

The need for the introduction of therapeutic toys in the perioperative period

La necesidad de la introducción de juguetes terapéuticos en el período perioperatório

A necessidade da introdução do brinquedo terapêutico no perioperatório

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Abstract

The aim was to describe the benefits of using the therapeutic toy in the perioperative period, to demonstrate which toys were part of and helped to reduce stress and anxiety in the child, and the recognition of the benefits of the toy in the perioperative period and the importance of the nursing professional in the development -involvement of therapeutic play. The study methodology was a literature review, using references made available in the electronic databases BIREME, PubMed and SciELO. It was demonstrated which toys were part of the intervention, both as a therapeutic toy and as a distraction, in addition to the allied toys in reducing anxiety, such as the toy car instead of a stretcher, in addition to other toys already available for perioperative intervention, such as puppets, books with tales of surgeries, theaters, and educational hospital materials. It was seen that technology was the most witnessed and has been a promising reality in terms of perioperative intervention. It demonstrated that although the diversity of available technologies in favor of perioperative preparation is equal to the pre-medication used preoperatively, taking advantage since the medication has side effects.

Descriptors: Pediatrics; Preparation; Perioperative; Therapeutic Toy; Child.

Resumen

El objetivo fue describir los beneficios del uso de juguetes terapéuticos en el período perioperatorio, demostrar qué juguetes formaban parte y ayudaron a reducir el estrés y la ansiedad en el niño, y el reconocimiento de los beneficios del juguete en el período perioperatorio y la importancia del profesional de enfermería en el desarrollo-implicación del juego terapéutico. La metodología del estudio fue una revisión de la literatura, utilizando referencias disponibles en las bases de datos electrónicas BIREME, PubMed y SciELO. Se mostró qué juguetes formaban parte de la intervención, tanto como juguete terapéutico como como distracción, además de juguetes aliados en la reducción de la ansiedad, como el coche de juguete en lugar de una camilla, además de otros juguetes ya disponibles para la intervención perioperatoria, como títeres, libros con cuentos de cirugías, teatros y material educativo hospitalario. Se vio que la tecnología fue la más atestiguada y ha sido una realidad prometedora en cuanto a la intervención perioperatoria. Demostró que aunque la diversidad de tecnologías disponibles a favor de la preparación perioperatoria es igual a la premedicación utilizada preoperatoriamente, aprovechando que la medicación tiene efectos secundarios.

Descriptores: Pediatría; Preparación; Perioperatorio; Juguete Terapéutico; Niño.

Resumo

Objetivou-se descrever os benefícios da utilização do brinquedo terapêutico no perioperatório, demonstrar quais brinquedos fizeram parte e auxiliaram para redução do estresse e ansiedade na criança, e o reconhecimento dos benefícios do brinquedo no perioperatório e a importância do profissional da enfermagem no desenvolvimento da brincadeira terapêutica. A metodologia do estudo foi uma revisão de literatura, através de referências disponibilizadas nas bases de dados eletrônicas BIREME, PubMed e SciELO. Demonstrou-se quais brinquedos fizeram parte na intervenção, tanto como brinquedo terapêutico, quanto para distração, além dos brinquedos aliados na redução da ansiedade, como o carro de brinquedo em lugar de maca, além de outros brinquedos já disponíveis para a intervenção perioperatória, como fantoches, livros com contos de cirurgias, tea-tros, e materiais hospitalares educativos. Viu-se que a tecnologia foi o mais presenciado e vem sendo uma realidade promissora em questão de intervenção perioperatória. Demonstrou que embora a diversidade de tecnologias disponíveis a favor da preparação perioperatória se iguale à pré-medicação utilizada em pré-operatório, levando vantagem visto que a medicação possui efeitos colaterais.

Descritores: Pediatria; Preparação; Perioperatório; Brinquedo Terapéutico; Criança.



Introduction

The perioperative period is a tense and extremely nervous moment in which the child can be traumatized and have permanent psychological sequelae. Hospitalization is the most difficult and delicate moment where fear, uncertainty and insecurity become major challenges to be overcome by the child and his family¹.

Through the toy, the child manages to be himself, being spontaneous and having fun, because playing works the playful and makes the individual perform with pleasure and joy. Through playing the child can develop his cognition and the social affective domain, having greater capacity to interact and relate to everyone around him².

In playful relationships, the child socializes and manages to understand the toy as part of his reality, assimilating and internalizing the experiences of the symbolic world, not limiting the imagination and the construction of abstract thinking³.

