









NEONATAL PAIN MANAGEMENT IN A MATERNITY HOSPITAL OF USUAL RISK: PERSPECTIVES OF HEALTH TEAM LEADING PROFESSIONALS

MANEJO DA DOR NEONATAL EM UMA MATERNIDADE DE RISCO HABITUAL: PERSPECTIVAS DE PROFISSIONAIS
LÍDERES DA EQUIPE DE SAÚDE

MANEJO DEL DOLOR NEONATAL EN UNA MATERNIDAD DE RIESGO HABITUAL: PERSPECTIVAS DE
PROFESIONALES LÍDERES DEL EQUIPO DE SALUD

-  Caroline Ramos de Oliveira ¹
-  José Marcos de Jesus Santos ¹
-  Laíse Escalianti Del Alamo Guarda ²
-  Bianca Jora Barbieratto ¹
-  Mariana Firmino Dare ¹
-  Daniela de Castro Barbosa Leonello ¹
-  Maria Cândida de Carvalho Furtado ¹
-  Adriana Moraes Leite ¹

¹ Universidade de São Paulo - USP, Escola de Enfermagem de Ribeirão Preto - EERP, Departamento de Enfermagem Materno-Infantil e Saúde Pública. Ribeirão Preto, SP - Brazil.

² Universidade de Brasília - UnB, Faculdade de Ceilândia. Ceilândia, DF - Brazil.

Corresponding author: Adriana Moraes Leite
E-mail: drileite@erp.usp.br

Author's Contributions:

Conceptualization: Caroline R. Oliveira, Adriana M. Leite; **Data Collection:** Caroline R. Oliveira; **Methodology:** Caroline R. Oliveira, Adriana M. Leite; **Project Management:** Adriana M. Leite; **Statistical Analysis:** Caroline R. Oliveira; **Supervision:** Maria C. C. Furtado, Adriana M. Leite; **Visualization:** Caroline R. Oliveira, José M. J. Santos, Laíse E. Alamo Guarda, Bianca J. Barbieratto, Mariana F. Dare, Daniele C.B. Leonello, Maria C. C. Furtado, Adriana M. Leite; **Writing - Original Draft Preparation:** Caroline R. Oliveira; **Writing - Review and Editing:** José M. J. Santos, Laíse E. Alamo Guarda, Bianca J. Barbieratto, Mariana F. Dare, Daniele C.B. Leonello, Maria C. C. Furtado, Adriana M. Leite.

Funding: No funding.

Submitted on: 2019/05/27

Approved on: 2020/01/21

ABSTRACT

Objective: to identify the management of neonatal pain from the perspective of health team leading professionals in a maternity hospital of usual risk. **Method:** qualitative study conducted between September and December 2016 with eight leading professionals of the health team of a maternity hospital in the interior of São Paulo, three nurses, two pediatric physicians, a Nursing technician, a Nursing assistant and a Laboratory technician. Data collection occurred through semi-structured interviews, whose statements were recorded, transcribed and submitted to content analysis, in the thematic modality. **Results:** verbalizations showed that the evaluation of neonatal pain was performed subjectively, based on aspects observed by the team, such as face alterations, vital signs, movements and crying. There were reports of difficulties in assessing neonatal pain and divergences regarding the time indicated for evaluation. Non-pharmacological methods were cited as strategies that facilitate the management of neonatal pain. However, although the statements were favorable to use them, the knowledge about those techniques was superficial, since speeches included "I don't know" and "I've never read anything about it", and it was evident the difficulty of applying them. The scores included the need for frequent training/qualification regarding the evaluation and treatment of neonatal pain, as well as to implement protocols, use scales and sensitize the health team. **Conclusion:** superficial knowledge of the leading professionals of the health team regarding the evaluation and non-pharmacological management of neonatal pain was evidenced, in addition to the absence of formal protocols and training.

Keywords: Neonatal Nursing; Health Personnel; Pain; Pain Management.

