les enfants et son interprétation chez les personnes qui les soignent subissent certainement l'influence de la culture du patient ou de la personne soignante. Le présent article fait le point sur des recherches qui ont tenté de mesurer le rôle du bagage culturel dans l'évaluation de la douleur chez les enfants et il donne des pistes d'orientation pour les recherches à venir. Cet intérêt pour les influences culturelles ne devrait toutefois pas faire oublier aux médecins la nécessité de demeurer sensibles aux croyances et aux habitudes des individus.

often self-identified in research studies, but from a limited number of choices and without the opportunity to fine-tune the definition. For example, within the current geographic and political confines of China, there are countless ethnic and linguistic groups, some of which are obvious to outsiders, and others that are only clear to the members of those groups. Classifying an individual as 'Chinese' glosses over potentially huge cultural differences from the perspective of the person so classified.

It is beyond the scope of the present paper to resolve this complexity, so we will address issues in pain assessment that have been attributed to culture and attempt to bring a broader perspective to assessment by self-report or observation of behaviour. Culture is often used as a proxy term for race or ethnicity, so we will review the question of racial (genetic) influences on pain perception. Institutions also have their own culture that can have a significant influence on the clinical practice of health professionals, so we will comment on some issues invoked by institutional policy. We, ourselves, are grounded in 'Western' medicine and culture, so our interpretation of our experiences is through that lens. Further discussion of the methodological issues affecting cultural studies can be found in Kitamura and Cohen's text (5).

PAIN PERCEPTION

Mogil et al (6) have shown that there are differences in pain thresholds between strains of homogeneous mice, suggesting that genetic differences in nociception exist. Clearly, there are pharmacogenetic differences in humans that appear to sort primarily into racial groups. For example, metabolism of codeine into its active form (morphine) is dependent on an enzyme pathway that may be absent or inactive in 9% of Europeans, 1% of Arabs and 30% of Hong Kong Chinese (7). However, these

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population data are still not predictive when considering the clinical care of an individual patient because we cannot determine the racial or genetic makeup of an individual in any practical way.

Although there may be variations in drug response between individuals, we are aware of little evidence of significant or predictable differences in pain perception among human racial groups. Only a few studies have compared pain intensity among racial or ethnic groups of younger children, providing mixed and confusing results. Buskila et al (8) described an apparent difference in children's tenderness threshold between Israeli-born Jews, Bedouin Arabs and Ethiopian Jews, but there were clear socioeconomic differences among groups and they did not control for possible reporting bias due to the investigator's ethnicity. Thomas and Rose (9) found strong ethnic differences in pain reporting after ear piercing (although interestingly, no sex differences). Within each group, pain scores were negatively correlated with self-reported coping ability and recalled parental concern about minor injuries. Pfefferbaum et al (10), on the other hand, found no difference in pain or anxiety between Hispanic and Anglo children undergoing oncology procedures (lumbar puncture or bone marrow aspiration), although there were differences in parental anxiety. Acculturation is the degree to which an immigrant group acquires the cultural values of the resident population due to close contact – in other words, the degree of cultural assimilation. This study was one of the few to attempt to assess acculturation, although no correlation was demonstrated with pain scores. Presently, the literature does not point to a strong or predictable relationship between culture or ethnicity and a child's pain intensity. Therefore, differences in pain assessment across cultures are not due to differences in nociception.

PAIN ASSESSMENT

If we accept that there is little reason to expect differences in pain perception between the racial or ethnic groups that coincide with common cultural groupings, then we must evaluate the mechanisms of pain assessment in the context of different cultures. The sociocommunication model of child pain provides a framework for our discussion because it views pain as an iterative social process with cultural influences as a factor (11). Expression of pain is multifaceted and depends on the sensory, emotional, cognitive, cultural and developmental makeup of the child, as well as the context of the pain. However, further expression and subsequent pain experience is also based on the reception that the child perceives from those around him or her – the social and cultural environment. Once the pain is expressed, the signal must be received and decoded by the caregiver (parent or health professional). Multiple factors affect this decoding – in particular, the caregiver's understanding of the child's expression as an indication of pain rather than another sensation or emotion. Caregivers' interpretations are influenced by their individual and family cultural values, beliefs and experiences, as well as the culture of the institution where they work. All of these factors ultimately modify the caregiver's response to the child's expression of pain. Even when pain is correctly identified, the response may not include effective treatment, because treatment choices are influenced by institutional and social factors, such as the fear of administering opioids to children or a lack of belief in the need to treat pain.