Playing presents an infinite range of possibilities where the individual has the power and autonomy to work on his personality. It is from this activity that the child expresses his true feelings and emotions that are important for his own development in relation to the situations that are presented to him in reality⁴.

In this perspective, the therapeutic toy can provide the child a moment of great pleasure and fun, contributing significantly to minimize adverse reactions of a psychological and mental nature, providing comfort and safety in medical and hospital procedures, as well as in the previous and posterior surgery process⁴.

The objective was to describe the benefits of using therapeutic toys in the perioperative period, to demonstrate which toys were part of and helped to reduce stress and anxiety in the child, and to recognize the benefits of the toy in the perioperative period and the importance of the nursing professional in the development of play therapy.

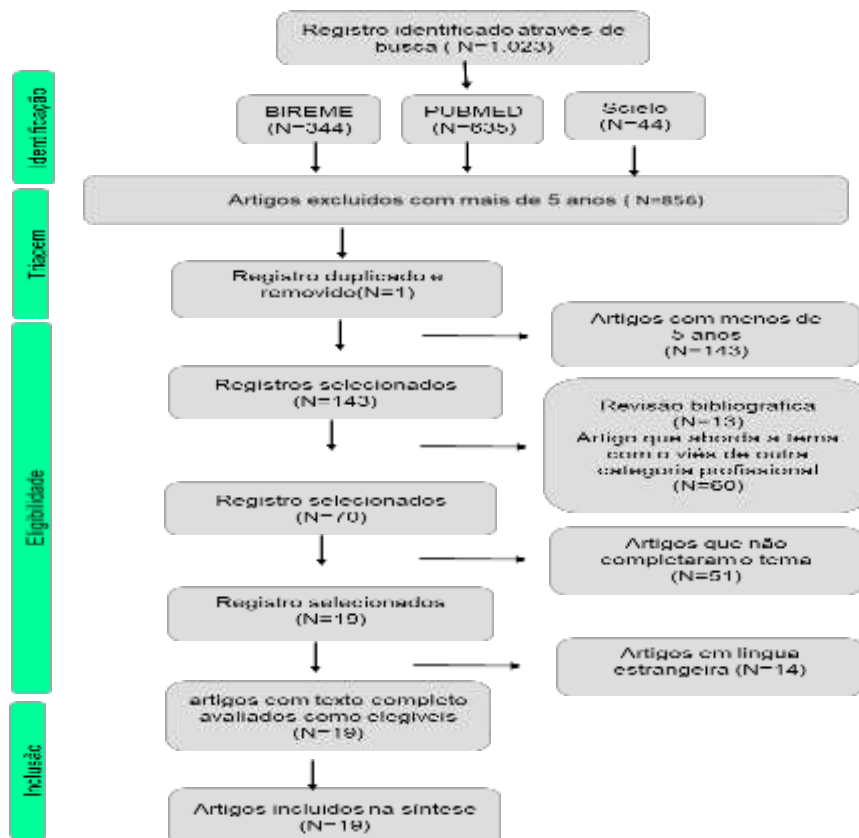
Methodology

This is a descriptive review with a qualitative approach, with a time limit for the publication of studies from 2015 to 2020, without restricting publication languages. Included in this research were: studies in developed and developing countries, with a broad understanding of the infantile age group, submitted to various surgical procedures, without considering the period of hospitalization and type of surgery submitted.

To carry out the present literature review, the selected articles were retrieved from the search tools available in the PubMed (National Library of Medicine) journals, SciELO (Scientific Electronic Library Online). As descriptors, "Therapeutic toy", "Pediatric", "Children", "Preoperative", "Anxiety", "Preparation", "Psychological" were adopted.

When entering the descriptors in the database, in PubMed, SciELO and BIRME, found in a total of 1,023 articles, however when delimiting the period of studies between 2015 and 2020, and research articles, all of which were in full, there were a total of 19 research articles.

Figure 1. Flowchart of search and selection of studies. Itapetininga, SP, Brazil, 2020



published and indexed in the referred databases in the last five years, articles that integrated the perioperative period, toy or therapeutic toy, and intervention in the reduction of childhood anxiety, excluding articles that were not in full, review literature, and studies that have never used the toy object in the perioperative period in their research.

