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RESEARCH

Avaliação da dor em neonatos e crianças em terapia intensiva

Evaluation of pain in neonates and children in intensive care

Evaluación del dolor en recién nacidos y niños en cuidados intensivos

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ABSTRACT

Objective: recognizing actions of nursing staff regarding pain assessment in neonates and infants during the hospitalization in the intensive care. **Method:** A qualitative and descriptive study with 16 nurses working in a Neonatal and Pediatric Intensive Care Unit, in May and June 2011, through open interviews. The ethical principles were respected, with a project approved by the Research Ethics Committee of UNIJUÍ (CAAE nº 0008/2011). **Results:** The data were subjected to content analysis and the analytical category emerged: nursing assessment and pain management of newborns and children in an intensive care. **Conclusion:** There are barriers to treat pain in children, those include: lack of assessment, reassessment appropriate, inadequate understanding of concepts, quantification of pain and lack of knowledge. **Descriptors:** Pain assessment, Newborn, Child, Nursing, Intensive Care Units.

RESUMO

Objetivo: Conhecer as ações da equipe de enfermagem referentes à avaliação da dor em neonatos e crianças durante o processo de hospitalização em terapia intensiva. **Método:** Estudo qualitativo e descritivo realizado com 16 profissionais de enfermagem que atuam em uma Unidade de Terapia Intensiva Neonatal e Pediátrica, em maio e junho de 2011, mediante entrevista aberta. Os preceitos éticos foram respeitados, com o projeto aprovado pelo Comitê de Ética em Pesquisa da UNIJUÍ (CAAE nº 0008/2011). **Resultados:** Os dados foram submetidos à análise de conteúdo e emergiu a seguinte categoria analítica: a enfermagem na avaliação e controle da dor de neonatos e crianças em terapia intensiva. **Conclusão:** Existem barreiras para tratar a dor em pediatria, que incluem: a ausência de avaliação, reavaliação adequada, entendimento inadequado sobre conceitos, quantificação da dor e déficit de conhecimento. **Descritores:** Medição da dor, Recém-nascido, Criança, Enfermagem, Unidades de terapia intensiva.

RESUMEN

Objetivo: Conocer las acciones de un equipo de enfermería con respecto a la evaluación del dolor en los recién nacidos y los niños durante la hospitalización en Cuidados Intensivos. **Método:** Estudio cualitativo y descriptivo, con 16 profesionales de enfermería que trabajan en la Unidad de Cuidados Intensivos Neonatales y Pediátricos, en mayo y junio de 2011, por medio de entrevistas abiertas. Se respetaran los principios éticos, con el proyecto aprobado por el Comité de Ética en Investigación UNIJUÍ (CAAE nº 0008/2011). **Resultados:** Los datos fueron sometidos a análisis de contenido y surgió una categoría analítica: la enfermería en la evaluación y el control del dolor de los recién nacidos y los niños en cuidados intensivos. **Conclusión:** Existen barreras para tratar el dolor en los niños, que incluyen: la falta de evaluación, reevaluación apropiada, falta de comprensión de conceptos, la cuantificación del dolor y la falta de conocimiento. **Descriptor:** Dimensión del dolor, Recién nacido, Niño, Enfermería, Unidades de cuidados intensivos.

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INTRODUCTION

Pain is a concern of mankind and all civilizations and historical periods are sought to clarify the reasons for the occurrence of the same and the procedures for its control. Considered an experience or sensation that can be associated with actual or potential tissue damage, subjective, personal, having sensory, affective, autonomic and behavioral aspects, the pain is not expressed in the same way in all cultures and neither felt the same way by individuals.¹

The assessment and measurement of pain are important because it is impossible to intervene in the issue of this nature without having a measure on which to base treatment or therapeutic procedures. Accordingly, the Joint Commission on Accreditation on Healthcare Organization (JCAHO) published standard that describes the pain as the fifth vital sign that should be assessed and recorded along with other vital signs.² Therefore, any complaint or sign of pain should be valued, respected, valued and recorded at the same time that others are checked vital signs, so that there is knowledge of the duct outlet, your reason and your results.³

During hospitalization, usually the patient is subjected to painful procedures, especially in intensive care units. Moreover, the assessment of pain is considered a challenge for practitioners, especially when one considers the neonatal and pediatric area due to lack of verbal communication and the different cognitive levels of these patients, making them unable to describe their pain, even him for not having previous experience of painful events.⁴

