

From invisibility to reality: pain management in children hospitalized for respiratory problems

Da invisibilidade à realidade: o manejo da dor de crianças hospitalizadas por agravos respiratórios

De la invisibilidad a la realidad: el manejo del dolor en niños hospitalizados por afecciones respiratorias

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ABSTRACT

Objective: to analyse pain management in children hospitalized for respiratory problems with pain during hospitalization. **Method:** This is an observational, cross-sectional, retrospective study conducted at a public teaching hospital in São Paulo, using the medical records of children hospitalized in the pediatric division in 2017. Data was collected in 2018 and subjected to descriptive and inferential analysis. **Results:** The medical records of 199 children with pain were analyzed, and 91.4% of them were found to have at least one prescribed pharmacological intervention, which 68.8% received; one child received a non-pharmacological intervention and 25.1% had their pain reassessed. The outcome of completing all three stages of pain management (22.1%) was associated with: children around two years older, those who received pharmacological intervention or had their pain reassessed and those with the NANDA nursing diagnosis 00132-Acute pain. **Conclusion:** pain management in children hospitalized for respiratory problems is undervalued in care practice.

Descriptors: Pediatric Nursing; Child; Respiratory Tract Diseases; Hospitalization; Pain Management.

RESUMO

Objetivo: analisar o manejo da dor em crianças hospitalizadas por agravos respiratórios com dor no contínuo da hospitalização. **Método:** estudo observacional, transversal, retrospectivo; conduzido em um hospital escola público em São Paulo, com prontuários de crianças hospitalizadas na divisão pediátrica em 2017. Os dados foram coletados em 2018, submetidos a análise descritiva e inferencial. **Resultados:** foram analisados os prontuários de 199 crianças com dor, sendo observado 91,4% delas com, no mínimo, uma intervenção farmacológica prescrita, recebida por 68,8%; uma criança recebeu uma intervenção não farmacológica e 25,1% tiveram sua dor reavaliada. O desfecho de realização das três etapas do manejo da dor (22,1%) foi associado a: crianças cerca de dois anos mais velhas, as que receberam intervenção farmacológica ou que tiveram a dor reavaliada e aquelas com o diagnóstico de enfermagem NANDA 00132-Dor aguda. **Conclusão:** o manejo da dor em crianças hospitalizadas por agravos respiratórios é desvalorizado na prática assistencial.

Descritores: Enfermagem Pediátrica; Criança; Doenças Respiratórias; Hospitalização; Manejo da Dor.

RESUMEN

Objetivo: analizar el manejo del dolor en niños hospitalizados por afecciones respiratorias con dolor durante todo el proceso de hospitalización. **Método:** estudio observacional, transversal, retrospectivo; realizado en un hospital escuela público en São Paulo, con expedientes médicos de niños hospitalizados en la división pediátrica en 2017. Los datos fueron recolectados en 2018, sometidos a análisis descriptivo e inferencial. **Resultados:** se analizaron los expedientes de 199 niños con dolor, observándose que el 91,4% de ellos tenían al menos una intervención farmacológica prescrita, recibida por el 68,8%; un niño recibió una intervención no farmacológica y el 25,1% tuvo su dolor reevaluado. El resultado de la realización de las tres etapas del manejo del dolor (22,1%) se asoció a: niños aproximadamente dos años mayores, aquellos que recibieron intervención farmacológica o que tuvieron el dolor reevaluado y aquellos con el diagnóstico de enfermería NANDA 00132-Dolor agudo. **Conclusión:** el manejo del dolor en niños hospitalizados por afecciones respiratorias está subvalorado en la práctica asistencial.

Descriptores: Enfermería Pediátrica; Niño; Enfermedades Respiratorias; Hospitalización; Manejo del Dolor.

