

Profile of patients who underwent general surgery in a pediatric hospital: implications for nursing

Perfil de pacientes submetidos à cirurgia geral em um hospital pediátrico: implicações para a enfermagem

Queila Faria dos Santos¹ • Fernanda Garcia Bezerra Góes² • Aline Cerqueira Santos Santana da Silva³ • Fernanda Maria Vieira Pereira⁴ • Joana de Andrade Nobre Ferraz⁵ • Rayssa Bravo de Oliveira Vollmer⁶

RESUMO

O objetivo da pesquisa foi descrever o perfil demográfico e clínico de pacientes submetidos à cirurgia geral em um hospital pediátrico do município do Rio de Janeiro. Trata-se de um estudo descritivo e retrospectivo com abordagem quantitativa. A fonte de informação foi prontuários de pacientes entre 0-12 anos internados na clínica cirúrgica pediátrica da instituição para realização de cirurgia geral no período de junho-agosto de 2016. Foi utilizado para a coleta de dados um formulário semiestruturado com variáveis demográficas e clínicas. O estudo foi aprovado pelo Comitê de Ética. Foram analisados prontuários de 139 crianças submetidas à cirurgias, sendo a maioria do sexo masculino 107 (77,0%), etnia parda (61,9%), faixa etária pré-escolar (42,4%). A maioria não apresentava comorbidades (90,6%), se tratava de primeira cirurgia (95%), e possuía como acompanhante a mãe 136 (97,8%). Quanto às cirurgias realizadas, prevaleceram as eletivas 137 (98,6%), sendo a hernioplastia 59 (39,07%) a de maior frequência, seguida pela postectomia 54 (35,76%). A maioria necessitou de medicamento para alívio da dor (65,4%). Conclui-se que o conhecimento desse perfil proporciona subsídios para um cuidado individualizado e qualificado que atenda às reais necessidades das crianças e suas famílias no pré, trans e pós-operatório da clínica cirúrgica.

Descritores: Cirurgia geral; Criança; Hospitalização; Enfermagem pediátrica.

ABSTRACT

This research aimed to describe the demographic and clinical profile of patients who underwent general surgery in a pediatric hospital in the city of Rio de Janeiro. To that end, we performed a descriptive and retrospective study with a quantitative approach. The information source consisted of medical charts of patients aged 0-12 years old who were admitted to the pediatric surgical clinic of the institution for general surgery in the period of June-August 2016. We used a semi-structured form with demographic and clinical variables to collect data. This study was approved by the Ethics Committee. We analyzed the medical charts of 139 children who underwent surgeries, and mostly were males, 107 (77.0%), brown (61.9%), belonging the pre-school age group (42.4%). Furthermore, most had no comorbidities (90.6%), this was their first surgery (95%), and the mother was the companion, 136 (97.8%). As for the surgeries carried out, the elective took precedent 137 (98.6%), having the hernioplasty 59 (39.07%) as the most frequent, followed by the postectomy (circumcision), 54 (35.76%). Most required pain medication (65.4%). We can conclude that being aware of this profile provides subsidies for an individualized and qualified care that meets the real needs of children and their families in the pre, trans and post-operative period of the surgical clinic.

Keywords: General surgery; Children; Hospitalization; Pediatric nursing.

NOTA

¹Enfermeira pela Universidade Federal Fluminense. Rio das Ostras, Brasil. E-mail: queila.fs@hotmail.com

²Enfermeira. Doutora em Enfermagem. Docente do Departamento de Enfermagem de Rio das Ostras da Universidade Federal Fluminense. Rio das Ostras, Brasil. E-mail: ferbezerra@gmail.com

³Enfermeira. Doutora em Enfermagem. Docente do Departamento de Enfermagem de Rio das Ostras da Universidade Federal Fluminense. Rio das Ostras, Brasil. E-mail: alinecer2014@gmail.com

⁴Enfermeira. Doutora em Ciências. Docente do Departamento de Enfermagem de Rio das Ostras da Universidade Federal Fluminense. Rio das Ostras, Brasil. E-mail: fernanddamaria@hotmail.com

⁵Enfermeira pela Universidade Federal Fluminense. Rio das Ostras, Brasil. E-mail: joanaferraz.rc@hotmail.com

⁶Acadêmica de Enfermagem da Universidade Federal Fluminense. Rio das Ostras, Brasil. E-mail: rayssa_vollmer@hotmail.com



INTRODUCTION

Hospitalization of a child is in itself a potentially threatening and anxiety-provoking experience, which causes fear, stress and a deviation from daily life, which is not confined only to the child, but also to his or her family ⁽¹⁾.

