

## CHILDREN'S ANXIETY IN SURGICAL SITUATION AND EMOTIONAL PERCEPTIONS REPORTED BY THEIR COMPANIONS IN THE PREOPERATIVE STAGE: AN EXPLORATORY STUDY

ANSIEDADE DE CRIANÇAS EM SITUAÇÃO CIRÚRGICA E PERCEPÇÕES EMOCIONAIS REPORTADAS POR SEUS ACOMPANHANTES NO PRÉ-OPERATÓRIO: UM ESTUDO EXPLORATÓRIO

ANSIEDAD DE NIÑOS EN SITUACIÓN QUIRÚRGICA Y PERCEPCIÓN EMOCIONAL DE LOS ACOMPAÑANTES EN EL PREOPERATORIO: ESTUDIO EXPLORATORIO

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### ABSTRACT

**Objective:** To evaluate the preoperative anxiety in children undergoing elective surgeries and describe the family's emotional perceptions related to the surgical process. **Methods:** this was a descriptive cross-sectional mixed study integrating quantitative and qualitative approaches conducted with 52 children and their respective legal guardians. The modified Yale Preoperative Anxiety Scale (YPAS-m) was used for data collection to assess the children's anxiety levels, and a semi-structured interview to investigate the family's emotional perception. The data analyses included qualitative data content analysis, and descriptive and inferential statistics analysis in the quantitative data. **Results:** more than 60% of the children were classified as anxious. The family's emotional perception was statistically associated with the parental position; mothers and fathers reported higher anxiety levels related to fear of anesthesia and the surgery itself, mainly due to a lack of information and guidance about these topics provided by the healthcare team. **Conclusions:** it is mandatory that the preoperative nursing care is centered on the child and family, addressing interventions that promote an atraumatic child's approach and specific educational approach about the anesthesia and surgical processes directed to the family, especially when families were represented by maternal and paternal figures.

**Keywords:** Surgical Procedures, Operative; Nursing Care; Child; Anxiety; Family.

### RESUMO

**Objetivo:** avaliar o estado de ansiedade pré-operatória de crianças submetidas a cirurgias eletivas e descrever as percepções emocionais de seus acompanhantes relacionadas ao processo cirúrgico. **Métodos:** estudo misto de natureza descritiva, com abordagem quantiqualitativa, de corte transversal, realizado com 52 crianças e seus respectivos acompanhantes. Na coleta de dados, utilizou-se a Escala de Ansiedade Pré-operatória de Yale modificada (EAPY-m), para avaliar o estado de ansiedade das crianças, e entrevista semiestruturada para investigar a percepção emocional dos acompanhantes. A análise de dados compreendeu a análise de conteúdo para os dados qualitativos e estatística de natureza descritiva e inferencial para os dados quantitativos. **Resultados:** verificou-se que mais de 60% das crianças estavam ansiosas. A percepção emocional dos acompanhantes esteve associada estatisticamente ao grau de parentesco com a criança, sendo que mães e pais reportaram mais tensão relacionada principalmente ao medo da anestesia e do procedimento cirúrgico, decorrentes da falta de informações e orientações sobre esses tópicos pela equipe de saúde. **Conclusões:** é necessário que a assistência de enfermagem pré-operatória esteja centrada na criança e na família e contemple intervenções que promovam cuidado atraumático para a criança e orientações relacionadas à anestesia e à cirurgia para os acompanhantes, especialmente se as famílias estiverem representadas pela figura materna e/ou paterna.