INTRODUCTION

Hospitalized children often experience pain, with estimates varying between 20 and 95%, when dealing with painful procedures or acute pain related to pathology¹⁻³. A cross-sectional study of 1217 children and adolescents (newborns to 18 years old) in 15 urgent and emergency departments found that 53.3% had pain when the questionnaire was administered, 37.5% of whom had severe pain⁴.

Due to its high incidence, it has been considered a public health problem, with its assessment becoming the fifth vital sign and a quality indicator, and its relief a goal of the decade and a right for children^{5,6}.

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Pain management can be defined as cyclical stages, including assessment, pharmacological and/or non-pharmacological intervention, and reassessment; which must be interlinked with a genuine partnership between all those involved: child, family and health professional, with collaborative communication and the establishment of a safe environment⁷. However, these points do not guarantee that pain management is carried out in health services, and further research is needed. This study will focus on children hospitalized for respiratory problems.

Respiratory problems are the main cause of hospitalization in children⁸, with estimates of more than five million hospitalizations due to lower respiratory tract infections between 1995 and 2019, in children aged five to 19, with more than 87,000 deaths annually⁹.

Among the clinical symptoms, children tend to experience: upper airway obstruction; dyspnea; use of accessory muscles; intense cough; hemoptysis; throat and chest pain, lasting an average of one to two weeks^{1,6,10}. These symptoms can be interconnected and lead to the experience of intense pain, but pain is still an invisible symptom in the clinical practice of children with respiratory problems, considering that, among the symptoms, pain does not bring urgent repercussions, compared to dyspnea, for example.

Pain in children with respiratory problems can be classified as visceral nociceptive pain, with activation of pain receptors due to alterations in the respiratory tract, and is often acute, lasting less than three months⁶. Numerous consequences of the absence of pain relief have already been established in the literature, with impacts on biopsychosocial well-being, neurological development and the experience of chronic pain; increased length of hospital stay and the chance of readmissions^{2,7,11}.

Added to these aspects are the acute impacts that can be caused in children with respiratory problems, due to the expression of pain, with behaviors such as irritability and intense agitation, changes in physiological parameters, dyspnea and use of accessory muscles, which can lead to respiratory fatigue⁸.

At the same time, comprehensive pain management tends to reduce the incidence of clinical complications, length of hospital stay and use of resources, as well as increasing child and family satisfaction, with less long-term impact^{5,7,12}. However, despite all of the above, pain management in pediatric settings is still inconsistent and inadequate; and in the case of children with respiratory problems: a topic that has been little explored in the scientific literature. Thus, the following question arose: How is pain management being carried out in hospitalized children with respiratory problems, throughout the hospital stay?

The aim of this study was to analyze pain management in children hospitalized for respiratory problems with pain throughout hospitalization.

METHOD

This is an observational, cross-sectional, retrospective, quantitative study. This is a sub-project of the study "Pediatric pain management: a retrospective study", with the sample only focused on respiratory problems. The recommendations of the document Strengthening the reporting of observational studies in epidemiology (STROBE)¹³ were followed.

The study was carried out in a public secondary hospital in the city of São Paulo, using the medical records of children treated in the pediatrics division, which includes the following sectors: children's emergency room, pediatric inpatient unit and pediatric intensive care unit. In this study, we chose to analyze the continuum of hospitalization, without separating the children by the sectors in which they were treated.

The institution does not have a pain management protocol, only an instrument that systematizes the assessment using scales: Neonatal Infant Pain Scale (NIPS), for newborns to infants of up to two months; Face, Legs, Activity, Cry and Consolability (FLACC), for infants of two months to children of seven incomplete years and neuropaths; Wong-Faces Scale (FACES) for children over three years; Numerical verbal scale, for children over seven years; and the Comfort behavior scale (COMFORT-b) for children using sedatives. The assessment takes place every four hours, in the event of pain outside the standardized times, using the nursing notes.

