

Commentary

Pain assessment in Sub-Saharan Africa

Marie Anne Walters

When working in the Queen Elizabeth Central Hospital in Blantyre, Malawi, as a nurse educator (from 2007 to 2009 with a total of 15 months spent in Malawi) my clinical observations of practice led me to the conclusion that pain management and assessment were not being undertaken. Children were unprepared (emotionally and physically), even when pain could be anticipated and predicted hours earlier. For example, a child requiring non-emergency lumbar punctures or minor surgical procedures/dressings receives no advance preparation or analgesia.

This worried me greatly but I realized there must be reasons for this omission from the pediatric care offered. In order to look at interventions to respond to this need, I first wanted to see what the problems were in Sub-Saharan Africa as a whole. I hope, in this commentary, to provide a succinct version of the literature review that was conducted. This will include discussions of my personal experience in Malawi, assessment issues, problems with current pain assessment measures in this population, and potential strategies to improve the assessment of pain.

Personal nursing experience in Malawi

During my clinical work, I observed that African children are taught to be quiet and cooperative from a very early age. Children will often hold completely still for lumbar punctures or cannulation procedures. This might be a result of cultural norms and expectations in this community. I observed children who had suffered open fractures, and only admitted to pain when asked; I observed a child with an acute abdomen, who was not guarding despite the medical diagnosis suggesting severe

pain. It is thought that children who express such silent, avoiding and enduring behaviors are trying to refrain from showing emotion, not only for fear of appearing weak but also as a way of showing consideration, especially for individuals viewed as senior people, such as older family members and medical personnel.

Currently no pain assessment tools are being used in the pediatric department at the Queen Elizabeth Central Hospital. In addition, only severe pain is treated and often inappropriately so in comparison with western standards. Cultural differences for children's expression of pain appeared vast in Malawi as did nursing attitudes, beliefs and training on pain which are likely to relate to how pain is seen and managed. During these experiences my realization of the unique issues related to assessment and management of children in pain in this setting began to emerge.

Assessment issues

Pain is routinely undertreated (Schechter et al., 1986; Jacob & Puntillo, 2000; Johnston et al., 2005) despite it being estimated as the most complex of human stresses due to the subjectivity associated with it (McCaffery & Pasero, 1999). The World Health Organization (1998) states that 80% of people worldwide do not receive adequate treatment for pain. Severe undertreatment of pain is a serious problem in more than 150 countries, with issues such as a lack of education and legal barriers to access pain medication being worse in poorer countries.

In a review article by specialists from the Red Cross Children's Hospital, Cape Town, African children are described as being particularly

vulnerable to disease, injury, and subsequent pain and suffering. Factors such as inadequate training of health professionals, language differences, cultural diversity, limited resources and the burden of disease can create barriers to children receiving pain treatment (Albertyn et al., 2009). A project to develop a pain program in Jordan used information on pain prevalence in 35 children via chart reviews and parent/child interviews to establish pain burdens. It also involved interviews with 22 parents in order to identify attitudes to pain management. The findings suggest that children are thought to receive less treatment because of health care professionals' beliefs and attitudes, with professionals being ill prepared to care for people experiencing pain (Forgeron et al., 2006).

Unrelieved pain in children has many physiological consequences on the anatomical systems of the human body and leads to inadequate functioning on a variety of levels (Eland, 1990; McCaffery & Pasero, 1999; Altimier et al., 2002; Mitchell & Boss, 2002). Untreated pain can also cause anxiety, depression, irritability and exhaustion (McGrath et al., 2006). HIV-infected children with pain have been found to be five times more likely to die than HIV-infected children without pain (Gaughan et al., 2002).

The benefits of effective pain management are widely known; with many patients experiencing enhanced recovery from surgery when pain was well controlled (Hastings, 1995). Previous experiences of pain also offer direct links to patients' perceptions of their progress and recovery, with those that had their pain well-managed in the past having more positive encounters on future admissions (Seers, 1987).

Problems with current pain assessment measures in this population

Measurement of pain in children is important as it serves as a trigger to treat pain and is necessary to develop appropriate objective interventions and evaluate responses to treatments (Anand et al., 1999). However, in order to manage pain in children, accurate assessment of pain is needed, with relevant, culturally appropriate tools for each setting.

A research based project conducted on a surgical ward in Kenya aimed to develop and use a common pain assessment tool. The perceptions of the nurses taking part in the study showed that differences from western culture to African culture were vast, noting that stoicism ('to grin and bear it') was desirable (Hastings, 1995). Africans were less likely to verbalize their expressions of pain and acknowledgment of pain was seen as an act of weakness. The meaning of pain was also significantly different in terms of religious and cultural beliefs about recognition and endurance of pain. Pain was frequently seen as being good and required in wound healing, particularly following injury or surgery. Pain was also seen by some as punishment for past sins.

Cultural expectations and social norms given to children by their parents may influence reports of pain and encourage avoidance or acceptance of pain (Gharaibeh & Abu-Saad, 2002). Language and culture all impact heavily on management and assessment of pain in children and are often impacted negatively by myths and misconceptions. For example, the belief that pain is good may influence the desire to treat pain on the part of both medical professionals and the patient and family. These factors can act as barriers to adequate pain care and impede proposed interventions (McCarthy et al., 2004; Finley et al., 2005).

Rampanjato and colleagues (2007) examined nurses' beliefs in Central Africa with regard to pain and found that many nurses believed that opioids cause addiction, pain expression was a sign of weakness, pain was an expected consequence of injury, and pain relief could interfere with healing. Nurses in a study in Malawi concurred as they stated morphine was "a bad drug, it can kill and even its side effects are very dangerous" (Bates et al., 2008, p. 112).