THE CHILD: REPORTING PAIN

Pain assessment by self-report has been regarded as the optimal measurement of pain intensity, when it is possible. Self-report can be considered a form of pain expression and is influenced by the child's emotional, cognitive, sensory and developmental level, as well as the culture and context of the pain experience (12).

Various tools have been developed to help younger children (four to 12 years of age) provide a numerical score of pain intensity. These tools commonly use a series of images of faces in varying degrees of distress, either photographs (the Oucher [13]) or more stylized drawings with cartoon-like features (Wong-Baker FACES Pain Rating Scale [14] and the Faces Pain Scale – Revised [FPS-R] [15]). Paradoxically, faced by an attempt to develop universal tools, clinicians and researchers in various settings have felt the need to 'localize' the faces by adding clothing, hair or colouring that they perceive is typical of their environment (16). However, there is no research to show that the reliability or validity of a scale is improved based on differences in 'ethnic' appearance. For example, the Oucher scale (one of the first facial scales, and the reference photographic version) has been developed in 'Caucasian', 'Hispanic' and 'African-American' formats offered as culturally or ethnically specific (17). Although research has shown, for example, that the Hispanic version is just as effective for Hispanic children as the Caucasian version is for white children, this does not mean the Hispanic version is more effective than the Caucasian version in children identified (or self-identified) as Hispanic. In another study (18), the Caucasian Oucher was used by 'black', 'white' and 'Hispanic' three- to 12-year-old children; no children objected to the Oucher on the basis of ethnicity. Neumann et al (19) found that the FPS-R, the Wong-Baker FACES Pain Rating Scale and a visual analogue scale correlated well with each other when tested in a group of Thai children in Bangkok.

In another study (20), the FPS-R was introduced to a clinical practice in a predominately Arab population in Amman, Jordan. Clinicians in this study did not find any difficulty in the children's ability to properly understand and use this tool, and the implementation improved pain assessment, including the reduction of clinician bias in determining a child's pain intensity. In summary, we do not know if culturally specific scales are necessary because they have only been shown to be equal, never superior, to comparison versions, and some studies lack psychometric assessments of the newly developed scales. We do know that multiple pain scales may confuse busy clinicians (18,20).

An alternative approach has been suggested by Schiavenato et al (21), who hypothesized that the 'primal face of pain' is intrinsic to human beings (and conceivably to nonhuman primates). He studied the facial actions of newborns, who presumably have not yet come under the influence of social norms or developmental variations. No differences were found in the key indicators (mouth opening, drawing in brows, closing eyes and raising cheeks) between ethnic or sex groupings. If the facial expressions of pain are constant across racial and ethnic groups, then perhaps the facial actions caricatured in a faces scale are recognizable by a child and thus not subject to the need for cultural variation. This suggests that a universal faces pain scale is quite possible and practical.

THE CHILD: EXPRESSING PAIN

There are many constraints that may make a child unwilling to report his or her own pain, that are unrelated to expected cultural influences, and that may overshadow cultural effects (22). A child may be afraid that admitting to pain will result in unpleasant consequences, such as an injection or a longer stay in hospital. Older children in most cultures may not want to worry their parents by expressing their own distress. In some families, it may be regarded as inappropriate for boys to cry. All of these factors will impact a child's pain expression and may be socially influenced, but may not be attributable to a defined cultural group. For example, McCarty et al (23) found that Thai children used more covert coping techniques than American children, but that, in general, there were more cross-cultural similarities than differences.