In addition, the need for surgery also causes stress in patients and their families, especially with the proximity of the intervention, which can generate different individual behaviors, influenced by emotional, physical and social factors, that even affect physiology and, consequently, the process of postoperative recovery ⁽²⁾.

In this aspect, the hospitalization of a child for a surgical procedure is doubly challenging, therefore, nursing care should prioritize minimizing the stress caused by the post-op period and hospitalization itself, and ensure a quick and effective postoperative recovery ⁽³⁾, in view of possible deleterious impacts on child development ⁽⁴⁾.

In this context, it is essential to consider the physical, psychic and emotional characteristics of this population group, which must be recognized and cared for in order for the child to have adequate growth and development ⁽³⁾, and not to be prejudiced by these care processes.

Therefore, the quality of nursing care for children who were submitted to surgery depends on the expertise on the profile of this clientele, so that the care is individualized and safe, that attends to the real needs of the child and their family. Therefore, the characterization of the pediatric surgical population admitted in a hospital environment directs the care process, as well as the appropriate multiprofessional performance ⁽⁵⁾.

A study indicated that 17% of patients in the postoperative period develop some kind of clinical complication, either due to a disease or an exacerbation of a pre-existing condition, with a consequent therapeutic need. Therefore, characterizing the population receiving care with an adequate evaluation during the preoperative period contributes to a decrease in these values ⁽⁶⁾.

In addition, the risks involved during the performance of surgical procedures depend on factors that are specific to the patient and the type of surgery. Important predictors of postoperative morbidity and mortality include the patient's age, physical state, size (big or small), and the nature of the surgery (emergency or elective) ⁽⁶⁾. In addition, among children, being male and / or having gone through frequent hospitalizations are individual risk factors that increase their vulnerability to hospitalization stresses ⁽⁷⁾.

All these aspects corroborate the need to know the profile of the child submitted to a surgical intervention and its possible risks. Therefore, being attentive to these factors becomes an essential condition for planning nursing care in the pre, intra and postoperative periods, since

they are determining factors in the health-disease process of the little ones. It is added that each clientele requires specific care to be planned by the nurses through the Nursing Process, as determined by the Federal Nursing Council ⁽⁸⁾.

In the forefront of this issue, there is an incipient scientific production regarding the socioeconomic-demographic and clinical profile of children hospitalized for general surgery. This brings to light the relevance of research of this nature, given the need for individualized, safe and quality care. Thus, the present study aims to describe the demographic and clinical profile of patients submitted to general surgery in a pediatric hospital in the city of Rio de Janeiro

METHOD

A descriptive and retrospective study with a quantitative approach, carried out in the pediatric surgical clinic of a municipal hospital located in the city of Rio de Janeiro-RJ.

The institution has 10 surgical beds, attending the correction of the cleft lip and cleft palate, otorhinolaryngological surgeries and general pediatric surgeries, being a reference in the state of Rio de Janeiro, and performing on average 1,300 surgeries per year. It should be emphasized that the focus of this study is on general surgeries, given the invisibility of the profile of these children in scientific evidences.

The data were collected by consulting the charts of patients aged 0-12 years who were hospitalized in the pediatric surgical clinic of the institution for general surgery from June to August of 2016, these being the inclusion criteria. It consisted of the sample universe (non-probabilistic sample), medical records of hospitalized children in these months, with a forecast of 200 surgeries. Medical records of patients submitted to cleft palate and / or otorhinolaryngologic surgeries were excluded. For data collection, a semi-structured form with socio-economic-demographic and clinical variables was used.

Data were analyzed using descriptive statistics, measures of central tendency and dispersion. For the association of clinical variables according to sex, the chi-square test was used. The level of significance was $\alpha = 0.05$. Statistical analysis was performed using IBM® SPSS software version 19.0.