RESUMO

Objetivo: identificar o manejo da dor neonatal na perspectiva de profissionais líderes da equipe de saúde em uma maternidade de risco habitual. **Método:** estudo qualitativo realizado entre setembro e dezembro de 2016 com oito profissionais líderes da equipe de saúde de uma maternidade do interior paulista, sendo três enfermeiras, dois médicos pediatras, uma técnica de Enfermagem, uma auxiliar de Enfermagem e uma técnica de laboratório. A coleta de dados ocorreu por meio de entrevistas semiestruturadas, cujas falas foram gravadas, transcritas e submetidas à análise de conteúdo, na modalidade temática. **Resultados:** as verbalizações mostraram que a avaliação da dor neonatal era realizada de forma subjetiva, a partir de aspectos observados pela equipe, como alterações em face, sinais vitais, movimentos e choro. Houve relatos de dificuldades para avaliar a dor neonatal e divergências quanto ao momento indicado para avaliação. Os métodos não farmacológicos foram citados como estratégias que facilitam o manejo da dor neonatal. Entretanto, apesar dos depoimentos serem favoráveis à utilização, o conhecimento acerca dessas técnicas mostrou-se superficial, uma vez que falas incluíam "eu desconheço" e "nunca li nada a respeito", bem como se tornou evidente a dificuldade de aplicá-los. Pontuaram ainda a necessidade de treinamentos/capacitações frequentes acerca da avaliação e tratamento da dor neonatal, bem como de implantar protocolos, utilizar escalas e sensibilizar a equipe de saúde. **Conclusão:** evidenciou-se

How to cite this article:

Oliveira CR, Santos JM, Guarda LEA, Barbieratto BJ, Dare MF, Leonello DCB, Furtado MCC, Leite AM. Neonatal pain management in a maternity hospital of usual risk: perspectives of health team leading professionals. REME – Rev Min Enferm. 2020[cited _____];24:e-1289. Available from: _____ DOI: 10.5935/1415-2762.20200018

conhecimento superficial dos profissionais líderes da equipe de saúde quanto à avaliação e manejo não farmacológico da dor neonatal, além da ausência de protocolos formais e capacitações.

Palavras-chave: *Enfermagem Neonatal; Pessoal de Saúde; Dor; Manejo da Dor.*

RESUMEN

Objetivo: *identificar el manejo del dolor neonatal desde la perspectiva de los profesionales líderes del equipo de salud de una maternidad de riesgo habitual. Método:* estudio cualitativo realizado entre septiembre y diciembre de 2016 con ocho profesionales líderes del equipo de salud de una maternidad del interior de São Paulo, incluyendo tres enfermeras, dos pediatras, un técnico de enfermería, un auxiliar de enfermería y un técnico de laboratorio. La recogida de datos se realizó a través de entrevistas semiestructuradas. Las declaraciones fueron grabadas, transcritas y sometidas a análisis de contenido, en la modalidad temática. **Resultados:** los testimonios mostraron que la evaluación del dolor neonatal se realizaba subjetivamente, en función de los aspectos observados por el equipo, tales como alteraciones faciales, signos vitales, movimientos y llanto. Hubo relatos de dificultad para evaluar el dolor neonatal y discrepancias sobre el momento indicado para la evaluación. se citaron Entre las estrategias que facilitan el manejo del dolor neonatal se mencionaron los métodos no farmacológicos. Sin embargo, a pesar de los testimonios favorables a su uso, el conocimiento sobre tales técnicas resultó ser superficial pues los testimonios incluían "No lo sé" y "Nunca he leído nada al respecto", aparte de la dificultad para usar dichas técnicas. Señalaron, asimismo, la necesidad de entrenamiento / capacitación frecuente sobre evaluación y tratamiento del dolor neonatal, así como para implementar protocolos, usar escalas y crear conciencia entre el equipo de salud. **Conclusión:** se constató que los profesionales líderes del equipo de salud tenían conocimiento superficial acerca de la evaluación y el manejo no farmacológico del dolor neonatal, además de la falta de protocolos formales y de capacitación.