Data collection took place in February to October 2020, inclusion criteria defined for the selection of articles were: articles published in Portuguese, English and Spanish; full articles that portrayed the theme related to toys, games and therapeutic toys, pediatrics, children, psychological anxiety. The integrative descriptive review and articles

Results and Discussion

Chart 1. Synthesis of articles. Itapetinga, SP, Brazil, 2020

| Title | Base | Objective | Methodology | Conclusion |
|--|---------------------------|--|---------------------------------------|---|
| Intervenção terapêutica na ansiedade Perioperatória das crianças, manifestações emocionais negativa e dor pós-operatória: Um estudo controlado randomizado | PubMed | Examine whether therapeutic intervention in children's perioperative anxiety, negative emotional manifestations, and postoperative pain: a randomized controlled study. | Randomized controlled study | The playful intervention is effective in reducing negative emotional manifestations before anesthetic induction and in postoperative pain in children undergoing elective hospital surgery. |
| Vídeo Distração e presença dos pais para o manejo da ansiedade pré-operatória e distúrbio comportamental pós-operatório em crianças: um ensaio clínico randomizado | PubMed | Determine whether the effect of video distraction on preoperative anxiety relief is independent of the presence of parents and whether a combination of both interventions is more effective than any single intervention on preoperative anxiety relief and postoperative behavioral disorders in preschool children. | Randomized clinical trial | The distraction from the video, the presence of the parents or their combination showed similar effects on preoperative anxiety during inhaled anesthesia induction and postoperative behavioral results in preschool children undergoing surgery. |
| Benefícios da aplicação do brinquedo terapêutico: visão dos Enfermeiros de um hospital infantil | Archive of Health Science | Benefits of applying therapeutic toys: the view of nurses at a children's hospital. | Exploratory study | The use of the Therapeutic Toy promotes individualization of care and helps the child to understand and face the hospitalization process. The benefits of its application are recognized by nurses and clients and, therefore, its use should be encouraged, so that the difficulties do not overlap during the care process. |
| O vídeo informativo pré-operatório reduz a ansiedade pré-operatória e as mudanças comportamentais negativas pós-operatórias em crianças | SciELO | The objective was to evaluate the effect of the informational video based on role-playing modeling on preoperative anxiety and postoperative behavior changes in children undergoing surgery. | Randomized trial | Patient orientation in the preoperative period should be standard care to minimize anxiety for patients before surgery, especially cancer patients. |
| Distração versus tratamento farmacológico para reduzir os níveis de ansiedade em crianças submetidas à cirurgia diurna: um estudo randomizado controlada de ano inferioridade. | PubMed | The aim of this study was to explore the efficiency of storytelling, images and coloring activities as an anxiolytic intervention compared to the traditional pharmacological premedication technique in a study of non-inferiority. | Randomized controlled study | The results indicate that the distraction technique employed can be considered an efficient alternative to traditional pharmacological premedication for children undergoing daytime surgery. |
| O efeito da distração do jogo na ansiedade antes da administração de pré-medicação: um ensaio randomizado | PubMed | The objective was to evaluate the role of distraction in the form of play dough (Play-Doh) in reducing pre-medication anxiety in children. | Prospective randomized clinical trial | This study showed that distraction in the form of playing with plasticine facilitated the administration of oral midazolam in young children. |



