

## Pain in hospitalized children: nursing team perception\*

### *Dor na criança internada: a percepção da equipe de enfermagem*

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#### SUMMARY

**BACKGROUND AND OBJECTIVES:** Pain is a complex and subjective phenomenon which marks children's lives in a unique manner. This study aimed at understanding the nursing team perception with regard to managing and evaluating pain in hospitalized children.

**METHOD:** This is a descriptive and qualitative study. Data were collected by means of semi-structured survey in the month of May 2011. Participated in this study 11 nursing team professionals working in the pediatric department of a teaching hospital.

**RESULTS:** Four categories were analyzed: "The meaning of hospitalized children crying"; "Pain evaluation by the nursing team"; "Perceiving pain situations in hospitalized children"; and "Minimizing pain in hospitalized children". It was evidenced that professionals do recognize children's pain, however they do not use validated methods to measure it. Pharmacological pain control was considered by the professionals as the primary method to relieve this symptom.

**CONCLUSION:** Nursing professionals are committed to the identification of children's pain, however pain control-related knowledge is fragile because most pro-

fessionals are limited to pharmacological methods and do not see the problem in a broader way, thus making impossible a better assistance.

**Keywords:** Children, Children's health, Pain, Pediatric nursing team.

#### RESUMO

**JUSTIFICATIVA E OBJETIVOS:** A dor é um fenômeno complexo e subjetivo que marca de forma singular a vida da criança. O objetivo deste estudo foi compreender a percepção da equipe de enfermagem com relação ao manuseio e avaliação da dor na criança internada.

**MÉTODO:** Trata-se de um estudo descritivo, de natureza qualitativa. Os dados foram coletados por meio de entrevista semiestruturada no mês de maio de 2011. Participaram do estudo 11 profissionais da equipe de enfermagem que atuavam na pediatria de um hospital-escola.

**RESULTADOS:** Foram analisadas quatro categorias: "O significado do choro na criança internada"; "Avaliação da dor pela equipe de enfermagem"; "Percebendo as situações de dor na criança internada" e "Minimizando a dor na criança internada". Evidenciou-se que os profissionais reconhecem a dor na criança, todavia, não utilizam métodos validados para mensurá-las. O controle farmacológico da dor foi colocado pelos profissionais como principal maneira de alívio desse sintoma.

**CONCLUSÃO:** Os profissionais de enfermagem são comprometidos na identificação da dor nas crianças, porém, existe fragilidade quanto ao conhecimento relacionado ao seu controle, pois a maior parte se restringe aos métodos farmacológicos e não visualiza o problema de forma mais ampla, impossibilitando melhor assistência.

**Descritores:** Criança, Dor, Enfermagem pediátrica, Saúde da criança.

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## INTRODUCTION

Pain is one of the most remarkable experiences of human beings' lives. In addition, pain is a complex phenomenon with individual and multidimensional facets accompanying the history of mankind, being its evaluation, handling and control a major challenge for health professionals<sup>1,2</sup>.

Pain is a subjective experience where experiences acquired along life are inserted and may be associated to real or potential tissue injury. This definition is problematic in the pediatric area due to the lack of oral communication and different cognitive levels of such patients, which make them unable to report their pain even because they have no previous experience with pain events<sup>3</sup>.

Pain in hospitalized children may be caused by the disease itself, treatment and procedures and is worsened by fear, anxiety and uncertainties. In this context, it is consensus among most researchers that children should be treated and evaluated according to age group and cognitive development with adequate tools. So, it is up to the nursing team to be prepared to evaluate and treat pain with a holistic and more humanized view<sup>4</sup>.

Assistance provided to children with pain requires unique skills of the nursing team, taking into account the subjectivity with which pain is felt by patients. In this sense, pain relief will provide children with conditions to adequately recover, which sends us to humanization and ethical principles which should permeate nursing care<sup>5</sup>.

Dealing with painful children is still a major challenge for health professionals, among them the nursing team which, in addition to living with children's development peculiarities, should respect their right not to feel pain when there are ways to avoid it. So, professionals shall look for means to minimize hospitalization damages for their development, in the sense of strengthening the links between children and their relatives.