Palabras clave: *Enfermería Neonatal; Personal de Salud; Dolor; Manejo del Dolor.*

INTRODUCTION

Although neonatal units are considered essential for newborns' care and protection, it cannot fail to reflect on the various singularities of these environments as environmental risk factors for the development of newborns. Many of the treatments provided to newborns include invasive and painful interventions, and may even result in damage to the nervous system that is still in formation.¹

It is known that scientific production on neonatal pain is in constant process of updating. National and international studies on the evaluation and management of neonatal pain identified gaps in knowledge and care practice from the perspectives of pediatricians,^{2,3} nurses and Nursing assistants.^{4,5}

The level of knowledge, attitude, work overload, professional and personal experience are some of the factors that can influence the management of neonatal pain. It is

evident that health professionals have very slowly seized the knowledge already produced about the management of neonatal pain,⁶ – which configures a submanagement of the theme.^{7,8}

Some issues of the routine of neonatal units may facilitate the adoption of measures that contemplate pain management, and these facilitators may be related to the very knowledge of health professionals and/or their practice. Moreover, in the context of a maternity of usual risk, in which most of the demands relate to full-term newborns that enables the adoption of non-pharmacological measures during painful procedures with the mother's participation (skin-to-skin contact, breastfeeding and breast milk), we question: "what are the facilitating and/or hindering factors in the management of neonatal pain in this maternity hospital?"

Thus, this study is part of the proposal of atraumatic, developmental and humanized care to the newborn, aiming at transforming the pattern of care, from the perspective of evidence-based practice, and sensitizing Nursing staff with regard to the evaluation of neonatal pain and its non-pharmacological treatment. It is expected to support future research and actions in the health service in favor of improving neonatal care in relation to adequate pain management.

OBJECTIVE

To identify the management of neonatal pain from the perspective of the health team leaders of a maternity hospital of usual risk in the interior of São Paulo.

METHOD

This is a qualitative and exploratory study, with a descriptive approach, conducted between September and December 2016 with eight leading professionals of the health team. The study site was a maternity hospital of usual risk located in the interior of São Paulo, which is a teaching and research center and assists women at usual obstetric risk with about 270 deliveries/month, with approximately 90% of full-term newborns.

The participants were intentionally chosen, and we invited the leaders of the health teams who held some position at the institution and/or who were considered leaders, that is, employees who stood out for the spirit of leadership within their professional category. Thus, semi-structured interviews were conducted with three nurses – 1 nurse from UCIN (N1), 1 nurse from the Surgical and Obstetric Center (N2) and 1 Nursing coordinator (NC) – two pediatricians (P1), one of whom is the Pediatrics coordinator and develops pediatric protocols (P2), a Nursing technician (NT), a Nursing assistant (NA) and a laboratory technician (LT).

The statements were recorded after authorization from the health professionals involved. The full transcription was performed by the same researcher who was in the field, then printed and handed in to the respective professionals for checking and final approval of the transcripts. It is worth mentioning that the professionals interviewed did not request to exclude any of their statements. There were no losses of participants and/or problems during the interviews.

It is important to say that the professionals were interviewed in their working period, in a specific room, taking special care to avoid causing problems to the service and evaluating the needs of the shift, with authorization and consent of their direct superiors. The average duration of each interview was 20 to 25 minutes.

A collection instrument was used to guide semi-structured interviews and consider the saturation assessment of the data obtained to complete the data collection. The questions of this instrument were: what is the perception, in your professional practice, of newborn pain management, in this institution? What are the facilitating and hindering factors for the proper pain management in this institution? When to assess neonatal pain? How to assess neonatal pain? Why evaluate neonatal pain? In your opinion, what changes are necessary to improve the management of neonatal pain in this institution? What non-pharmacological intervention would you use to relieve the pain of your child and/or close relative (NB) undergoing painful procedures? What do you think about skin-to-skin contact in kangaroo position, sucrose and breastfeeding in neonatal pain relief? What do you think about the mother's participation in these measures? How do you do it in the institution? Do you invite the mother be present during blood collection?

The transcription of the semi-structured interviews recordings was submitted to content analysis (thematic modality) and to the theoretical framework exposed.⁹ This approach helped identify gaps on the knowledge and practice of health professionals in relation to the management of neonatal pain, and suggestions for care improvement.

Content analysis concerns a set of communication analysis techniques that aims to obtain, based on systematic procedures and objectives of content description of registered messages, indicators that allow inferring knowledge related to the condition of production and reception of these messages. In this context, the thematic analysis technique (thematic modality) consists in the identification of meaning nuclei that make up communication, whose manifestation or repetition has meaning for the analytical objective studied.¹⁰ Thus, the excerpts of the statements obtained were grouped into thematic axes, being distributed between five categories and their subcategories.

