ISSN: 1676-4285

Federal Fluminense University

AURORA DE AFONSO COSTA NURSING SCHOOL

Original Articles

Nurses' practical knowledge on the clinical management of neonatal pain: a descriptive study

Louise José Pereira Dames[1], Valdecyr Herdy Alves[1], Diego Pereira Rodrigues[1], Renata Rangel Birindiba de Souza[1], Flávia do Valle Andrade Medeiros[1], Eny Dórea Paiva[1]

1 Fluminense Federal University

ABSTRACT

Aim: to analyze the practical knowledge of nurses on the clinical management of neonatal pain. **Methods:** a descriptive, exploratory and qualitative study held with 20 Neonatal Intensive Care Unit nurses of two public maternity hospitals in the city of Niterói. Data was collected through semi-structured interviews and analysed by targeting the construction of thematic categories. **Results:** the categories found were associated with the perception of nurses regarding neonatal pain and their knowledge and actions regarding the clinical management of this neonatal symptom. It was found that nurses lack knowledge of the clinical management of pain, which is not a part of the daily neonatal care routine. They were also unaware of the application of rating scales for pain assessment. **Conclusion:** possessing scientific knowledge is crucial, as it provides required methods for neonatal care, focusing on the improvement of the quality of the health care provided and in the humanization of nursing care, considering pain as the fifth vital sign.

Descriptors: Pain Management; Infant; Newborn; Children's Health; Nursing.

INTRODUCTION

Pain is a personal social concept as its physiology, despite being shared by all societies, has cultural particularities that affect its appearance and its representation in human disease processes. This makes it necessary to use sociological aspects to establish which forms of pain can be handled, endured or revealed[1]. One's own definition of pain is indicated by verbal and subjective aspects, making pain assessment in the neonatal population more challenging[2].

The most commonly-used definition of pain is the one developed by the *International Association for the Study of Pain (IASP)*: an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage[2]. This statement allows the conceptualization of pain as a unique and individual experience, altered by the previous awareness of an existing or assumed damage[1].

Consequently, the absence of pain is a key factor for an individual's wellbeing and is also a quality indicator in healthcare, especially in the Neonatal Intensive Care Unit (NICU). The deep technological and scientific changes that occurred over the past decades should also be considered, as they have provided significant changes in neonatal care[3]. Even so, in the NICU, invasive procedures needed to carry out certain treatments have contributed to the occurrence of pain during neonatal care in addition to adverse events such as bright luminosity, artificial temperature, excessive handling, and countless equipment that, despite being crucial, creates a stressful environment[3,4,5].

With this in mind, it becomes crucial for a nurse to understand how to assess the clinical handling of pain by using physiological indicators such as heart and respiratory rates, blood pressure, oxygen saturation, palmar sweating, and vagal tone. However, it is important to know these indicators are not specifically related to pain, as the usual behavioral responses of a newborn (NB) facing the symptom are crying, motor activity, and facial expression of pain.

In spite of being a better tool for pain evaluation in comparison to physiological parameters, behavioral measures rely on the viewer's interpretation of the signs being evaluated[6]. Therefore, a healthcare professional needs to know how to recognize these signs and the discomfort experienced by neonates. Due to their multidimensional methods, rating scales for pain assessment currently allow the evaluation and pursuit of information regarding individual responses evaluated through the newborn's interactions with the environment[7].

The utilization of rating scales and measurement instruments for pain assessment, such as the Neonatal Facial Coding System, the Neonatal Infant Pain Scale, the Objective Pain Scale developed by *Hannallah,* the COMFORT scale, and the Neonatal Postoperative Pain Evaluation Score, aim to allow the assessment of pain in the neonate. However, a nurse must be qualified to perform this assessment in order to provide qualified and humanized care to premature infants hospitalized in the NICU.

This study aims to analyze the knowledge of nurses regarding the clinical management of neonatal pain, based on the comprehension, knowledge and on the use of neonatal pain assessment and management measures taking into account the countless procedures carried out in the NICU.

