

## Assessment and management of chronic oncologic pain in a pediatric inpatient unit\*

Avaliação e manejo da dor oncológica crônica em unidade de internação pediátrica

Evaluación y manejo del dolor oncológico crónico en una unidad de internación pediátrica

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**Abstract: Objective:** to understand the complexity of the assessment and management of chronic oncologic pain in hospitalized children. **Method:** qualitative study based on Complexity Theory and Grounded Theory. A total of 21 health professionals participated in the research. Semi-structured interview and non-participant observation were used to collect the data. The analysis followed the coding steps. **Result:** the pain assessment performed by professionals is based on the relative's report, the child's report and the observation of the child's behavior. Analog color scale, face scale and numerical scale were used. Pharmacological analgesia is the medical prescription; and, in non-pharmacological, ludic aspects, conversation, massage, bathing, warm or cold compress and comfort promotion are performed. **Conclusion:** the assessment and management process of chronic oncologic pain in hospitalized children requires that health professionals have technical and scientific preparation to deal with objective and subjective aspects that involve this care.

**Descriptors:** Pediatric Nursing; Chronic Pain; Pain Measurement; Pain Management; Neoplasms

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**Resumo: Objetivo:** compreender a complexidade da avaliação e do manejo da dor oncológica crônica da criança hospitalizada. **Método:** estudo qualitativo baseado na Teoria da Complexidade e na *Grounded Theory*. Participaram da pesquisa 21 profissionais de saúde. A entrevista semiestruturada e a observação não participante foram usadas para coletar os dados. A análise seguiu as etapas de codificação. **Resultado:** a avaliação da dor pelos profissionais está embasada no relato do familiar, da criança e na observação do comportamento da mesma. Utilizaram-se escala analógica de cores, escala de faces e escala numérica. A analgesia farmacológica é a prescrição médica; e, na não farmacológica, realizam-se lúdico, conversa, massagem, banho, compressa morna ou fria e promoção de conforto. **Conclusão:** a avaliação e o manejo da dor oncológica crônica da criança hospitalizada solicitam dos profissionais de saúde preparo técnico e científico para lidar com aspectos objetivos e subjetivos que envolvem esse cuidado. **Descritores:** Enfermagem Pediátrica; Dor Crônica; Medição da Dor; Manejo da Dor; Neoplasias

**Resumen: Objetivo:** comprender la complejidad de la evaluación y el manejo del dolor oncológico crónico en niños hospitalizados. **Método:** estudio cualitativo basado en la Teoría de la Complejidad y la Teoría Fundamentada. La investigación abarcó 21 profesionales de la salud. Para recoger los datos, se utilizó la entrevista semiestructurada y la observación no participante. El análisis siguió los pasos de codificación. **Resultado:** la valoración del dolor por parte de los profesionales se basa en el informe del pariente y del niño, así como la observación del comportamiento del niño. Se utilizaron escala de color analógica, escala facial y escala numérica. La analgesia farmacológica es la prescripción médica; y, en la no farmacológica, se realizan ludicidad, conversación, masajes, baños, compresas calientes o frías y promoción del confort. **Conclusión:** la evaluación y el manejo del dolor oncológico crónico en niños hospitalizados requiere que los profesionales de la salud tengan una preparación técnica y científica para abordar los aspectos objetivos y subjetivos que involucran este cuidado. **Descriptor:** Enfermería Pediátrica; Dolor Crónico; Dimensión del Dolor; Manejo del Dolor; Neoplasias

## Introduction

In Brazil, cancer in children and adolescents (aged from 0 and 19 years) is considered rare when compared to tumors in adults, as it corresponds to between 2% and 3% of all malignant tumors, standing out as the most important cause of death in developing countries.<sup>1</sup> In pediatric oncology, the literature highlights pain as one of the most prevalent and distressing symptoms experienced by children.<sup>2-4</sup> Its occurrence may be related to cancer itself and/or to the diagnostic and therapeutic procedures to which children are subjected during treatment.<sup>5</sup> A study revealed that 52% of children with leukemia had chronic pain throughout their treatment, and the most common areas of pain were: back (8%), legs (8%), stomach (8%), chest (6%), arms (4%) and head (4%).<sup>3</sup>