**Palavras-chave:** Procedimentos Cirúrgicos Operatórios; Cuidados de Enfermagem; Criança; Ansiedade; Família.

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## RESUMEN

**Objetivo:** Evaluar el estado de ansiedad preoperatoria de niños sometidos a cirugía electiva y describir las percepciones emocionales de sus acompañantes vinculadas al proceso quirúrgico. **Métodos:** Estudio mixto descriptivo, de enfoque cuantitativo y cualitativo y corte transversal, realizado con 52 niños y sus acompañantes. En la recogida de datos se utilizó la escala de ansiedad preoperatoria de Yale modificada (EAPY-m) para evaluar el estado de ansiedad de los niños y la entrevista semiestructurada para investigar la percepción emocional de los acompañantes. El análisis de datos comprendió el análisis de contenido de los datos cualitativos y la estadística de naturaleza descriptiva e inferencial de los datos cuantitativos. **Resultados:** Se constató que más del 60% de los niños estaban ansiosos. La percepción emocional de los acompañantes estaba asociada estadísticamente al grado de parentesco con el niño: madres y padres mostraron más tensión relacionada, principalmente, con el miedo de la anestesia y del procedimiento quirúrgico debido a la falta de información y orientación del equipo de salud. **Conclusiones:** la atención de enfermería preoperatoria debe estar centrada en el niño y en la familia y debe contemplar intervenciones que promuevan cuidados no traumáticos para el niño y orientación sobre la anestesia y la cirugía a los acompañantes, especialmente si las familias estén representadas por la figura materna y/o paterna.

**Palabras clave:** Procedimientos Quirúrgicos Operativos; Atención de Enfermería; Niño; Ansiedad; Familia.

## INTRODUCTION

Surgery in the pediatric context can be considered a traumatic event in the life of children and their families and, generally, the surgical process is experienced with a lot of tension, anxiety, fear, and deprivation in the daily life of the family, school, and ludic contexts.<sup>1</sup>

It is worth highlighting that, among outpatient surgeries, pediatric surgeries are prevalent because they require little intensive postoperative care and generally do not require hospitalization.<sup>2</sup> The main advantages of outpatient surgeries are: less exposure to the hospital environment, which contributes to decreased risk of infection; reduction of preoperative anxiety in patients and their families, given the possibility of a faster return to the home and social environments; and a reduction in costs for the hospital institution.<sup>2</sup> However, even in the face of such advantages, ambulatory surgical procedures can still trigger emotional changes in children and their family members, which are related to fear of the unknown, postoperative pain, intraoperative separation from the family, and fear of not waking up from anesthesia or becoming incapacitated, among other concerns.<sup>3</sup>

Anxiety is a frequent clinical outcome in preoperative children that can lead to negative, aggressive, and regressive behaviors, changes in the central nervous system manifested by increased heart rate, blood pressure, respiratory rate, oxygen consumption, cardiac output and muscle tension as well as sleep and eating disorders, enuresis, and inadequate responses to analgesia and anesthesia, making the postoperative recovery period even more difficult.<sup>4</sup>

Although children are more vulnerable to anxiety responses due to cognitive and emotional capacity limitations related to prior knowledge and experiences regarding health care, the family can also experience fear, worries, and feelings of insecurity and doubts about what happens in the surgical center.<sup>5</sup>

Thus, the pediatric family member/companion will not always fully exercise the safety and support role to the child in a

surgical situation because the way they face and perceive the surgical event directly interferes with the child's level of anxiety and behavior in the preoperative period.<sup>6</sup> Given this, it is important that in outpatient pediatric surgeries, in which preoperative anxiety levels are expected to be low, nurses are sensitive to recognizing, accommodating, and intervening in the emotional needs of children and their companions in order to provide a humanized, integral, and child-centered care.<sup>3</sup>

Based on this, this exploratory study was proposed to investigate the level of anxiety of children undergoing elective outpatient surgeries and the emotional perceptions of their respective companions.

## OBJECTIVE

To evaluate the state of preoperative anxiety in children who underwent to elective surgery and describe the emotional perceptions related to the surgical process in their respective companions.

## METHOD

This is a descriptive, cross-sectional, quantitative study conducted in the waiting room of a pediatric surgical clinic of a public hospital in the Federal District from September of 2014 to April of 2015.

The inclusion criteria adopted were: children from three to 12 years of age, of both genders, undergoing elective surgeries who agreed to participate in the study by drawing in a designated space in the Voluntary Informed Consent Term (VICT). Participants who underwent emergency surgery, who received pre-anesthetic drugs, and whose caregivers did not authorize participation were excluded. The inclusion criteria for companions was having a degree of kinship or not, including both genders. The companions who did not agree to participate were excluded from the study.

The sampling convenience technique was used to calculate sample size based on the quantitative and qualitative approach of the study. Thus, out of the 74 invited to participate in the study, 17 refused and five children who received pre-anesthetic medication (sedative) were excluded, comprising a final sample of 52 children and their companions.