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| Crianças e ansiólise dos pais em cirurgia ambulatorial pediátrica: um estudo randomizado controlado comparando 0,3 mg kg ⁻¹ de midazolam com distração interativa baseada em computador <i>tablet</i> | PubMed | The aim was to compare the effects of midazolam for premedication with age-appropriate game apps on anxiety in children during and after outpatient surgery. Parental anxiety was also assessed. | A randomized clinical trial | We were unable to show whether TAB is superior to MDZ to reduce anxiety in children undergoing outpatient surgery. TAB is a non-pharmacological tool that can reduce perioperative stress without any sedative effect in this population. |
| Ansiólise pré-operatória na infância: sedação e distração são melhores do que sozinhas? Um estudo prospectivo randomizado | PubMed | This study was designed to assess three different strategies for preoperative anxiety in childhood: midazolam premedication, midazolam in combination with a portable digital video disc player or isolated video distraction strategy. | Prospective randomized study | Both pharmacological premedication and video distraction are effective strategies for controlling preoperative anxiety in childhood. The combination of midazolam and Digital Video-Disk player was no better than any of them. |
| Ensaio clínico randomizado de tour de realidade virtual imersiva da sala de cirurgia em crianças antes da anestesia | PubMed | This study was designed to determine whether a preoperative VR tour could reduce preoperative anxiety in children. | It is a randomized clinical trial | This preoperative VR tour of the operating room was effective in relieving preoperative anxiety and increasing compliance during anesthesia induction in children undergoing elective surgery. |
| Informações preparatórias on-line para crianças e suas famílias submetidas a extrações dentárias sob anestesia geral: um ensaio clínico randomizado de fase III | PubMed | The purpose of this study was to assess whether www.scottga.org improved children's anxiety and family satisfaction compared to controls. | Double-blind clinical trial | The families believed that the preparation of a video game helped their children's perioperative anxiety, but there were no objective measures of behavioral improvement associated with this intervention. |
| A preparação psicológica reduz a ansiedade pré-operatório de crianças | SciELO | Objectives: to verify the effect of psychological preparation on the relief of preoperative anxiety in children and to assess whether there is a correlation with parents' anxiety. | Randomized and double-blind trial | Psychological preparation was effective in reducing the degree of anxiety in children at the time of surgery. However, there was no relationship between the degrees of anxiety of parents and their children. |
| A eficácia do transporte em um carro de brinquedo para reduzir a ansiedade pré-operatória em pré-escolares: um estudo prospectivo controlado randomizado | PubMed | This study was developed to determine whether transporting a pediatric patient in a children's toy car influences perioperative levels of anxiety compared to transporting it on a hospital stretcher with or without midazolam oral premedication. | Randomized study | Transport in a toy car can relieve preoperative anxiety in preschool children undergoing surgery to a level comparable to that of midazolam. |
| Efeitos das apresentações auditivas e audiovisuais sobre a ansiedade e mudanças comportamentais em crianças submetidas à cirurgia eletiva | PubMed | The aim of the present study is to evaluate how audiovisual and auditory presentations on the perioperative period impact preoperative anxiety and postoperative behavioral disorders in children undergoing elective outpatient surgery. | Randomized study | In comparison to auditory presentations, audiovisual presentations, being memorable and interesting, can be more effective in reducing children's anxiety. In addition, we can suggest that both methods can be equally effective for post-operative behavioral changes. |
| Jogo baseado em incentivos para aliviar ansiedade pré-operatória em crianças: um estudo prospectivo e randomizado | PubMed | The aim of this study was to evaluate the effectiveness of an incentive-based game in conjunction with the parents involved in reducing preoperative anxiety in | Prospective randomized study | The use of incentive-based game therapy reduces anxiety scores during induction of anesthesia and improves compliance with facial mask induction in children undergoing surgery. It can be a simple, economical, and easy to administer |



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| | | children undergoing elective surgery. | | technique that can be easily applied in a low-income environment. |
| Ansiedade e estresse perioperatório em crianças submetidas a cirurgia cardíaca congênita e seus pais: efeito da intervenção breve - um ensaio de controle randomizado | PubMed | To know the effects of psychological preparation on stress, anxiety and perioperative mood in children undergoing cardiac surgery and their parents. | Prospective, non-blind, randomized control study | The provision of video games and toys in the preoperative period reduced postoperative stress and anxiety and improved mood in children undergoing congenital heart surgery. Parents were relieved of anxiety and stress with appropriate counseling and information. |
| Variando o tamanho da tela para distração passiva de vídeo durante a indução da anestesia em crianças de baixo risco: um ensaio piloto randomizado controlado | PubMed | The main objective was to determine whether a large projection-based video screen mounted on a patient's bed decreased anxiety compared to a tablet during induction of mask anesthesia in children aged 4 to 10 years. | It is a prospective and randomized study | In a low-risk population, preoperative anxiety was low and adherence to induction was high when pairing screen-based distraction interventions, regardless of size, with the presence of parents in inducing anesthesia. |
| Compreendendo a sessão de brinquedo terapêutico dramático: contribuição para a enfermagem pediátrica | SciELO | Understand how a dramatic therapeutic toy session takes place in the care of hospitalized children. | Study defined as empirical investigation | It showed that the toy is an appropriate way to get to know a little better what happens to the child during play, with emphasis on the interaction, articulation, and interdependence between the higher psychological faculties, reinforcing, once again, the importance of including the toy in the nurse's care practice with the hospitalized child. |
| Um estudo piloto da eficácia de um jogo sério CliniPup na ansiedade perioperatória e na dor em crianças | PubMed | The objective was to evaluate the effectiveness of the CliniPup game on anxiety and pain in children undergoing outpatient surgery. | Prospective randomized pilot study | Children who played the CliniPup game a week before surgery had a significant reduction in preoperative anxiety after playing the game, but not at other times, but the difference in pain and post-hospitalization behavior was not observed. |
| Distração Pediátrica na Indução de Anestesia com Realidade Virtual e Anxiólise Perioperatória | PubMed | The aim of this study was to determine whether immersive audiovisual distraction with a VR headset during general anesthesia (GA) induction in pediatric patients reduced preoperative anxiety. | Randomized clinical trial | This study demonstrates a reduction in pediatric preoperative anxiety with the use of VR. Preoperative VR can be an effective non-invasive modality for anxiolysis during anesthesia induction in children. |