This study was approved by the Research Ethics Committee of the *Escola de Enfermagem de Ribeirão Preto* of the *Universidade de São Paulo* (EERP/USP), according to CAAE: 14938113.7.0000.5393. The researchers followed the guidelines and regulatory standards recommended in Resolution N°. 466/12 of the *Conselho Nacional de Saúde* - CNS, on research involving human beings. Health professionals signed an Informed Consent Form, with a guarantee of refusal at any time without suffering any damage.

RESULTS

The statements of the health team leading professionals showed multiple approaches that support the complexity of the theme under discussion. Table 1 shows the distribution of excerpts from the interviews in the five categories and their subcategories, demonstrating the suitability of content analysis (thematic modality) performed.

DISCUSSION

The methodological course we used allowed to apprehend data on the knowledge and practices adopted by the leading professionals of the health team related to the evaluation and non-pharmacological treatment of neonatal pain, as well as to identify their facilitating and hindering aspects.

Regarding the evaluation of neonatal pain, it is still common to perform it subjectively, without the use of scales. The participants revealed that pain assessment was performed only from aspects observed by the team, such as face alterations, vital signs, body movements and newborn crying. The team's difficulty in evaluating neonatal pain was widely mentioned, reporting the lack of knowledge on scales and the absence of their use in the institution. In this context, the barriers mentioned by nurses in the United States and China are related to resistance to change, lack of knowledge, lack of time and lack of confidence in existing tools.¹¹

Moreover, as for pain management facilitators, it is clear that there is goodwill and interest of the team in performing the best possible assistance to the newborn. However, although the statements are favorable to skin-to-skin contact, knowledge about this method is superficial. One of the difficulties highlighted by the professionals interviewed concerns the performance of skin-to-skin contact in the kangaroo position, as well as breastfeeding during painful procedures that require an adequate position, such as punctures for venous access, arterial punctures or PICC insertions. Authors recommend that, for this intervention, physiological parameters should be monitored throughout the procedure, and it is necessary to evaluate the availability

Table 1 - Distribution of the statements excerpts of the health team leading professionals, according to categories and subcategories defined by content analysis (thematic modality). Maternity hospital in the interior of SP, 2016

Categories	Subcategories	Excerpts from interviews
1 st Factors that facilitate neonatal pain management	1.1 Performance of professionals in pain management	[...] in terms of the participation of the team everyone ends up wanting to ease that suffering [...] (N1) About the methods everyone is collaborative [...] (NA)
	1.2 The use of non-pharmacological methods	[...] which is the non-nutritive suction and the use of sucrose that we do here (N1) [...] when they're in skin-to-skin contact, right, the smell of the mother, the heartbeat, we already see that it relieves [...] (N1) [...] natural breastfeeding is something that the baby is already used to, in addition, they have contact with their mother, so so they're in her lap, more protected, and milk [...] (N2)
	1.3 The use of sucrose as the main choice for the relief of neonatal pain	[...] as I saw it before sucrose and now with sucrose it looks like the effect is good [...] (NT) [...] I think sucrose is, because it's sweet, it's, it stimulates NB suction, and with that [...] releases welfare serotonin hormone [...] (N2) Using sucrose is more practical because the mother does not need to come along with the child, she has some difficulty walking because she is a puerperal woman, so it ends up being more practical to give sucrose to the NB (P2)
	1.4 Breastfeeding as a non-pharmacological method	[...] it contributes during blood collection for Guthrie test and calcaneus collections, you can do it quietly while the baby nurses (NT) [...] it would be interesting to add breastfeeding while collecting blood for examination, which also reduces pain (P2)
	1.5 Other non-pharmacological interventions	[...] it is a support, to snuggle their child, the mother, thus depending on the procedure, the warmth of the mother and the child and this is important [...] (LT) [...] depending on the procedure, because it has to do with each case as well. Because there's a case that's a bath too, the bath relaxes a lot, right? The way you snuggle in the case the child in the case, in the crib (E1) [...] a non-nutritive suction is a support [...] (NT)
2 nd Factors that hinder the management of neonatal pain	2.1 Superficial knowledge of non-pharmacological methods	Kangaroo position, wow I don't have much experience to tell you, because I don't see much, what I see most is suction, I think it helps, but I don't know about what you're talking [the pain] how it would be. I think there must have snuggles, the child must feel a little safe, it should be less traumatic, but so I don't know how to tell you [...] (P1) Regarding skin-to-skin contact for pain relief, I don't know, I've never read anything about it. I have no information on it. I know about the contact in the delivery room, at the time of birth, benefits, advantages of this contact, but for non-pharmacological analgesia I do not know (P2)
	2.2 Difficulty in applying non-pharmacological methods	In some [procedures] it is difficult, right? Oh, there's no way we can puncture a baby that is like this in skin-to-skin contact with the mother, but also when it's not to take blood for an exam when it's capillary there you can, right? So there are some that can, but there are some there is no way (NA)
	2.3 Failures in how to deal with pain	[...] I believe that the issue of controlling the pain of the newborn is not incorporated (NC) I think the Nursing team is not prepared exactly for performing sucrose for procedures that are not painful, I think some pediatricians are also not oriented [...] (P2) I think it's a little limited because [...] it is kind of subjective this fact, mostly out there in the rooms, I think they have no dexterity to know what [...] to identify (N2)
	2.4 Excessive painful procedures	[...] in pain management yes, right, I think the procedures themselves, right, that we do in the case, right, more invasive procedures like blood collection, and even the Guthrie test that we do (N1)
	2.5 Workflow and amount of human resources	[...] what I think it makes it difficult is the number of, when it's crowded, and then it gets unprofessional in relation to the number of children, and then for you to [...] give the sucrose a little before, a couple of minutes before sometimes I think this can cause problems [...] (P1) [...] we could evaluate more closely, right, when there are less babies [...] (NA)