The data collection was carried out in two axes, one directed to the children and another to companions. The modified Yale Preoperative Anxiety Scale (EAPY-m) was used to evaluate anxiety levels; this is an instrument validated and translated in Brazil that has been widely used in international<sup>7,8</sup> and national studies<sup>9,10</sup> to measure the level of anxiety in pre-school and school children, especially in the immediate pre-anesthetic period and at the time of anesthetic induction.

The EAPY-m consists of an observational scale composed of 22 categories distributed in five domains - activities, apparent awakening, vocalization, emotional expressiveness, and interaction with the family - which reflect different natures of behaviors that can be manifested by the child, making this instrument much more sensitive to changes in anxiety levels than those that assess anxiety comprehensively.<sup>9,10</sup>

In the EAPY-m scoring system, each domain is assigned a partial score based on the observed score, which is then divided by the number of categories in the domain. To obtain the final score, the score from each domain is added to the others and the result is multiplied by 20, such that scores in the range of 23.4 to 30 points do not indicate anxiety and scores > 30 points indicate a state of anxiety.<sup>9,10</sup>

The data collection directed to the companions was performed through a semi-structured interview with the duration of approximately 10 minutes, composed by the following guiding question, with a view to identify the emotional state reported by the companions in relation to the surgical process of their children: what do you think about the surgery your child is about to be submitted? From this question, supplementary questions were asked to explore the content brought by the companions in the interview such as: Are you calm? Anxious? Afraid? Why?

It should be emphasized that the data collection was performed by a research team composed of the responsible researcher and two undergraduate Nursing students. These students received previous training for the application and completion of the EAPY-m, however, no inter-observer reliability analysis was performed during the training.

A descriptive statistical analysis (absolute and percentage frequencies) was conducted with the demographic data and state of anxiety of children and companions. The Fisher's exact test, with a significance level of 5%, was used to identify possible correlations between the emotional status reported by the companions and variables related to the child's age, type of surgery, previous surgeries, and degree of relationship. The qualitative data were submitted

to content analysis following the steps of pre-analysis, material exploration, and categorization of themes that emerged from the companions' responses considering differences and similarities. The interviewed companions were identified by the initial letter corresponding to their relationship with the child (M – mother, F – father, MF – mother and father, and G– grandmother), followed by the corresponding numbering in the sample.

The study was submitted to the Research Ethics Committee (CEP) of the Health Science Teaching and Research Foundation (FEPECS) after being approved by the head of the Nursing section at the Pediatric Surgical Clinic and by the Hospital Management, and was approved on 02/10/2014 under protocol number 525251.

## RESULTS

The children's demographic data showed a predominance of school-age children (mean = 6.9 years) and males (84.6%) who underwent a variety of surgeries grouped into three categories: head and neck, abdomen, and genitourinary. In addition, 82.7% of the children and companions were experiencing their first surgical event (Table 1).

Table 1 - Clinical and demographic data. Brasília – DF, 2016

Variables		Frequency
Age (years)	Mean	6.9
Gender n (%)*	Female	9 (15.4%)
	Male	43 (84.6%)
Type of surgery n (%)	Head and neck	6 (11.54%)
	Abdomen	10 (19.23%)
	Genitourinary	36 (69.23%)
First surgery n (%)	No	9 (17.31%)
	Yes	43 (82.69%)

\*n, absolute value/frequency; (%), relative percentual frequency.

All children and companions had the parental relationship with the majority (87%) as the mother and/or father; only one companion was represented by a grandmother. Mothers predominate over fathers; the presence of both parents corresponded to 11% of the sample and the presence of other companions, such as the grandmother, was the least frequent category (Figure 1).

More than 60% of the children showed anxiety levels with scores higher than 30 on the Preoperative Anxiety Scale; the mean score of participants classified as anxious was 43.63. Only 16 children had scores below 30, and therefore, were classified as non-anxious with a mean score of 25.65 (Figure 2).

The answers from companions in the interview were grouped into two categories: emotional perception reported as calm or tense (Figure 3).