The literature underlines that the presence of chronic pain in children with chronic disease, for example, cancer, can negatively affect various aspects of childhood life, including physical activity, school attendance, sleep patterns, family interaction and mood, among other aspects.<sup>5</sup> In this regard, the aforementioned study identified that children who manifested chronic oncologic pain had difficulties in the extracurricular (16.7%), domestic (14.6%), social (12.6%), sleep (12.6%) and academic (12.5%) contexts.<sup>3</sup>

Therefore, it is important that the assessment and management process of chronic oncologic pain be carried out based on a thought that cover the multidimensional nature of pain, the complexity of human relationships and teamwork. In this context, the Complexity Theory emerges as a possibility to understand the challenge that involves the care of children hospitalized with chronic oncologic pain, since it takes into account the risks, uncertainties, order and disorder that permeate this whole process.<sup>6</sup> In this setting, it is known that it is important for the health professional to consider the multidimensionality of chronic oncologic pain and manage this condition based on strategies that take into consideration the child's age, culture, and clinical condition.<sup>5</sup>

For this reason, it is emphasized that understanding the complexity involved in the assessment and management of chronic oncologic pain is necessary, since such activities are not only based on objective and technical elements, but also encompass interactive, subjective aspects, teamwork and all necessary measures to mitigate child and family distress. Accordingly, the following research question emerges: how do health professionals assess and perform the management of chronic oncologic pain in hospitalized children?

Based on the above, this research innovates by addressing the interactive aspects and meanings that permeate the assessment and management of chronic oncologic pain, under the context of the complexity of the work of the multiprofessional health team, since, regarding the theme, the literature has focused predominantly on technical issues of assessment and

professional and/or parental management of this phenomenon.<sup>3,7-10</sup> Therefore, the objective of this study is to understand the complexity of the assessment and management of chronic oncologic pain in hospitalized children.

## Method

Qualitative approach study, developed based on the methodological framework of Grounded Theory (GT)<sup>11</sup> and the theoretical framework of Complexity Theory from the perspective of Edgar Morin.<sup>6</sup>

The data were collected by the main researcher through semi-structured interviews recorded in audio and non-participant observation, with 21 health professionals from a Pediatric Inpatient Unit (PIU) of a public hospital, in Rio de Janeiro, Brazil, specialized in the treatment of hematological diseases. Data collection took place between August 2014 and June 2015, in the PIU facilities, with an average duration of 20 minutes. PIU is located on the eighth floor of the institution and has 13 beds.

The study participants were defined using the theoretical sampling resource whose objective is to search for people and facts that help the researcher to make the elaborated categories dense.<sup>11</sup> The first sample group was composed of seven nurses, since they are the professionals responsible for the nursing care management. The initial analyzes of the interviews conducted with nurses made the importance of teamwork evident, highlighting the interdependent relationship among those involved in child care. Subsequently, based on this understanding, seven nursing technicians were interviewed in order to understand their participation in the assessment and management of chronic oncologic pain, whereas, within the context of the nursing team's work, they are the professionals involved in direct child care. Given the interdependent relationship between nursing work and other professionals, seven

more health professionals belonging to other professional classes were interviewed, namely: two physicians, two physiotherapists, one psychologist, one social worker and one pharmacist.

All participants were recruited by direct contact and met the inclusion criteria: having a minimum experience of one year in the care of oncologic children and that same period of professional link with the institution. Health professionals who were on vacation or on leave during the data collection period were excluded. It should be underlined that the targeting for the other sample groups happened with the agreement of the Research and Ethics Committee (REC).