Continue...

...continued

Table 1 - Distribution of the statements excerpts of the health team leading professionals, according to categories and subcategories defined by content analysis (thematic modality). Maternity hospital in the interior of SP, 2016

Categories	Subcategories	Excerpts from interviews
3 rd Pain assessment	3.1 How to assess pain	<i>You notice by the reactions, errr, characteristics of the baby's face and crying, through crying, agitation, whether or not he pulls their arms or hands (NT)</i> <i>By the expressions of the face, the crying [...] (N2)</i> <i>By facial expression, by the way, by the movement of the limbs [...] The very crying the [...] (NA)</i> <i>[...] I think it's hard, you need to have a lot of perception, this [...] to be able to differentiate, right, because they actually cries for everything, whether they are in pain or not (N2)</i>
	3.2 When to assess the pain	<i>As soon as we're going to do some procedure, we're already watching, how quiet they are, if they're sleeping during this procedure and after this procedure. To see how they're going to be (N1)</i> <i>When you're going to puncture, when the baby is crying a lot, when the baby has trauma characteristics, right, you can see that they have shoulder dystocia that's it (NA)</i> <i>[...]in other situations of healthy children without any complication I don't see much need (P2)</i> <i>[...] I think that not only in painful procedures but I think that in the clinical evaluation of the NB [...] (N2)</i> <i>I believe that at various times [...] (NC)</i> <i>Well, of the child in the hospital ward [...] every time we're going to do some procedure I think. As access, blood collection, now children here (ICU), in general, sometimes children usually have some problem, right, so you have to pay more attention to this pain (P1)</i>
	3.3 The importance of pain assessment	<i>Because I think it's differential, I think if that's the case it's assistance, right? It is better for the NB [...] (N2)</i> <i>Because the pain is correlated with the response to treatment, so a child feeling pain will have physiological changes that will harm them in the recovery of some illness, besides it is inhuman to leave a living being, a patient, feeling pain, if you have the option to remove pain (P2)</i> <i>I think it brings benefit by bringing comfort, by bringing peace [...] the issue of baby sleep, ohhh can control weight loss too, I think it's all tied up (NC)</i> <i>Due to the consequences of pain for the baby, stress, irritability, change in signs, I think that's it and to improve care too (P1)</i>
4 th Changes needed to improve pain management in the institution	4.1 Training	<i>[...] it is important for us to often have these training even every six months for errrr remember, right, because in daily life we end up getting lost (N1)</i> <i>[...] training the whole team, do all the training of this team, it is that way, theoretical training, practical training [...] (NT)</i> <i>The training of the staff, the multi team, not only nurses (NC)</i>
	4.2 Protocols and scales for pain assessment	<i>[...] maybe establish a protocol [...] more concrete of pain assessment for children who are hospitalized in a more serious condition in the intermediate care unit [...] (P2)</i>
	4.3 Change in the attitude of professionals and awareness of the team	<i>[...] awareness I think (NC)</i> <i>[...] but I still think it is possible to improve more, raise awareness of its importance so everyone would take this idea [...] (N2)</i> <i>[...] an attitude, adequate staff for baby care, right? I think that's in general what can help more like that. It is professionals training itself (P1)</i>
5 th Participation of parents and/or family in the management of neonatal pain	5.1 Advantages and support to neonatal pain management with family participation	<i>I think it's important [...] because when you leave the baby in her lap while collecting blood, doing some procedure, they feel much more protected and they calm down (N1)</i> <i>[...] So I think, so, the baby snuggling with their mother, they feel more protected, and I think they feels less pain (N2)</i>
	5.2 Difficulties in the participation of the family in neonatal pain management	<i>[...] mainly because being family means suffering together, but trying to be a person who did not show so much anxiety. That we have already realized that the little ones, when the mother is very anxious and in affliction, they end up feeling too (NT)</i> <i>I think that [in the hospital] it does not happen properly, that the team does not yet think about this self-care of the patient and does not encourage the participation of the mother and family in their own care. It can improve (NC)</i>