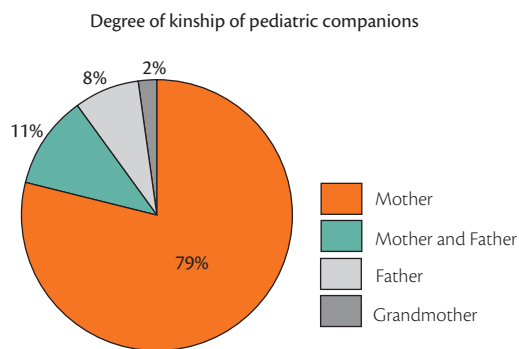


Figure 1 - Percentage frequency of the degree of kinship of companions in relation to their children. Brasília – DF, 2016.

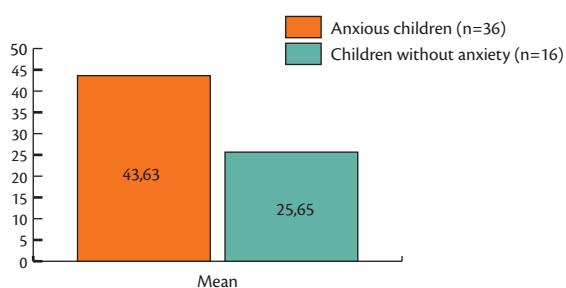


Figure 2 - Mean scores of the modified Yale Preoperative Anxiety Scale according to the classification of participants' anxiety status. Brasília – DF, 2016.

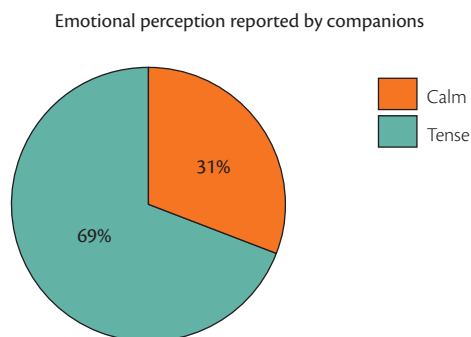


Figure 3 - Percentage frequency of emotional perception reported by companions. Brasília – DF, 2016.

The category involving tension (almost 70% of the responses) comprised the report of fear and anxiety mainly related to anesthesia; at least 42% expressly stated their fears related to anesthesia as follows:

M24: "[...] I could not sleep right out of concern. I am afraid of anesthesia, it is a general thing, right? And I am worried about him waking up in a lot of pain".

M43: "I am very nervous and anxious, but I try not to pass it on to him. The fear is about the anesthesia because it is general anesthesia and he will be put to sleep".

The companions also related the perception of tension to fear of the surgical procedure itself, postoperative recovery and death, and doubts due to a lack of medical guidance; others still associated the tension with previous negative/bad surgical experiences that the child had already experienced or that companions themselves have experienced as patients, exemplified by statements such as:

M39: "I am a little nervous. Oh, I am worried about the surgery itself not the anesthesia because the doctor said he would wear a mask to apply the anesthesia. But I am worried about the needle, the cuts too, and if he will be able to rest later".

MP40: "We are very anxious. The anesthesia worries me a lot, we are afraid of what can happen, some complication because it is general anesthesia. Her last appointment was already three months ago; the doctor did not explain how the surgery will be.

"M46: "Yeah ... I am a little anxious, yes [crying]. I am afraid that she will not come back [crying]. I did not even tell her about the surgery, I just said she was going to have an examination. I worry a lot about her reaction".

M37: "I am a little anxious about his surgery; I do not know, I am worried because I had a bad experience with a C-section".

M44: "The fear is about the anesthesia, even though this is her third surgery. Because it was not very good last time, you know? She had a fever and had to be hospitalized after surgery".

Some companions still mentioned contradictory feelings, because they said they were tranquil/calm but at the same time apprehensive or worried about the surgery, that is, they perceived calmness but they also denied it in their speech:

M21: "Okay, I am tranquil. But then, I get a little anxious about the surgery, about how it is going to be".

M31: "I am calm, just a little apprehensive about the anesthesia".

We observed during data collection that the conduct of the medical team varied greatly. Some medical anesthesiologists and surgeons approached the children and their family to clarify the procedures that would be performed and possible doubts, while others performed quick and protocol type inter-

views, which made it impossible to have a qualified provision of information to the child and family, and others did not show up in the preoperative waiting room.

The category of emotional perception reported as "calm", in turn, was reported as tranquility especially related to previous successful/positive surgical experiences of children or their companions:

M25: "I am calm and overconfident that everything will work out; This is his fourth surgery".

