Caring for Children in Pain a Vietnamese Perspective

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Abstract

Purpose: The purpose of this study was to identify and describe Vietnamese nurse’s pain management in children.

Methods: A quantitative cross-sectional study using a questionnaire measuring 110 registered Vietnamese nurse’s perception of pain and pain management in children.

Results: The results showed that many nurses in Vietnam are using pain assessment instruments as well as non-pharmacological alleviations methods extensively. Vietnamese nurses had high levels of knowledge in physiology of pain. Nurses’ knowledge about the use of pain medication was correlated to attitudes. The higher level of knowledge the nurses had about pain medication, the more positive was their attitude towards pain management in general.

Conclusion: In conclusion, the most commonly used non-pharmacological pain alleviation method among the nurses was talking to the child and be close to the child. This method to attempt to relieve pain is valuable as it doesn’t require any specific equipment. Vietnamese nurses had high levels of knowledge about physiology of pain.

INTRODUCTION

Pain perception is a highly subjective experience. Children often suffer from pain when undergoing procedures and treatment. Pain management is an essential part of the nurses’ profession, with the aim to reduce suffering and increase wellbeing of the individual they care for [1]. Melzack [2] stated that the experience of pain depends on the meaning of the situation, cultural learning and the environment. Causes of inadequate pain relief may be based on nurses’ lack of knowledge regarding the need for appropriate pain management [3].

Vietnam is according to the World Bank a Lower middle income country with limited resources in health care. The Vietnamese governments, ministry of health, have taken a decision to promote pain management among other things in palliative care. Therefore, it is valuable to investigate what Vietnamese nurses doing with children in pain.

Factors that hinder optimal pain relief may partly be due to the child’s diagnosis, the child’s age, and behavior [4]. It may also be partly due to the nurses’ lack of knowledge, organizational culture, decision-making strategies and different perception of children with pain [5]. It is difficult to provide appropriate and adequate pain relief to children who do not respond as expected to pain relief [6].

Nurses’ knowledge and attitude clearly influence whether they can provide a qualified pain management or not [4]. Misconceptions, such as, that young children lack the ability to localize their pain and that children who are active or sleeping cannot be in pain, often prevent adequate pain relief [5]. For nurses, it can be challenging to assess and treat children in pain [7,8].

Nurses feel an uncertainty as to what type of pain relief method to use in different situations [9]. The use of non-pharmacological methods in the health care system has become an important complement to pharmacological treatment [10]. Children’s pain expression can also be effected by the way the parents interact with the child [11, 12].

In the nursing profession, the use of non-pharmacological methods has become more frequent as it has been shown to create a sense of calmness and well-being in the person in pain [13]. Non-pharmacological methods to reduce pain in the child can be; comforting, encouragement, touch and relaxation through various breathing exercises [14]. Parental presence is an important part of pain management in children as parents often transfer security and reduce stress in situations that can be difficult for the child to understand [15]. The parents can also help by distracting the child during a painful procedure [16]. When parents use distraction as a non-pharmacological
method, children showed less distress during painful procedures [12,17,18]. Massage has been shown to have both analgesic and sedative effects [19] and in infants, physical touch has been shown to decrease pain response [20].

In a study conducted by Enskår et al. (2007), it highlighted the fact that nurses had good levels of knowledge and positive attitudes to pain management. A high level of knowledge was correlated to a more positive attitude to pain management [10]. Non-pharmacological pain management methods have been proven to be effective in pain management in children [14].

The aim of this study is to identify and describe Vietnamese nurses’ pain management in children.

MATERIALS AND METHODS

Method

Design: A quantitative cross-sectional study with a questionnaire developed by Salanterä’s [21], measuring nurses perception of pain and pain management in children was undertaken.

Settings: Vietnam is a low-income country where a large number of the population lives in poor areas with an income less than one dollar a day [22]. Recently Vietnam experienced increases in its Gross Domestic Product (GDP), with improvements in health statistics. This economic shift has been found to have increased the gap between the top income and the lowest income earners. The Public Health Systems in Vietnam covers four different segments of the population including The Social Health Insurance (SHI) program; The Health Care Funds for the Poor (HCFP) program; the Voluntary Health Insurance (VHI) and a program for free health care for children under 6 years of age. In addition, SHI allows employees who are mothers caring for children in hospital will get 75% of their monthly income [23,24].

Regarding the nursing training in Vietnam, nursing education is comprised of a three year program and consists of four parts: general topics, basic science, basic medical sciences, and specialized subjects. One of specialization subjects is pediatric nursing. Additionally, in order to become professional pediatric nurse, nursing students also need to complete a hospital training program as an intern for at least one year before signing a work contract with the hospital administration.

Moreover, nurses caring for children in hospital have to perform their roles as regulated and stipulated by the Vietnam Ministry of Health, which have established eight ethical competence standards for nurses and healthcare providers’ in regards to communication in health care settings.