METHODS

This is a qualitative, exploratory and descriptive study; there is no intention of quantifying data, but to identify events[8] that demons-

Dames LJP, Alves VH, Rodrigues DP, Souza RRB, Medeiros FVA, Paiva ED. Nurses' practical knowledge on the clinical management of neonatal pain: a descriptive study . Online braz j nurs [internet] 2016 Sept [cited year month day]; 15 (3):393-403. Available from: http://www.objnursing.uff.br/index.php/nursing/article/view/5413

trate nurses' knowledge regarding the clinical management of pain in the NICU.

The study was approved by the Faculdade de Medicina da Universidade Federal Fluminense (FM/UFF) (Medical School of Federal Fluminense University) Research Ethics Committee (REC), under the number 063.427/2013 in accordance with Resolution 466/12 of the Conselho Nacional de Saúde (CNS) (National Board of Health).

The study was conducted in two hospitals located in the Metropolitan Region Number II of the state of Rio de Janeiro, One is a quaternary care university hospital and the other a tertiary care state hospital. The participants of the study were 20 nurses who worked in these institutions' NICU. The inclusion criterion was to work as a nurse in the NICU. Nurses who had worked in the field for less than six months were excluded from the research.

First, the study's inclusion and exclusion criteria were verified. After their establishment, the participants were invited to take part in the research on the same day the interviews were held. The participants were asked to sign the Free and Clarified Consent Term (FCCT) after their consent, voluntarily agreeing to take part in the research and ensuring anonymity and confidentiality of the collected data by giving each participant an alphanumeric code (ranging from E1 through E20).

Before data collection, the investigators underwent a period of adaptation to the study's setting, aiming to observe which conditions seemed favorable and unfavorable for applying the research tool. Consequently, it was agreed with the coordination units that the interviews would be held in the break room, where there would be greater privacy and no one else would be present during the interview.

Individual, semi-structured interviews were used to collect data. These were based on a script consisting of open-ended and closed-ended questions concerning the clinical management of pain in newborns. The interviews were held between January and April of 2014. A digital recorder was used to register the data, with the prior authorization of each candidate.

Subsequently, the investigators fully transcribed the material and submitted the statements to attentive reading, which made it possible to analyze the collected data. The investigators decided to establish thematic categories by verifying the Recording Units (RU) in which they emerged, thus making it possible to develop them.

This allowed the discussion and settlement of the point of view needed to reach the study's object, giving rise to the following categories: 1) *The perception of nurses regarding neonatal pain in the Neonatal Intensive Care Unit*; 2) Nurses' knowledge regarding the clinical management of neonatal pain; 3) *Actions regarding clinical management of pain as a nursing care practice*.

RESULTS

The perception of nurses regarding neonatal pain in the Neonatal Intensive Care Unit

Nurses validated in their statements that a NB baby is capable of feeling pain, even when premature, supporting, therefore, the scientific literature:

> (...) I do believe a NB baby is able to feel pain; it is evident to me as I'm able to notice the modification of physical and physiological signs when I perform a painful procedure. (E5)
>
> (...) I think NB babies do feel pain and I can see that by observing changes in their physiological and behavior para-

meters when performing procedures, which are potentially painful. (E13)

In the context of the NICU, the interviewees assessed the NB baby's level of pain through behavior parameters or physiological parameters associated with the neonate's behavior, such as the reduction of oxygen saturation and facial expression changes, followed by episodes of crying, irritability, and member agitation, as described below:

> (...) Neonates do feel pain, because, when I perform a painful procedure, I notice changes in their facial expression. (E4)
>
> (...) When I'm manipulating a NB baby, he/she demonstrates physical and clinical signs of pain, such as drops in the oxygen saturation, facial expression, and change of skin color. (E20)

The participants emphasized the importance of the nursing staff in the identification of pain during the performance of invasive care activities and procedures, which are common in the Unit. Some statements regarding the above must be highlighted:

> (...) In my experience, what I notice is that the nursing staff, as a whole, has a sharp eye towards this pain issue. However, when we encounter a nurse who is more engaged in providing direct care to babies, it is common for them to assess pain more easily than other professionals. (E9)
>
> (...) I can see the nursing staff is more interested, engaged, and committed regarding the assessment of pain when compared to other professionals who also come into contact with the baby. (E12)
>
> (...) I do think the baby's pain matters more to the nursing staff than to other professionals because, during nursing school, we talk about and discuss humanization more, while many other professionals end up working in a mechanized manner. (E17)

Therefore, the care for the neonates in the NICU must be given by a nurse who has an accurate eye for assessing pain in NB babies in order to treat it through actions that will contribute to a qualified and humanized assistance in the clinical management of pain.

Nurses' knowledge regarding the clinical management of neonatal pain

In relation to the importance of preventing, minimizing, and relieving the pain of the hospitalized neonate infant, only a few candidates were able to point out the organic and behavioral implications that emerge when pain is not assessed and treated correctly. Therefore, in order to exemplify these findings, the following statements were highlighted:

> (...) I think some complications, such as deterioration of the NB baby's clinical condition, predisposition to an infectious process, weight loss and presence of gastric residuals may occur due to the pain experienced during the performance of procedures. (E7)
>
> (...) I suppose that through the reduction of pain we are able to promote the improvement of the NB's clinical status, thereby protecting the future growth and development of this infant. (E8)

However, when deeply analyzing the nurses' statements, it can be identified that they de-

Dames LJP, Alves VH, Rodrigues DP, Souza RRB, Medeiros FVA, Paiva ED. Nurses' practical knowledge on the clinical management of neonatal pain: a descriptive study . Online braz j nurs [internet] 2016 Sept [cited year month day]; 15 (3):393-403. Available from: http://www.objnursing.uff.br/index.php/nursing/article/view/5413

tect and assess pain through individual criteria, with no theoretical and scientific foundations, which are essential for guiding their therapeutic approaches regarding neonatal pain. The interviewees stated that they did not feel capable or prepared to assess and manage neonatal pain, under the allegation of deficiencies during their professional education, in graduate and post-graduate courses.

> (...) I wasn't informed about pain and its handling during my professional education, or even in the institution where I currently work. (E2)
> (...) I don't feel prepared when talking about pain, whether it was not deeply discussed during my professional education or because we don't have a more active, permanent education to teach us this theme. (E15)
> Our job never taught us about pain. I also admit I have trouble discussing the theme due to the deficit in our professional formation. (E18)

The participants stated that the identification of pain and its assessment are not daily practices in the healthcare institution they currently work, according to the statements below:

> (...) Unfortunately, the assessment of pain in newborn babies is not a daily practice in the unit. Maybe this can be explained due to the lack of exigency or because of the absence of an existing policy in the unit regarding pain and its management. (E1)
> (...) Here in the unit, the assessment of pain in neonates is not a part of our daily work routine, maybe because there isn't a rule about it. (E11)
> (...) The identification of pain is not a routine in our unit, let alone assessing neonatal pain as explained in theory. Maybe, we, as healthcare professionals, even use this excuse to not have to do this task. (E20)

The lack of assessment regarding the clinical management of neonate pain and the lack of knowledge of pain assessment scales can be noticed in the daily practice of nurses. The following are statements in this respect:

> (...) I can't recall any of the pain assessment scales right now because I don't use them. (E5)
> (...) I don't remember any pain assessment scales to give you as an example. (E12)
> (...) The institution doesn't use any neonatal pain assessment tools or scales. I know they exist, but I don't know their names and the parameters evaluated. (E17)

By the statements above, it can be concluded that in order to work in the clinical management of neonates' pain, nurses need specific knowledge regarding the subject. To provide healthcare that results in pain relief and in the infant's wellbeing, they must also know how to apply pain assessment tools; all of them are available in the scientific literature or, sometimes, in the healthcare institution.