This study aimed at understanding nursing professionals perception of pain handling and evaluation in children admitted to the pediatric unit.

## METHOD

After the approval of the Research Ethics Committee, State University of Montes Claros, MG, under opinion 2563/2011, this descriptive and qualitative study was carried out in the pediatric sector of the Teaching Hospital Clemente de Faria (HUCF). The institution

is considered a reference hospital for Northern Minas, Jequitinhonha Valley, Mucuri Valley and Southern Bahia to treat children with infectious diseases and injured by venomous animals, among others.

Participated in this study nursing professionals working in the HUCF pediatric sector, being 2 nurses and 9 nursing technicians. Inclusion criteria were: directly assist children, be part of the shift scale of the sector during the research and agree to participate. The number of respondents was defined as from data saturation, that is, when participants referred no new information. Interviews were carried out during May 2011, in the hospital, and lasted approximately 20 to 45 minutes.

Semistructured interview was used for data collection. All interviews were recorded with participants' consent and then fully transcribed and identified with the codes E1 to E11, in chronological order. The interview was developed as from the guiding question: "How do you perceive pain in hospitalized children?"

Selected technique for data analysis was the content analysis, which is considered a subject's expression mean, where the analyst tries to categorize text units (words or sentences) which are repeated, inferring one expression that represents them.

## RESULTS

The following categories have emerged from interviews analysis: "The meaning of hospitalized children's crying"; "Pain evaluation by the nursing team"; "Perceiving pain situation in hospitalized children" and "Minimizing hospitalized children's pain".

**The meaning of hospitalized children's crying** – among most common changes observed, it was noted that crying is a frequent manifestation during hospitalization, due to the presence of disease and invasive processes needed for treatment. Crying, in addition to showing discomfort, is also considered synonym to pain, according to reports:

*"When children cry, I think they are feeling pain, or fear, or are their mothers, or because they are in an unknown place and, most of the times, they feel pain (E2)".*

*"I think they are uncomfortable, may be pain or lack of home environment, lack of friends, of school (E6)".*

Interviews show that, in addition to pain, crying may come also from emotional issues, fragility due to separation from parents, lack of friends and of the school, new environment and hospitalization.

"When children cry, I think there is something bothering them, or that they might be feeling pain at this mo-

ment. In addition to pain, there are emotional issues related to the disease itself, psychological issues related to the family, the lack of some family member, the mother, the father or the sibling, and also physical factors, such as painful procedures (E10)".

Nursing team interaction and communication with hospitalized children help their adaptation process. This way, many children develop more affinity with the nursing team, better adapting to the hospital environment.

"When children are admitted, we talk to them, because they may be puzzled by the place, wondering at the staff working here, or because they are far from their mothers. So, we always chat with children to familiarize them with this new environment. Some children arrive here very angry, then get accustomed and do not want to leave; a certain affinity is created (E9)".

**Pain evaluation by the nursing team** – Crying is constantly used by the nursing team as pain evaluation method. For younger children, pain evaluation methods are observation of pain expressions and groaning. For older children it is possible to obtain the oral report.

"I evaluate pain through crying; crying due to pain is different; and through children's face or expression (E1)".

*"I evaluate through crying, through their painful face, also when children complaint and, if they are neonates, by children's groaning (E6)".*

"Younger children are unable to report pain, we have to know how to evaluate what they are feeling at the moment, and what is related to their crying (E10)".

It is possible to notice from nursing team testimonials the non-utilization of pain evaluation scales.

"In fact, we know that there are several pain evaluation scales in the literature, but here in the pediatric unit we do not use these tools, so we evaluate pain by children's face, how they are presenting, by oral report, or for older children, they are even able to report the intensity of that pain (E10)".

"The ideal would be to have a pain evaluation tool, according to the age group of each child, and that this tool was applied. But currently I evaluate by children's expression, and for older children, also by their report (E9)".