The interviews with the participants of the first sample group had the following guiding question: how do you assess and manage the chronic oncologic pain of hospitalized children? For the participants of the second and third groups, the guiding questions were: how do you take care of children with chronic oncologic pain? What meaning do you attribute to teamwork in caring for children with chronic oncologic pain? Due to the methodological resource known as theoretical sampling, the guiding questions developed for the second and third groups of the sample emerged from the initial assumption of the importance of teamwork and the interdependent relationship in interprofessional work.

Non-participant observation totaled 54 hours, being performed on five occasions during the day and used in order to understand in practice the meanings that guide attitudes, behaviors, (re) actions and interactions established among health professionals in the care of children with chronic oncologic pain.

The comparative type analysis was performed simultaneously with the collection, which is a characteristic of the method. The completion of data collection in each sample group was determined by the use of theoretical saturation. The interview data initially went through an open-type coding, with line-by-line analysis, generating preliminary codes that, grouped by similarities, gave rise to conceptual codes, and then they were compared to each other generated subcategories and categories.<sup>11</sup>

A short time later, axial coding made it possible to relate the subcategories to each other, thus determining their properties and dimensions. Finally, in the selective coding, from the refinement of the concepts that emerged, the central phenomenon of the study was defined. In all of these coding steps, memos and diagrams were also used as important analytical tools.<sup>11</sup> Finally, the results of this research were validated between the months of September and October 2016, with the participation of five judges, three of whom Nursing researchers with expertise in Grounded Theory and two nursing assistants from the first sample group of the present study.

The research was conducted according to the ethical standards required by Resolutions 466/2012 and 510/2016. Accordingly, it obtained approval from the REC of the institution where the study was developed, on 15/07/2015, under opinion number 355/14, CAAE 32795514.8.3001.5267, and from the REC of the proposing institution, on 10/03/2014, under opinion number 816.736, both having taken place in 2014. All participants signed the Free and Informed Consent Form. The statements of nurses are identified by the letter E, those of the nursing technicians by the letter T, those of the physicians by the letter M, those of the pharmacist by the letters FC, those of the psychologist by the letter P, those of the physiotherapists by the letters FS and those of the social worker by the letters AS (as per their acronyms in Portuguese). All are followed by a number that refers to the order of the interviews in each sample group (E1, T1, M1).

## Results

The use of Grounded Theory, as a qualitative research method, allows the development of conceptual categories that, when related to each other, are able to explain the phenomenon of study.<sup>11</sup> This analytical relationship gave rise to the central phenomenon “Nursing care management for hospitalized children with chronic oncologic pain: an experience of multiple interactions”. This article presents the category: assessment and management of chronic

oncologic pain, which was composed of four subcategories: needing to work as a team; interacting with children and their relatives; meaning the (re) assessment of chronic oncologic pain; and describing the management of chronic oncologic pain.

In the subcategory “needing to work as a team”, it was understood that this type of work is recognized by the participants as necessary, since the child needs to be cared for in the set of his/her needs:

*I think the work of the multiprofessional team is fundamental because the child is seen holistically. (T6)*

*The child with chronic oncologic pain needs to be cared for by all professionals [...] there is not only nursing staff, the physician. It is each in its own peculiarity. (FC3)*

*When we work as a team, things flow better. In fact, you can't address health separately. (AS7)*

*Teamwork is extremely important for any type of patient and each has its role. There is no point in the doctor wanting to solve everything on his own, then he will not be able to assess, prescribe, reassess. (M1)*

Teamwork enables nurses to act more safely, avoid damage, iatrogenic conditions, and manage disorders:

*I will need to talk to the physiotherapy team to act better on that limb affected by chronic oncologic pain [...] I need the physiotherapist's eyes to manage and understand the limits of movement of that limb affected by pain. (E1)*

*Commonly, I have to talk to other professionals, like the pharmacist, so that we can speed up the process and resolve the lack of medication as quickly as possible. (E2)*