Actions regarding clinical management of pain as a nursing care practice

Non-pharmacological interventions aim to decrease environmental stimuli, reduce stress, and avoid physiological and behavioral changes. Based on the statements given by the

interviewees, it can be confirmed that when pain was noticed, prescriptions of pharmacological treatments were asked for with no application of a non-pharmacological treatment first in order to alleviate pain whatsoever.

> (...) It's not unusual for doctors to prescribe painkillers or sedatives to be used during invasive procedures, surgical or non-surgical, and yes, usually, we nurses do ask them to prescribe painkillers when we identify a NB baby in pain. Dipyrone is commonly used in ordinary pain and, when necessary, we also use endovenous fentanyl during certain procedures. (E4)
>
> (...) Usually, I don't see doctors prescribing pain medications during our shift unless a nurse informs a doctor there's a NB in pain. Then, yes, the medication will be prescribed and administrated. When a medication is prescribed here in the unit, I only notice the use of endovenous dipyrone. (E14)

Non-pharmacological measures, such as non-nutritive sucking stimulation, administration of oral glucose solution, granting comfort and proper positioning, minimal handling, reducing the environment luminosity and noises, and asking another professional for help during invasive procedures, can be used for the management of neonatal pain. The following are statements in this respect:

> (...) I usually wrap the NB baby in cloths and use 25% glucose before performing an invasive procedure. Also, when possible, we try grouping care procedures to avoid excessive handling. As for the environment, I try to make it more humanized, reducing the lighting and environmental noises. (E2)
>
> (...) When I perform an invasive procedure, I worry about wrapping the baby, offering oral glucose through non-nutritive sucking and offering proper positioning. In addition, I try to maintain a quiet environment and/or trying to reduce the environment lighting whenever possible. (E8)
>
> (...) I try to reduce excessive manipulation through group caring, use glucose through non-nutritive suctioning while I'm performing an invasive procedure; I try to offer ongoing support to the NB baby and, if necessary, I ask the help of another professional. While in the environment, I look to reduce the noise and luminosity affecting the neonate, aiming to offer him/her more comfort. (E19)

From the perspective of nurses, the clinical management of pain is not effective due to the non-existence of neonatal pain care protocols in the institution, according to the following statements:

> (...) I believe that, because we don't any pain care protocols to follow, many neonates can suffer pain as they are not being properly evaluated and treated. (E2)
>
> (...) I noticed many things concerning the babies' healthcare are left undone because we don't have protocols to follow that have been well-defined and discussed with the nursing staff. (E11)
>
> (...) I notice the pain process goes unnoticed during our work, as we don't have a protocol to guide our care during the performance of painful procedures in neonates. (E13)

Dames LJP, Alves VH, Rodrigues DP, Souza RRB, Medeiros FVA, Paiva ED. Nurses' practical knowledge on the clinical management of neonatal pain: a descriptive study . Online braz j nurs [internet] 2016 Sept [cited year month day]; 15 (3):393-403. Available from: http://www.objnursing.uff.br/index.php/nursing/article/view/5413

Thus, it becomes necessary to use measures that contribute to the control of neonatal pain through protocols based on the nurses' experience in handling this symptom. As highlighted, pain is the fifth vital sign and must be assessed during the daily lives of health professionals, aiming to offer the neonate humanized and quality healthcare.

DISCUSSION

Pain is one of the oldest symptoms in the history of medicine; it is an unpleasant sensation that everyone is going to experience throughout life, and that can be aggravated by a disease or during certain procedures performed in hospital stays[9]. Healthcare professionals must comprehend its concept as an experience characterized by the complexity, subjectivity, and multidimensionality of numerous aspects involved in the pain process, which change according to the perception of each human being[2].

The lack of knowledge of pain as a vital sign that must be assessed daily is concerning as, facing the current state-of-the-art care, in which the recent development of material regarding neonatal pain is considered scarce, there is the risk of performing invasive and potentially painful procedures without appropriate interventions for relieving the pain caused[3]. Also, there is a risk of iatrogenic events.