The family, represented by the companion, more easily perceives that children need help or are feeling pain, as stated below: *"Very often companions report us that children are feeling pain at that moment (E10)".*

**Perceiving pain situations in hospitalized children** – it was observed from the testimonials that pain situations perceived by the nursing team are represented by invasive procedures, such as venous punctures, dress-

ings and drug administration. The separation of children from their parents for preliminary procedures is also perceived as a pain situation.

"Pain due to the disease, in general with venous punctures, drug administration, dressings, procedures performed according to the disease (E3)".

"I think that most of the time, hospitalized children feel pain during invasive procedures and when they are taken away from the companion for exams, or when they are bothered with their situation. They may feel pain during the administration of treatment-related drugs during hospitalization (E10)".

Other reported pain situations are related to the disease itself generating the hospitalization. The nursing team perceives most common diseases leading to chronic pain in pediatrics.

"In pediatrics, we see that neoplasias cause severe pain (E5)".

"Children with pain are those hospitalized with pneumonia, sickle cell anemia, fractures and other things (E1)".

"I think that most hospitalized children with severe pain have respiratory problems, pneumonia, and shortness of breath which causes a lot of distress. These are very debilitating diseases (E2)".

**Minimizing hospitalized children's pain** – Pharmacological strategies are the most common since pain is directly related to the baseline disease.

"I try to medicate according to medical prescription or I try to talk to children to minimize pain and discomfort (E4)".

*"If it is acute pain we medicate to control pain (E1)".*

*"In general we medicate and, depending on the type of pain, if it is local one may apply cold or warm packs depending on the situation and on the indication (E3)".*

Thermotherapy with cold or warm packs is a strategy used to relieve pain. Sweetened solutions, such as the use of gauze with glucose are commonly used to minimize neonate pain.

"We use gauze with glucose a lot for the neonate to suck and minimize pain (E5)".

Physical strategies are also often used, among them therapeutic touch, massage, physical contact, which provide comfort, safety and confidence, in addition to decreasing stress and fear, thus collaborating for integration between nursing professionals and children. The mere change in position is reported as strategy for pain relief.

"If pain is considered moderate or regular, such as wind, we massage to minimize pain (E1)".

"We caress, touch their fronts, change children's pos-

ition in bed, or even cuddle them, swing, ask the companion or even we bathe them to see whether they calm down. We may play, take some toys to call children's attention (E8)".

The communication process with children to prepare them for painful procedures makes children at ease, decreasing the fear for such procedures.

"Look; when children are older, I try to talk about the procedure to be performed, showing materials to be used and letting them know the materials so that they feel at ease and accept such procedures [...] (E10)".

The participation of the family or companion is stressed in moments of pain during hospitalization and favors children's pain relief and higher comfort and safety.

"I also think that the participation of companions is very important, because if companions support children at this moment of pain, or before any action which may cause pain, they will feel relaxed and safe (E9)".

## DISCUSSION

Pain is one of the most important symptoms identified by the nursing team in hospitalized children, and may be represented by behavioral changes involving global and specific reactions, the latter indicating discomfort in localized physical areas.

In this context, it is also observed children's psychical distress coming not only from the physical illness but also from emotional weakening occurred during hospitalization, encompassing both the diagnostic uncertainty phase and potential worsening in clinical evolution. In addition, when hospitalized, children leave their family context and experience at least partial parents separation and face feelings manifesting in different ways, including anxiety, sadness, fear and distress, among others, as shown by some testimonials<sup>6</sup>.

Children's hospitalization process is undoubtedly remarkable for the life of any child, since at this moment they are fragile and unable to perform their normal activities, changing their daily routine, such as playing and going to school. The childhood image is closely linked to well being, energy and happiness, which makes more difficult to assimilate disease and hospitalization in this phase of life, both by the children and their whole supporting network.

Childhood is a fundamental human development stage, marked by intense physical activities which are necessary for children to slowly explore and know the environment around them and, as a consequence, to grow normally and improve their knowledge of the world.

