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Nursing knowledge of school-age children undergoing ear, nose and throat surgery and their families – A scoping review protocol

Conhecimento em enfermagem relativo à criança em idade escolar submetida a cirurgia de otorrinolaringologia e sua família – Um protocolo scoping review

Conocimientos de enfermería sobre los niños en edad escolar sometidos a cirugía otorrinolaringológica y sus familias: Un protocolo de scoping review

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Abstract

Objective: To map the nursing focus in the existing literature on school-age children undergoing ENT surgery and their families, as well as their respective clinical data, nursing diagnoses, and nursing interventions. Methods: This scoping review will adhere to the Joanna Briggs Institute guidelines for Scoping Reviews and will consider published and unpublished evidence in English, Spanish and Portuguese. Databases including MEDLINE, CINAHL, PsycINFO, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, Scopus, JBI Evidence Synthesis and SciELO, along with sources of unpublished literature, such as ProQuest Dissertations and Theses and Repositório Científico de Acesso Aberto em Portugal, will also be searched for relevant studies. No cultural or geographical limitations will be applied. The study selection process will be reported using the PRISMA-ScR guidelines. Results: Two reviewers will independently extract the data using an extraction table. The first step is to identify the nursing focus, followed by presenting the remaining elements, specifically data, diagnoses and nursing interventions, organised in a figure that shows the relationships between them. Conclusion: By systematically presenting the current state of nursing knowledge in this field, this review will provide a foundation for enhancing clinical decision-making,

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improving the quality of nursing care delivered to school-age children undergoing ENT surgery and their families, and identifying areas for future research.
Keywords: Documentation; Family; Nursing care; Perioperative period; School-age children.

Resumo

Objetivo: Mapear os focos de enfermagem existentes na literatura relativos à criança em idade escolar submetida à cirurgia otorrinolaringológica e sua família, bem como os respectivos dados, diagnósticos e intervenções de enfermagem. Método: Esta Scoping Review seguirá as directrizes do Joanna Briggs Institute e considerará evidências publicadas e não publicadas em inglês, espanhol e português. Bases de dados como MEDLINE, CINAHL, PsycINFO, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, Scopus, JBI Evidence Synthesis e SciELO, juntamente com fontes de literatura não publicada, como ProQuest Dissertations and Theses e Repositório Científico de Acesso Aberto em Portugal, também serão pesquisadas para estudos relevantes. Não serão aplicadas limitações culturais ou geográficas. O processo de seleção dos estudos será orientado de acordo com as directrizes PRISMA-ScR. Resultados: Os dados serão extraídos de forma independente por dois revisores, utilizando uma tabela de extração. A primeira etapa é a identificação dos focos de enfermagem, seguindo-se a apresentação dos restantes elementos, nomeadamente dados, diagnósticos e intervenções de enfermagem, organizados numa figura que demonstre as relações entre eles. Conclusão: A apresentação sistemática do estado atual do conhecimento em enfermagem nesta área fornecerá uma base para suportar a tomada de decisão clínica em enfermagem, melhorar a qualidade dos cuidados de enfermagem prestados às crianças em idade escolar submetidas a cirurgia ORL e suas famílias, bem como permitirá identificar áreas para investigação futura.
Palavras-chave: Documentação; Família; Enfermagem; Período perioperatório; Criança em idade escolar.