We included the medical records of children aged between 28 days and 14 incomplete years, delimited due to the length of time they had been in the pediatric division, hospitalized in 2017, regardless of the sector of care, for a respiratory problem, a criterion delimited due to the invisibility of the pain of these children in the scientific literature, with at least one pain score, assessed by a scale, documented in the continuum of hospitalization, recorded in the aforementioned instrument or in the nursing note. In cases where the child had more than one hospitalization, the records of the most recent hospitalization were considered. Medical records that were unavailable due to use in outpatient consultations, readmissions, use by other researchers, or incomplete completion, with no information on pain assessment, were excluded.

Data was collected using the convenience sampling technique, analyzing all the medical records available over a period of one year. For the collection, an instrument was established by the researchers involved, after deliberation in the research group, containing variables characterizing the child, pain management and the systematization of nursing care. Specifically in the pain management stages, the assessment was conducted using the institutional instrument with the validated scales. Pharmacological interventions were prescribed by the average team: “at the doctor's discretion” (ACM) or “if necessary” (Y/N). Non-pharmacological interventions could be prescribed in the nursing prescription or carried out autonomously by the nursing team and documented in the medical records. The reassessment was documented in the nursing notes. In order to capture all the information, the selected medical records were read in full.

During hospitalization, the highest pain intensity score was collected, i.e. if the child had mild to severe pain during hospitalization, the highest intensity score (severe) was considered. In order to make data from different scales comparable, the highest score recorded was divided by the maximum value of the corresponding scale, respecting the variation of each instrument.

The dependent variable in this study was pain management, including assessment, intervention and reassessment, with the score being an independent variable that complements the discussion of the findings.

Data was collected from January to December 2018, with the database finalized in 2019. During this period, 1,728 hospitalizations were recorded. However, 477 records were excluded, with 1,251 records read in full, 762 of them for respiratory problems. Of the total, 481 children had a documented pain score, with 199 being children with respiratory problems, counted in the sample of this study. It is worth noting that no sample calculation was carried out for the data collection, and all the medical records available during the established period were collected.

The data was subjected to descriptive and inferential analysis using the Statistical Package for Social Sciences (SPSS®) software, version 21. For the descriptive analysis, percentiles, measures of central tendency (mean) and dispersion (Standard Deviation - SD) were used. For the inferential analysis, the continuous variables were tested for their distribution (Kolmogorov-Smirnov test) and a non-Gaussian distribution was observed. Thus, non-parametric tests were used to compare variables (Pearson's chi-squared test and Fisher's exact test), with a p-value of <0.05 (5%) being considered a statistical difference in a 95% Confidence Interval (CI).

The research protocol was approved by the Research Ethics Committee of the School of Nursing of the University of São Paulo and the Co-participating Institution, both in 2017. It is worth noting that, at the co-participating institution, upon admission, the children's guardians sign an agreement allowing the use of medical records in scientific research. In order to analyze the medical records, the main researcher signed a Term of Commitment, which guaranteed respect for the confidentiality of the information collected.

RESULTS

We analyzed the data of 199 children with respiratory problems and pain during hospitalization, as shown in Table 1.

The average age was 2.22 (+2.96) years. There was a predominance of male children (58.3%), with a clinical diagnosis of bronchiolitis (43.2%), diagnosed with a respiratory virus (n=65), such as respiratory syncytial virus (33.3%). The characterization of pain management is shown in Table 2.

All the children were assessed for pain at least once, with the FLACC scale being the most frequently used (83.4%). They all scored four points on average for pain. Among the children, 91.4% had at least one pharmacological intervention prescribed. However, only 68.8% received it for pain relief. Only one child received a non-pharmacological intervention, which was the application of local heat, and only 25.1% had their pain reassessed. The nursing diagnosis NANDA 00132- Acute pain, was classified at 20.6%, with the nursing activity: “Perform comprehensive pain assessment, including the site, characteristics, onset, duration, frequency, quality, intensity or severity of pain and precipitating factors”. Data related to pain management and its association with other variables are shown in Table 3.