The nurses who took part in the research mentioned the fact neonates are able to feel pain. This is indicative of the neonatal pain perception, as they have nerve endings that propagate painful impulses since the 20ª gestational week. Among the parameters that the interviewees used to characterize signs of pain, were the behavioral and physiological parameters. They are encountered during the performance of potentially painful procedures and are both mentioned in the scientific literature as important indicators for the assessment of neonatal pain in the NICU [10]. Behavioral reflexes, such as body movement, irritation, agitation, and crying are behavioral responses to pain[11]. Physiological responses include increased heart and breathing rates, elevated intracanious pressure, sudoresis and reduction of oxygen-saturated haemoglobin, and vagal tonus[7]. Therefore, nurses must be aware of and sensitive to these alterations during the neonate's stay in the NICU, as it is accompanied by painful episodes[12].

The nursing's approach to handling neonate pain is based on humanized care, which allows the professional to understand and perceive the NB baby in a different manner during hospitalization. Therefore, the perception of the subtlety of the expression of pain in the baby, the performance of better body reading, and a more consensual and broadly humanized application of techniques explained in the NICU are fundamental healthcare procedures for neonates[13].

In the NICU daily routine, we strongly believe that many factors are associated with the depreciation of neonatal pain, especially the lack of knowledge of research participants. Some had mistaken ideas about the theme and lacked knowledge of the signs showed by the NB baby when facing pain. There were also professionals performing multiple activities, who were then prevented to prioritize the assessment of pain. There was even the lack of sensibility regarding the damage caused by pain during hospitalization was found[14]. Still, it is important to remember that, in routine care in the NICU, each seriously ill newborn is subjected to about 50-150 painful procedures per day. This high number of procedures and stimulation cause harmful effects in the baby's behavioral and

physiological organization, creating a state of chronic stress that will have implications in the utilization of his/her energy reserves that would be normally directed to its growth, reestablishment, and development[15].

Consequently, it is of great importance that nurses know about physio-pathological mechanisms involved in the NB baby's pain process in order to become aware of the importance of its assessment and treatment[14]. The lack of nurses' knowledge regarding the disorders unleashed in the organism of a NB baby reveals the necessity of a professional training aiming the management of neonatal pain.

The lack of criteria used to assess pain in NB babies can also be noticed. This leads to nurses using their own criteria without the necessary scientific foundation to guide their therapeutic approaches regarding the clinical management of pain. All of these were subjects not properly discussed during their professional formation. Taking into account the scientific evidence, neonates have a distinguished way to express pain through a unique language; it becomes important to the implementation of pain assessment scales that should be used as instruments for the perception of pain, as their purpose is to facilitate the interaction and communication between members of the health team. If the pain assessment scales were to be consistently used, they would allow the perception of the progression of painful symptoms and the response to therapy of each neonate[16]. Under these circumstances, it is necessary for the capacitation of nursing professionals towards developing further studies regarding the treatment of pain.

The lack of an institutional routine of neonatal pain assessment in the NICU, besides the lack of knowledge of pain assessment scales in nurses, jeopardizes the care offered to the NB baby. The acknowledgment of this ignorance and the unavailability of multiple scales in the institution for use in the professional routine is concerning, especially considering that they were created to promote a more accurate identification of the pain process. For that reason, it can be inferred that reviewing this question is urgent because, by not applying the pain assessment scales properly, one can seriously compromise the neonate's health, postponing the implementation of effective healthcare, and causing potential changes in the neonate's organic condition.

The nurses' conduct regarding the assessment of neonatal pain must be a daily practice in the NICU, whether through scientifically proven assessment methods or through the observation of behavioral and physiological changes in the neonate. In this regard, the approach to pain management should be improved to match the standards proposed by the American Academy of Pediatrics. A strategy in this direction would include discussions with the whole professional team, not only with nurses, about the variables that help and hinder difficult the effective adoption of adequate pain relief measures during invasive procedures in the NICU[17].