The study complied with the guidelines of Resolution No. 466/2012 of the National Health Council, which provides for conducting research with human beings ⁽⁹⁾. Therefore, the research was approved by the Research Ethics Committee of the Municipal Health Secretariat of Rio de Janeiro (CAAE: 59485316.2.0000.5279. Opinion: 1,745,441). As it is a retrospective study, through a non-interventional analysis of the medical record and

that dispenses with the direct information collection with the research participant, the Ethics Committee was requested to exempt the free and informed consent form. However, the confidentiality of the patient's personal identification was guaranteed by the investigators and by the data collection and recording techniques. The patient was identified only through initials and registry numbers that serve only to validate the individuality of the information.

RESULTS

Of the total of 139 (100.0%) patients submitted to surgical interventions, the majority corresponded to males (77.0%), of brown ethnicity (61.9%), the largest number of surgeries performed in children in the pre-school age group (42.4%). The maternal figure was responsible for the hospitalization of 136 (97.8%) (table 1).

Of the total number of surgeries performed, 137 (98.6%) were elective. Most of the children submitted to the surgical procedure had no comorbidities (90.6%), just had their first surgery (95.0%), most of them had no previous hospitalization (89.2%) and 123 (88.5%) had no allergies. Regarding the use of regular medication, 123 (88.5%) did not use.

Among the patients submitted to surgical procedures, the boys did more surgeries when compared to the girls, had a higher incidence of venous access and used more medication for pain compared to the girls. However, there was no statistically significant difference. Regarding the number of days in the postoperative period, the male patients presented a statistically significant difference ($p < 0.05$) in relation to the female sex, with a hospital stay longer than 24 hours.

It is worth mentioning that out of 139 patients, 10 performed more than one surgical procedure at admission, totaling 151 surgeries. The most frequent surgery was hernioplasty 59 (39.07%), followed by postectomy 54 (35.76%), hydrocele 11 (7.28%), frenectomy 8 (5.30%), hypospadias 5 (3, (0.66%), orchiectomy 1 (0.66%), orchidopexy 1 (0.6%), exequation of polydactyly 2 (1.32%), cantectomy 2 (1.32%), (0.66%), facial hemangioma 1 (0.66%), cutaneous lesion biopsy 1 (0.66%), treatment of hyperkeratosis 1 (0.66%), epididymal site 1 (0.66%) and cryptorchidia 1 (0.66%).

Most of the children who underwent surgery had some type of laboratory examination (90.6%), with a higher blood count (90.6%). Although there were no intercurrent records in the postoperative period, most of

TABLE 1 – Characterization of patients according to sociodemographic variables. Rio de Janeiro-RJ, 2018

| Variables | N | % |
|---------------------------------------|-----|------|
| Gender | | |
| Female | 32 | 23,0 |
| Male | 107 | 77,0 |
| Ethnicity | | |
| Brown | 86 | 61,9 |
| Caucasian | 34 | 24,5 |
| Not declared | 02 | 1,4 |
| Age group | | |
| Breast-fed | 26 | 18,7 |
| Kindergarden | 59 | 42,4 |
| School | 34 | 24,5 |
| Pre-teen | 12 | 8,6 |
| Teenager | 08 | 5,8 |
| In charge of hospitalization * | | |
| Mother | 136 | 97,8 |
| Father | 2 | 1,4 |
| Origin (municipality) ** | | |
| Rio de Janeiro | 92 | 66,2 |
| Belford Roxo | 15 | 10,8 |
| Nova Iguaçu | 9 | 6,5 |
| São João de Meriti | 6 | 4,3 |
| Mesquita | 5 | 3,6 |
| Queimados | 4 | 2,9 |
| Duque de Caxias | 3 | 2,2 |
| Nilópolis | 1 | 0,7 |
| Tubiancanga | 1 | 2,2 |

* variable presented missing 1 (0.7%); ** variable presented missing 3 (2.1%).



TABLE 2 – Characterization of patients according to clinical variables. Rio de Janeiro-RJ, 2018

| Variables | Female n (%) | Male n (%) | Test (p value) |
|---|-----------------|---------------|-------------------|
| Amount of surgeries* | | | |
| One | 28 (21,9) | 100 (78,1) | 0,01 (0,89) |
| Two or more | 02 (20,0) | 08 (80,0) | |
| Peripheral venous access ** | | | |
| No | 01 (16,7) | 05 (83,3) | 0,06 (0,80) |
| Yes | 26 (20,8) | 99 (79,2) | |
| Days of post-operative hospitalization *** | | | |
| <24h | 05 (45,5) | 06 (54,5) | 4,22 (0,04) |
| >or=24h | 24 (19,0) | 102 (81,0) | |
| Use of pain medication*** | | | |
| No | 13 (28,3) | 33 (71,7) | 2,08 (0,14) |
| Yes | 16 (17,6) | 75 (82,4) | |

* variable presented missing 1 (0.7%); ** variable presented missing 8 (5.8%); * variables presented missing 2 (1.4%).

the patients used pain relief medication (65.4%), among these cases dipirone (98.9%) was the first choice.