Resumen

Objetivo: Mapear el foco de atención de enfermería en la literatura existente sobre niños en edad escolar sometidos a cirugía ORL y sus familias, así como sus respectivos datos clínicos, diagnósticos e intervenciones de enfermería. Métodos: Esta scoping review se adherirá a las directrices del Instituto Joanna Briggs para Revisiones de Alcance y considerará evidencia publicada y no publicada en inglés, español y portugués. También se buscarán estudios relevantes en bases de datos como MEDLINE, CINAHL, PsycINFO, Registro Cochrane Central de Ensayos Controlados (Cochrane Central Register of Controlled Trials), Base de Datos Cochrane de Revisiones Sistemáticas (Cochrane Database of Systematic Reviews), Scopus, JBI Evidence Synthesis y SciELO, junto con fuentes de literatura no publicada, como ProQuest Dissertations and Theses y Repositório Científico de Acesso Aberto em Portugal. No se aplicarán limitaciones culturales ni geográficas. El proceso de selección de estudios se comunicará siguiendo las directrices PRISMA-ScR. Resultados: Dos revisores extraerán los datos de forma independiente utilizando una tabla de extracción. Comenzarán por identificar el foco de atención de enfermería, seguido de la presentación del resto de elementos, concretamente datos, diagnósticos e intervenciones de enfermería, organizados en una figura que muestre las relaciones entre ellos. Conclusiones: Al presentar sistemáticamente el estado actual de los conocimientos de enfermería en este campo, esta revisión proporcionará una base para mejorar la toma de decisiones clínicas, mejorar la calidad de los cuidados de enfermería prestados a los niños en edad escolar sometidos a cirugía ORL y a sus familias, e identificar áreas para futuras investigaciones.
Palabras clave: Documentación; Familia; Cuidados de enfermería; Periodo perioperatorio; Niños en edad escolar.

1. Introduction

Otorhinolaryngology (ENT) surgeries, involving procedures related to the ear, nose and throat, are the most common surgical procedures performed on children (Virag et al., 2019), often representing one of a child's first surgical experiences (Dumbrava & Comsa, 2012; Fukuchi et al., 2005). While these procedures are generally considered safe and effective, they can be a source of significant stress and anxiety for both children and their families (Dobrina et al., 2023). Nurses, positioned at the forefront of paediatric care, play a pivotal role in providing comprehensive, family-centred care throughout the perioperative journey, addressing not only the physical needs of the child but also their emotional and psychological well-being (Jiang et al., 2023).

The scope of paediatric ENT surgeries is vast, encompassing a wide range of procedures, each with unique considerations and potential challenges. Predominant among these procedures are adenoid and tonsil surgeries, with or without placement of tympanostomy tubes (Gerhardsson et al., 2016; Kvaerner et al., 2000). Tonsillectomy, for instance, is primarily

indicated for children with recurrent tonsillitis, sleep-disordered breathing and obstructive sleep apnoea (Kubba & Downie, 2020; Zielinski et al., 2022). In the United States approximately 289 000 tonsillectomies are performed annually in children and adolescents under 15 undergo (Mitchell et al., 2019), with a further 37 000 performed in UK (Marshall & Sumilo, 2023).

Adenoid hypertrophy is another common condition in this age group, frequently leading to nasal obstruction (Calvo-Henriques et al., 2023). Adenoidectomy, the standard treatment approach, is recommended in cases of the presence of four or more episodes of recurrent suppurative rhinorrhoea, sleep disruption with nasal breathing obstruction, hyponasility, malocclusion or orofacial dysfunction, cardiopulmonary complaints as a result of upper airway obstruction and recurrent otitis media (Alghamdi et al., 2020; Calvo-Henriques et al., 2023). In addition, adenotonsillectomy may be necessary in cases of obstructive sleep apnoea (Alghamdi et al., 2020), resolving the condition in approximately 75%-80% of affected children (Cooper et al., 2013).

Otitis media with effusion is a leading cause of hearing loss in a school-age children (Takai et al., 2023). Recurrent acute otitis media often necessitates myringotomy, a procedure involving a small eardrum incision (Brink & Gisselsson-Solen, 2019). In the United States, insertion of tympanic ventilation tubes is performed on 667 000 children under 15 annually (Nobrega et al., 2023), making it the most common surgical intervention performed in this patient population (Brink & Gisselsson-Solen, 2019; Nobrega et al., 2023).