Participants: A convenience sample was used, in total 110 registered nurses working in a tertiary Child and Women hospital in the center of Vietnam. There were no guidelines for pain management in children at the hospital. The nurses were asked to complete a questionnaire; all the responding nurses were female. There were no male nurses working on the ward. A convenience sampling technique was used to recruit participants for this study. One completed questionnaire was used to exclude due to technical problems. This reduced the final sample to 109 for analysis. All respondents had worked for at least one year with children experiencing pain in a children’s hospital. Of the 109 respondents, fifty percent had children of their own. The demographic variables are presented in (Table 1).

Data collection: The questionnaire “CHILDREN’S PAIN” was used it was developed by Salanterä (1999). The validity and reliability of the questionnaire had been established in other studies [21,25]. This instrument consist of seven parts; attitudes to pain management (Item n=18) and questions measuring knowledge as physiology of pain (Item n= 9), pain medication (Item n= 23), pain alleviation (item n= 6), sociology and psychology of pain (item n= 13). The instrument also contained questions about pain assessment methods (Item n= 12), non-pharmacological pain alleviation methods (Item n= 21) and pain treatment documentation (Item n= 8). Following analysis of the data, the main findings identified were: The use of pain assessment instrument (s), Pain assessment methods and Pain alleviation methods. The response alternatives utilized a five point Likert scale.

This instrument has been previously used in Finland as well as in Sweden, the United Kingdom (UK) and South Africa [21,26]. The instrument was translated from English to Vietnamese by two bilingual persons and then back to English by a professional translator. Cross cultural back-translation was used to achieve semantic equivalence [27].

Data analysis: Primarily descriptive statistics were undertaken, using percentages, mean and standard deviation. Pearson’s correlations were also conducted [28].

Ethics: The hospital management in Da Nang, Vietnam, where the survey was conducted gave their approval for the study, it was also approved by the relevant body in Vietnam which is Institutional review board for human participants. Participation in the study was voluntary and respondents could at any time and without giving any reason withdraw their participation. It was anticipated that the survey would take between 10 - 20 minutes.

### Table 1: Demographic variables of the respondents (n=109).

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>M±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years since qualification</td>
<td>5.70 ± 5.67</td>
</tr>
<tr>
<td>Year in health care</td>
<td>4.89 ± 5.47</td>
</tr>
<tr>
<td>Year in pediatrics</td>
<td>4.39 ± 5.16</td>
</tr>
<tr>
<td>Year in present work place</td>
<td>4.28 ± 5.16</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>RN</td>
<td>98.2 %</td>
</tr>
<tr>
<td>Specialist in pediatric nursing</td>
<td>1.8 %</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>&lt;25 years</td>
<td>56.9 %</td>
</tr>
<tr>
<td>26-35 years</td>
<td>30.5 %</td>
</tr>
<tr>
<td>36-45 years</td>
<td>6.7 %</td>
</tr>
<tr>
<td>46-56 years</td>
<td>3.8 %</td>
</tr>
<tr>
<td>&gt;56 years</td>
<td>0 %</td>
</tr>
</tbody>
</table>
to complete. Confidentiality of the data was ensured. The study followed the principal set out in the declaration of Helsinki [29].

RESULTS AND DISCUSSION

The nurses reported the use of different non-pharmacological pain alleviation methods to different extents. The most commonly reported methods were talking to the child (72%), being close to the child (70%) and helping the child to change body posture (68%). The least reported methods were offering the child a video to watch (24%) and the application of electronic stimulation (22%) (Figure 1).

The Vietnamese nurses’ (n=109) scored attitudes and knowledge above average, that is above 3 on the five point Likert scale. The highest category was knowledge about the physiology of pain, and the lowest was knowledge about pain medication (Table 2).

In a correlation between the different categories of knowledge and attitudes it was found that there was three positive weak correlations one between attitudes and the item pain medication. A second between pain alleviation and physiology of pain. And a third between physiology of pain and pain alleviation.

Attitudes were only correlated to pain medication. No correlation was found between total knowledge and attitudes (Table 3).

A total of 52 percent of the nurses in the study had access to pain assessment instruments on their ward. Of the 52% of the nurses who had access to pain assessment instruments the variety of instruments can be found in (Figure 2). The most commonly reported way of assessing pain was using pain words (59%) and the Visual Analog Scale (VAS) (55%). The least reported scale used was pain colors (32%).

To assess pain, the respondents reported using both observing behavior changes (such as facial expressions and bodily changes), as well as observing physiological changes, (such as heart rate and breathing) to a high extent > 70% (Figure 3).

The results showed that Vietnamese nurses had high levels of knowledge and positive attitudes towards the use of pain medication. The nurses in Vietnam are using pain assessment instruments as well as non-pharmacological alleviations methods extensively.