DISCUSSION

The profile of patients who were submitted to general surgery in the study setting was predominantly characterized by pre-school children of brown ethnicity. In a study carried out in the pediatric unit of a public teaching hospital in the city of Londrina / Paraná, there was also a prevalence of males among surgical procedures (66.5%)⁽⁵⁾. Similarly, a study on the profile of users of a pediatric surgery outpatient clinic was predominant among boys aged 4 to 6 years old⁽¹⁰⁾. These data require special attention in nursing care, considering that being male appears to increase children's vulnerability to a surgical procedure and, consequently, the stress of a hospitalization.

In addition, admission to the hospital for surgical intervention may be more impacting for children, especially those in the pre-school stage, because for them, usually this moment is an incomprehensible and traumatizing experience, since surgery brings with it uncomfortable exams, contact with blood, malaise, anesthetic procedures and postoperative difficulties⁽¹¹⁾.

It is, therefore, an experience of suffering in which the child is vulnerable, but it can also be a moment of strength of the child when the hospitalization is faced with the mother, who becomes a facilitator and protector during this period⁽¹²⁾. This corroborates with the present study, considering that 97.8% of the patients were accompanied by their mothers during hospitalization, which needs to be recognized and valued as a facilitating factor for nursing care.

Regarding those responsible for the hospitalization of the child, a study carried out with 20 families that had

children hospitalized in a pediatric public hospital in the south of Brazil was compatible with the data found in this study, since there was also a prevalence of the maternal figure as the patient's companion. This fact draws attention to the predominance of the mother's presence in events such as this, relating to the female legacy of dedication to the care of the children regarding hygiene, food and comfort, as well as the contact that fosters the feeling of unity among them⁽¹³⁾.

It is noteworthy that there were no black children, most of them being recorded in the medical records as brown, revealing a peculiar characteristic that does not represent the data of the last Brazilian Demographic Census of 2010. The results of this survey pointed out that, in the Southeast region, Rio de Janeiro stands out in relation to the other states because 12.4% of the population are people of black color or race, with approximately 2 million patients. However, it should be noted that, in the population segment from 0 to 14 years of age, the ethnicity register is usually obtained by adults⁽¹⁴⁾. Therefore, the data reflect the ethnicity declared by the legal guardians or registered by health professionals in completing the anamnesis.

It was also observed that the hospital attends healthy children without comorbidities, hospitalizations and / or previous surgeries in the surgical clinic for the accomplishment of elective procedures, which contributes to a postoperative without interurrences. However, the stress state of the children and their families doesn't depend on the complexity degree of the surgery and length of hospital stay, as the preoperative period is always considered a stressor for child development, as it often involves an emotional overload for the whole family, and hospitalization itself increases the probability of invasive and traumatic procedures⁽⁴⁾.

Therefore, because the children are mostly hospitalized only a few hours before the surgical procedure, nurses have the essential role of making efforts to minimize the stressors in this context. Thus, nursing care planning should address physical, emotional, social and spiritual needs, as well as orientation related to the hospitalization process and the surgical procedure ⁽¹⁵⁾.

Talking, watching television, praying and playing are some of the coping strategies that help children deal with the potential stressors of hospitalization, especially anxiety and distress. Data showed that children who played the most often sang more, studied more, listened to more music in the hospital, cried less, felt anger less frequently, made fewer attempts to hide, and vice versa. Therefore, the nurse should use interactive and playful strategies to minimize the stress of hospitalization in the pre, trans and postoperative periods of the children, even in cases of elective surgeries with short hospitalization.

The nursing team must provide a qualified assistance from the admission of the child to the hospital unit, always in order to fully meet their needs. In addition, it is imperative to include the family as an integral member of the care process, so that it can offer the necessary support to children in the hospital, making this process more humanized and less traumatic for all parties involved ⁽¹⁷⁾.