*When the situation is very complicated, I try to hold a meeting with the social service, with the CCIH [Comissão de Controle de Infecção Hospitalar, which can be translated into Commission for the Control of Hospital Infection] and with the medical leadership. We address treatment, access, rights and duties of the caregiver. (E5)*

It is noted that, for the assessment and management of chronic cancer pain, multiple interactions among health professionals, children and their relatives are necessary. In this regard, in the subcategory “interacting with children and their relatives”, the importance of the child’s relative in the hospital context and the difficulty of some professionals in interacting with this care agent were revealed:

*The presence of the relative is essential, because it is the child’s link. If the mother is absent, the child is not comfortable with us. (E3)*

*Parents are key agents. We welcome these parents so that they can have an understanding of the diagnosis so that, based on that understanding, they can pass on the meaning to the child. (P6)*

*Sometimes, our difficulties here are related to those responsible, as they think that the medication and physiotherapy will eliminate the child’s pain. (FS5)*

*There are mothers who are totally easy to deal with, but there are mothers who are difficult. (T4)*

On the other hand, in the context of teamwork, health professionals reported having an affective relationship and without interactive difficulties with the hospitalized children with chronic oncologic pain, a fact observed during non-participant observation:

*I can have a good interaction with the child [...] I can talk, I can see when the child does not want to be examined, when the child*

*is upset about something; there is a sort of psychology that I use in the interaction. (M2)*

*My interaction with the child is nice. (E6)*

*Here, at the hospital, we take care of the child with as much affection as possible. (T5)*

*I don't have much difficulty in interacting with the child. (FS4)*

Interactions with children and their relatives favor the assessment of chronic oncologic pain more effectively. In this regard, in the subcategory “meaning the (re) assessment of chronic oncologic pain”, it was understood that pain assessment and reassessment are important actions to reduce its impact on the child’s quality of life:

*This primary assessment is very important, as well as reassessment, because the oncologic child suffers a lot, besides the family and the professionals. (E6)*

*You have to start from the understanding that chronic oncologic pain is a nuisance for the child and that it will hinder the child’s quality of life and its treatment as a whole, so it needs to be always assessed. (E7)*

*Pain assessment is very important because it is from there that you observe the child’s clinic status, the cause of the pain. You examine the patient as a whole, and the function is to intervene immediately to end the child’s problem by alleviating his/her suffering. (M2)*

A comprehensive assessment of chronic oncologic pain includes the identification of its origin and cause, an action carried out not only by the nurse, but also by other health professionals. In this process, health professionals have instruments, which are used to know the pain intensity:

*We first assess the cause of the pain, if there is any infection associated. (M2)*

*First, we take into account the cause of oncologic pain, since here we have those children with chronic oncologic pain due to specific metastasis in a given region. (FS5)*

*In order to assess pain, we rely on analog color, numeric and face scales. (E5)*

In the context of teamwork, the child's and relative's report is appreciated by the psychologist in his/her assessment of pain. This means that qualified listening is essential to grasp the demands of this binomial:

*My pain assessment, as a psychologist, involves listening to the child because, in the sickle cell patient, there is chronic pain that is physical and is easy to perceive, as the patient cries out in pain. In oncologic patients, after the child understands the full meaning of his disease, chronic pain goes beyond. (P6)*

The involvement of the family in the assessment of chronic oncologic pain was considered by health professionals as an important action strategy. The non-participant observation revealed that health professionals actively listen to the children's and relative's report about the pain experience, a fact that reinforces the following statements:

*I support myself a lot on these three bases: the child's face, the child's report, and the caregiver's report [...]. I consider the caregiver's report very important because the caregiver lives with this child and they know the child much more than I do. (E2)*

*I think it's important because mothers are the ones who most deal with them [children] and they know their children, so I think this report is important. (T1)*

*In infants, the mother is extremely important to identify pain. (M1)*

The reassessment of chronic oncologic pain was considered necessary, given its importance in revealing the child's response to the adopted therapy:

*It [reassessment] is of utmost importance. If you don't reassess, how will you know if the child is still in pain? For example, you did a morphine dose, if you don't reassess, how will you know if the child has improved?(E2)*

*The reassessment is done so that we can assess if the drug that is being regularly used is having the desired effect and if we can add some more care, not only pharmacological, but trying to intervene in some other way. (E1)*

Some nursing professionals expressed difficulties in (re) assessing pain, especially when the child is unable to verbalize it:

*Sometimes, the pain that the mother says the child is feeling is not always the pain that the child is really feeling and you have to know how to differentiate these things. (E4)*

*When children are older and able to verbalize, the assessment is more reliable. Nevertheless, when not, this assessment is very complicated. (T3)*

The pain assessment process implies the registration of its characteristics in the child's medical record, favoring the follow-up of its clinical evolution and professional support:

*Registration gives us the basis. It's our support. It's what shows the evolution of care, whether the child is improving or not. (E5)*

*The record is important because, otherwise, how will you get support if you didn't write it down?(T4)*

The assessment of chronic oncologic pain must precede its clinical management. In the subcategory "describing the management of chronic oncologic pain", it was found that

pharmacological management is important and that the drugs are prescribed by the physician, who follows the analgesic ladder of pain:

*Pharmacological therapy is very important for this patient; then it has to exist because the patient cannot be in pain and it has to be in a rational way. (FC3)*

*If it's a weak pain, we use a less potent analgesic. If it's a more intense pain, we use an opioid. (M1)*

*If he is not improving with basic analgesia, such as dipyrrone, we start to use a stronger analgesia, as is the case of Tramal®, until we get to the morphine. We will stagger the drugs. (M2)*

*We started with the weakest painkiller until get the strongest. (T2)*

Non-pharmacological analgesia is also developed by health professionals. They develop it through ludic aspects (play), conversation, massage, bathing, warm or cold compresses and comfort promotion (proper positioning, stretching), also identified during non-participant observation:

*Depending on the child's situation, I will adapt the child to the bed, I will provide comfort, I will massage and I will give a bath. (E1)*

*I use ludic aspects to take the focus off suffering because, when we play, they often forget about pain [...] ludic is my biggest strategy here. (E2)*

*Depending on the child's status, the medication did not have much effect and you end up having to go to a more psychological part, try to talk to the child, make the environment as calm as possible. (E4)*

*Depending on the child's pain, we make a bag of hot water or ice. (T6)*

*I work with the most global stretching, better positioning on the bed, and I talk to the child [...] there is pain that we cannot work physically; thus, it has to be managed on the basis of conversation and comfort, as you perform a simple activity, a lower limb stretching, she already reports relief [...] if the cause is physical, neuromuscular, if the cause is on the neuropathic part, a compression, a nerve malnutrition that is leading to that tingling sensation [...] we work with neural mobilization to work on nerve irrigation, we check the child's hydration because all this helps, it is not a unique approach. If there is pain, then I will use heat or cold. (FS5)*

*We play with the child, so we play [...] it's also a way for her to get out of that moment of sadness and illness, stuck in an inpatient unit, and become able to go beyond a little, be happy, be able to fantasize, as well as to bring the ludic universe. (P6)*

It should be underlined that the use of pharmacological and/or non-pharmacological analgesia requires health professionals to have knowledge and skills to act safely, thus favoring relationships of trust with their peers, with children and their relatives.

## **Discussion**

This study reinforces that the assessment and management of chronic oncologic pain in hospitalized children require health professionals to work in a team to meet the multiple needs of children and their families. Thus, the interprofessional relationship is an essential element for pain assessment and management, since it makes possible a care that encompasses the physical, spiritual, social and psychological components of chronic oncologic pain.

Teamwork evokes the systemic or organizational principle of Complexity Theory, where it is understood that the organization of a whole includes new qualities or properties in relation to its parts. Equally, the whole is less than the sum of its parts whose qualities are inhibited by the organization of the set,<sup>6</sup> i.e., teamwork gives professional care new properties when carried

out effectively, while enabling the articulation of disciplinary knowledge, favoring comprehensive care.