My personal perspective from Malawi is that pain is seen as an individual and private matter and silent suffering is often encouraged. The hierarchy in Africa is also very pertinent. My own experience was that those in powerful authority positions demanded the utmost respect of their colleagues and had almost unquestionable authority over junior staff. Many patients and families see the nurse as the professional; if they needed pain relief they

would expect that the nurse would know this and bring it, as asking can be seen as inappropriate, showing a lack of respect and deserving of a reprimand.

Few nurses are sufficiently trained to recognize, measure and assess pain and anxiety in the pediatric patient. There is limited access to literature, with journals being too expensive and internet access being inadequate in many resource poor settings. Decision-making is therefore hampered by ignorance regarding specific factors such as facial expressions, individual characteristics, cultural differences, and uniqueness of the child and physiological indicators of pain, all of which are important factors in the assessment of pain (Albertyn et al., 2009).

Studies have shown an ad hoc approach to pain assessment with under use of pain assessment tools: 'if we pass by and notice it, we treat it.' Problems described by health care workers related to too many tools being on offer, the tools themselves being too time consuming to conduct and fears that children wouldn't or couldn't reliably self report (Forgeron et al., 2006). Furthermore inconsistencies were seen between doctors' and nurses' perceived roles in pain management.

Parents' vital contribution to pain assessment and management has been undervalued in the developing world setting. Parents know their child best and can often see subtle changes in behavior, which can be a vital aid in assessment and control. Parents are also often able to reduce anxiety and consequent exacerbation of pain in their children, providing comfort and essential reassurance (Hastings, 1995). However, in the developing world setting parents were too intimidated to talk to nurses. They saw their input as a disruption to the nurse's work and busy schedule, which was felt to be disrespectful and inappropriate to someone viewed as senior in society (Forgeron et al., 2009).

Potential strategies to improve the assessment of pain

After conducting this review I worked with senior Malawian nurses to assess the myths and misconceptions of our own staff (through a questionnaire which addressed many of the issues first raised as general problems with pain

assessment and management in Sub-Saharan Africa). This was done as it was realized that our own problems may have been different. Our findings were then used to commence educational workshops with the aim of dispelling some of the fears identified, by multidisciplinary debate and discussion of the myths held and the practicalities of improving our situation in Malawi. We were then ready to start teaching staff and commence setting up a service. The first step towards this was to look at the pain assessment tools available and their usefulness to the children we wanted to treat.

From an extensive review of pain assessment tools by Stinson and colleagues (2006), I was able to make conclusions to guide the appropriateness of a tool for use in Malawi specifically. The Visual Analogue Scale (VAS) was found to be time consuming in its explanation in order for full comprehension and proper use to occur, making it unsuitable for use in busy understaffed environments. It was also found to be less reliable in children younger than 8 years. In the Wong-Baker FACES Pain Rating Scale, children's ratings were influenced by the nature of the smiling 'no pain' anchor. The tears on the upper anchor led to underestimation by some children of their pain (i.e. those who do not want to admit to crying), which would make its use in Malawi troublesome. The Oucher scale has overcome cultural limitations associated with the original version, as culturally sensitive photographic scales have now been developed; however, they are costly to reproduce which limits their ability to be used in a resource poor setting.

The Pieces of Hurt tool has undergone extensive psychometric testing by various teams of investigators (Stinson et al., 2006). Children described it as easy to use and understand and it has been used to measure procedure-related, postoperative and oncology-related pain but no studies for recurrent or chronic pain use have been conducted as yet.

The Faces Pain Scale-Revised (FPS-R) has been described as a simple and quick to administer tool which requires minimal instruction in children from 4 to 18 years old, with children as young as 3 years being able to use the tool with adequate comprehension (www.painsourcebook.ca). The

faces displayed are more realistic and appropriate for the differences in African expression, and so symbolic understanding may be increased. The diverse age range is of benefit where the use of many different tools for different aged children may prove to be difficult, particularly at initial introduction.

The applicability of self-report and observational methods in Sub-Saharan Africa is dependent upon the introduction of appropriate tools with structured education and teaching. Existing pain tools can be used and from the review by Stinson et al (2006) the FPS-R looks to be the most suitable self-report scale. A variety of observational tools are available as well (Blount & Loiselle, 2009) but these have not yet been assessed for use in Sub-Saharan Africa. The education of health professionals including doctors and nurses is crucial, and parents need to have an awareness of methods used to assess their child's pain, particularly when physiological signs are not noted. Parents will see subtle changes in behavior such as when their children are losing their appetite, reducing their play time, preferring to stay still, or having low mood, and these may be strong indicators of pain.

In summary a review of literature was used as a starting point, with the objective of setting up an

appropriate and relevant service to meet the needs of children in pain in Malawi. We aimed to teach our staff about the importance of involving parents and children, using observational skills and behavioral signs in conjunction with self-report techniques to measure children's pain holistically. We advocated the use of an appropriate pain tool based upon the child's stage of development.

Professionals in Malawi needed education and trust in self-report and observational assessment of pain. Furthermore, myths and misconceptions needed to be addressed in order to dispel them and to allow for interventions to take place. However, due to the deep-rooted basis of some of these, time and constant encouragement and teaching will also be needed. From personal experience, I believe that in order to start pain education and think about interventions to improve care, the myths and misconceptions which have been briefly discussed here need to first be assessed and their relevance to change calculated.

Marie Anne Walters, B/Nurs
Link Nurse Educator, Birmingham Children's Hospital, UK, and Queen Elizabeth Central Hospital, Blantyre, Malawi
email: marieannewalters@yahoo.com

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