That being said, supporting and minimizing the companion's suffering also becomes an imperative in this process. A study carried out to assess the stress level of 54 accompanying mothers of children hospitalized for elective surgical procedures showed that 82% of these women presented a high stress index, specifically related to the child's first experience of surgery ⁽⁴⁾.

The importance of adequate preparation and the greater approximation with the children and their relatives in the preoperative period is also added as a way to minimize the anxiety generated by the surgical context, including reducing the chances of children's absence to the scheduled procedures ⁽⁹⁾.

The results of this study related to the type of surgery corroborate with the literature that the hernioplasty is one of the most common surgical corrections of childhood, predominantly inguinal and male ⁽¹⁸⁾. Therefore, the finding that most of the children submitted to surgery in the temporal cut of the research belong to the male sex, allows similarity with data from another investigation in which there was a predominance of urological type surgeries, such as postectomy, in addition to inguinal herniorrhaphy and umbilical ⁽⁹⁾.

The surgical correction of inguinal hernia is older than the history of surgery, being a major concern among surgeons due to the high rate of relapses presented in corrections with or without prosthesis. In addition, abdominal wall hernias are the most common in childhood, with

a high incidence among preterm and low birth weight infants, making up one of the largest surgical procedures among the pediatric clientele, and should be scheduled as soon as possible due to the risk of incarceration ⁽¹⁹⁾.

The second most evident surgical correction was the postectomy, understood as resection of the foreskin. Even today, phimosis presents a controversial definition in the literature, and can be defined as a congenital or acquired narrowing of the skin that covers the glans, characterized by a non-retractile foreskin incurring in the appearance of possible morbidities ⁽²⁰⁾.

It should be noted that, at birth, the foreskin is a layer adhered to the glans until the desquamation of the smegma occurs and undoes this adhesion. This process occurs gradually and is completed by the age of three years, considering that the foreskin is retractile only in 4%, in six months in 20%, in three years in 50% and in 17 in 99%, making thus becoming a common clinical entity in this age group ⁽²⁰⁾.

Although hydrocele presents a lower percentage than the other morbidities discussed above, it is also one of the most frequent problems in pediatric urology. There are several types of congenital hydrocele, where the most frequent in younger children is the communicant. This type is caused by persistent peritoneal-vaginal conduit (VCT) that allows passage of the peritoneal fluid into the scrotum in the standing or seated position, and is characterized by the increase of the size of the scrotal pocket during the day, with its decrease or disappearance during the nocturnal rest. The simple hydrocele does not present a variation of size during the day ⁽²¹⁾.

It is therefore a frequent entity among infants, usually in the first six months of age, with spontaneous disappearance and very rarely requires surgical correction. In this way, it is not usually indicated in children younger than 4 years of age, due to their high spontaneous cure rate ⁽²¹⁾.

Fenectomy was another surgery performed among children in the pre-school age group. The lingual brake is an anatomical fold-shaped structure that is located between the belly of the tongue and the floor of the oral cavity, through a connection between them. In the condition that this brake is very close to the apex of the tongue, it hinders the movement of this organ, known as ankyloglossia ⁽²²⁾.

The incidence of this clinical entity in younger children aged 0- 3 months and 4 and 12 months is 1.59 and 1.49%, respectively, and affects about one individual per 300 births. In these cases, surgeries are indicated when orofacial functions such as chewing, swallowing and phonological are significantly compromised. As the frenectomy is the usual procedure to release the lingual frenulum ⁽²³⁾.

Hypospadias is also another frequently encountered urological manifestation. It presents as a congenital malformation of the male external genitalia, where the urethral meatus is located in the ventral part of the penis between the glans and the perineum. It affects 1 in every 250 living births. Among the severity found, there are problems related to sexuality, infertility and the need to sit down to urinate ⁽²⁴⁾.

The classification of the hypospadias occurs according to the anatomical location of the urethral meatus, in which the distal presents a higher incidence between 65-70% of the cases. The treatment imposed is surgical, between the ages of 6 and 12 months, with better results when performed earlier, between 4 and 6 months of age ⁽²⁴⁾.

In view of pathologies that require surgical correction, intravenous therapy is imperative. In this perspective, this practice has become an indispensable resource in clinical practice and of extreme importance in the treatment of acute and chronic diseases, and in health recovery, being used for different purposes and in varied situations ⁽²⁵⁾.