Source: Authors of this study.

of parents to practice skin-to-skin contact, especially among mothers. For newborns with gastroschisis, myelomeningocele and other surgical conditions and/or clinical instability, this intervention is not recommended.¹²

We observed in the statements that professionals believe that breastfeeding relieves the pain of the newborn during painful procedures, but at the same time its indication occurs only for certain types of procedures (calcaneus or venous puncture), being the method discarded by the team in other situations. It is then questioned why this strategy is not used in intramuscular injections, such as routine obstetric scans. It is known that the ideal is to put the newborn in immediate skin-to-skin contact, wait 20 to 30 minutes, offer the maternal breast in this period (giving the NB the possibility to suck) and perform the potentially painful routine procedures, thus associating two effective methods in the relief of neonatal pain: skin-to-skin contact and breastfeeding.

A national study reported that breastfeeding combined with skin-to-skin contact can potentiate analgesic effect, contributing to newborns better recovery after painful procedures.¹³ It is evident that health professionals recognize breastfeeding and the supply of breast milk as non-pharmacological strategies for neonatal pain relief, which is positive data regarding the knowledge of these methods. This is of great interest in humanization and continuous improvement of neonatal care, especially in maternity hospitals of usual risk.

Research conducted with professionals from 196 hospitals in Australia reveals increased use of measures such as sucrose (53.0%) and breastfeeding (79.0%).¹⁴ The statements confirm the predilection of health professionals for sucrose as a non-pharmacological method of neonatal pain relief, since the maternity hospital where the study was carried out follows the sucrose administration protocol at 25%. It is noteworthy that, despite the proven efficacy of sucrose at a given concentration, with beneficial effects for the relief of newborn pain,¹⁵ there is still insufficient scientific evidence on the effects of repeated doses of sucrose and on its indiscriminate use, whether in the short or long term.

In the current study, sucrose administration was considered more practical by the team than inviting the mother to breastfeed the NB, for several factors: the mother is a puerperal, and may have difficulty walking to the laboratory; many professionals still believe that the mother does not adequately assist in painful procedures; sometimes breastfeeding does not occur since the newborn is not hungry or is sleepy at that given moment.