M37: "I am calm, however, we know that every surgery has a risk, right? Oh, I have been through a lot of surgeries in my life and it all worked out fine".

Other factors consisted in the fact that the companions perceived the surgery as necessary to prevent future complications in the child's health, to nurture positive feelings of hope that everything will go well, and to put faith in the figure of a Higher Being who is in control of the lives of their children.

P23: "I am fine, I am calm. He needs the surgery because his penis is, yeah, how do you say... it is obstructed, and it can be a problem later without the surgery".

M20: "I am calm [...] and I have already placed everything into the hands of God".

In addition, the companions related the perception of "calm" to the characteristics of the ambulatory surgical procedure (simplicity and speed), to the orientation and preoperative preparation received and, still others, to the condition of being health professionals themselves, claiming knowledge of the subject and no intimidation about the hospital environment.

M28: "The doctor explained that it is very simple, so I am calm".

M8: "I am calm, I know it is a simple surgery. I have worked in a hospital and I am not afraid of this environment or the procedures. I am confident that everything will work out".

A52: "I am calm. It is because I work in the health area, I am a nursing technician and I know a little about a surgical center".

Regarding the inferential analysis of the quantitative data, no statistical significance was found between the emotional perception of companions and the children's age, type of sur-

gery, and the experience from previous surgeries. However, a statistically significant association was observed between the emotional state reported by companions and the degree of kinship to the children ( $p = 0.0013$ ) (Table 2).

Table 2 - Relationships between the emotional perception referred by companions and degree of kinship. Brasília – DF, 2016

Degree of kinship	Emotional perception N (%)		Total	p-value
	Calm	Tense		
Mother	11 (27%)	30 (73%)	41	0.0013*
Mother and Father	0	6 (100%)	6	
Father	4 (100%)	0	4	
Others	1 (100%)	0	1	

\* p-value in the Fisher's exact test.

It was observed that 73% of mothers and 100% of mothers and fathers (when simultaneously present) perceived tension; in contrast, none of the parents alone and none of the other companions reported tension. Thus, it is worth noting that parents (mothers and/or mothers and fathers, when present simultaneously) presented a higher perception of tension, which was statistically significant, in relation to parents or companions with other degrees of kinship, such as grandparents and aunts.

A descriptive association analysis was performed to evaluate the association between the emotional perception of companions and the state of anxiety in the children, which showed that out of the 36 (69%) companions who reported tension perception, 26 children were anxious and 10 were not anxious (scores below 30). Out of the 16 (31%) companions who declared their perception of calm, 10 children were classified as anxious and six without anxiety. It was observed that, in most cases, regardless of whether the companions reported tension or calm, most children were classified as "anxious" by the Modified Yale Preoperative Anxiety Scale.

## DISCUSSION

In this study, the number of anxious children and the level of preoperative anxiety in children show a high prevalence represented in almost 62% of the sample, which corroborates the literature estimates that 40 to 75% of children experience significant anxiety in the preoperative period.

In fact, the surgery alone is a traumatic event that causes physical trauma and can also cause emotional and psychological damage, especially if it is the child's first surgical event, as was the case in more than 80% of the study participants. The challenge in preoperative care is to provide atraumatic care, that is, to provide therapeutic care in different contexts through in-

terventions that eliminate and minimize the physical and psychological suffering perceived by children and their families.<sup>1,11</sup>

Atraumatic care aims to avoid further damage or trauma to the surgical experience and is based in three fundamental principles: a) to avoid or minimize the separation between child and family; b) to promote a sense of control; and c) to avoid or minimize injuries and pain.<sup>11</sup>

The presence of companions at the time of the anesthetic induction and the use of the therapeutic toy technique and promotion of play activities are highly cited/suggested strategies in the pediatric surgical practice to promote atraumatic care, however, they are difficult to implement in public health services due to routines and bureaucratic questions.<sup>12,13</sup>

Thus, it is not enough to provide the preparation and clinical care, but also to recognize the psychological, social, and emotional needs of children that are often ignored aspects in the clinical practice, whose priority objective is the restoration of a weakened organ through surgery in detriment of a humanized and integral care.<sup>14</sup>

The demographic data show a predominance of male children and genitourinary surgeries, which may be justified by the fact that urological surgeries comprise 60% of pediatric surgeries and congenital genitourinary malformations, mainly involving males, are the main reasons for consultation with a surgeon.<sup>15,16</sup>

In addition, despite the new roles and functions that mothers as women have been assuming in society, they were found to be the main companion of children in this study, a common fact in the universe of Pediatrics.<sup>3,5,10</sup>

The emotional perceptions reported by the companions were categorized as tense or calm. The calm category, less than 35%, was linked to reports of safety, hope, and tranquility associated with positive experiences in previous/positive surgeries, guidelines given by professionals, and faith in a Higher Power.