In neonates and children hospitalized pain can be caused by the disease itself, treatment, procedures and potentiated by fear, anxiety and uncertainty. In this context, the consensus among researchers that the child should be evaluated and treated according to the age and cognitive development through appropriate tools.⁴ The responsibility to promote pain relief and comfort requires assessment of physiological, emotional, behavioral and environmental factors that trigger or exacerbate it. Thus, it is the nursing staff prepare to assess and treat pain sensation, thus effecting a holistic view and more human.⁵

Pain assessment based on change of behavioral expressions of infant and child after a painful stimulus seems to be more sensitive and specific in detecting pain compared to physiological measures. Among the behaviors that indicate pain stand out crying, agitation, motor response, facial expression and changes in the pattern of sleep/ wakefulness; between physiological reactions, include an increase in heart rate, breathing, blood pressure, saturation decreased oxygen, apnea, cyanosis, tremors and sweating⁽⁶⁾.

Among the many duties of the nursing staff in intensive care, one of which is to provide quality of care, more specifically, with regard to pain management in neonates and children. In this perspective, dealing with the pain is still a challenge to health professionals, especially nursing, which, in addition to living with the particularities of child development must respect their right to not feel pain when there are ways to avoid it.⁵ this context, evaluation,

management and treatment of pain can interfere in reducing morbidity, length of hospital stay, minimize discomfort and prevent complications, which justifies the relevance of this research.

Although the pain being present in daily life and their studies have evolved a lot in recent years, there are still gaps in knowledge about that event. It is noteworthy that the nursing staff is who actually lives longer with the client, thus it is necessary to learn to know the pain signals so as to get intervene properly in his relief. Meantime, as the treatment of pain is considered part of care, it is essential to emphasize its meaning and broaden the knowledge of health professionals about the importance of effective treatment thereof.

Given the above, the aim of this study was to determine actions of the nursing staff regarding pain assessment in neonates and infants during hospitalization in intensive care.

METHOD

This is a descriptive study with a qualitative approach, which was carried out in the Neonatal Intensive Care Unit and Pediatric (NP-ICU) of a hospital, size IV, the northwest region of the state of Rio Grande do Sul. That unit provides ten beds to stay, six for neonatology and pediatrics for four. The nursing team is made up of six nurses and 29 nursing technicians.

Study participants were 16 nurses (four nurses and 12 nursing technicians) who met the inclusion criteria: being a nurse or nursing technician and act-NP in the ICU for at least six months. Professionals who were away for any reason were excluded. The number of participants was defined by the criteria of completeness, ie, from the time when the information began to repeat the data collection was terminated.⁷

The data were collected in the months of May and June, 2011, through open interviews recorded and transcribed in their entirety, with the following question: Tell me, how do you identify and assess pain in neonates and children admitted to the ICU-NP working? For socio-demographic characteristics of the study subjects, we used a form with the following data: occupation, age, sex, marital status, number of children, education, length of service, time in the ICU Pediatric and Neo-shift. Still, simple observation by the researcher, with records in a field diary was performed. The data analysis followed the assumptions of content analysis.⁸

Ethical precepts involving human research were respected, according to Resolution 196/96 of the National Health Council.⁹ Therefore, the project was approved by the Ethics Committee in Research of the Northwest Regional University of the State of Rio Grande do Sul (UNIJUÍ), CAAE No 0008/2011 of 14/03/2011. Still, to maintain the anonymity of the subjects, it was decided to name them E1, E2, E3 and so on.

RESULTS AND DISCUSSION

The study included 16 nurses from ICU-NP, four of them are nurses and 12 nursing technicians, working in shifts morning, afternoon and evening. The age of respondents ranged from 20 to 50 years. Among the subjects, 15 were female, nine have children, seven are married, two divorced and the rest are singles. As for the length of employment, this ranged from two to 23 years and the time in the ICU-NP from two to ten years.

From the search to apprehend the essence of the content in the speeches of respondents, emerged a category, described and analyzed sequentially.