The statements also indicate the workflow and the amount of human resources as items that hinders neonatal pain management. In this respect, it is believed that, for a humanized work environment, health professionals need to

be valued and equipped by the institution, as well as receive psychological assistance to learn how to deal with the feelings experienced in practice. This contributes to the professional ability to deal with the work process.¹⁶

The professionals also suggested the need for training/qualification on the evaluation and treatment of neonatal pain, in the search for necessary changes to improve pain management in the institution. It is inferred that clinical protocols are fundamental for implementing a good management of neonatal pain, as well as for standardizing procedures and conducts, assisting in the organization of units and adequate managing neonatal pain. It is known that the provision of protocols is one of the requirements for obtaining quality titles by the institution.¹⁷

In this sense, the American Academy of Pediatrics recommends that health services have evidence-based protocols for the prevention and treatment of pain in newborns, including careful performance of procedures, routine pain assessment, and the use of pharmacological and non-pharmacological measures for pain relief, surgical pain medications, and procedures for severe pain.⁶

Some professionals also recognized a need for sensitizing the health team to promote changes in behavior and actions. It relates to an important theme such as changes applicability in a work environment. It is believed that health professionals' awareness to transform the workplace into a humanized environment depends on individual actions that must stimulate others to carry out the best child care plan.

To program any transformation, the initial step is the professionals' awareness that the treatment of neonatal pain is important and able to be performed with a small touch or attitude such as breastfeeding or calm and comfort them. This change in individual attitude can be mobilized through workshops of humanization and training of the team.¹⁸

It is noteworthy that Nursing professionals play an essential role in the proper management of neonatal pain, with possibilities to avoid it and/or minimize it during painful procedures, since they assist them for longer time within health services. Thus, the findings of this study imply the need to have, among health professionals – here, especially nurses and Nursing students – effective appropriation of updated knowledge about the identification, evaluation, control, management and registration of neonatal pain.

The limitations of the current study are related to the lack of statistical representativeness, since it was carried out only with health team leading professionals of a single maternity hospital in the interior of *São Paulo*. We suggest, in future research, to include other health professionals to obtain a more comprehensive situational diagnosis on the management of neonatal pain in these categories.

CONCLUSION

This study brings the identification of neonatal pain management from the perspective of health team leading professionals in a maternity hospital of usual risk. Significant deficiencies in relation to the knowledge and practice of those professionals to manage neonatal pain were highlighted, in addition to the absence of formal clinical protocols and training.

It is recommended more appropriation of non-pharmacological measures with the mother's participation, such as skin-to-skin contact and breastfeeding in neonatal pain management among the health professionals interviewed. Moreover, adding the findings to the concepts of humanism, the policies of humanization of care and the developmental care of the newborn, through family-centered care, it is suggested a change in actions and conducts in this health team, which should be stimulated from awareness-raising workshops and professional training, becoming active subjects in the creation and implementation of training, documentation and internal policies for neonates pain assessment and management.

Finally, aiming at ethical, comprehensive and humanized care, we suggest the implementation of clinical protocols, flows for decision-making, audits and constant updates of documents related to the management of neonatal pain in this maternity hospital.

