Maternal opinions about bathing for pain relief in hospitalized children

Opiniões maternas sobre o banho para alívio da dor em crianças hospitalizadas Opiniones maternas sobre el baño para calmar el dolor en infantes hospitalizados

Danton Matheus de Souza¹ lo https://orcid.org/0000-0001-6320-4826

Vanessa Dias Fogaça² lo https://orcid.org/0000-0002-7199-6912

Joese Aparecida Carvalho² lo https://orcid.org/0000-0001-6140-2431

Lisabelle Mariano Rossato¹ lo https://orcid.org/0000-0003-3375-8101

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Corresponding author

Danton Matheus de Souza E-mail: danton_souza@usp.br

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Denise Myuki Kusahara (https://orcid.org/0000-0002-9498-0868) Escola Paulista de Enfermagem, Universidade Federal de São Paulo, São Paulo, SP, Brasil

Abstract

Objective: To analyze maternal opinions regarding the use of therapeutic baths to relieve pain in children hospitalized for respiratory problems.

Methods: This is a descriptive, qualitative study, conducted in a secondary teaching hospital, in the city of São Paulo, between July 2022 and July 2023. A total of 16 mothers of children hospitalized for respiratory problems, with acute pain, literate, who followed the intervention - therapeutic bath and one-hour follow-up-participated. The bath consisted of immersion in hot water (between 37-39°C), with 2/3 of the body immersed for at least five minutes. Through convenience sampling, mothers were asked to write their opinion with the guiding phrase "Write your opinion about the use of therapeutic baths to relieve your child's pain", with poetic freedom in writing. The data were subjected to thematic content analysis, complemented by lexical analysis, with the IRAMUTEQ® software. National ethical guidelines were respected.

Results: Mothers believed that therapeutic bathing is an effective and innovative intervention, with mutual benefits for their children and themselves. In children, they reported that bathing provided relief from pain and respiratory symptoms, comfort and numbness. For mothers, it provided satisfaction with care, rest and a feeling of inclusion.

Conclusion: Mothers believed that therapeutic bathing is an effective and innovative intervention, with mutual benefits for children and themselves, with pain relief and subsequent maternal satisfaction.

Resumo

Objetivo: Analisar as opiniões maternas frente ao uso do banho terapêutico para alívio da dor em crianças hospitalizadas por agravos respiratórios.

Métodos: Estudo descritivo, qualitativo, conduzido em um hospital escola, secundário, no município de São Paulo entre julho de 2022 a julho de 2023. Participaram 16 mães de crianças hospitalizadas, por agravos respiratórios, com dor aguda, alfabetizadas, que acompanharam a realização da intervenção - banho terapêutico e o seu seguimento de uma hora. O banho consistiu em uma imersão em água quente (entre 37-39°C), com 2/3 do corpo imerso por, no mínimo, cinco minutos. Por meio de uma amostragem por conveniência, as mães foram solicitadas a redigir sua opinião com a frase norteadora: "Escreva sua opinião sobre o uso do banho terapêutico para alívio da dor do seu filho", com liberdade poética à escrita. Os dados foram submetidos a análise temática de conteúdo complementada pela análise lexical, com o software IRAMUTEQ®. Respeitou-se as diretrizes éticas nacionais.

Resultados: As mães opinaram que o banho terapêutico é uma intervenção efetiva e inovadora, com benefícios mútuos, à criança e a si. Na criança, redigiram que o banho proporcionou alívio da dor e de

¹Nursing School, *Universidade de São Paulo*, São Paulo, SP, Brazil. ²University Hospital, *Universidade de São Paulo*, São Paulo, SP, Brazil **Conflicts of interest:** nothing to declare. sintomas respiratórios, conforto e adormecimento. Já às mães, proporcionou satisfação com o cuidado, descanso e sensação de inclusão.

Conclusão: As mães opinaram que o banho terapêutico é uma intervenção efetiva e inovadora, com benefícios mútuos à criança e a si, com alívio da dor e posterior satisfação materna.

Resumen

Objetivo: Analizar las opiniones maternas sobre el uso del baño terapéutico para calmar el dolor en niños y niñas hospitalizadas por agravios respiratorios.