Positive and successful experiences of previous surgeries favor the sense of safety in the child and his family because they already know what to expect; they are dealing with something known, with no room for fantasies about the surgery, anesthesia, and post-anesthetic recovery among others.<sup>17</sup>

The guidelines related to the anesthetic medicine, surgical procedure, postoperative recovery, and other subjects about child care in a surgical situation are essential for the family/companions to feel more secure about the child's surgery. It is also important that nursing professionals provide space for a qualified listening to families, so that they can talk about their fears/desires and be welcomed and clarified about doubts and fears.<sup>2</sup>

The nursing consultation is an important device for approaching, welcoming, and guiding families in pediatric surgical care to minimize anxiety, fear, and doubts. Sampaio *et al.*<sup>2</sup> found that the outpatient nursing consultation contributed to clarify doubts, minimize anxiety, and create a safety bond between pro-

fessional, patient, and family as well as influence the reduction of absences and suspensions of surgeries because it was possible to demystify perceptions of fear and anxieties in the child and family related to the surgical event during that consultation.

On account of hope and faith, another study verified that companions demonstrated tranquility in their discourse when related to attachment to the figure of a Superior Being.<sup>5</sup> In fact, some studies record that believing in a Supernatural and Superior Being helps people to positively face their uncertainties and feelings of powerlessness in the face of stressful situations such as illness, hospitalizations, and surgeries.<sup>18,19</sup>

Given this, it is expected that the nursing team can provide a positive surgical experience for the child and family, not only guiding families about procedures and health care in the pediatric surgical field, but also encourage them to rely on their own religious beliefs to nurture feelings of hope; these aspects were approached and related to the perception of calmness, security, and tranquility before the surgical event.

The category of tension comprised concern, fear, apprehension, and nervousness related to the anesthesia, surgery, postoperative recovery, surgical wound care, lack of orientation/information, and fear of death. These feelings corroborate the results of a study that investigated the feelings of companions of children in a surgical situation and of another that evaluated the emotional state of adult patients undergoing cardiac surgeries.

The fear related to the lack of medical advice about anesthesia and/or surgical procedure was present in many of the companions' reports, who reported feelings of distress. This is in line with the previously field observation made by the researcher regarding the inconstant approach of the medical team, anesthesiologists, and surgeons; some were available to clarify doubts and examine the children, other were brief in the interviews, and others did not even appear in the preoperative waiting room.

The information and guidance on the surgical process addressed to pediatric patients is vitally important because they are also emotionally fragile and have their fears in the face of what is unknown and uncertain. Kain *et al.*<sup>21</sup> demonstrated that parents who participated in an educational program on the surgical anesthetic process had low levels of anxiety in the preoperative period. Another study evaluated the level of anxiety of parents before their children's outpatient surgery and found that parents who received guidance on the surgical procedure in the nursing consultation had a reduced level of anxiety compared to those who did not receive information.<sup>3</sup>

Surgery guidelines are necessary not only for companions but also for children undergoing surgery, who have the right to know what will be done during the procedure and what they may experience later, such as pain, which should not be omitted.<sup>6</sup> International studies increasingly indicate the need to perform preoperative preparations appropriate to the level of the

child's development, through a developmental care approach, in order to improve the surgical experience and provide the child with a relevant understanding of the procedure.<sup>6,22</sup>

It is up to the nurses to use their knowledge of child development to propose interventions and teach parents or companions coping strategies directed at the developmental stage of the child for the preoperative and postoperative periods.<sup>22</sup> However, when there is no minimum guidance from the health nursing team, the family can impair the child's coping by omitting the surgery itself, as reported by one of the mothers in our study. Therefore, it is essential to building a collaborative relationship between the nurse and pediatrician in order to use it as a facilitating agent to the child's surgical experience.<sup>22</sup>