Table 1: Characterization of participants (n=199). São Paulo, SP, Brazil. 2018.

Variable		n (%)	95%CI
Age (years)	$\mu=2.22(\pm 2.96)$; Min=0.05; Max=14.75; CI=1.85-2.68		
Hospitalization (days)	$\mu=4.44(\pm 4.84)$; Min=1.00; Max=27.00; CI=4.80-6.160		
Sex	Female	83 (41.7)	35.08-48.66
	Male	116 (58.3)	51.35-64.92
Baseline disease		38 (19.1)	14.21-25.15
Previous hospitalization	Children's Emergency Room	191 (95.9)	92.14-98.08
	Intensive Care Unit	17 (8.5)	5.33-13.33
Clinical diagnosis	Bronchiolitis	86 (43.2)	36.52-50.16
	Pneumonia	67 (33.7)	27.46-40.50
	Asthmatic crisis	34 (17.1)	12.46-22.96
	Subglottic stenosis	4 (2.0)	0.60-5.24
	Bronchopneumonia	3 (1.5)	0.31-4.54
	Viral croup (Laryngitis)	2 (1.0)	0.04-3.83
	Apnea	1 (0.5)	0-3.08
	Wheezing crisis	1 (0.5)	0-3.08
	Influenza	1 (0.5)	0-3.08
Respiratory viral panel	No viral collection	64 (32.1)	-
	Negative	70 (51.8)	43.49-60.11
	Respiratory syncytial virus	45 (33.3)	25.93-41.66
	Parainfluenza 3 virus	10 (7.4)	3.93-13.25
	Human rhinovirus	4 (2.9)	0.90-7.63
	Influenza virus	4 (2.9)	0.90-7.63
	Metapneumovirus	1 (0.7)	0-4.49
	Human adenovirus	1 (0.7)	0-4.49

Notes: μ =mean; Min=minimum; Max=maximum; CI=confidence interval.

Table 2: Characterization of children's pain management (n=199). São Paulo, SP, Brazil, 2018.

Variable		n (%)	95%CI
Pain score	$\mu=4.44(\pm 2.3)$; Min=1; Max=10; CI=4.13-4.75		
Pain assessment	NIPS Scale	19 (9.5)	6.13-14.5
	FLACC Scale	166 (83.4)	77-59-87.98
	FACES Scale	7 (3.5)	1.58-7.22
	Verbal Numerical Scale	18 (9.1)	5.73-13.92
	COMFORT-B Scale	0	0
Prescribed pharmacological intervention*	Dipyrone	168 (84.4)	78.7-88.84
	Paracetamol	57 (28.6)	22.80-35.30
	Ibuprofen	5 (2.5)	0.91-5.91
	Morphine	3 (1.5)	0.31-4.54
	Cetoprofen	7 (3.5)	1.58-7.22
	Ketorolac	5 (2.5)	0.91-5.91
	Tramadol	9 (4.5)	2.28-8.49
	Simethicone	2 (1.0)	0.04-3.83
Pharmacological intervention carried out		137 (68.8)	62.09-74.88
Non-pharmacological intervention	Documented	1 (0.5)	0-3.08
	Not documented	198 (99.5)	96.92-100
Pain reassessment		50 (25.1)	19.59-31.60
Nursing Diagnosis: Acute Pain		41 (20.6)	15.54-26.78

Notes: μ =mean; Min=minimum; Max=maximum; CI=confidence interval; *each child could have had more than one pharmacological intervention prescribed.

Table 3: Analysis of association between pain management and independent variables (n=44). São Paulo, SP, Brazil, 2018.