Métodos: Estudio descriptivo, cualitativo, realizado en un hospital universitario, secundario, en el municipio de São Paulo entre julio de 2022 y julio de 2023. Participaron 16 madres de infantes hospitalizados por agravios respiratorios, con dolor agudo, alfabetizadas, que participaron en la realización de la intervención (baño terapéutico y seguimiento de una hora). El baño consistió en una inmersión en agua caliente (entre 37 y 39 °C), con 2/3 del cuerpo sumergido durante cinco minutos, como mínimo. Por medio de un muestreo por conveniencia, se solicitó a las madres que escribieran su opinión a partir de la frase orientadora: "Escriba su opinión sobre el uso del baño terapéutico para calmar el dolor de su hijo", con libertad poética en la escritura. Se realizó un análisis temático de contenido de los datos, complementado con un análisis léxico con el *software* IRAMUTEQ®. Se respetaron las directrices éticas nacionales.

Resultados: Las madres opinaron que el baño terapéutico es una intervención efectiva e innovadora, con beneficios mutuos, para el niño y para sí misma. Relataron que, en el niño, el baño ayudó a calmar el dolor y los síntomas respiratorios y proporcionó bienestar y adormecimiento. Por otro lado, a las madres les proporcionó satisfacción con el cuidado, descanso y sensación de inclusión.

Conclusión: Las madres opinaron que el baño terapéutico es una intervención efectiva e innovadora, con beneficios mutuos, para el niño y para sí misma, que calma el dolor y proporciona satisfacción materna.

Introduction

Pain is defined as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage", being classified based on temporality and pathophysiology. Temporally, it can be divided into acute pain, which has a sudden onset, but is resolved within a period of less than three months, whereas chronic pain is continuous or recurrent, persisting beyond three months. Its pathophysiology is divided into nociceptive pain, with tissue damage in pain receptors; neuropathic cause, with changes in the central and/or peripheral nervous system; and mixed cause, with components of the two previous causes. In this study, the focus is on respiratory problems, which are often acute in nature and nociceptive cause. (1)

Children are a population susceptible to hospitalizations due to respiratory problems. In the first years of life, children are developing their immunity, with an increase in respiratory infections, as seen in a systematic review that indicates that, between 1995 and 2019, in the United States, there were more than five million hospitalizations of children due to illnesses respiratory. Among the clinical picture of infections, pain is frequent, associated with the use of accessory muscles, low productive cough, dyspnea, and pathophysiological changes in the respiratory system. ⁽²⁾ In this context, there is a need to look at pain in this profile.

In Brazil, in a cross-sectional study with medical records of 1,251 hospitalized children, it was observed that 481 presented documentation of acute pain at some point during hospitalization, of which 46.1% were related to respiratory problems. However, despite this frequency, when comparing respiratory problems with other specialties, such as surgery and orthopedics, a devaluation of this specialty was observed, with a greater number of children whose pain was not relieved. (3) The visibility of children's pain, especially respiratory pain, becomes imminent, with nurses being an essential agent as they act autonomously in the application of non-pharmacological interventions. (4)

Despite the increasing development of non-pharmacological interventions, there is difficulty in translating this knowledge into clinical practice. (4) In the aforementioned study, of 481 children with pain, only six had documentation of these interventions, making it a potential field of research for exploration. (3) When analyzing the barriers to use non-pharmacological interventions, it is observed that nurses do not believe in the its effects on pain relief, requiring studies to demonstrate this effectiveness in order to raise awareness among professionals regarding its use. (5)

A non-pharmacological intervention that deserves attention is the use of baths. Previously, an integrative review that aimed to assess the use of water immersion for pain relief in infants indicated a study that used immersion bath, with

promising effects on pain relief; however, the population was restricted to newborns, making it not possible to generalize the findings to children. (6) Therefore, conducting studies on this intervention in children is emerging, and the authors conducted a clinical trial (in-press) on the use of baths, with a qualitative stage, part of this investigation. Qualitative research becomes essential allies as it allows understanding the views of those involved about an intervention, increasing its strength of recommendation. (7)

In the child's area, a special focus must be placed on the family. It is assumed that the family is the main expert on children, as their voice in decision-making permeates a more accurate assessment and intervention and their inclusion in the development of behaviors allows for an equal exchange with mutual learning. (8) Recognizing this context, the literature has advanced theories that guide family inclusion in child care, such as Family Centered-Care (FCC). When portraying the theme of pain, family inclusion is observed in international recommendations on pain management stages, which includes assessment, individualized intervention (pharmacological and non-pharmacological) and reassessment, with collaborative communication among everyone involved, in a safe and comfortable environment, with a genuine partnership with the family, which occupies the center of this process. (9)

However, family members' views on nursing interventions performed on children are still poorly reported, as seen in a literature review, which indicated satisfaction studies focusing on quantitative designs in newborns, with a low number of Brazilian studies. (10) In view of all the aforementioned problems, this study takes a look at the families of children hospitalized for respiratory problems, with acute pain, who used baths to relieve pain. Thus, the following concern emerged: What are the maternal opinions of children hospitalized with pain regarding the use of baths to relieve pain? This study aimed to analyze maternal opinions regarding the use of therapeutic baths to relieve pain in children hospitalized for respiratory problems.