Thus, the significant incidence of peripheral venous puncture, both for maintenance of venous access and for blood collection, is in line with scientific evidence that this is one of the most invasive and painful health care, especially among children. However, in this population group, it is one of the most challenging procedures for nursing professionals precisely because it causes terror and anxiety in both the child and the family ⁽²⁶⁾.

Such reality imposes the need for strategies to minimize this suffering, especially regarding the preparation of the child to experience this moment in a less traumatic way, especially among preschoolers, the prevalent age group in this research. In this area, the literature points out as a possibility the use of therapeutic toys ⁽²⁷⁾, or even apps ⁽²⁶⁾.

Regarding patient safety, a study highlighted as evidence the evaluation of the care process to children in surgical situations. It is believed that the Pediatric Safe Surgery Checklist (CPCS) is able to contribute to the systematization of care, provided that all patients involved understand the need to perform the tasks described in this process. The same study presents evidence on the reduction of hospital infections in which strict aseptic techniques are used to perform invasive procedures, intensification in hand washing and change of gloves to each activity performed as a form of prevention ⁽²⁸⁾. In

this perspective, the implementation of a safety culture must be adopted by all hospitals to ensure safe practice with medication in pediatrics ⁽²⁹⁾.

In this logic, the choice of medication is a critical action that requires knowledge in order to achieve success in the procedure, with lower postoperative morbidity, such as pain, nausea and vomiting, and favoring a rapid recovery. In this perspective, dipyrone was the medicine most used for pain relief.

However, a study carried out in 2013, with 120 children aged 3 to 6 years old in the postoperative period submitted to tonsillectomy, showed no difference in pain relief when compared to the use of dipyrone versus paracetamol, both of which were conditioned to the relief of pain within 6 hours. Both drugs have a good tolerability profile and effective analgesic properties when administered intravenously in the postoperative period of this type of surgery ⁽³⁰⁾.

According to the same study, the most frequent adverse effects of Dipyrone were persistent nausea and vomiting, surgical site bleeding, dyspepsia and allergic reactions, but were not recorded in the first 24 hours of the post-op ⁽³⁰⁾.

CONCLUSION

In conclusion, the pediatric patients submitted to general surgery in the research setting are mostly brown preschool children, with no similarities, no previous surgeries and no post-surgical complications, the most prevalent being hernioplasty and postectomy. However, the use of analgesics was recurrent. In addition, the mother figure represents the main companion in the hospitalization of the child.

It is hoped that this research contributes to reinforce the importance of knowing the profile of the pediatric surgical population served in different practice scenarios, in order to favor an individualized, safe and qualified nursing care that meets the real needs of children and their families in the pre, trans and postoperative periods of the surgical clinic.

However, the work had as a limitation the absence of data in the medical records for a more comprehensive characterization of the socioeconomic-demographic profile of the patients. In addition, it has limits for broader generalizations, considering the analysis of data in a specific hospital setting.