Variable		Pain management		p-value
		Yes (n=44)	No (n=155)	
Sex	Female	15 (34.1)	68 (43.8)	0.242*
	Male	29 (65.9)	87 (56.1)	
Baseline disease		8 (18.2)	36 (19.3)	0.861*
Previous hospitalization		44 (100)	0	0.228**
Clinical Diagnosis	Bronchiolitis	16 (36.3)	70 (45.2)	0.537**
	Asthmatic Crisis	8 (18.2)	26 (16.8)	
	Pneumonia	18 (40.9)	49 (31.6)	
	Wheezing Crisis	0	1 (0.6)	
	Bronchopneumonia	1 (2.8)	2 (1.3)	
	Subglottic stenosis	0	4 (2.9)	
	Influenza	0	1 (0.6)	
	Viral croup (Laryngitis)	0	2 (1.3)	
	Apnea	1 (2.8)	0	
	Negative	13 (48.1)	57 (52.8)	
	Respiratory syncytial virus	11 (25.0)	34 (31.9)	
	Parainfluenza 3	2 (7.4)	8 (7.4)	
	Human rhinovirus	0	4 (2.9)	
	Influenza	1 (2.8)	3 (2.8)	
Respiratory Viral Panel	Metapneumovirus	0	1 (0.6)	0.901**
	Adenovirus	0	1 (0.6)	
	Nursing Diagnosis: Acute Pain	18 (40.9)	132 (85.1)	
	Pharmacological intervention carried out	44 (100)	93 (60.0)	
	Non-pharmacological intervention carried out	0	1 (0.6)	
Pain reassessment		44 (100)	6 (3.8)	<0.001*

Note: *Pearson's chi-square test; **Fisher's exact test

The completion of the three basic stages of pain management (assessment, intervention and reassessment) was identified in 44 children (22.1%). A comparison between pain management and age showed that the children who received all three stages were around two years older than those who did not receive all three stages (3.31+3.88 years; CI=2.33-4.64 and 1.91+2.57 years; CI=1.55-2.37, respectively - $p=0.041$).

Pain management was associated with children who received pharmacological intervention ($p<0.001$), those who had their pain reassessed ($p<0.001$) and the NANDA nursing diagnosis 00132-Acute pain ($p<0.001$). The other variables showed no association with each stage of pain management and integration.

DISCUSSION

This study shows that pain management in children hospitalized for respiratory problems is still undervalued, considering that only 22.1% of the children went through all three stages. Starting with the assessment, this stage is crucial for identifying children's pain and, consequently, quickly establishing a care plan. Although challenging, there are numerous scales available for assessment and in this study all the children had their pain assessed by a scale^{6,14}. However, it is estimated that this assessment may have been influenced by the lack of documentation of professional performance in clinical practice, since out of 762 hospitalizations for respiratory problems, only 199 children had a documented pain score.

The scientific literature already recognizes that in clinical practice, pain assessment is carried out mechanically, even if instruments are available. Studies indicate that professionals don't carry out the assessment due to lack of time or, when they do, they don't use the scales, because they see the assessment parameters as subjective, using intuition, observation or asking the child's family member if there is any pain experience^{11,14,15}. When reflecting on this context in children with respiratory problems, there is the influence of overvaluing the respiratory clinical picture to the detriment of other signs that accompany it, such as pain, which adds to what has been previously indicated and contributes to an inaccurate assessment¹⁶.

In this study, only one diagnosis per child was documented, and bronchiolitis prevailed, with no statistical difference when compared to the dependent variable. However, it is worth considering that when there is a context with a combination of different conditions, such as pneumonia with pleural effusion, or bronchiolitis with pneumonia, the child's pain can be accentuated and greater attention should be paid¹⁰.

Approximately 70% of respiratory conditions are caused by a virus², as seen in this study of 65 children. A systematic review with meta-analysis of studies carried out on 103,210 children under five hospitalized for lower airway infections found that 38,355 had at least one respiratory virus¹⁷. It is estimated that this figure could be much higher, considering that many institutions do not collect viral panels as part of their hospital routine, as was seen among the participants in this study, with 32.1% of the children not having one.