To travel this stage of their lives without losses, children need to be healthy. However, along their development, children also go through illness periods, which many times may be followed by hospitalization. Being ill and hospitalized during childhood are unexpected events for this phase of life and so they are considered as crisis moments for the family<sup>7</sup>.

This study has shown that psychological reactions, such as anxiety, are worsened when pain comes with lack of understanding and treatment uncertainty. In the relationship between professionals and children during hospitalization, there is the need for reliability and sensitivity to establish a therapeutic communication.

For such, the professional has basic elements: empathy and involvement with children, in addition to a feeling of mutual trust. Nursing care should go beyond what the eyes can see; it is necessary to allow a true meeting between caregivers and children. There must be an interaction process and exchanges of experiences in search for humanized care as from children's needs to see, listen, touch, play and feel<sup>1,8</sup>.

Although hospitalization might be, and in general is, stressing for children, it may also be beneficial. The most obvious benefit is recovery. In addition, hospitalization may also be an opportunity for children to control their stress and feel competent in their coping ability. The hospital environment may provide new socialization experiences for children who may broaden their interpersonal relationships. Seeing such events as challenges, and not as problems, children, families and health professionals are presented with socialization and friendship opportunities<sup>9</sup>.

In our study, crying is considered by the nursing team as the primary pain manifestation. Literature describes crying as the primary communication method of children, being considered the most widely used way to express their discomfort or even pain.

Another relevant aspect of pain evaluation in pediatrics is the need to understand the nervous system physiological system. This because painful experiences are result of a set of events involving peripheral and central nervous systems. In addition, pain is a subjective human experience subject to detailed evaluation and described as the fifth vital sign. This because it is an individual experience with unique body characteristics which generate discomfort which should be evaluated and recorded similarly to other vital signs. To call it fifth vital sign suggests that it should be evaluated as automatically as blood pressure and pulse, and so its effective treatment is extremely important<sup>10</sup>.



Pain evaluation in children is still a challenge for health professionals, due to the difficulty they have in reporting its intensity and frequency. The way children communicate their pain and their ability to face it is closely related to their age and cognitive maturity<sup>11</sup>. It is worth stressing that pain evaluation and measurement start with physical evaluation and history done by the nurse at admission. However, the evaluation of this symptom is limited due to its subjective character. In this context, pain evaluation is a fundamental piece for the nursing process. Unfortunately, health professionals, including the nursing team, tend to underestimate pain in children. To evaluate it, easy tools adequate for each age group should be used, starting with the neonate<sup>6</sup>.

The nursing practice not always uses pain measurement tools, as observed by this study. It is known that pain scales aim at obtaining the maximum information about individual responses to pain, through interactions with the environment.

These tools are applied to identify, quantify and treat this symptom, even for children. However, it has to be stressed that pain scales are difficult to use in some clinical situations, such as sedated children, those with movement limitations or submitted to tracheal intubation. In addition, there is limitation of pain evaluation objectivity due to the different condition of the hospital environment, transient patient variations, lack of uniformity of quantitative scales, and the standards of the institution where the patient is admitted. The inaccuracy of pain scales evaluations may even result in inadequate therapeutic intervention<sup>12</sup>.

Hospitalization is a stressing event leading the team to encourage the presence of companions in the unit and their participation in the treatment. Family support is critical because it enables the maintenance of effective communication between children and professionals. Family participation in the hospitalization process offers some advantages, such as: relaxed environment, integration among team, family and patient, active participation of children and they families in assistance, more information which may collaborate with assistance, less changes in children's life, in addition to favoring the prevention of re-hospitalizations, giving emphasis to assistance continuity at home<sup>13</sup>.

Families know children's needs and during hospitalization this is not different; when children complain of pain, the companion is the first to notice that they need help and so he refers to the professional to minimize or eliminate that pain and this shows the importance of the companion. There is involvement in the pain evaluation

process, giving information such as behavioral changes and children's emotional status. For knowing the usual behavior of their children faced to pain, parents may identify specific behaviors and should be encouraged to actively participate in the identification and evaluation of their children's responses to interventions<sup>13</sup>. In this context, the interaction among nursing team, parents and children has been positive for the good performance of the work and to give a more humanized assistance to hospitalized children.