Although the Federal Nursing Council emphasizes the importance of BT through Resolution No. 546, of 2017, despite the legal incentive, its application in practice is still modest, in the period of five years, little research has been found regarding the topic BT in perioperative period, in Brazil.

In China, the child is hospitalized one to two days before surgery, and on the day of surgery they are transported from the infirmary to the operating room on a stretcher, parents and children show significant anxiety and some children even refuse to lie on the stretcher, recently in a hospital. hospital in Shanghai, adopted a method of transporting children to the operating room in a non-motorized toy car. In 2017, a study carried out presented the efficiency of the toy car in the preoperative transport, the evaluation occurred in six moments, the previous day in the pre-anesthetic visit, when entering the passenger car or stretcher in the transport to the CC, when arrive at the preoperative room, when leaving the waiting room, when entering the CC, when placing the monitor and ready to

induce anesthesia. Parental anxiety, were assessed before they were separated⁵.

Three groups were separated into: transport by the toy car, transport on the stretcher, and pre-medication (oral midazolam 0.5mg / kg), an effective result in reducing anxiety was in the group that used the toy car and the group who received the pre-medication, although the result is similar, the toy car has an advantage, given the ease of being an anxiolytic without adverse reaction, and the reduction of the parents' anxiety, was presented only from the group that used the toy car⁵.

Another way to relieve tension and anxiety was presented in a study⁶, in which the children benefited from the modeling clay game before premedication, the assessment was during the administration of midazolam medication where both groups used the premedication, but the collaboration of receiving the premedication was greater in the group that used the modeling clay, the choice of the clay was due to be a clean, familiar material, where the child uses creativity.



Study⁷ used virtual reality for his study, where a group of children were divided into a control group and a virtual reality group (VR), where the VR group benefited, being effective in reducing preoperative anxiety and increasing compliance during anesthesia induction in elective surgery, the VR group used the 4-minute video, produced in 360°, presented a character, in the hospitalization process, from the admission to the hospital, passing through various departments until the arrival at the surgical center, all very educational, and the control group received only standard hospital information.

As presented in a study⁸, where distraction was compared to pre-medication, intervention with educational video, story telling and coloring books was used, all based on hospital information such as: health professionals, materials used, among others.

In order to understand the effects of psychological preparation, a group of researchers⁹ conducted a study with a control group and an intervention group with a one-day hospital stay before undergoing cardiac surgery, where the intervention group, the parents, in addition to receiving verbal information, were educated about the disease with pamphlets, videos, and a perioperative course was provided, children could get involved with funny videos or games during the preoperative stay, the group that did not receive intervention received standard information and were allocated in a common game room, without involvement in play activities, both groups were evaluated before of pre-medication, both had altered serum cortisol level in the preoperative period, after promethazine syrup was used in both groups, before anesthetic induction, in the postoperative period the intervention group had a lower level of serum cortisol compared to the group control, but the level of cortisol increases when you have pain and the control group was the one that most reported this increase and the one that most referred pain.

Unlike the previous study, this one has three groups, being group 1 with standard information, group 2 kit + information (stethoscope, gloves) and group 3 video on a notebook with information about procedures, but in cartoon, the relevance of this study is the comparison level of stress among boys and girls, with the group benefiting more from boys than girls, which suggests that in future studies, greater attention should be paid to child girls, compared to group 1, group 2 and group 3 there was a decrease in worries and fears, but group 3 of video was the most benefited with the cartoon in relation to the control group¹⁰.

Study¹¹ researched the degree of anxiety between two groups, one that received psychological preparation and the other that did not, both groups participated in a session in the toy library, but only one group benefited from psychological preparation, which was the availability of a book telling the story of a character who has an accident and needs surgery. In this study, parents did not accompany their children during anesthetic induction, the separation occurred in the playroom. According to the study, children and children who received psychological preparation, benefited from the reduction of anxiety, but one of the

limitations of these studies was the lack of a control group, since distraction in the playroom, in a previous study, helps to reduce stress.