The literature reinforces that children can have more than one virus, as seen in a cross-sectional study of 3,199 children up to 16 years old, with 1,624 positive for one, 210 for two, 28 for three and three for four respiratory viruses¹⁸. Here, although no cases of reinfection were detected, it is worth considering this sum of viruses and their influence on the experience of pain.

The main virus detected in this sample was the respiratory syncytial virus (33.3%), corroborating the scientific literature^{10,17,18}. A cross-sectional study showed that among 75,128 children hospitalized for respiratory problems, the respiratory syncytial virus was the most frequent in those under one year old (4,204 infants) and between one and two years old (2,777 children)⁸. Despite the higher prevalence of this virus already reported in children under one year old, this study found that the younger the child, the less likely they were to have pain management in all its stages ($p < 0.04$).

In relation to the child's age and pain management, devaluation may be associated with the historical construction that children who don't verbalize pain don't feel it like others and/or experience less systemic impact from unrelieved pain^{3,4}, which can influence the professional view and, consequently, lead to a lack of interventions. On the other hand, children under the age of one are more likely to be hospitalized for respiratory problems than others, because their immunity is still developing¹⁹, which increases the chance of experiencing pain not only because of the condition, but also because of the care team's manipulations, making it necessary to reframe this context.

Although this study was conducted before the COVID-19 pandemic, it is important to reflect on this context. Although the number of children infected with the virus is lower than adults, as is the rate of hospitalization and morbidity and mortality, pain (headache, pain in the throat, chest or abdomen) is present in the clinical picture²⁰. For future studies, we recommend investigating pain management during the pandemic period.

None of the medical records in this study documented the use of the Comfort-b scale, which should be used for sedated children who are frequently hospitalized in the ICU. The number of children with respiratory problems who are hospitalized in the ICU is high^{8,19} and is mainly caused by respiratory failure; they use numerous ventilation devices, such as invasive ventilation, and are subjected to invasive manipulations and procedures. Based on this, the likelihood of these children experiencing pain is high, but if they are under sedation, assessment is more challenging². The low use of this scale may be influenced by professional reports that the scale is long and subjective², which again leads to the devaluation of children's pain management.

Pain relief has been a right of hospitalized children since 1995²¹. To this end, the World Health Organization (WHO) recommends that intervention should be multimodal, with a combination of pharmacological and non-pharmacological interventions⁶. However, despite the recommendations, there is still a lack of translation of this knowledge into clinical practice. A cross-sectional study of 63 hospitalized children found that, in the last 24 hours assessed, 55.4% reported having felt some pain, but only 12.5% received a multimodal intervention; another aspect is that 15.5% did not receive any intervention⁵, which corroborates this study, in which 31.2% of the children did not receive any intervention.

The use of pharmacological interventions can be influenced by the fact that medications for children are used off-label, and professionals are wary of prescribing them. This is seen especially in the case of opioids, with the fear of causing respiratory depression, which can be accentuated in children with respiratory problems⁶. As for non-pharmacological interventions, there is a professional belief that they are not effective in relieving pain, leading to low use^{14,15}, as seen in this study with their use in one child.

It is expected that after an intervention has been carried out, children will be re-evaluated¹¹, but only 25.1% had this stage carried out. Here, pharmacological intervention and pain reassessment were associated with comprehensive pain management ($p < 0.001$).

Partnership with the family can be a predictor of pain management. In practice, it has been observed that professionals tend to listen to parents when assessing pain²². However, they often have little knowledge of the subject, placing their personal perceptions of pain as the basis for assessment^{7,15,23}. Family education is necessary as we move towards pain management, but it is worth reflecting that the family should not be held responsible as the agent of the process; that responsibility lies with the health professional.

In this sample, 20.6% of the children had a documented nursing diagnosis and intervention associated with pain management ($p < 0.001$). This finding highlights the importance of the nursing process as an ally to the clinical practice of the nursing team in the search for comprehensive pain management^{7,24}, and investments need to be made so that its importance is recognized in care.