Testimonials have reported some causes of pain in hospitalized children. In general, pain may be classified as acute or chronic. The former may result from diseases or traumas, surgical procedure or invasive diagnostic or therapeutic procedures performed during hospitalization; the latter is a factor present in chronic pediatric diseases or problems and disorders<sup>11</sup>.

Most of the time, hospitalized children are submitted to different invasive procedures, among them venous puncture. This procedure is a major source of suffering during hospitalization because it is the most frequent. So, the planning or even the implementation of any intervention by the nursing team to manage pain should be adopted considering each specific situation. Children's preparation is critical to ensure good treatment results, in addition to decreasing psychological trauma caused by hospitalization<sup>14</sup>.

Although evaluating and measuring pain are not easy tasks, these procedures should become routine for nurses who should record such information in children's medical charts, to enable the implementation of pain relief measures<sup>13,15</sup>. It was observed from the reports that, in general, hospitalized children pain is mostly pharmacologically treated, since this pain is directly related to children's baseline disease. In case of more severe pain, or after procedures from which severe pain episodes are expected, a safe and effective pharmacological choice is made. During drug infusion, it is worth stressing that children are subject to injuries by biological, chemical and mechanical agents and by emotional trauma. So, the nursing team should look for means to prevent, decrease or eliminate these risks throughout the procedure<sup>16</sup>.

The study reports the use of thermotherapy (by heat or cold) as cutaneous or transcutaneous stimulation which may contribute to pain relief. The application of cold on the painful area results in mild dormancy. Local temperature decrease results in mild vasoconstriction of the region, decreasing local circulation and also limiting the volume of extracellular fluid. Heat for pain relief is another choice, as observed by one testimonial. Warming

promotes muscle relaxation and a sensation of comfort, there is vasodilation and increased circulation, favoring the local immune contribution of defense cells and cytokines which accelerate the resolution of the inflammatory process<sup>17</sup>.

It was observed that nursing professionals use sweetened solutions to relief pain of hospitalized children. These solutions release endogenous opioids with intrinsic analgesic properties. Sucrose or glucose are effective to decrease crying when offered before minor procedures, such as capillary or venous punctures<sup>18</sup>.

The study has mentioned the use of physical strategies such as therapeutic touch, massage, physical contact providing comfort, safety and trust, in addition to decreasing stress and fear, cooperating for the integration between the nursing professional and the patient to relieve pain, providing peace and well-being.

It has been also observed that there is nursing team concern with preparing children for painful procedures. This should be done according to each age group, ensuring less anxiety and fear. For children afraid of body injuries, it is essential that nursing professionals repeatedly stress the reason for the procedure and evaluate children's perception.

This is important because information given is captured following the adequate cognitive level for each age. This requires awareness of words used to describe events or processes. The procedure should be explained in simple terms and adequate words to obtain children's cooperation and, as a consequence, less painful reactions<sup>19</sup>. However, it is worth stressing in the study the lack of guiding approaches and routines for effective pain evaluation in pediatrics, which makes difficult handling hospitalized children's pain.

It is increasingly necessary that pain is objectively and accurately evaluated, allowing better quality of nursing assistance and adequate pain management. An evaluation tool may orient nursing assistance to children with pain caused by other pathological, surgical and traumatic processes which may impair children's physical and psychological integrity. Last but not least, it is valid to stress the need for further studies on pain in childhood addressing treatment and evaluation. The nursing team should be continuously trained for effective hospitalized children pain evaluation and handling to ensure a humanized and high quality assistance.

## CONCLUSION

Health professionals are committed to pain identification in children, however they have poor knowledge regarding

pain control because most of them are limited to pharmacological methods not seeing the problem in a broader manner, and making a better assistance impossible.

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Presented in August 28, 2011.

Accepted for publication in November 08, 2011.