The presence of the child's relative, often represented by the maternal figure, was characterized by health professionals as essential, but some expressed difficulties in preserving this relationship. Despite this fact, studies reveal that the occurrence of conflicts between health professionals and family members of hospitalized children is common, since this definition of roles is not clear for both parties.<sup>12-13</sup> Nonetheless, it is important for the health professional to appreciate his/her relationship with the relative of the hospitalized child, given that the latter plays a facilitating role in the pain assessment and management process, especially in situations where the child cannot verbalize this phenomenon.<sup>14-15</sup>

It is understood that the family is a unit of human complexity, where child care is concentrated. It is a very strong biological, psychological, cultural and social cluster, capable of influencing child behavior and development.<sup>6</sup>

Concerning pain assessment, regardless of its cause, it is understood that it is a complex and continuous process, being a prerequisite for its correct management.<sup>16</sup> The participants in this investigation assessed chronic oncologic pain based on in three measures: child's report, observation of his/her facial, and behavioral expression and relative's report. The literature highlights that self-reporting, when possible, is considered the ideal way to assess pain in children, since it is the most reliable measure of the presence and severity of pain. However, it also points out that self-report scales are considerably complex for preschoolers.<sup>17</sup>

Regarding the involvement of the family in care relationships, a survey conducted in Israel showed that 90% of nurses in a pediatric unit reported that it is important to involve the family in the assessment process of the pain of hospitalized children; however, in practice, only 34% reported their involvement in this process. Most nurses reported assessing pain based on their own perception (89%), the children's self-report (86.5%) and their crying (79%).<sup>18</sup>

Although relative's report is important in the pain assessment, it is necessary that nurses and other health professionals know how to ponder the real intensity of this condition in the child, whereas the literature shows divergences among the perceptions of parents, their own children and health professionals. Regarding the above, a study identified that, when comparing the assessment of pain intensity made by physicians, children and their relatives, using the numerical scale, the proportion of agreement between children and physicians was 14.6%; between physicians and family members, it was 15%; and between children and their relatives, it was 40.1%.<sup>19</sup>

For this reason, it is imperative that health professionals are properly qualified and prepared for a correct pain assessment. This involves not only knowing how to effectively use the instruments available in the literature, but also educating the senses for a more comprehensive perception of the child's pain experience, recognizing, however, the possibility of dealing with errors and illusions. In Complexity Theory, it is understood that perception is a cerebral translation and reconstruction of stimuli or signals encoded by the senses. This results in the possibility of errors, including intellectual ones, which are conditioned by the perception.<sup>6</sup>

The assessment process of chronic oncologic pain includes recording, in the child's medical record, its characteristics and the interventions performed by the professional, in a legible and complete way. Nevertheless, studies point to the need for advances in pain records and underline professional notes as necessary, as they help to maintain patient safety.<sup>20-21</sup>

Based on the results, it is possible to understand that the management of chronic oncologic pain is performed by nurses and other health professionals through pharmacological and non-pharmacological analgesia. Regarding pharmacological analgesia, the participation of the following professionals is highlighted: physicians, nurses, nursing technicians and pharmacists. In this regard, the literature reveals that the multidisciplinary approach based on pharmacological and non-pharmacological therapy for the management of acute and chronic

pain results in an effective improvement in the quality of life of the pediatric population with a potential reduction in dependence on opioids.<sup>22</sup>

Currently, it is recommended that the pharmacological analgesia of children with cancer undergoing persistent pain treatment is based on two stages: for mild pain in children older than three months, paracetamol and ibuprofen are presented as first-line drugs. For the analgesia in children with moderate to severe pain, opioids such as low morphine doses should be considered the first choice. For children under three months, paracetamol is the only option.<sup>5</sup>