The stages of pain management can be influenced by the health professional's knowledge. A cross-sectional study of 292 nurses found that 74.7% had insufficient knowledge and an inadequate attitude towards pain management in children¹⁴. This data is worrying and may be associated with professional training, as seen in another cross-sectional investigation with 203 nurses, where 95.6% reported never having received training in pain management²⁵.

However, knowledge is only one of the points that may be associated with the invisibility of pain management. In this study, the co-participating institution is set up as a teaching hospital, where professionals should be engaged in ensuring qualified care for children, teaching students in this process.

Despite the absence of a pain management protocol, there is a tool for systematizing and implementing the assessment of pain as the fifth vital sign, which should guarantee an assessment and sensitize professionals to the subsequent steps. The low number of documented non-pharmacological interventions is noteworthy, as this may be under-represented by the tendency of professionals to value only drug interventions and not to use or document the use of non-pharmacological interventions.

The devaluation of pain management can be seen as a deviation from professional ethics, since there is evidence, some of which has already been integrated into the professional routine, but which is still not widely disseminated. The problem with pain management may go beyond knowledge and become part of professional attitudes, which are still inconsistent with the ethical values of the health professions.

Strategies to change this context should be considered. To this end, three steps are recommended: 1) Assessing the current state of pain management, with this study fitting into this context; 2) Identifying the gaps and barriers to pain management and 3) Conducting an implementation study^{11,26}.

One possible strategy is training, as seen in a quasi-experimental study with 37 nurses, which had a significant impact on knowledge and performance in pain management²⁷. However, regardless of the strategy, constant updates and audits are recommended to ensure that implementation takes place.

Limitations of the study

Limitations of this study are the absence of data on the hospitalization unit at the time of the pain experience and data on the ventilation device used, which could enrich the discussion of the findings, as well as the carrying out of a sample calculation, which could indicate the representativeness of the sample in the population. In addition, data dependence on professional records, which may not be a true reflection of what happens in clinical practice.

However, this study provides relevant data which shows that the devaluation of pain management in children hospitalized for respiratory problems is a reality and should be highlighted.

In future studies, it is recommended that prospective protocols be carried out to assess pain management in children with respiratory problems at the bedside, as a true reflection of care, as well as qualitative research to understand the perceptions of professionals regarding pain management in this profile of children.

Studies that look at the place of hospitalization as an independent variable, with a focus on the emergency room and paediatric ICU and the translation and exchange of knowledge are still needed, in order to implement the evidence already available in clinical practice, giving new meaning to a context of invisibility, making pain important, visible and better managed.

CONCLUSION

This study showed that pain management in children with respiratory problems is undervalued, as all three stages were carried out in only 22.1% of cases.

Specifically, regarding each stage, all the children were assessed for pain using a validated scale, 91.4% had a pharmacological intervention prescribed, but only 68.8% received it for pain relief. Only one child received a non-pharmacological intervention and 25.1% had their pain reassessed.

Pain management was associated with children who were around two years older, who received a pharmacological intervention, who had their pain reassessed and who received the NANDA nursing diagnosis 00132- Acute pain.

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Authors' contributions

Conceptualization, D.M.S., J.A.C. and L.M.R.; methodology, D.M.S., J.A.C. and L.M.R.; software, D.M.S.; validation, L.M.R.; formal analysis, D.M.S.; investigation, D.M.S., D.F.O., M.L.L.M.S., J.A.C. and L.M.R.; resources, L.M.R.; data curation, J.A.C.; manuscript writing, D.M.S., D.F.O. and M.L.L.M.S.; writing – review and editing, D.M.S., D.F.O., M.L.L.M.S. and L.M.R.; visualization, J.A.C.; supervision, L.M.R.; project administration, L.M.R. All authors read and agreed with the published version of the manuscript.