REFERENCES

1. Brázio PRN. Infant anxiety in a surgical setting: an experimental study [thesis]. Madeira: Universidade da Madeira; 2014.
2. Giordani AT, Sonobe HM, Ezaias GM, Valério MA, Barra MR, Stadler DV. Profile of surgical patients attended at a public hospital. *Rev enferm UFPE on line* [Internet]. 2015 [acesso em 28 mai 2016]; 9(1): 54-61. Disponível em: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view-File/10306/10975>
3. Silveira A, Neves ET, Famoso AF, Donaduzzi JC, Junges CF, Zamberlan KC. Characterization of children undergoing surgical treatment in a teaching hospital in southern Brazil. *Rev enferm UFSM* [Internet]. 2011 [acesso em 28 mai 2016]; 1(2):174-82. Disponível em: <https://periodicos.ufsm.br/revism/article/view/2484>
4. Carnier LE, Rodrigues OMPR, Padovani FHP. Maternal stress and pre-surgical infant hospitalization. *Estudos de Psicologia* [Internet]. 2012 [acesso em 28 mai 2016]; 29(3): 315-25. Disponível em: <http://www.scielo.br/pdf/estpsi/v29n3/02.pdf>
5. Alves BA, Santos TFM, Ferrari RAP, Tacla MTGM, Sant'Anna FL, Lopes EB. Hospitalized child: characterization of surgical procedures in a public teaching hospital. *Semina: Ciências Biológicas e da Saúde* [Internet]. 2015 [acesso em 28 jul 2016]; 36(1): 317-24. Disponível em: <http://www.uel.br/revistas/uel/index.php/seminabio/article/view/18813>
6. Fernandes FM. Preoperative assessment and elective surgery care: evidence-based recommendations. *Revista da AMRIGS* [Internet]. 2010 [acesso em 28 jul 2016]; 54(2): 240-58. Disponível em: http://www.amrigs.org.br/revista/54-02/23-pratica_medica.pdf
7. Hockenberry MJ, Wilson D. Wong. *Fundamentals of Pediatric Nursing*. 9. ed. Rio de Janeiro: Elsevier; 2014.
8. Conselho Federal de Enfermagem (BR). Resolução Cofen nº 358/2009. It deals with the Systematization of Nursing Assistance and the implementation of the Nursing Process in public or private environments, where Nursing professional care takes place, and provides other measures. In: Conselho Federal de Enfermagem [Internet]. 2009 [acesso em 28 jul 2017]. Disponível em: http://www.cofen.gov.br/resolucao-cofen-3582009_4384.html
9. Conselho Nacional de Saúde (BR). Resolução n.º 466 de 12 de dezembro de 2012. Approves guidelines and regulatory standards for research involving human subjects. Rio de Janeiro; 2012.
10. Sampaio CEP, Oliveira MV, Leal VMM, Comino LBS, Romano RAT, Gomes AMT. Pediatric outpatient surgery: an exploratory study about the impact of nursing consultation. *Rev. Min. Enferm* [Internet]. 2012 [acesso em 28 jul 2016]; 16(1): 25-30. Disponível em: <http://www.reme.org.br/artigo/detalhes/496>
11. Cardoso NR, Prado PF, Souza AAM, Figueiredo ML. Experiencing the surgical process: perception and feelings of the child. *Rev baiana enferm* [Internet]. 2017 [acesso [acesso em 22 ago 2018]; 31(3):e17648. Disponível em: <https://portalseer.ufba.br/index.php/enfermagem/article/view/17648/15077>
12. Ribeiro CA, Angelo M. The meaning of hospitalization for pre-school children: a theoretical model. *Rev. Esc. Enferm. USP* [Internet]. 2005 [acesso em 22 ago 2018]; 39(4):391-400. Disponível em http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342005000400004&lng=en&nrm=iso
13. Menezes M, Moré CLOO, Barros L. The Social Networks of Family Companions during Hospital Hospitalization of Children. *Rev Esc Enferm USP* [Internet]. 2016 [acesso em 22 ago 2018]; 50(n.esp):107-113. Disponível em: http://www.scielo.br/pdf/reeusp/v50nsp/pt_0080-6234-reeusp-50-esp-0107.pdf
14. Instituto Brasileiro de Geografia e Estatística. censo demográfico 2010: characteristics of the population and households. results of the universe [Internet]. 2011 [acesso em 22 ago 2018]. Disponível em: <https://ww2.ibge.gov.br/home/estatistica/populacao/censo2010/default.shtm>
15. Christóforo BEB, Carvalho SD. Nursing care performed in the surgical patient in the preoperative period. *Rev. Esc. Enferm. USP* [Internet]. 2009 [acesso em 22 ago 2018]; 43(1):14-22. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342009000100002
16. Motta AB, Perosa GB, Barros L, Silveira KA, Lima ASS, Carnier LE, et al. Coping behaviors in the context of child hospitalization. *Estudos de Psicologia* [Internet]. 2015 [acesso em 22 ago 2018]; 32(2): 331-41. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-166X2015000200331&lng=en&nrm=iso
17. Gomes GLL, Fernandes MGM, Nóbrega MML. Anxiety of hospitalization in children: conceptual analysis. *Rev Bras Enferm* [Internet]. 2016 [acesso em 22 ago 2018]; 69(5):940-5. Disponível em: <http://www.scielo.br/pdf/reben/v69n5/0034-7167-reben-69-05-0940.pdf>
18. Ennio G. Inguinal hernia in childhood. *Rev. Col. Bras. Cir* [Internet]. 2001 [acesso em 22 ago 2018]; 28(6): 444-52. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0100-69912001000600010&lng=en
19. Garcia FJ, Neto TO, Pereira JBS, Campanholo MR, Gonsaga RAT, Coelho SA. Abdominal hernia in childhood. *Modern Pediatrics* [Internet]. 2013 [acesso em 22 ago 2018]; 49(4) :161-165. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0100-69912001000600010
20. Lima AR, Rodrigues BS, Maciel LC, Andrade KB, Rebechi RS. Influence of the suture type on the healing of the postectomy. *Electronic Journal of the SBU Teaching and Training Commission* [Internet]. 2017 [acesso em 22 ago 2018]; 3(1): 19-24. Disponível em: http://recet.org.br/edicoes/2018/Edicao_1/7_2017_07VI.pdf
21. Romero JG, Ruiz YG. The pediatrician before the most frequent processes of Pediatric Urology. *Rev. Curso de Actual-*