Methods

This is a descriptive, qualitative study, guided by the thematic content analysis technique. This is a subproject of a study entitled "*Efetividade do banho terapêutico no alívio da dor de crianças hospitalizadas: Ensaio clínico controlado randomizado de superioridade*", with a look at secondary qualitative data. To write it, we followed the stages indicated by the COnsolidated criteria for REporting Qualitative research (COREQ). (11)

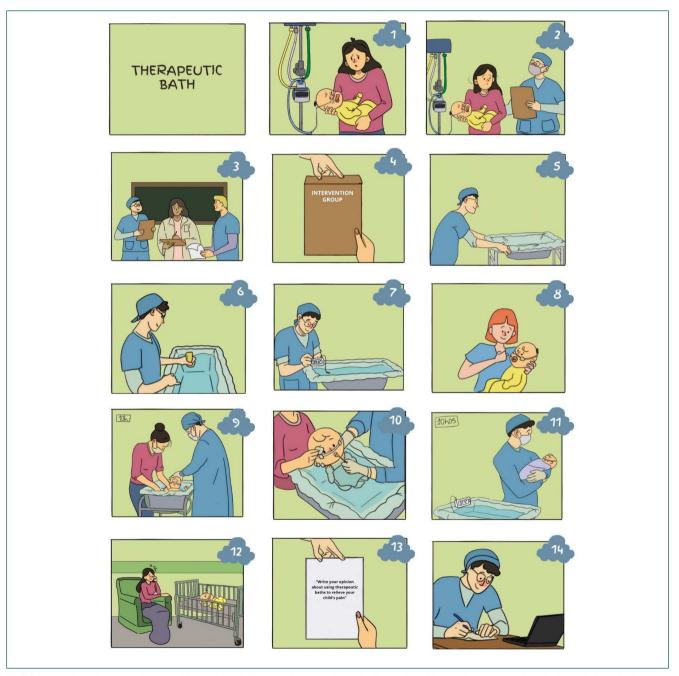
The study was conducted between July 2022 and July 2023 in a public secondary-level teaching hospital in the city of São Paulo, Brazil, in the Pediatric Inpatient Unit (PIU) and Children's Emergency Room (CER) sectors. Both services provide care to children and adolescents between 28 days and 15 years of age. PIU has 15 hospitalization beds, divided by age group, and CER has 10 observation beds and 2 extra beds, with no on-demand care, with a referenced emergency room.

Mothers of children hospitalized for respiratory problems with acute pain, literate, who had followed therapeutic bath and remained in follow-up for one hour, with acceptance of writing their opinion at the end of the primary quantitative collection, were included. It is reiterated that only mothers in the intervention group of the primary study (children who received the therapeutic bath) were eligible to participate, which reduced the number of participants. No exclusion criteria were established.

Participants followed therapeutic bath, which consists of a hot bath, carried out by mothers alone or with the researcher, with children immersing themselves in water at a temperature between 37 and 39°C, with 2/3 of the body immersed, with a minimum duration of five minutes and emergence at a temperature above 36°C. After immersion, children were monitored for one hour. It is noteworthy that the intervention was called a "therapeutic bath" because it goes beyond the purpose of hygiene, with the redefinition of its objective: from a cleaning intervention to a non-pharmacological intervention for pain relief. It should be noted that its principles follow those of immersion bath, but hygiene is not mandatory, with immersion in hot water being the focus,

which can lead to a therapeutic effect. The bath was conducted with children aged 28 days to three years, hospitalized for respiratory problems, who presented acute pain, assessed using standardized scales for their age group. Figure 1 illustrates the intervention conduct and the study qualitative stage outlining.