In this sense, a study found that non-opioid drugs were more used (45%) than opioids (32%) in the pain management in children with advanced cancer.<sup>2</sup> On the other hand, it is underlined that opioids are often the medications most used in children with chronic oncologic pain or persistent pain.<sup>5</sup> Corroborating the above, an integrative review identified that opioids are the most used drugs in the oncologic pain management, and it is up to nurses to develop care in their administration regarding dosage, indications, compliance with schedules, and guidance to the nursing staff.<sup>23</sup>

Among the opioids available are: morphine, tramadol, oxycodone, methadone, fentanyl, among others. Its availability in developed countries is satisfactory, while its access in developing countries is inadequate. Although it is widely used in the oncologic pain management, as evidenced, a review study that aimed to assess the efficacy and adverse events of opioids in the oncologic pain management in children and adolescents aged from 0 and 17 years identified that there is no evidence of a randomized clinical trial that support or refute its use in this age group, given that the tests focus on adults.<sup>24</sup>

Regarding non-pharmacological analgesia, it was understood that the health professionals in this study develop massage, bathing, conversation, preparation of the environment - in order to provide comfort -, warm or cold compress, bed positioning, as well as ludic activities. In this regard, an integrative review study identified that, among the physical

and psychological interventions used in the non-pharmacological oncologic pain management in the pediatric context, are aromatherapy, art therapy, distraction, hypnosis, physical activity, positioning, massage and multimodal cognitive-behavioral.<sup>2</sup>

The use of non-pharmacological analgesia strategies in the management of chronic oncologic pain highlights its multidimensional and complex aspect, a fact that requires from health professionals knowledge and practices that transcend their physical dimension. In this setting, the concept of total pain emerges in the literature as a fundamental principle of palliative care, seeking to improve the quality of life of patients and relatives who face a health condition that threatens the continuity of life.<sup>25</sup> Therefore, total pain leads us to think about the different aspects of life affected by chronic oncologic pain, namely: physical, psychological, social, and spiritual, a perspective aligned with the assumptions of non-pharmacological analgesia and Complexity Theory.<sup>26</sup>

Regarding the above, it is admitted that considering non-pharmacological analgesia as a possible action strategy to mitigate chronic oncologic pain in hospitalized children means breaking with the exclusion and segregation paradigm among different knowledge and subjects. From the perspective of complexity, there is a need for an awareness that, based on the connections, cooperation and solidarity among the various therapeutic knowledge and practices, it is possible to reform our thoughts, seeking a new paradigm: the complexity paradigm, which is based on articulation, connection among the parts, the whole and its context.<sup>6</sup>

This study has some limitations, such as the fact that it presents only the perspective of health professionals on the assessment and management process of chronic oncologic pain in hospitalized children. Considering that the results revealed that family members and children are also involved in this activity, there is a need for studies that investigate the perspective of these participants.

## **Conclusion**

The results of this study made it possible to understand that the assessment and management of chronic oncologic pain in hospitalized children are complex activities that require from health professionals a myriad of actions and interactions, permeated by objective and subjective aspects. Pain assessment is performed by health professionals based on the child's report, relative's report and observation of the child's behavior. To that end, the following assessment instruments are available in the institution: analog color scale, numerical scale and face scale.

Pain management is developed through pharmacological and non-pharmacological analgesia. The first follows the prescription of the medical staff, which considers the analgesic ladder, while the second is performed by other health professionals. In this context, the following non-pharmacological strategies are used: ludic aspects, conversation, massage, bathing, warm or cold compresses and comfort promotion.

It should be underlined the importance of teamwork and the registration of information about pain assessment and management in the child's medical record, a fact that allows the clinical evolution of pain to be followed-up, in addition to providing support to the professional in relation to the provided care. Concerning the implications for the health care practice, the results showed the need for professionals to establish interaction and action strategies that favor teamwork and a good relationship with children and their relatives, in addition to pointing out guidelines for assessment and management of chronic oncologic pain. Moreover, the need for further studies on the subject should be underlined, in order to deepen the theoretical discussions on the object of study.

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