Others have suggested that socially or culturally mediated behaviours may even influence an infant's physical or verbal expression of pain. Lewis et al (24) examined Japanese and Caucasian-American infants at four months of age during routine immunizations. The parents of the Japanese infants were born in Japan and had lived in North America for less than 10 years (mean of three years). Facial and cry responses and salivary cortisol levels were measured. The Japanese infants had less behavioural reactivity, longer latency to peak reaction, shorter latency to return to quiet, but higher cortisol levels. Do these findings represent socially influenced behaviour even at this young age? Does suppression of behavioural responses result in higher stress, as evidenced by elevated stress hormones?

Working with a different East Asian group, Rosmus et al (4) demonstrated increased behavioural reactivity in Chinese-Canadian infants at two months of age, compared with Caucasian infants, although the groups may not have been equivalent on some socioeconomic variables. In fact, emerging research by Pillai Riddell et al (25) questions the age at which infants' pain responses begin to be socialized. Their recent work suggests that mothers may influence their infants' behavioural responses to painful stimuli, both immediate and latent, through socialization processes at a very young age.

We have noted stereotypical culturally influenced behaviour among Thai children, who appeared stoic and unmoved by needle procedures (26). *Kreng jai* ('awe heart') is a Thai social injunction against causing distress or annoyance to others, especially to those who are older or senior in status (23). Muted pain behaviour would be consistent with assumptions about *kreng jai* and social expectations in this society. However, children interviewed for other research in the same region of Thailand were very expressive in describing severe pain from cancer or other diseases (27):

...If only I could die so that I don't have to be in such anguish. (14-year-old brain tumour patient)

It hurts and it's torturing... Pain means torture...the feeling of dying...the feeling like I can no longer bear it. (15-year-old appendicitis patient)

Parents perceive that children prefer to tell them rather than the nurses or doctors. However, nurses may feel that parents do not give that information to the professionals: "It seems

that when their child suffers from severe pain, they don't know that they can inform us." (quotation from registered nurse, northeastern Thailand) (28). Culturally constrained behaviour, such as *kreng jai*, may interfere with a child's behavioural expression of pain, although not necessarily with pain perception. This, in turn, interferes with health providers' awareness of pain. Thai health professionals explained that they use 'traditional' pain signs as described in Western texts, or listed items on Western behavioural measures as the behavioural cues of pain (20). Interestingly, these health professionals cite *kreng jai* as a reason that parents and children may be hesitant to discuss their child's pain with them, but do not suggest that pain behaviours from Western pain scales may be less robust in Thai children because of *kreng jai*.

It has also been shown that children may express their pain differently if the observer or interviewer belongs to a different cultural group. Neuman (29) reported that African-American children provided significantly fewer verbal responses about pain than European-American children. As a possible explanation, she postulated 'lack of comfort' in African-American children when talking to a European-American interviewer and the possibility of African-American children being "...socialized to be tough in order to survive in a world that is predominantly white".

Although we believe that self-report scales are transferable among countries and cultures, the above examples suggest that behavioural scoring methods may pose problems. Behavioural measures are generally used for younger children or those who cannot communicate as a substitute for verbal self-report. It has been assumed that these behaviours are universal and that younger or impaired children do not have the ability to mask behaviours such as crying, limb withdrawal, holding the painful area, etc, in response to the pain experienced. If socialization and cultural influences impact behaviours at very young ages, then behavioural scales developed in Western settings may not be transferable to other societies. Even if behaviours such as crying, moaning or holding the painful area are globally consistent among infants and children, the frequency or intensity of these behaviours may not be.

THE CAREGIVER: DECODING PAIN EXPRESSION

As previously suggested, an observer (the caregiver) must interpret the behaviours or reports generated by the patient in a sociocommunication context. Both the culture of the observer and the assumed culture of the patient have an impact. It is treacherous to predict social or behavioural constraints based on a perceived cultural heritage. The assumption that a child with an East Asian appearance comes from a 'Chinese' heritage and therefore should be expected to show stoicism is cultural stereotyping, not cultural sensitivity, and will result in misjudgements of the patient's pain intensity. The range of behaviours within a group is too broad to use preconceptions of behaviour to calibrate an observer scale. In heterogeneous societies, even those predictions may be misleading because the child may be significantly acculturated and identify more with the dominant societal culture rather than their ethnic or cultural heritage.