In regards to non-pharmacological pain alleviation methods, it was found that talking to the child was the most commonly reported non-pharmacological pain alleviation method together with being close to the child. These methods are easy to perform and do not require any equipment. In some countries, the use of non-pharmacological pain relief methods, such as Virtual Reality, are used. However, these require the use of expensive equipment [30]. Others have found promising results from using less expensive methods, such as music [31]. Non-pharmacological methods need to be given attention [14], and should be considered as equal to the use of basic nursing interventions. In Vietnamese culture, as well as in the nursing profession, the nurses act as the children’s advocate.

The results also showed that the nurses’ knowledge about pain medication was correlated to their attitudes, with the higher level of knowledge the nurses had about pain medication, the more positive an attitude. This was also found in a study conducted by Enskär et al., [26]. Statements regarding knowledge and attitudes of the nurses’, responses showed high levels of knowledge about the physiology of pain. This was somewhat surprising to the researchers, as earlier research found that nurses working in high income countries as Sweden and the UK reported higher levels of knowledge compared to nurses working in lower income countries, such as South Africa [26]. Not all low income countries have the same educational system, eg. the education for nurses

Figure 1 Nurses use of non-pharmacological pain alleviation methods in percentage. (n=109).
Table 2: Mean for the different categories (n=109).

<table>
<thead>
<tr>
<th>Categories (n=109)</th>
<th>M1±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiology of pain</td>
<td>4.15±0.43</td>
</tr>
<tr>
<td>Sociology and psychology of pain</td>
<td>3.48±0.37</td>
</tr>
<tr>
<td>Attitudes</td>
<td>3.43±0.48</td>
</tr>
<tr>
<td>Pain alleviation</td>
<td>3.37±0.51</td>
</tr>
<tr>
<td>Pain Medication</td>
<td>3.21±0.29</td>
</tr>
</tbody>
</table>

Figure 2 Percentages of nurses who have access to different pain assessment instruments.

Table 3: Correlations between the items attitudes, physiology of pain, pain alleviation, pain medication and sociology and psychology of pain (mean value of the questions) (N= between 65 and 108).

<table>
<thead>
<tr>
<th></th>
<th>Attitudes</th>
<th>Physiology of pain</th>
<th>Pain alleviation</th>
<th>Pain Medication</th>
<th>Sociology and psychology of pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>-</td>
<td>0.046</td>
<td>-0.082</td>
<td>0.285*</td>
<td>-0.038</td>
</tr>
<tr>
<td>Physiology of pain</td>
<td>0.046</td>
<td>-</td>
<td>0.224*</td>
<td>-0.077</td>
<td>0.144</td>
</tr>
<tr>
<td>Pain alleviation</td>
<td>-0.082</td>
<td>0.224*</td>
<td>-</td>
<td>0.225*</td>
<td>0.216</td>
</tr>
<tr>
<td>Pain Medication</td>
<td>0.285*</td>
<td>-0.077</td>
<td>0.225*</td>
<td>-</td>
<td>-0.071</td>
</tr>
<tr>
<td>Sociology and psychology of pain</td>
<td>-0.038</td>
<td>0.144</td>
<td>0.216</td>
<td>-0.071</td>
<td>-</td>
</tr>
<tr>
<td>Total knowledge</td>
<td>0.220</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*p < 0.05

Figure 3 Percentages of nurses reporting use of pain observing methods.

in Vietnam has a high medical content and includes knowledge regarding pain and pain management in children to a high extent according to the curriculum for nurses in Vietnam. Vietnamese nurses follow prescriptions, however the nurses need knowledge about pharmacological treatment and side effects of it. Nurses also have to explain about the medication to the children and the child’s parents.

According to Schiavenato [32], it is a challenge to measure children’s pain. Therefore, it was encouraging to find that
the Vietnamese nurses used several of the pain assessment instruments available. They mainly used; words to describe pain and the visual analog scale (VAS). According to Simons (2009) there is an inconsistency in the pain assessment of children [33]. Children’s level of distress and cognitive development are two essential concerns when nurses try to attain a valid self-report [34]. The reasons for using words to describe pain and the VAS could be the easy availability of the tools. Information from the parents and nurses are valuable complements, however self-reporting of pain is considered the golden standard for older children [35].

One of the limitations of this study was that the questionnaire was translated from English to Vietnamese which could be potential a risk when translating between different languages and cultures [27]. In this study another limitation could be a possible bias resulting from a convenience sample. The questionnaire was also rather extensive however the internal missing data was very low.

CONCLUSION

The most commonly used non-pharmacology pain alleviation method among the respondents involved method requiring nurses to be close to the child, for example; talking to the child, Being close to the child and Helping the child to change position. This type of assistance does not require any equipment and can be done in most locations and situations.

Finally, in Vietnamese culture, the nurses spend time communicating with the children in hospital. This greatly contributes to their ability to evaluate and assess the child’s pain. Despite Vietnam being a low-income country, the level of knowledge, especially in regards to the in physiology of pain was found to be of a high standard.

ACKNOWLEDGEMENTS

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REFERENCES