The research participants aim to reduce aggressive stimuli to NB babies through pharmacological therapies with the purpose of pain relief, especially using anesthetics and sedatives due to the performance of invasive procedures. However, the care of neonatal nursing in the NICU goes beyond managing the baby's physical condition. The observation of subtle complaints, such as demonstrations of discomfort, contemplates the excellent and humanized care resultant from recognizing signs of pain and implementing effective actions, which are essential goals that must be reached. Amongst the effective actions, there are the ones that are classified as non-pharmacological, which can be used with legal independence by nurses[18]. However, the main pain relief methods chosen

by the interviewees consist of pharmacological measures.

Some participants highlighted non-pharmacological measures used for the relief of neonatal pain as described in the scientific literature, such as non-nutritive sucking, use of oral glucose, granting comfort and proper positioning, minimal handling, reduction of the environment lighting and noises, as well as asking another professional for help when performing invasive procedures. These interventions mainly aim to prevent the aggravation of a painful process, disorganization of the neonate, stress, and agitation; in other words, to minimize the pain repercussions. They are suggested for mild cases of pain but, for moderate or severe pain, these methods should be used alongside pharmacological interventions[18]. The measures mentioned by the interviewees are standard for pain relief, especially the utilization of non--nutritive sucking, administering oral glucose, granting comfort, and reducing the environmental lighting and noises.

Amongst the most-studied solutions for pain relief, sucrose and glucose are worthy of mention due to their analgesic effect. This can be noticed by observing a reduction in the duration of crying, attenuation of the facial expression of pain, and a decrease of heart rate elevation. Comforting the NB baby is another neonatal pain relief method, which aims to offer coziness, putting him/her in a comfortable position in which he/she will feel protected. The effects of non-nutritive suction are, for example, the improvement of oxygenation and in the respiratory and gastrointestinal functions, and the decrease of the heart rate and energy expenditure, promoting rest and analgesia [4]. The environmental lighting and noises are considered aggressive and unnecessary stimuli, especially in the NICU. When reduced, they offer the neonate more qualified attention[19]. In order to do so, it is enough to turn off mobile phones, reduce the sound of the telephone ringer and the volume of infusion pumps, amongst other simple and accessible measures to any professional.

The clinical management of pain is not present in the professional routine of nurses under the justification of the lack of assistance protocols. However, it is clear that the simple existence of a pain assistance protocol does not guarantee its assessment and treatment if the healthcare professional involved is not committed and engaged. The institutional factor that must be taken into account is the lack of guidelines, which, when present, make it easier to correctly choose medications, administer them and carefully monitor the patient, thereby improving the quality of the sedation and analgesia, as well as avoiding adverse effects. For that reason, some international guidelines establishing standards for the adequate neonatal pain management have been already published, even though few institutions adopt protocols and scales for assessing neonatal pain during the performance of procedures. In most hospitals, there is no register in the medical records of the use of pain assessment scales or of analgesic treatment. However, the presence of written guidelines can improve pain awareness in the NICU[20].

It is extremely challenging to generate constructive discussions between the staff members regarding the adoption of conducts that aim to minimize the pain while caring for neonates, as these critical-reflexive actions will guide the nurses and the nursing staff during the elaboration and implementation of protocols for the clinical management of pain. The influence of personal factors and other factors, such as the poor understanding between staff members, communication difficulties with family members, and the lack of human resources, damage the assessment of neonatal pain and, consequently, its minimization[20].

CONCLUSION

The interviewees assess and evaluate pain using their own criteria, without the theoretical or scientific embracement necessary for guiding their therapeutic conducts regarding neonatal pain.

The lack of knowledge regarding the clinical management of pain affects the care offered to the newborn baby, as well as contributing to unqualified care. This is due to the fact that the assessment of neonatal pain is crucial given the innumerous procedures the NB baby undergoes, especially in the NICU. Furthermore, the environment stimulates the baby's irritability, consequently promoting painful stimuli.