Research by our group in Amman, Jordan, identified some additional themes with respect to assessment of children's pain.

An action research program to enhance pediatric pain management at a cancer specialty hospital started with preconceptions based on published literature. These preconceptions included, among others, that local culture and religious beliefs would complicate pain management (30). In fact, we found that the primary barriers included medical misconceptions concerning opioids and pain treatment in general (20). Parents indicated that children had a responsibility to express their pain – that they should ‘cry a lot’, ‘complain’ or ‘tell about the pain’ (31). No parent suggested that the child should be asked about their pain; in other words, self-report was not elicited. In addition, nurses were quite clear that it was their responsibility to recognize pain by behavioural signs: “Do not ask directly. Nurse should be able to tell – it is their job to know” (20). It is conceivable that these constraints are quite independent of societal influences.

At the same time, studies show that the caregiver’s own cultural background may influence his or her ability to understand and empathize with patients of a cultural background different from their own (32,33). This may influence health professionals’ ability to reliably decode the child’s pain expression. However, a study of observed postoperative pain in northern Thai children found that parents’ ratings of their children’s pain correlated more closely with the child’s self-report than did either Thai or American nurses’ ratings (Finley et al, unpublished data), suggesting that Thai nurses were no better than American nurses at decoding the behaviour.

THE INSTITUTION

Institutional culture – the environment in which the child, the parent and health professional coexist – may also influence a caregiver’s interpretation of a child’s pain expression and modify subsequent treatment. Institutional culture has been described as ‘the way things are done around here’, and includes such factors as approaches to care, values and beliefs, and teamwork (34). A child’s pain experience will be affected by whether professionals and administrators see pain prevention and treatment as a priority care goal. Although, in our experience, most of the reasons for suboptimal pain care are not intrinsic to any particular societal group or country, the ways in which one works to bring about institutional change should incorporate strategies that are consistent with societal norms. Certainly, knowledge deficits about the significance of pain and the consequences of undertreated pain are not cultural phenomena, and have led to initiatives such as the campaign for pain to be the ‘fifth vital sign’ in the United States and the recent addition of pain management to Canadian hospital accreditation standards (35). Additionally, in economically constrained countries, it is understandable that other pressing issues such as infectious disease, dehydration and nutrition may carry greater importance than pain care; allocation of scarce resources is made necessary by poverty, not cultural values.

However, pain care needs can be met with very few resources. In Jordan, improved pain care was accomplished by influencing institutional factors such as administrative leadership, local mentorship, education and policy development (20). It was essential that senior administrators gave explicit support to the initiative. Nurses requested policies that would require them to move up the medical hierarchy (resident to fellow to consultant) if pain was not addressed by the junior staff. This gave them the confidence to advocate for their patients. These strategies were devised to work within the authority structure of the hospital, which was

reflective of Jordan’s patriarchal society. However, we remain cautious of this analysis because we also found that we were incorrect in our preconceptions of how a patriarchal society would influence a mother’s role in pain care (31).

In Thailand, we are using similar elements to improve pain care for hospitalized children. Qualitative data from Thai health professional focus groups identified support from hospital administrators and senior medical staff to be key in bringing about institutional change (28), although the underlying principle is *kreng jai*, not hospital hierarchy. Further research is required to understand the manner in which societal culture influences institutional culture and, therefore, pain assessment.

CONCLUSIONS

Cultural implications of pain assessment in children remain elusive, as does the construct of culture. The empirical evidence is limited and often based on ambiguous conceptualizations of culture and relatively weak methodologies. Ultimately, much of the research that supposedly invokes ‘cultural’ variations concerns different racial groups living in the same geographical region of North America or Europe, who go to the same schools and are exposed to the same popular culture. Many investigators seem focused on identifying differences between cultural or ethnic groups, rather than on developing skills that are transferable, no matter what the patient’s heritage or belief structure. A more reasonable model for cross-cultural practice would focus on cultural competence, not ‘cultural sensitivity’; useful guidelines have been suggested by Davidhizar and Giger (36,37). On the other hand, many of the issues described in low- or middle-income countries as ‘cultural’ can more directly be traced to context, education, limited resources and economic struggles. As Maddocks stated (38), “Ability to cope with pain is a required skill where there is a lack of effective analgesia or no money to afford it.” A new approach for cross-cultural research should focus on pain awareness, care priorities, policies, protocols, behavioural expression and interpretation, and the difference between culture and context.