To collect qualitative data, the convenience sampling technique was used, and, at the end of children's follow-up in the primary study (one-hour period), mothers who met eligibility criteria were approached in person and participated in the study. These mothers were asked to write their opinion



[1] Child presenting pain, assessed using validated scales; [2] Approach by researcher to family member with an invitation to participate in the study (quantitative and qualitative stage); [3] Inform care team about child's inclusion in the study and need for medication; [4] Allocation to therapeutic bath group; [5,6 and 7] Process of preparing therapeutic bath; [8] Provision of analgesic medication by the service's nursing team; [9,10 and 11] Carrying out therapeutic bath according to established protocol; [12] Reassessment of child at 15,30 and 60 minutes after medication; [13] Invitation to the person in charge of recording their opinion (focus of this study); [14] Documentation in medical records

Figure 1. Comic book about taking a therapeutic bath

about the intervention on a piece of paper given by the researcher with the following sentence written on it: "Write your opinion about using therapeutic baths to relieve your child's pain", established after discussions among the other researchers, reaching a consensus. It was decided to offer poetic freedom, without any type of influence when writing the opinion, limiting only the time, for writing to take place within an hour so that the researcher could complete data collection during his presence in collection sectors.

Bedside collection was conducted with 16 participating mothers, and there was no refusal to participate nor collection of repeated opinions. The data collection approach was carried out by a researcher, a pediatric nurse, master's student in healthcare, who had previous experience in qualitative research. Data collection was completed together, at the end of the primary study, without the need for discussion regarding data theoretical saturation. Furthermore, it is worth highlighting that there was no collection of sociodemographic data from mothers, a methodological choice justified by the study being focused on opinions, and these data would not influence the phenomenon analyzed here.

At the end of data collection, opinions were transcribed by the associated researcher, with validation by the researcher in charge, and transcriptions were not returned to participants. The data were analyzed from two complementary perspectives: Bardin's thematic content analysis and a lexical analysis. For thematic content analysis, text skimming of opinions was followed (between five and 10 times) with material exploration and extraction of their meanings, which were subsequently organized into categories. (12) This stage was conducted by a pair of researchers, with discussions regarding individual analyzes and consensus on the creation of categories. For lexical analysis, the data was processed in the *Interface de R* pour les Analyses Multidimensionnelles de Textes et de Questionnaires (IRAMUTEQ[®]) software, which allows a quantitative look at essentially qualitative data, deepening thematic analysis. For its presentation, the Descending Hierarchical Classification (DHC), which, through chi-square test (x2), organized words by their frequency, and similarity tree, with an illustration of the word connections for the construction of maternal opinions, were used. (13) A p-value<0.05 (5%) was considered a statistical difference. It is noteworthy that IRAMUTEQ* generates classes, whereas thematic content analysis generates categories. However, in order to standardize the nomenclature, it was decided to call both categories and link them for a complete analysis.

This study was approved by the Research Ethics Committees of the *Universidade de São Paulo* Nursing School and the co-participating hospital, under Opinions 5,326,308 (Certificate of Presentation for Ethical Consideration (*Certificado de Apresentação para Apreciação Ética*) 55575322.8.0000.5392) and 5,406,490 (Certificate of Presentation for Ethical Consideration 55575322.8.3001.0076), respectively. We respected Resolutions 466/12 and 510/16 of the Brazilian National Health Council. Participation was signed through the Informed Consent Form. Maternal opinions are identified using the letter M and the order of inclusion: M1, M2, M3...

Results

From opinion analysis, two categories emerged, 1) "It seems like magic": Therapeutic bath and its potential for pain relief and 2) "Innovation": Transitioning from the feeling of helplessness to satisfaction with the use of therapeutic bath, to be described. In lexical analysis, Figure 2 shows the DHC, which demonstrates the most frequent words in maternal opinions, with their appropriate p-value.

"It seems like magic": Therapeutic bath and its potential for pain relief

Mothers reported that, prior to the start of therapeutic bath, children were in a lot of pain, stressed, agitated, irritated and crying that was difficult to console. Two mothers wrote that they tried to use other non-pharmacological interventions, however, they were unsuccessful. After bath, in a consensus of all opinions, pain relief was reported, complemented

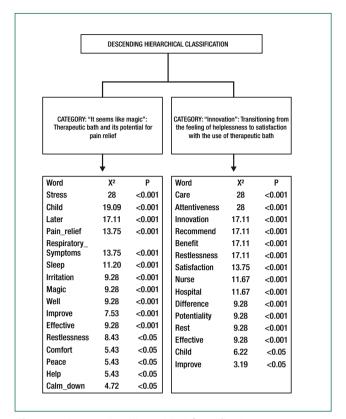


Figure 2. Descending Hierarchical Classification

by relaxation, comfort, falling asleep, calmness and collaboration in care. Mothers made an analogy of bathing to "magic", with the quick change that the intervention provided in children's behavior with immersion. Furthermore, they reported relief from respiratory symptoms, such as tiredness and coughing. In Figure 2, attention is drawn to the frequency of the words "pain_relief", "improve", "effective", "comfort" and "calm", demonstrating that mothers wrote good opinions about therapeutic bath.