Some of the companions expressly stated that they were afraid that their child would die; others used euphemism to say that they were afraid their son would not wake up or return from anesthesia. The fear of death is not always verbalized clearly by companions when they have hospitalized relatives; the use of subtle expressions or even the denial of fear of death for fear that, as they speak, this fact will be fulfilled is common.<sup>23</sup>

Indeed, to speak of death or even the risk of death, even more of a child is not an easy thing because in the Western culture there is the conception that death occurs impersonally and is predictable/accepted only in the old age. It is impersonal because it always occurs with the other, someone unknown or sometimes even relatively close to a particular person, but it is hardly considered as a possible event to occur with that person or with his child.<sup>23</sup> In addition, it is very difficult to accept the death of a child because it implies the interruption of the biological cycle of life that, in turn, impinges on the idealized cultural imaginary that each child has a future to grow and develop, unlike an elderly person.<sup>24</sup>

The statistical analysis showed that the emotional perception of the companions in relation to the child in the preoperative situation was associated with their degree of kinship. Mothers and fathers, when simultaneously present, reported more perception of tension in the surgical context, which suggests that the emotional perception of tension is supposedly related to companions with greater affective attachment to the child.

Studies indicate that mothers are the most anxious among companions, a fact also verified in this study and that may contribute to aggravate the child's state of anxiety in the preoperative period.<sup>10,25</sup> This result indicates the possibility of companions with other degrees of kinship such as uncles, grandparents, and cousins among others, to represent important figures to be considered as mediators of interventions for relieving tension/anxiety in children in the preoperative period because they have an increased perception of calm compared to parents.

The investigation of the relationship between the state of anxiety in children and the emotional tension emphasized by their respective companions showed that, to some extent,

there was concordance between the anxiety state and the tension in the children and their respective companions based on the result that out of the 36 companions who recognized tension perception, 72% (n = 26) of their children were anxious while others did not present anxiety (scores below 30). Although an inferential analysis has not been performed to better investigate this relationship, this descriptive result shows anxiety of pediatric companions as a factor that may contribute to intensifying the anxiety levels of their respective children in the preoperative period.

The lack of inter-observer reliability analysis in the application of the EAPY-m scale by the research team and only the performance of a descriptive analysis to correlate the anxiety state of children with the emotional perception reported by their respective companions are among the limitations of this study. It is suggested that future studies carry out inferential analyses, and not only descriptive, between the levels of anxiety of children and their companions, and compare the states of anxiety in the context of outpatient surgeries and emergency surgeries in Pediatrics; in this study, performed in preoperative outpatient surgeries, the level of anxiety was high in more than 60% of the participants.

Regarding the implications of the results of this study, they identify the need to develop innovative and effective nursing interventions for the preoperative preparation of children and their families in outpatient surgical situations in order to contribute reducing anxiety and emotional stress. This study also indicates the importance of incorporating the extended family (grandparents, uncles) into the pediatric surgical process as well as the importance of instructional preparation and emotional support to the family, seen as a collaborative and potentiating agent of pediatric care. We also highlight that the design as a mixed study type with a quantitative approach contributed to a more in-depth understanding of the preoperative anxiety phenomenon in the scenario of pediatric surgeries, both from the perspective of children and their families.

## CONCLUSION

In this study, more than half of the children who composed the sample were classified as having anxiety, and more than 80% were experiencing the first surgical event of their lives. The emotional state of companions regarding their children in the preoperative situation was associated with the degree of kinship with the child, suggesting that mothers and fathers have more perception of tension in the surgical scenario than other relatives. The perception of tension mainly involved the fear of anesthesia and the surgical procedure itself due to a lack of information and guidance on these topics provided by the health team.

In addition, there was concordance between the state of anxiety in children and the emotional tension of their respective

companions because among the 36 companions who reported tension perception, 72% of their children were anxious. Thus, it is important that nursing professionals, as members of health teams, promote preoperative care focused on children and families, considering the emotional dimension in the planning of nursing care. The purpose is to provide atraumatic care for the child and care for their companions by means of information, guidance, and clarification of doubts related to the anesthesia and surgery, especially if the families are represented by the maternal and/or paternal figure who exhibit high levels of tension.

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