We found no compelling evidence that culture significantly affects the sensory aspects of pain or pain perception. There is also no evidence that a localized or ‘culturally based’ self-report tool is superior, or that it is unreasonable to promote a universal tool such as the FPS-R. It is reasonable to expect that culture may affect a child’s pain expression, especially the intensity of pain behaviours. Culture may also affect the observer’s perception and awareness, and therefore treatment, and consequently may influence the pain experience, as described in Craig’s (11) sociocommunication model of child pain.

A focus on ‘cultural sensitivity’ may contribute to stereotyping with respect to pain care, and detracts from the main issue: How do we get health professionals to actually assess and treat pain consistently? Most cross-cultural pain research has been conducted in Western countries with subjects from various racial or ethnic groups, but assessments of acculturation are rarely provided. It may be inappropriate to assume that findings from heterogeneous societies are transferable to countries that are more socially homogeneous. We believe that it is more important to be sensitive to the individual beliefs, values and preferences of the child and family than to rely on preconceptions of the patient’s perceived culture or ethnicity, even if self-identified.

REFERENCES

1. Manguel A. *The City of Words*. Toronto: House of Anansi Press, 2007:143.
2. Statistics Canada. Ethnicity. <<http://www.statcan.ca/english/concepts/definitions/e-race.htm>> (Version current at December 14, 2008).
3. Abu-Saad H. Cultural components of pain: The Arab-American child. *Issues Compr Pediatr Nurs* 1984;7:91-9.
4. Rosmus C, Johnston CC, Chan-Yip A, Yang F. Pain response in Chinese and non-Chinese Canadian infants: Is there a difference? *Soc Sci Med* 2000;51:175-84.
5. Kitayama S, Cohen D, eds. *Handbook of Cultural Psychology*. New York: The Guilford Press, 2007.
6. Mogil JS, Ritchie J, Sotocinal SG, et al. Screening for pain phenotypes: Analysis of three congenic mouse strains on a battery of nine nociceptive assays. *Pain* 2006;126:24-34.
7. Williams DG, Hatch DJ, Howard RF. Codeine phosphate in paediatric medicine. *Brit J Anaes* 2001;86:413-21.
8. Buskila D, Neumann L, Press J, Zaks N, Gedalia A. Assessment of nonarticular tenderness of children in different ethnic groups. *J Musculoskel Pain* 1995;3:83-90.
9. Thomas VJ, Rose FD. Ethnic differences in the experience of pain. *Soc Sci Med* 1991;32:1063-6.
10. Pfefferbaum B, Adams J, Aceves J. The influence of culture on pain in Anglo and Hispanic children with cancer. *J Am Acad Child Adolesc Psychiatry* 1990;29:642-7.
11. Craig KD. Pain in infants and children: Sociodevelopmental variations on the theme. In: Giamberardino MA, ed. *Pain 2002 – An Updated Review. Refresher Course Syllabus*. 10th World Congress on Pain, San Diego, CA. Seattle: IASP Press, 2002:305-14.
12. von Baeyer CL. Children's self-report of pain intensity: What we know, where we are headed. *Pain Res Manage* 2009;14:39-45.
13. Beyer JE. *The Oucher: A User's Manual and Technical Report*. Evanston: Hospital Play Equipment, 1984.
14. Whaley L, Wong DL. *Nursing Care of Infants and Children*, 3rd edn. St Louis: CV Mosby, 1987.
15. Hicks CL, von Baeyer CL, Spafford P, van Korlaar I, Goodenough B. The Faces Pain Scale – Revised: Toward a common metric in pediatric pain measurement. *Pain* 2001;93:173-83.
16. Jongudomkarn D, Angsupakorn N, Siripul P. The development and validation of the Khon Kaen University Pediatric Pain Assessment Tool for school-aged Isaan children in Thailand. *J Transcult Nurs* 2008;19:213-22.