IDENTIFICATION AND ASSESSMENT OF PAIN IN CHILDREN NEONATES AND INTENSIVE CARE

In an ICU neonate or child can be subjected to numerous painful procedures a day and monitoring of pain should be considered a priority for the nursing staff who assist them. These professionals, who spend the most time with the patient and maintain a close relationship with him and his family, are the first to identify and assess the patient's pain. Thus, the possibility of pain, routine assessment and appropriate treatment constitutes constant concern of nursing.¹⁰

The effects of pain and stress in neonates and children in ICUs are intense, so pain should be evaluated, registered and properly controlled. Pain should be assessed in a clinical setting, to undertake a treatment or appropriate therapeutic approach and the effectiveness of this treatment depends on the assessment and reliable measurement. It is noteworthy that the treatment of pain is not just medical, so the need to grasp the emotional and social aspects involved in the care of newborns and children in intensive care.¹¹ Non-pharmacological measures are effective to promote stability and good organization of the neonate and may be useful in conserving energy for their growth and development.¹²

It is considered that the assessment of pain includes location, intensity, frequency, duration, quality of pain as well as record on specific instruments. However, the painful signs manifested by the neonate, when viewed in isolation, does not accurately characterize the pain felt by this, so it is necessary that professionals associate the signs to make effective assessment.¹³

In the speeches of respondents is evident that they interpret the crying, facial expressions and body as suggestive signs of pain in neonates.

We noticed the pain when they are well stirred, restless and is part of the face that is the feature of pain [...] they cry a lot. (E1)

[...] The reflexes, the baby's reaction when he is very restless, something he has and should be pain. (E3)

We realize the pain by degree of agitation [...] he begins to stir, also you can see the facial expression of crying. (E5)

[...] Sometimes they have facial expression of pain or are sudorifical begin to sweat more [...] crying is also a sign of pain. (E9)

They manifest the pain with irritability, and crying, with a restless sleep. (E10)

Facial expression changes when we touch the aching cock [...] he cries and pulls the different member [...] and also has a different expression. (E11)

Similar results on the identification of pain in neonates are found in the literature.¹⁴⁻⁵ In a study that analyzed the parameters used by the nursing staff of a public hospital in Bahia for the assessment of pain in preterm infants, it was found that in the context of their clinical practice in the NICU nursing staff recognizes the pain through the evaluation of the crying and manifestations of the newborn through her facial expression. In another study, the authors point out that the nursing staff assesses pain, especially noting changes in child behavior, including characteristic crying, changes in facial movement, mood and body movements.¹⁵

It is considered that each professional perceives pain as his professional and scientific experience, as well as by cultural influence. The pain is perceived by behavioral and physiological changes in neonates and children, and among the behavioral changes stand out crying, facial expression, motor response, irritability and changes in vital signs.

In this context, for newborns facial expression is the most studied artifact, considered the gold standard in this age group and includes contraction of the eyebrows, eye squeeze, nasolabial fold deepening of the opening of the lips, mouth stretched vertically, horizontally elongated mouth, contraction of the lips, tongue taut and trembling chin.¹⁶

Other signs made by children hospitalized in intensive care and listed by subject as important in the assessment of pain were: changes in vital signs and verbalization of pain, explained in the fragments of the statements below:

Children who already verbalize say Aunt hand hurts, it hurts, it hurts [...] but basically it's the crying that people see that something is not right. (E2)

There are some that can speak, say you have pain [...] if we observe not crying, discomfort [...] sometimes even vital signs are changed. (E4)

The heartbeat also change it, we can even realize desaturation by pain, by crying. (E5)

When you are crying, sometimes some have low oxygen saturation, are cyanotic [...] heart rate and pressure change also. (E6)

The monitor identifies tachycardia [...]. (E9)

The child has tachycardia; it may also be a wheezing. (E13)

[...] The increase of the heart rate and their color changes. (E14)

It was also noted that experience helps in the assessment, as evidenced in the speech fragment E16.

I identify through the faces, through the notion of baby faces, mild pain, moderate pain, severe pain, as facial expression and also alleviating some knowledge that we will have over the years. (E16)

The pain can be assessed using physiological, biochemical and behavioral indicators and measured by means of a few scales.¹⁷ Among the physiological factors that manifest themselves in situations of pain, we highlight changes in heart and respiratory rate, blood pressure, oxygen saturation and hormonal level, linked to endocrine-metabolic response.¹⁸ Among the behavioral, crying is considered a primary method of communication in newborns

and children, and that communication mobilizes professionals to be involved directly in their care in order to meet their needs.¹⁷

I identify that he is in pain when he starts crying nonstop. (E4)

I see so [...] when the child cries or screams, intense crying is because she is in pain. (E8)

I realize he's in pain by intense crying, they cry even. (E15)

The crying was described as parameter in the interviews, but is aware that facial expressions are more specific and easily identified in pediatric pain. Participants attributed significant value to cry when pain assessment preverbal patient. However, in practice its use is questionable, since crying can be triggered by other stimuli, such as discomfort, hunger and cold, and newborns and children intubated and pharmacologically compromised, being unable to vocalize crying.