A service of permanent education is needed in healthcare units in order to change the clinical management of pain. This service would capacitate healthcare professionals, especially the nursing staff, regarding the clinical management of pain, as well as implementing a care protocol in order to guide the professional practice towards the relief of the NB baby pain processes.

Thus, this study evidences the need of a change in the clinical management of the pain, which must be consciously made, backed by professional ethics and comprehensive and humanized care offered to the newborn baby in the Neonatal Intensive Care Unit.

REFERENCES

1. Santos KH, Escobar EMA. O manejo clínico da dor em pediatria: considerações sob a ótica do cuidado em enfermagem. Enferm Rev [internet]. 2015 [cited 2015 Apr 2]. 18(1): 101-20. Available from: http://periodicos.pucminas.br/index.php/enfermagemrevista/article/view/9373/7779
2. Falcão ACMP, Sousa ALS, Stival MM, Lima LR. Abordagem terapêutica da dor em neonatos sob cuidados intensivos: uma breve revisão. R Enferm Cent O Min [internet]. 2012 [cited 2015 Apr 2]. 12(1): 108-23. Available from: http://www.seer.ufsj.edu.br/index.php/recom/article/view/130/261
3. Santos LM, Pereira MP, Santos LFN, Santana RCB. Avaliação da dor no recém-nascido prematuro em Unidade de Terapia Intensiva. Rev Bras Enferm [internet]. 2012 [cited 02 abr 2015]. 65(1): 27-33. Available from: http://www.scielo.br/pdf/reben/v65n1/04.pdf
4. Oliveira RM, Silva AVS, Silva LMS, Silva APAD, Chaves EMC, Bezerra SG. Implementação de medidas para o alívio da dor em neonatos pela equipe de enfermagem. Esc Anna Nery Rev Enf [internet]. 2011 [cited 2015 Apr 2]. 15(2): 277-83. Available from: http://www.scielo.br/pdf/ean/v15n2/v15n2a09.pdf
5. Bottega FH, Benetti ERR, Benetti PE, Gomes JS, Stumm EMF. Evaluation of pain in neonates and children in intensive care. J Res: Fundam Care [internet]. 2014 [cited 2015 Apr 2]. 6(3): 909-17. Available from: http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/3115/pdf_1330
6. Silva APM, Balda RCX, Guinsburg R. Identification of pain in neonates by medical students, residents in pediatrics and neonatology. Rev Dor [internet]. 2012 [cited 2015 Apr 2]. 13(1): 35-44. Available from: http://www.scielo.br/pdf/rdor/v13n1/en_a07v13n1.pdf
7. Melo GM, Rebouças CBA, Cardoso MVLM, Farias LM. Nursing team communication with regard pain in newborns: a descriptive study. Online Braz J Nurs (Online) [Internet]. 2013 [cited 2015 Apr 2]. 12(3): 451-61. Available from: http://www.objnursing.uff.br/index.php/nursing/article/view/4019/html
8. Minayo MCS. O desafio do conhecimento: pesquisa qualitativa em saúde. 12ª ed. São Paulo: HUCITEC; 2010.
9. Caetano EA, Lemos NRF, Cordeiro SM, Pereira FMV, Moreira DS, Buchhorn SMM. The new-born with pain: the role of the nursing team. Esc Anna Nery Rev Enf [internet]. 2013 [cited 2015 Apr 2]. 17(3): 439-45. Available from: http://www.scielo.br/pdf/ean/v17n3/en_1414-8145-ean-17-03-0439.pdf

