

## NURSES' KNOWLEDGE, ATTITUDES AND PRACTICES REGARDING PEDIATRIC POST OPERATIVE PAIN MANAGEMENT

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### INTRODUCTION

Pain is the most feared symptom of a disease. It is “an unpleasant sensory and emotional experience, associated with actual or potential tissue damage or described in terms of such damage” (International Association for the Study of Pain (IASP), 1986, p. 217). Pain and fear to pain are commonest feelings in hospitalized patients. It can be classified as acute and chronic pain. Acute pain associated with brief episode of tissue injury or inflammation caused by surgery, burns, or trauma. Chronic pain may or may not be symptomatic of underlying, ongoing tissue damage or chronic disease. It can persist for long after an initial injury has healed or other event has occurred (Cohen, Maclaren & Lim, 2007) and intensity of pain is ending around the specific period of time (Gehdoo, 1994). Under this classification post operative pain is categorized as acute pain and also surgery related pain.

Management of pain can be a critical issue especially when applying it to pediatric conditions.

Assessing and managing pain is therefore very complex in pediatric patients because it is very difficult to differentiate restlessness or crying due to pain from feelings of hunger or fear (Gehdoo, 1994). Pain should be anticipated, and safely and effectively be controlled in all children (Motor 1998). Though it is true that children feels pain as same as adult, 20 years ago pain in children was considered insignificant (Mather & Mackie, 1983). Not only in the past, even today also has number of misconceptions concerning paediatric pain management persisted among health care professionals.

Relieving pain is very essential part of nurses' caring role. So nurse should understand the nature of pain and be able to asses and manage pain effectively. According to the available literature, many researchers have identified, yet, pediatric nurses have failed to adequately relieve children's pain by failing to recognize pain, failing to optimize pain treatments, and accepting severe pain as an expected part of illness and treatment (McCaffery & Pasero, 1999). Child's self report is one most reliable indicator for assessing pain but this is possible only in children with sufficient cognitive and communication ability, but infant or child without sufficient cognitive and communication ability. Nurse should have to use standard approaches to assess pain and therefore paediatric nurse should have ability and appropriate knowledge in practice of pain management among paediatric patients (Gehdoo, 1994). Accordingly, the purpose of this particular study was to assess the nurses' existing knowledge, attitudes and practice regarding paediatric post operative pain management at pediatric surgical wards at Lady Ridgeway children's hospital (LRH) in Sri Lanka. More specifically the study was focused: to identify existing knowledge, attitudes and practices as well as misconceptions and barriers about post- operative pain management in paediatric patients.

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## METHODOLOGY

Descriptive study design is mostly appropriate and was used in this study because its results may lead to have more information about nurses' knowledge and practice of paediatric pain management (Polit & Hunger, 1991). The method of data collection was self report measurement and data was collected by the researcher administered questionnaire. The questionnaire was based on sample characteristics such as demographic data, knowledge and attitudes of nurses about pain management, method about assessment of paediatric pain, misconceptions and barriers of pain management of paediatric patients. Content validity of the instrument was assured by referring to the standard literature and referring to the subject experts. Reliability and understandability was assured by performing test-pretest reliability. Descriptive analysis was done.

The study was conducted in the paediatric surgical wards at Lady Ridgeway Hospital for Children. This is a tertiary care children's' hospital in Colombo, Sri Lanka, with the bed strength of over 1100. The sample size was 64 registered nurses who were working at surgical wards in the Lady Ridgeway Hospital for children at that period and who were willing to participate voluntarily to the study. Nurses who do not have experience less than 6 months in paediatric surgical wards and relief nursing staff that did not work in the clinical setting in regular basis were not considered. Ethical approval to conduct the study was granted from the ethical review committee of Lady Ridgeway Hospital for Children.

## RESULTS AND DISCUSSION

In this study researcher invited to 64 nurses and 60 nurses were participated and response rate is 93.75%. Relating to the demographic characteristics of the sample, study findings showed that there was no impact of sex, age or educational level of participants to their knowledge and practice of pain management in pediatric patients. In terms of the knowledge of participants regarding pain and pain management, majority of the participants had enough knowledge to describe pain. More than 88% participants have described the pain correctly. More than 96% of the sample has described the post operative pain (Table-1). Describing the attitudes of participants regarding pediatric pain management, study found that over half of the participants assume that there is a risk of addiction to analgesics among children. Very few nurses assumed that pain management is not necessary for pediatric patients. This belief indicates that less priority has been given to pediatric pain management as described by Twycross (2005). While 90% of participants agreeing that pain assessment is helpful to identify the location and the intensity of the pain (Table-1), the study revealed that no one use pain rating scale or any other tool for assessing children's pain. However 96% use behavioral and physiological changes to assess children's pain and determine it, as an actual pain in children.