REFERENCES

- Cong X, Wu J, Vittner D, Xu W, Hussain N, Galvin S, *et al.* The impact of cumulative pain/stress on neurobehavioral development of preterm infants in the NICU. *Early Hum Dev.* 2017[cited 2019 Mar 28];108:9-16. Available from: <https://doi.org/10.1016/j.earlhumdev.2017.03.003>
- Capellini VK, Daré MF, Castral TC, Christoffel M, Leite AM, Scochi CGS. Conhecimento e atitudes de profissionais de saúde sobre avaliação e manejo da dor neonatal. *Rev Eletrônica Enferm.* 2014[cited 2019 Feb 03];16(2):361-9. Available from: <https://www.fen.ufg.br/revista/v16/n2/pdf/v16n2a12.pdf>
- Mohamadami Z, Namnabati M, Marofi M, Barekatein B. Four components of pain management in Iranian neonatal Intensive Care Units: The nurses' and physicians' viewpoint. *J Educ Health Promot.* 2017[cited 2019 Apr 15];6(64):1-5. Available from: https://dx.doi.org/10.4103%2Fjehp.jehp_139_15
- Polkki T, Korhonen A, Laukkala H. Nurses' perceptions of pain assessment and management practices in neonates: a cross-sectional survey. *Scand J Caring Sci.* 2018[cited 2019 Mar 03];32(2):725-33. Available from: <https://doi.org/10.1111/scs.12503>
- Oliveira IM, Castral TC, Cavalcante MMFP, Carvalho JC, Daré MF, Salge AKM. Conhecimento e atitude dos profissionais de Enfermagem sobre avaliação e tratamento da dor neonatal. *Rev Eletrônica Enferm.* 2016[cited 2019 Feb 05];18:e1160. Available from: <https://revistas.ufg.br/fen/article/view/36782>
- American Academy of Pediatrics. Committee on Fetus and Newborn and Section on Anesthesiology and Pain Medicine. Prevention and Management of Procedural Pain in the Neonate: An Update. *Pediatrics.* 2016[cited 2019 Apr 10];137(2):e20154271. Available from: <https://pediatrics.aappublications.org/content/137/2/e20154271>
- Lago P, Frigo AC, Baraldi E, Pozzato R, Courtois E, Rambaud J, *et al.* Sedation and analgesia practices at Italian neonatal intensive care units: results from The European Study. *Ital J Pediatr.* 2017[cited 2019 Apr 10];43(1):26. Available from: <https://dx.doi.org/10.1186%2F13052-017-0343-2>
- Hatfield LA. Neonatal pain: what's age got to do with it?. *Surg Neurol Int.* 2014[citado em 2019 Apr 12];5(Suppl 13):S479-89. Available from: <https://dx.doi.org/10.4103%2F2152-7806.144630>
- Polit DF, Beck CT. Fundamentos de pesquisa em Enfermagem: avaliação de evidências para a prática da Enfermagem. 9ª ed. Porto Alegre: Artmed; 2018. 456 p.
- Bardin L. Análise de conteúdo. Lisboa: Edições 70; 1979.
- Cong X, McGrath JM, Delaney C, Chen H, Liang S, Vazquez V, *et al.* Neonatal nurses' perceptions of pain management: survey of the United States and China. *Pain Manag Nurs.* 2014 [cited 2019 Apr 14];15(4):834-44. Available from: <https://doi.org/10.1016/j.pmn.2013.10.002>
- Barb S, Jackson S, Romaniuk C, Golski E, Lozinski M, Ramesar D, *et al.* Skin to Skin / Kangaroo Care in Neonatal Units. Neonatal Patient Care Teams, HSC & SBH Child Health Standards Committee; 2015[cited 2019 Apr 14]. Available from: <http://www.wrha.mb.ca/extranet/eipt/files/EIPT-035-010.pdf>
- Leite AM, Silva ACTO, Castral TC, Nascimento LC, Sousa MI, Scochi CGS. Amamentação e contato pele a pele no alívio da dor em recém-nascidos na vacina contra a Hepatite B. *Rev Eletrônica Enferm.* 2015[cited 2019 Feb 01];17(3):1-8. Available from: <https://www.fen.ufg.br/revista/v17/n3/pdf/v17n3a01.pdf>
- Foster J, Spence K, Henderson-Smart D, Harrison D, Gray PH, Bidewell J. Procedural pain in neonates in Australian hospitals: a survey update of practices. *J Paediatr Child Health.* 2013[cited 2019 Apr 15];49(1):35-9. Available from: <https://doi.org/10.1111/jpc.12064>
- Stevens B, Yamada J, Ohlsson A, Haliburton S, Shorkey A. Sucrose for analgesia in newborn infants undergoing painful procedures. *Cochrane Database Syst Rev.* 2016[cited 2019 Apr 15];(7):CD001069. Available from: <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD001069.pub5/full>
- Montgomery C. Paediatric pain management. In: Jovey RD. *Managing pain: the Canadian healthcare professional's reference.* Stittsville: Baker Edwards Consulting Inc; 2008. p. 221-36.
- Castral TC, Bueno M, Bussotti EA. Controle da dor como indicador de qualidade na assistência neonatal. In: Associação Brasileira de Enfermagem, Associação Brasileira de Obstetras e Enfermeiros Obstetras, Morais SCR, Souza KV, Duarte ED, organizadores. *PROENF Programa de atualização em enfermagem: saúde materna e neonatal: ciclo 7.* Porto Alegre: Artmed Panamericana; 2016.p.109-51.
- Uman LS, Birnie KA, Noel M, Parker JA, Chambers CT, McGrath PJ, *et al.* Psychological interventions for needle-related procedural pain and distress in children and adolescents. *Cochrane Database Syst Rev.* 2018[cited 2019 Apr 15];(10):CD005179. Available from: <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD005179.pub4/full>