- ización Pediatría [Internet]. 2017 [acesso em 22 ago 2018]; 3: 183-94. Disponível em: https://www.aepap.org/sites/default/files/183-194_urologia_pediatrica.pdf
22. Ribeiro FP, Simonetti ZPR, Santos AS, Belém LC, Resende GB. Lingual phrenectomy in pediatric patients: case report. *Revista da academia brasileira de odontologia* [Internet]. 2016 [acesso em 22 ago 2018]; 5(1): 307-42. Disponível em: <http://www.rvacbo.com.br/ojs/index.php/ojs/article/view/307>
23. Melo NSFO, Lima AAS, Fernandes A, Guimarães RPVCS. Anquiloglossia: case report. *Revista Sul-Brasileira de Odontologia SOB* [Internet]. 2011 [acesso em 22 ago 2018]; 8(1):102-7. Disponível em: http://vdisk.univille.edu.br/community/depto_odontologia/get/ODONTOLOGIA/RSBO/RSBO_v8_n1_janeiro-marco2011/v8n01a14.pdf
24. Martins AV, Araujo EJ, Souza JA, Colombeli EM, Lima RM, Ramos TC. Surgical treatment of distal hypospadias. *Arq Catarin Med* [Internet]. 2013 [acesso em 22 ago 2018]; 42(4): 54-9. Disponível em: <http://www.acm.org.br/revista/pdf/artigos/1258.pdf>
25. Jacinto AKL, Avelar AFM, Wilson AMMM, Pedreira MLG. Phlebitis associated with peripheral intravenous catheters in children: a study of predisposing factors. *Esc Anna Nery* [Internet]. 2014 [acesso em 22 ago 2018]; 18 (2):220-6. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1414-81452014000200220&lng=en&nrm=iso&tlng=pt
26. Cunha MLR, Brandi S, Bonfim GFT, Severino KG, Almeida GCF, Campos PC, et al. Application for preparation of the child / family in the venipuncture: experience report. *Rev. Bras. Enferm* [Internet]. 2018 [acesso em 22 ago 2018]; 71(3):1474-8. Disponível em: http://www.scielo.br/pdf/reben/v71s3/pt_0034-7167-reben-71-s3-1474.pdf
27. Pessoa AVC, Santos AF, Marques DKA, Lubenow JAM, Cruz DSM. Therapeutic toy: preparation of pre-school children for venipuncture. *Revista de Ciências da Saúde Nova Esperança* [Internet]. 2018 [acesso em 22 ago 2018]; 16:64-71. Disponível em <http://www.facene.com.br/wp-content/uploads/2018/05/V.16-N.1-2018.pdf>
28. Wegner W, Silva MUM, Peres MA, Bandeira LE, Frantz E, Botene DZA, et al. Patient safety in hospitalized child care: evidence for pediatric nursing. *Rev. Gaúcha Enferm* [Internet]. 2017 [acesso em 22 ago 2018]; 38(1):68020. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1983-14472017000100504&lng=en&nrm=iso.
29. Souza ASC, Marinho DT, Silva JS, Santos GMG, Silva RMR, Oliveira MMC. Adverse events and safe practice with medication in pediatrics: integrative review. *Rev. Enfermagem Atual* [Internet]. 2018 [acesso em 22 set 2018]; 18(84): 157-63. Disponível em: <https://revistaenfermagematual.com.br/uploads/revistas/22/revista.pdf>
30. Sener M, Kocum A, Caliskan E, Yilmaz I, Caylakli F, Aribogan A. Administration of paracetamol versus dipyron in intravenous-controlled analgesia for pain relief in the postoperative period of children after tonsillectomy. *Rev. Bras. Anestesiologia* [Internet]. 2015 [acesso em 24 ago 2018]; 65(6):476-82. Disponível em http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-70942015000600476&lng=pt&nrm=iso.