My son's bath was great. He was very agitated and after the bath he was relaxed, he slept, woke up well and let the procedures be done. (M4)

My son was in a lot of pain, it was difficult to calm him down. I put him in the water, it seemed like magic, he was left with another child. He calmed down. He cried to get out of the shower. Then he relaxed, he was pain free. (M7)

I really enjoyed the bath for pain relief. My son was very tearful, I tried breastfeeding, holding

him, distracting him, but nothing helped. We put him in the bath, he became tearful, bath outside the house. But after he left, he relaxed, he managed to sleep. (M15)

My son was crying a lot, in pain. The bath was performed and it was quick, he was able to relax, rest, in less than 15 minutes he was asleep. Before I tried everything, I gave him a cell phone, a pacifier, we held him, the father came here, but nothing helped. He managed to relax. (M16)

He (child in pain) was very agitated before bath, in pain. After bathing, he felt much better, comfortable, relaxed, his tiredness improved and his cough stopped. (M6)

"Innovation": Transitioning from the feeling of helplessness to satisfaction with the use of therapeutic bath

In this category, there is a high frequency of the words "innovation", "recommend", "benefit", "satisfaction, "difference" and "potentiality", which were used in the construction of maternal opinions (Figure 2). In these words, mothers indicated that, prior to starting therapeutic bath, they were irritated, stressed and had a feeling of restlessness. However, after carrying out the intervention, they said that it was a mutual benefit (for children and for themselves), considering that they were able to rest, relax and reduce stress by seeing their children without pain, sleeping. The feeling of restlessness gave way to satisfaction, expressed in all opinions. They said they never imagined the potential of bathing, considering it an innovative, effective, great, "super comfortable", "wonderful" method that provided benefits to children, recommending it for other families. Furthermore, they recognized nurses as professionals in charge of the bath, offering numerous compliments in their opinions.

In my opinion, the bath was a great innovation. (M5)

I managed to rest after the shower. My son calmed down. I was very satisfied with this care. (M7)

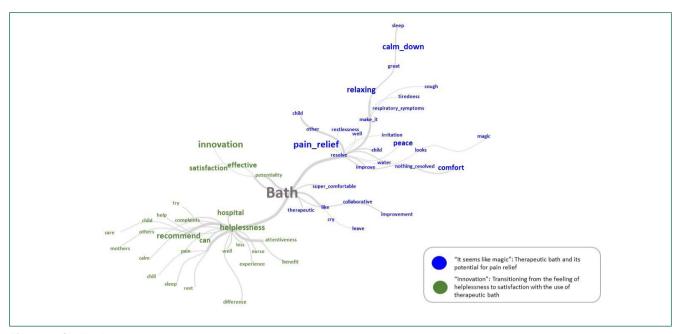


Figure 3. Similitude tree

I was feeling helpless because I couldn't do anything to ease my son's pain. Now, after bath, he was much calmer. He had been feeling pain for two days, I was already irritated, it's really painful to see someone in pain and not be able to do anything, especially when he's a baby, it's very difficult. I was very in peace with bath. (M15)

I (mother) found using bath to relieve pain in my body super comfortable. There's nothing better. The child is relieved, pain-free, at ease, calm and relaxed. (M9)

Figure 3, below, shows a similitude tree, which demonstrates connection of words in the construction of maternal opinions. It is observed that the word "bath" is interconnected with "therapeutic", "innovation" and "satisfaction", among others, which illustrate the potential effects of bathing on children and their mothers.

Discussion

In this study, maternal opinions were favorable to use therapeutic baths to relieve pain in children hospitalized for respiratory problems. Mothers recognize the effects of the intervention, going beyond pain relief, also mentioning the relief of respiratory symptoms, relaxation and falling asleep. The effects were mutual, with the possibility that mothers relaxed after the intervention by seeing their children well, and they also assessed the bath as an innovative, effective method that provided satisfaction.

The views of individuals receiving or involved in interventions are vitally important. In a qualitative study, with 21 women undergoing water birth in a hospital setting, positive reports were observed regarding the intervention and the nurse, who conducted it in a respectful and supportive manner, encouraging women's autonomy in the birthing process. (14) This finding supports the maternal opinions of this study, which recognized the benefits of the intervention, with words such as "care", "innovation" and "recommendation" (p<0.05), added to the role of nurses in conducting it.