Studies^{12,13} similar tests were carried out comparing the effect of electronic distraction, one by video and the other by games, the appropriate choice for age, with the effect of midazolam, comparing the anxiety of the child, as well as of the parents, the satisfactory result in relation to electronic object since it was neither inferior nor superior to the effect of midazolam (oral 0.5mg / kg).

Rsearch¹⁴ the favorable result was obtained, in reducing anxiety, negative emotional manifestations and postoperative pain, with playful intervention, with the use of video, dolls and hospital supplies days before surgery. This reinforces the use of preoperative preparation programs.

A study¹⁵ performed in a children's hospital in San Francisco, he used virtual reality in his research, since in this particular hospital the use of premedication is not usually performed, but the presence of parents, which facilitated a more readable result of the research, because children who received distraction from virtual reality benefited from the reduction of preoperative anxiety.

The difference in video distraction was reported, with or without the presence of parents in inducing anesthesia and postoperatively, although it showed similar results in reducing anxiety, the group that received only distraction by video had an insignificant better result¹⁶.

Another study¹⁷ compared the superiority of the effectiveness of a large video screen versus a tablet, but the result was the non-superiority between them. In this study, premedication was not used, which corroborates with studies on the reduction of anxiety with the use of distraction.

Researchers^{18,19} made games and videos available online for family members participating in their research, videos and coping games, therefore, parents / guardians need to be able to prepare their children at home, although the purpose was to prepare patient and family members, one week before the procedure, only in one survey did the effectiveness of online preparation be observed, in the second survey, families even believed that the preparation reduced perioperative anxiety, but studies have not proven it.

Researchers¹⁴ suggested in one of their studies the use of more objective analysis, with saliva samples, being cortisol as a physiological marker of stress, being of great value for future studies.

Of all the research, the one that shows the use of cortisol (blood) as a stress marker was that of Kumar and collaborators⁹, in which the distraction intervention was presented, with video games and toys, and the intervention group was the one that presented the best postoperative result.

Two studies focused on the nursing professional are emphasized, one in relation to the understanding of the dramatic therapeutic toy and the other about the benefits of the application of the therapeutic toy from the perspective of the nurse professional: the first is an empirical study, about the understanding of the therapeutic toy dramatic



with six children, aged 3 to 10 years old, in this study the aspects were considered: evidence of the presence of imaginary situations, at the moment of the session what happened and its unfolding, as well as playing with the object the situation would imagine about it, verbal and non-verbal reactions / manifestations, the study revealed that the BT process is developed and has four stages, establishing a bond, exploring, dramatizing and stopping playing, highlighting the first stage where the child examines, analyzes, experiences and the situation that surrounds it, articulating itself with the following steps. And the nurse realizing that each stage has its time and the child's silence and lack of interest in playing is nothing more than the child's interpersonal process towards the nurse, however discreet and subtle, where she is organized and internally and after she interacts, with freedom to expose yourself. This for nurses is of great value because it allows them to plan and include BT in their interventions and identify whether their goal has been achieved²⁰.

The second study was conducted with interviews with professional nurses, with grouped themes, such as: benefit of BT, factors that hinder its application in practice, the opinion of some nurses was, that BT leaves the humanized environment, providing better acceptance, understanding of procedures, facilitating assistance,

benefiting not only the child but the family member and professionals, but some interviewees reported not using this technique. The difficulties in applying BT, reported by the interviewees as: lack of toys, resources, professional interest, time, adequate space, training⁴; which corroborates with a study²¹ by the ABBR vice-presidency on the lack of trained professionals.

Conclusion

Although current research on therapeutic toy in perioperative is scarce, the research showed the functionality of the toy, whether it is modern or not, remains an efficient ally to reduce anxiety, stress and negative behavior in the pediatric perioperative period, being of great relevance, since that premedication that aims to reduce anxiety paradoxically is a great source of stress in pediatrics. Today, technology has been an ally in several segments in the health area, promising in reducing anxiety, postoperative pain and reducing negative manifestations, being of low cost, and can be used with toys for distraction, therapy and recreation. In this review, it was observed how important the professional nurse, since he is delegated the role of observing, evaluating and implementing, together with other professionals, actions to reduce anxiety in children and parents.

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