When considering pharmacological knowledge among participants, 63% categorized ketamine as narcotics, 41% mentioned Intra venous is the best route for administer medication for managing pain but 36% of the sample have selected Intra muscular is the best route. Majority of the sample (88%) has identified respiratory distress, nausea, and vomiting as the side effects of drugs. By considering pharmacological knowledge of pain management, basic elements of pharmacologic treatment include type of analgesic, dose, timing, and routes of delivery. Postoperative pain management encompasses the use of different classes of drugs, including opioid and nonopioid analgesics. The goal is to control the pain as rapidly as possible. Administration of multiple, small, ineffective doses of analgesic may result in the prolongation of pain, exacerbation of anxiety, and even severe adverse effects of the analgesic, such as respiratory depression. Except in extenuating circumstances, medication should not be given intramuscularly, because it is painful and absorption can be variable. Oral administration is preferred for mild to moderate pain. When the child needs immediate pain relief, intravenous administration is indicated when regional routes are not appropriate or readily available. (American academy of pediatrics, 2001)

**Table 1 – Knowledge and attitudes of participants**

| Source  | frequency | presentation |
|---|-----------|--------------|
| Pain is                                       |           |              |
| Physiological and psychological illness       | 23        | 38.33%       |
| Brief episode of inflammation                 | 18        | 30%          |
| Unpleasant sensory & emotional response       | 53        | 88.33%       |
| Post-operative pain                           |           |              |
| Acute & surgical related pain                 | 58        | 96.6%        |
| Associate with inflammation of tissue         | 23        | 38.3%        |
| Assessment of pain                            |           |              |
| Not necessary                                 | 03        | 5%           |
| Same as adult                                 | 21        | 35%          |
| Help to identify location & intensity of pain | 54        | 90%          |

High proportion of sample of the study used to assess pain by observing behavioral and physiological changes of the child to determine actual pain. Sixty per cent participants consider about the complains of pain of the child as best method same as majority of respondent believe that the best judge of intensity of pain is the child ( Subhashini, Vatsa & Lodha, 2008). These are also recommended methods to assess pain. But if child does not have sufficient communication skills it won't be able to use this method as the best method (Gehdoo, 2004). According to the findings of the study, there are no appropriate methods use to assess children's pain as same as Manworeen (2000). Paediatric nurses therefore need more knowledge about pain assessment.

**Table 2: Overall practice of pediatric pain management**

| Source   | frequency | presentation |
|--|-----------|--------------|
| Other ways of reducing pain                              |           |              |
| Motivation to sleep                                      | n=45      | 75%          |
| Distraction techniques                                   | n=52      | 86.66%       |
| Play therapy   | n=49      | 81.66%       |
| Friendly hospital environment                            | n=51      | 85%          |
| Determine actual pain of child                           |           |              |
| Complain of child  | n= 36     | 60%          |
| According to the post –op period                         | n= 41     | 68.33%       |
| Behavioral & physiological changes of child              | n= 58     | 96.66%       |
| Prior measures to administer pain management medications |           |              |
| Asses the severity of pain                               | n= 51     | 85%          |
| Observation of vital signs                               | n= 48     | 80%          |
| Weight of the child                                      | n= 50     | 83.33%       |
| Age of the child   | n= 49     | 81.66%       |
| Barriers of pain management in practice                  |           |              |
| Heavy work load  | n= 33     | 55%          |
| Unavailability of medical advice                         | n= 39     | 65%          |
| Unavailability of resources                              | n= 31     | 51.66%       |
| According to the routings of the ward                    | n= 20     | 33.33%       |

In this study the majority of participant had identified unavailability of medical advice as one of the major barrier to optimal pain management. Doctors prescribe medication and nurses

have to depend on doctors orders. According to the age, weight and condition of patients, doctors prescribe drugs for pain. When the medications are insufficient, changes should be made. The research study of Vincent (2005) also identified inadequate physician medication orders for the pain as the greatest barrier to optimal pain management (Table 2).

As Manwooren (2000) explained, in the past 20 years, the amount of information available to pediatric nurses' pain management has dramatically increased. In contrast this particular study shows that the participants' knowledge about clinical manifestation of children's pain is not in satisfactory level. This study further identified that majority of nurses believe that pediatric patients will develop addictions to opioid analgesics. In contrast, the study done by Sue and Smart (2000) identified that very few nurses had believed that pediatric patients develop addictions to opioids. As American academy of pediatrics (2001) described, when the child needs immediate pain relief, intravenous administration is indicated when regional routes are not appropriate or readily available. But the study findings revealed that the majority of the sample has not clear understanding about the most suitable route for administering analgesics for pediatric patients. As in the above discussion it is conceivable that nurses in this sample show a big gap in terms of required pharmacological knowledge and that of existing. Sue and Smart (2005) concurred that nurses pharmacological knowledge continuously be lacking. Manwooren (2000) further supported that nurses need more information about opioids and non-opioids in managing pediatric patients' post operative pain.

#### CONCLUSIONS/RECOMMENDATIONS

By considering the findings of this study, increasing educational opportunities for nurses is important to update their knowledge. Nurses should be facilitated to attend specialized educational programs to develop nurses' clinical practice in management of pain.

Standard policy is important to prevent short comings of pain management. It is important to conduct in-service programs or knowledge enhancing educational sessions about pain management and other areas that identified as insufficient in knowledge on regular basis. There is no recommended policy or protocols about the pain management in Sri Lanka, but most of developed countries have policies about pain management. Therefore findings of this study highlighted on developing pain management policies related to Sri Lanka and it will be very effective to optimal pain management of pediatric patients.

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