Mothers reported that they tried other interventions before bathing, but were unsuccessful. However, immersion in water was associated with "magic" due to its quick effect. This aspect may be related to the physical properties of water that allow body relaxation, added to the reminder of the safety of bathing at home. (15,16) However, it is worth noting that, in the primary study design, therapeutic

bath was a supporting intervention to medication, being compared with medication alone. Although this association of interventions is an assessment limitation, in the primary study, a faster and more pronounced reduction in pain was observed in the bath group (In-press). In this study, maternal opinions demonstrated a quick effect, like an analogy to magic.

Therapeutic bath adds to the family presence, already established as a non-pharmacological intervention. (17) In a cross-sectional study, carried out with 69 children between six and 18 years old, 93% reported pain within a 24-hour interval, with 58% of these stating that different non-pharmacological interventions provided pain relief, with 26% recognizing the family presence. (18) This supports a qualitative investigation with 18 healthcare professionals working at a pediatric ICU who considered that the presence of the family is the main intervention for relieving children's pain and anxiety. (19) Another qualitative study, with 12 family members, observed that they recognize themselves as a source of pain relief for children, who long to be close, indicating that using a non-pharmacological intervention marked the experience as positive, (20) supporting the maternal opinions described here.

In this study, the family was a key agent in the evaluation process of a non-pharmacological intervention. Therapeutic bath, the focus of opinions, adds to the family presence, which can enhance pain relief and, consequently, family visions in the pain experience. This family inclusion is aligned with the philosophy of FCC that guides the work of pediatric nurses. This care approach represents a mutually beneficial partnership between health-care professionals, children and their families, with a collaboration marked by assumptions of: dignity and respect; information sharing; participation; and collaboration. (17,21)

Although this study did not measure variables regarding FCC specifically, in maternal opinions, it was observed the indication of perceptions that integrate the assumptions of this philosophy. ⁽²¹⁾ In dignity and respect, the family was heard and respected; in information sharing, the family was informed about study conduction; in participation,

the family was encouraged to drive or be nearby; and in collaboration, there was joint construction of the intervention and the possibility of subsequent evaluation, with recognition of maternal opinions as a rich data source.

Despite the recommendation of FCC assumptions, when portraying pain relief, a qualitative study conducted with professionals from the nursing team demonstrated that there is a low translation of this knowledge into clinical practice, with the absence of family inclusion and, consequently, the use of interventions that associate it.⁽¹⁷⁾ Therefore, it is necessary to act on this aspect in future studies, considering that therapeutic bath integrates the family as a crucial agent in conducting the intervention.

Another aspect is that the literature indicates that a key component of FCC is satisfaction at the end of the assistance process. (21,22) Although this study did not assess satisfaction itself, it was cited as an important result of carrying out therapeutic bath in maternal opinions. There is a scientific movement towards studies on family satisfaction after the World Health Organization considered it as an indicator of quality, defining it as a personal opinion that goes against care needs, expectations and experiences, allowing a sense of empowerment, knowledge, ability to manage health conditions and changes in views regarding healthcare services. (10,22) Thus, maternal opinions are in line with what is indicated, interpreting family members as agents of opinion formation, which gives indication strength to the intervention. (23)

In an investigation with children who underwent venipuncture using local anesthesia, distraction and family presence, it was observed that families were satisfied with care, respect and the chance to collaborate with the team. (24) This study allowed interpret that pain relief promoted family satisfaction, which supports the opinions described here.

In a prospective cohort carried out with family members of children with complex chronic conditions with family satisfaction assessment with health care, initially, a high level of satisfaction was observed; however, over time, this score was reduced, with the multiple experiences with several professionals. (25) This aspect must be reflected

in maternal opinions, considering that therapeutic bath is a specific moment within a continuum of hospitalization. Although mothers in this study reported that therapeutic bath led to their satisfaction with care, it is necessary to reflect on the entire context when working on satisfaction, aiming to enhance the indicator not only in an intervention, but in each interaction with healthcare professionals.