There are several non-pharmacological and pharmacological for the control and prevention of pain in neonates and infants undergoing routine procedures methods. In a review study aimed to describe the non-pharmacological methods used by nurses for pain relief, the highlights are the following methods: interventions in the environment (noise control, temperature and light), non-nutritive sucking, glucose administration, positioning and comfort, touch and massage, offer breast milk, changes in behavior and routine painful procedures with respect to.¹⁹

Currently, pharmacologic strategies for the treatment of pain are the nonsteroidal anti-inflammatory analgesics, opioid analgesics, adjuvants, local, regional analgesia and anesthesia. In addition, combinations of pharmacological and non-pharmacological interventions have been adopted with the aim of reducing or alleviating situations that can increase the pain, the child's stress and that influence their behavior.²⁰

E1, E7, E10 and E12 report that, after the evaluation of pain, it is tried to minimize it in any way.

We administer the medication as the on-duty calls for pain [...] tries to calm the child with a pacifier. (E1)

We medicate as your doctor prescribes [...] the nurse and the doctor assess [...] we do the medications as they go crying, manifesting [...] you will see the need. (E7)

Try to fit better in bed, engage in a more intimate way with sheet nesting, non-nutritive sucking [...] caressing, getting close to him, holding his hand, talking [...] they like and settle down. (E10)

Trying to change a bit the position, try tucking them [...] try to comfort in whatever way possible, sometimes even in the mother's lap. (E12)

Valuing the partnership between parents and staff health, pain relief, constitutes one of the major efforts for the success of this practice. The involvement and interaction are essential, as parents have the capacity to perceive any change in the behavior of their children.²¹ Thus, can contribute to the assessment of health professionals, however it is noted that no respondent mentioned the family as an important process assessment of pain in children, only for control. Moreover, it was observed that mothers cannot stay 24 hours in the unit with their children and visits are permitted from nine to 12 hours, from 14 to 18 hours and from 21 to six.

Health professionals to meet the needs of the patient offer effective pain relief, according to a proper judgment and approaches available. The relief of pain and symptoms of disease is an important contribution to the quality of life of the patient, in order to promote recovery, and other benefits.

It is considered that the professional experience with newborns and children and prior knowledge of reactions to pain are factors facilitating the evaluation process and control it. However, despite the limitations in the management of pain in children, a careful evaluation provides subsidies to the decision to intervene in stressful and painful conditions that affect the child suffers.¹⁶

Thus, it is for health professionals that serve this population know how to identify the best methods of assessment and pain control. To interpret the reactions of pain in newborns and children through assessment of physiological changes, behavioral, and self-reported perceptions of family nursing helps to understand the language of the child and plan quality care for children and their families.

CONCLUSION

The study shows that there are barriers to effective pain management in pediatric and neonatal intensive care, among which no standardization of a method for assessment (validated scale) and non-pharmacological measures for pain control.

Pain as a subjective sign, plus the impossibility of infant and child verbalize it requires the health professional who works in ICU-NP be aware of behavioral and physiological changes that accompany the painful episode, and point to the need the use of instruments to assess pain in this age group.

The nurses working in ICUs-NP, mostly, develop their job seriously and care about the well being of infants and children. However, it is important to invest in the training of middle and upper level about the parameters for identifying, standardized assessment and treatment of pain of children admitted in these spaces. Thus the nursing staff responsible for the care of these neonates and children will be able to translate the non-verbal language and program humanized comfort measures with positive impact on the recovery of the same.

Thus, as in the daily care in the ICU-NP often pain, being individual and subjective, cannot be identified and therefore not controlled by the nursing staff, we suggest the application of rating scales of pain along with checking vital signs. The use of a validated to assess pain, considered the fifth vital sign and the use of protocols to treat it, scale qualifies attention to newborns and assisted children in intensive care and mobilizes a personalized and humanized care, according to the real needs each.