17. Beyer JE, Turner SB, Jones L, Young L, Onikul R, Bohaty B. The alternate forms reliability of the Oucher Pain Scale. *Pain Manage Nurs* 2005;6:10-7.
18. Jordan-Marsh M, Yoder L, Hall D, Watson R. Alternate Oucher form testing: Gender, ethnicity, and age variations. *Res Nurs Health* 1994;17:111-8.
19. Neumann CJ, Lolekha R, Limkittikul K, Luangxay K, Chotpitayasonondh T, Chanthavanich P. A comparison of pain scales in Thai children. *Arch Dis Child* 2005;90:269-70.
20. Finley GA, Forgeron PA, Arnaout M. Action research: Pediatric pain service development in Jordan. *J Pain Symp Manage* 2008;35:447-54.
21. Schiavenato M, Byers JF, Scovanner P, et al. Neonatal pain facial expression: Evaluating the primal face of pain. *Pain* 2008;138:460-71.
22. Larochette AC, Chambers CT, Craig KD. Genuine, suppressed and faked facial expressions of pain in children. *Pain* 2006;126:64-71.
23. McCarty CA, Weisz JR, Wanitromanee K, et al. Culture, coping, and context: Primary and secondary control among Thai and American youth. *J Child Psychol Psychiat* 1999;40:809-18.
24. Lewis M, Ramsay DS, Kawakami K. Differences between Japanese infants and Caucasian American infants in behavioral and cortisol response to inoculation. *Child Devel* 1993;64:1722-31.
25. Pillai Riddell R, Stevens BJ, Cohen LL, Flora DB, Greenberg S. Predicting maternal and behavioral measures of infant pain: The relative contribution of maternal factors. *Pain* 2007;133:138-49.
26. Forgeron PA, Jongudomkarn D, Evans J, et al. Children's pain assessment in Northeastern Thailand: Perspectives of health professionals. *Qual Health Res* 2009;19:71-81.
27. Jongudomkarn D, Aungsupakorn N, Camfield L. The meanings of pain: A qualitative study of the perspectives of children living with pain in north-eastern Thailand. *Nurs Health Sci* 2006;8:156-63.
28. Forgeron PA, Jongudomkarn D, Finley GA, et al. Changing pain care for children in Northeastern Thailand: Clinician perspectives. *World Congress on Pain*. Glasgow, August 18, 2008.
29. Neuman BM. Relationships between children's descriptions of pain, self-care and dependent-care, and basic conditioning factors of development, gender, and ethnicity: 'Bears in my throat'. PhD dissertation, Wayne State University, 1996.
30. Abu-Saad H. Cultural group indicators of pain in children. *Matern Child Nurs J* 1984;13:187-96.
31. Forgeron PA, Finley GA, Arnaout M. Pediatric pain prevalence and parents' attitudes at a cancer hospital in Jordan. *J Pain Symptom Manage* 2006;31:440-8.
32. Flores G. Culture and the patient-physician relationship: Achieving cultural competency in health care. *J Pediatr* 2000;136:14-23.
33. Flores G, Abreu M, Schwartz I, Hill M. The importance of language and culture in pediatric care: Case studies from the Latino community. *J Pediatr* 2000;137:842-8.
34. McCormack B, Kitson A, Harvey G, Rycroft-Malone J, Titchen A, Seers K. Getting evidence into practice: the meaning of 'context'. *J Adv Nurs* 2002;38:94-104.
35. Canadian Pain Society. Accreditation Pain Standard: Making it happen! <http://canadianpainsociety.ca/accreditation_manual.pdf> (Version current at December 23, 2008).
36. Giger JN, Davidhizar R. The Giger and Davidhizar Transcultural Assessment Model. *J Transcult Nurs* 2002;13:185-8.
37. Davidhizar R, Giger JN. A review of the literature on care of clients in pain who are culturally diverse. *Intern Nurs Rev* 2004;51:47-55.
38. Maddocks I. Palliative care education in the developing countries. *J Pain Palliat Care Pharmacother* 2003;17:211-21.