In addition to the benefits for children, therapeutic baths provided an impact on mothers' experiences, allowing them to reduce stress and give them the chance to rest. This experience supports a study carried out with families of children with disabilities who participated in a pediatric water sport program, where family members reported the benefits to children, experiencing new sensations, opportunities and relief from muscle pain, in addition to promoting emotional bonds, with children being close to family members in an intervention conducted together, with greater confidence in their care skills. (26)

In maternal opinions, intervention assessment is observed as innovative, effective, comfortable, and empowering, which leads to benefits beyond pain. This recognition can be the beginning for implementing the intervention in clinical practice, especially when added to experimental studies, in accordance with health value. This concept is related to the practical implementation of an intervention, which should not be summarized only by the monetary cost, but rather by its sense of use and meaning for patients, with the integration of perspectives of professionals (who will carry out the intervention), individuals (who will receive the intervention) and costs (for conducting the intervention). (7) For the future, work on costs is necessary to interconnect the three pillars of value in health.

This study had the following main limitations: the low number of opinions written, but on the other hand, they demonstrate rich opinions that must be considered; data collection was carried out in just one healthcare service, limiting the experience to a specific group of mothers; and taking a bath in conjunction with analgesic medication.

However, as seen in the reviews, bathing led to a quick reduction in pain.

In a context in which hospital services are reorganized in search of strategies to promote child well-being, an objective of sustainable development, demonstrating mothers' opinions about an intervention that is associated with this context is vital. (27) The innovative nature of this study is noteworthy, giving visibility to the pain of children with respiratory problems and a new intervention, well assessed by families, which was redefined from hygiene care to a non-pharmacological intervention, which can be integrated into nurses' practice, empowering the profession and its role in pain management.

For future studies regarding therapeutic bathing, we suggest understanding professional perspectives regarding the barriers and facilitators for its use in clinical practice and assessing efficiency. In this study, we worked with maternal opinions, who assessed the intervention as effective, a perspective that can enable its application in clinical practice with fewer impasses in acceptance by those involved in delivering the intervention.

Conclusion

This study demonstrated that mothers assessed therapeutic bathing as an effective intervention for pain relief. In their opinions, mothers make an analogy between bathing and "magic", due to the quick change in children's behavior after taking it, with transition from pain, agitation and irritation to pain relief and respiratory symptoms, comfort and numbness. These benefits were mutual, with impacts on mothers, who said they were irritated, stressed and felt helpless before bathing, reactions that opened up space for a feeling of inclusion, rest and satisfaction. Along these lines, bathing was seen as an innovative method for mothers, with its use recommended in clinical practice. All this recognition increases the recommendation strength of the intervention and demonstrates the potential of nurses in their role in relieving children's pain, moving towards comprehensive care, with family integration in care.

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Collaborations =

Souza DM, Fogaça VD, Carvalho JA and Rossato LM contributed to study design, data analysis and interpretation, article writing, critical review of relevant intellectual content and approval of the final version to be published.

References =

- World Health Organization (WHO). WHO Guidelines on the Pharmacological Treatment of Persisting Pain in Children with Medical Illnesses. Geneva: WHO; 2012 [cited 2023 Sep 20]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK138354/
- Wang X, Li Y, Mei X, Bushe E, Campbell H, Nair H. Global hospital admissions and in-hospital mortality associated with all-cause and virus-specific acute lower respiratory infections in children and adolescents aged 5-19 years between 1995 and 2019: a systematic review and modelling study. BMJ Glob Health. 2021;6(7):e006014.
- Carvalho JA, Souza DM, Domingues F, Amatuzzi E, Pinto MC, Rossato LM. Pain management in hospitalized children: a cross-sectional study. Rev Esc Enferm USP. 2022;56:e20220008.
- van Veelen S, Vuong C, Gerritsma JJ, Eckhardt CL, Verbeek SE, Peters M, et al. Efficacy of non-pharmacological interventions to reduce pain in children with sickle cell disease: a systematic review. Pediatr Blood Cancer. 2023;70(6):e30315. Review.
- 5. Shah P, Siu A. Considerations for neonatal and pediatric pain management. Am J Health Syst Pharm. 2019;76(19):1511–20.
- Souza DM, Yamamoto ME, Carvalho JA, Rocha VA, Fogaça VD, Rossato LM. Practice of immersion in hot water to relieve pain in neonatology: an integrative review. Rev Bras Enferm. 2024;77(1):e20230260. Review.
- Pedroso MC, Malik AM. Cadeia de valor da saúde: um modelo para o sistema de saúde brasileiro. Cien Saude Colet. 2012;17(10):2757-72. Review.
- Salvador Á, Crespo C, Barros L. Family management of pediatric cancer: links with parenting satisfaction and psychological distress. Fam Process. 2019;58(3):761–77.
- Eull D, Looman W, O'Conner-Von S. Transforming acute pain management in children: a concept analysis to develop a new model of nurse, child and parent partnership. J Clin Nurs. 2023;32(15-16):5230–40.
- Kanda K, Blythe S, Grace R, Kemp L. Parent satisfaction with sustained home visiting care for mothers and children: an integrative review. BMC Health Serv Res. 2022;22(1):295. Review.