10. Santos LM, Ribeiro IS, Santana RCB. Identificação e tratamento da dor no recém-nascido prematuro na Unidade de Terapia Intensiva. Rev Bras Enferm [internet]. 2012 [cited 2015 Apr 2]. 65(2): 269-75. Available from: http://www.scielo.br/pdf/reben/v65n2/v65n2a11.pdf
11. Akuma AO, Jordan S. Pain Management in neonates: a survey of nurses and doctors. J Adv Nurs [internet]. 2012 [cited 2015 Apr 2]. 68(6): 1288-1301. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21988718
12. Carvalho CG, Carvalho VL. Manejo clínico da enfermagem no alívio da dor em neonatos. E--Scientia [internet]. 2012 [cited 2015 Apr 2]. 5(1): 23-30. Available from: http://revistas.unibh.br/index.php/dcbas/article/view/199/464
13. Cordeiro RA, Costa R. Non-pharmacological methods for relief of discomfort and pain in newborns: a collective nursing construction. Texto Contexto Enferm [internet]. 2014 [cited 2015 Apr 2]. 23(1): 185-92. Available from: http://www.scielo.br/pdf/tce/v23n1/0104-0707-tce-23-01-00185.pdf
14. Presbytero R, Costa MLV, Santos RCS. Os enfermeiros da unidade neonatal frente ao recém--nascido com dor. Rev RENE [internet]. 2010 [cited 2015 Apr 2]. 11(1):125-32. Available from: http://www.revistarene.ufc.br/revista/index.php/revista/article/view/355/pdf
15. Silva MKG, Rocha SS. O significado de cuidar do recém-nascido sem possibilidade de terapêutica curativa. Rev RENE [internet]. 2011 [cited 2015 Apr 2]. 12(1): 97-103. Available from: http://www.revistarene.ufc.br/vol12n1_pdf/a13v12n1.pdf
16. Oliveira RM, Silva AVS, Chaves EMC, Sales NC. Avaliação comportamental e fisiológica da dor em recém-nascidos pelos profissionais de enfermagem. Rev Min Enferm [internet]. 2010 [cited 2015 Apr 2]. 14(1):19-24. Available from: http://www.reme.org.br/artigo/detalhes/82
17. Martins SW, Dias FS, Enumo SRF, Paula KMP. Pain assessment and control by nurses of a neonatal intensive care unit. Rev Dor [internet]. 2013 [cited 2015 Apr 2]. 14(1): 21-6. Available from: http://www.scielo.br/pdf/rdor/v14n1/en_v14n1a06.pdf
18. Matsuda MR, Martins MR, Filho MAN, Matta ACG. Métodos não-farmacológicos no alivio da dor no recém-nascido. Brazilian Journal of Surgery and Clinical Research [internet]. 2013 [cited 2015 Apr 2]. 5(1): 59-63. Available from: http://www.mastereditora.com.br/periodico/20131130_150810.pdf
19. Aquino FM, Christoffel MM. Dor neonatal: medidas não-farmacológicas utilizadas pela equipe de enfermagem. Rev RENE [internet]. 2010 [cited 2015 Apr 2]. 11(especial): 169-77. Available from: http://www.revistarene.ufc.br/edicaoespecial/a19v11esp_n4.pdf
20. Maia ACA, Coutinho SB. Fatores que influenciam a prática do profissional de saúde no manejo da dor do recém-nascido. Rev Paul Pediatr [internet]. 2011 [cited 2015 Apr 2]. 29(2): 270-76. Available from: http://www.scielo.br/pdf/rpp/v29n2/a20v29n2.pdf

---

All authors participated in the phases of this publication in one or more of the following steps, according to the recommendations of the International Committee of Medical Journal Editors (ICMJE, 2013): (a) substantial participation in the planning or preparation of the manuscript or the collection, analysis or interpretation of data; (B) preparing the work or performance of critical review of the intellectual content; (C) approval of the submitted version. All authors declare for any purposes that are their responsibilities related content to all aspects of the manuscript submitted to OBJN. Ensure that issues related to the accuracy or completeness of any part of the article have been properly investigated and resolved. Absolving, so the OBJN of any joint participation in any imbroglios on the matter at hand. All authors declare that they don't have conflict of interest, whether financial or of relationship, to influence the drafting and/or interpretation of the findings. This statement has been digitally signed by all authors as recommended by the ICMJE, whose model is available in http://www.objnursing.uff.br/normas/DUDE_final_13-06-2013.pdf

---

Received: 11/28/2015
Revised: 06/14/2016
Approved: 06/21/2016