REFERENCES

1. Silva JA, Ribeiro-Filho NP. A dor como um problema psicofísico. *Rev dor.* 2011;12(2):138-51.
2. Booss J, Drake A, Kerns RD, Ryan B, Wasse L. Pain as the 5th vital sign [toolkit on the internet]. Illinois: Joint Commission on Accreditation of Healthcare Organizations; 2000 [cited 2013 Abr 27]. Available from: http://www.va.gov/oaa/pocketcard/pain5thvitalsign/PainToolkit_Oct2000.doc
3. Pedroso RA, Celich KLS. Dor: quinto sinal vital, um desafio para o cuidar em enfermagem. *Texto & contexto enferm.* 2006;15(2):270-6.
4. Silva Ms, Pinto MA, Gomes LMX, Barbosa TLA. Dor na criança internada: a percepção da equipe de enfermagem. *Rev dor.* 2011;12(4):314-20.
5. Kanai KY, Fidelis WMZ. Conhecimento e percepção da equipe de enfermagem em relação à dor na criança internada. *Rev Dor.* 2010;11(1):20-7.
6. Sousa BBB, Santos MH, Sousa FGM, Gonçalves APF, Paiva SS. Avaliação da dor como instrumento para o cuidar de recém nascidos pré-termo. *Texto & context enferm.* 2006;15(esp):88-96.
7. Minayo MCS, Gomes FD. *Pesquisa social: teoria, método e criatividade.* Petrópolis: Vozes; 2007.
8. Bardin L. *Análise de conteúdo.* Lisboa: Edições 70, 2009.
9. Ministério da Saúde (BR). Conselho Nacional de Ética em Pesquisa em Seres Humanos. Resolução nº 196, de 10 de outubro de 1996: diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos [Internet]. [acesso 8 ago 2011]. Disponível em: <http://conselho.saude.gov.br/comissao/conep/resolucao.html> 9 196
10. Viana DL, Dupas G, Pedreira MLG. A avaliação da dor da criança pelas enfermeiras na Unidade de Terapia Intensiva. *Pediatria (São Paulo).* 2006;28(4):251-61.
11. Pimenta, CA. A pesquisa na área de enfermagem abordam avaliação e tratamento da dor. *Prat hosp.* 2003; 5(30):58-60.
12. Scochi CGS, Carletti M, Nunes R, Furtado MCC, Leite AM. A dor na unidade neonatal sob a perspectiva dos profissionais de enfermagem de um hospital de Ribeirão Preto - SP. *Rev bras enferm.* 2006;59(2):188-94.
13. Freitas, AC, Moura VLF. A Enfermagem na avaliação e tratamento não-farmacológico da dor em recém-nascidos. *RECENF Rev tecnico cient enferm.* 2009;7(23):301-05.
14. Santos LM, Ribeiro IS, Santana RCB. Identificação e tratamento da dor no recém-nascido prematuro na Unidade de Terapia Intensiva. *Rev bras enferm.* 2012;65(2):269-75.
15. Oliveira RM, Silva AVS, Chaves EMC, Sales NC. Avaliação comportamental e fisiológica da dor em recém-nascidos pelos profissionais de enfermagem. *REME Rev min enferm.* 2010;14(1):19-24.
16. Silva YP, Silva JF; Costa LP, Medeiros MF, Mota JAC. Avaliação da dor na criança. *Rev med Minas Gerais.* 2004;14(1,Supl3):S92-S6.

17. Nascimento RL, Silva LR, Silva MDB, Christoffel MM. Avaliação da dor do recém-nascido na unidade terapia intensiva neonatal sob o olhar dos profissionais de enfermagem de um hospital universitário. *Rev pesqui cuid fundam.* 2010;2(4):1410-17.
18. Nicolau CM, Modesto K, Nunes P, Araújo K, Amaral H, Falcão, MC. Avaliação da dor no recém-nascido prematuro: parâmetros fisiológicos versus comportamentais. *Arq bras ciênc saúde.* 2008;33(3):146-50.
19. Friaça KR, Pereira DC, Paiva MMW, Gonçalves DCL, Costa RMA. Atuação do enfermeiro na avaliação e no alívio não-farmacológico da dor no recém-nascido. *Rev pesqui cuid fundam.* 2010;2(Ed. Supl.):1022-1026.
- 20 Lemos, S; Ambiel, CR. Dor em Pediatria: Fisiopatologia, Avaliação e Tratamento. *Rev saúde pesquisa.* 2010;3(3):371-378.
21. Nascimento LC, Strabelli BS, Almeida FCQG, Rossato LM, Leite AM, Lima RAG. O manejo da dor em crianças, no pós-operatório tardio de cirurgia cardíaca, pelos profissionais de enfermagem, na ótica das mães. *Rev latino-am enferm.* 2010;18(4): 8 telas.



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