- Souza VR, Marziale MH, Silva GT, Nascimento PL. Translation and validation into Brazilian Portuguese and assessment of the COREQ checklist. Acta Paul Enferm. 2021;34:eAPE02631.
- 12. Minayo MC. O desafio do conhecimento: pesquisa qualitativa em saúde. 14ª ed. São Paulo: HUCITEC; 2014. 406 p.
- Souza MA, Wall ML, Thuler AC, Lowen IM, Peres AM. The use of IRAMUTEQ software for data analysis in qualitative research. Rev Esc Enferm USP. 2018;52:e03353.
- Camargo JC, Albuquerque RS, Osawa RH, Correa EE, Lavieri EC, Néné M, et al. Self-care demands in water birth: a qualitative study. Acta Paul Enferm. 2023;36:eAPE02601.
- 15. Pérez Ramírez N, Nahuelhual Cares P, San Martín Peñailillo P. [Effectiveness of Watsu therapy in patients with juvenile idiopathic arthritis. A parallel, randomized, controlled and single-blind clinical trial]. Rev Chil Pediatr. 2019;90(3):283–92. Spanish.
- Alghadeer SM, Wajid S, Babelghaith SD, Al-Arifi MN. Assessment of saudi mothers' attitudes towards their children's pain and its management. Int J Environ Res Public Health. 2021;18(1):348.
- 17. Souza DM, Fernandes RF, Costa CT, Borghi CA, Rossato LM. From theory to practice: the inclusion of hospitalized children's families in painful procedures. Rev Esc Enferm USP. 2023;57:e20230152.
- Andersson V, Bergman S, Henoch I, Simonsson H, Ahlberg K. Pain and pain management in children and adolescents receiving hospital care: a cross-sectional study from Sweden. BMC Pediatr. 2022;22(1):252.
- Sabeti F, Mohammadpour M, Pouraboli B, Tahmasebi M, Hasanpour M. Health Care Providers' Experiences of the Non-Pharmacological Pain and Anxiety Management and Its Barriers in the Pediatric Intensive Care Units. J Pediatr Nurs. 2021;60:e110–6.
- Kammerer E, Eszczuk J, Caldwell K, Dunn J, Appelman-Eszczuk S, Dunn J, et al. A Qualitative Study of the Pain Experiences of Children and Their Parents at a Canadian Children's Hospital. Children (Basel). 2022;9(12):1796.
- 21. Institute for Patient- and Family-Centered Care (IPFCC). Partnering with Patients and Families to Design a Patient and Family-Centered Health Care System Recommendations and Promising Practices. Cambridge: IPFCC; 2008 [cited 2023 Sep 20]. Available from: https://www.ipfcc. org/resources/PartneringwithPatientsandFamilies.pdf
- Loureiro F, Antunes V. Instruments to evaluate hospitalised children parents' satisfaction with nursing care: a scoping review. BMJ Paediatr Open. 2022;6(1):e001568. Review.
- Mendoza BA, Fortier MA, Trinh LN, Schmid LN, Kain ZN. Factors impacting parental and child satisfaction in the perioperative setting. Paediatr Anaesth. 2021;31(9):932–43.
- Sanchez Cristal N, Staab J, Chatham R, Ryan S, Mcnair B, Grubenhoff JA. Child Life Reduces Distress and Pain and Improves Family Satisfaction in the Pediatric Emergency Department. Clin Pediatr (Phila). 2018;57(13):1567–75.
- McKiernan A, Carr A, O'Keeffe L, Butler E, Quinn C, Guerin S. Levels of satisfaction with children's respite services, parental coping and family functioning. Health Soc Care Community. 2020;28(2):568–75.
- 26. Gaab E, Steinhorn DM. Families' Views of Pediatric Palliative Aquatics: a Qualitative Study. Pain Manag Nurs. 2015;16(4):526–33.
- United Nations. Transforming our word: The 2030 agenda for sustainable development. United Nations; 2015 [cited 2024 Jan 31]. Available from: https://sdgs.un.org/2030agenda