Nursing interventions implemented during the perioperative period play a pivotal role in optimising surgical outcomes of children undergoing ENT surgery (Jiang et al., 2023). These interventions, defined as “any treatment based upon clinical judgment and knowledge that a nurse performs to enhance patient/client outcomes” (Butcher et al., 2018, p.27), involve improving children’s knowledge and understanding of the surgical process and creating a familiar and less dauting environment for them. Children may have difficulty understanding and coping with the hospital environment, surgical procedures, and postoperative recovery. They often experience heightened anxiety and fear related to the separation from parents, pain, and unfamiliar sensations associated with the anaesthesia and surgery itself (Dobrina et al., 2023; Jiang et al., 2023).

Families of children undergoing ENT surgery also require significant support and education from nurses. Parents and caregivers often experience high levels of stress and anxiety related to their child’s surgery and may struggle to balance their own emotions needs with those of their child, as well as influence pain and anxiety levels in their children (Dobrina et al., 2023). Nurses can provide invaluable support by providing clear and consistent information about the surgical procedure, expected recovery, and potential complications. They can also empowered families by teaching them how to care of their child at home, manage pain and discomfort, and recognise signs of potential complications. Postoperative complications can include haemorrhage, fever, pain, emergence delirium, nausea, vomiting, dehydration and limited oral intake (Aldrees et al., 2022; Dobrina et al., 2023; Masoudifar et al., 2023; Muzzi et al., 2021; Zielinski et al., 2022).

Various preoperative preparation programs have been developed to address these issues. Levin and colleagues highlight ten studies focused on different education modalities that can be implemented with children and/or parents at different points during the preoperative journey. These programs helps to reduce anxiety and improve outcomes by ensuring that both children and parents are well-prepared for surgery (Levin et al., 2019).

Although tonsillectomies, adenoidectomies and myringotomies are generally safe operations, nurses are responsible for, for example, implementing pain management interventions, such as non-pharmacological pain control interventions like distraction techniques (Mousaviasl et al., 2023). Moreover, these procedures are usually carried out as day surgeries (Tolvi et al., 2021), with many children being discharge within a few hours of the operation, necessitating appropriate follow-up care during the postoperative period (Billings et al., 2022). Telephone follow-up calls are widely considered as a valuable resource for assessing complications and preventing emergency department visits. Additionally, these calls offer an important support for

parents by addressing queries and filling information gaps they may have (Billings et al., 2022; Shaffer & Dohar, 2020; Smith et al., 2022). Therefore, based on the Family-Centred Care Model, care planning should involve the whole family, recognising both the child and the family members as target clients of care (Shields, 2010). This reduces the stress associated with hospitalisation, making the family-centred care approach the most appropriate theoretical framework to support the care provided (Buyuk & Bolisik, 2018).

Despite the prevalence of ENT surgeries in the paediatric population and the integral role of nurses in optimising patient outcomes, the integration of their knowledge into the nursing process of children undergoing ENT surgery and their families is poorly systematised. The nursing process refers to a systematic and organised approach to solving health and illness problems through the implementation of nursing interventions (Hants et al., 2023; Schub & Karakashian, 2018). Inconsistent documentation of nursing care during the perioperative period creates additional challenges regarding continuity of care and the interoperability of the information produced by electronic information systems, directly impacting the care quality (Neves et al., 2022; Søndergaard et al., 2019). Using standardised nursing terminology in electronic information systems can enhance documentation quality and safety (Queirós et al., 2021; Tajabadi et al., 2019).

Synthetising and organising the nursing focuses in the literature, as well as the different interventions and tools used when caring for school-age children undergoing ENT surgery and their families, employing the International Classification for Nursing Practice (ICNP) (International Council of Nurses, 2019), will facilitate the transcription of the knowledge produced. This knowledge must be incorporated into the nursing process according to the international standards, such as ISO 18104:2014 (International Organization for Standardization, 2014). An organised nursing process based on these standards translates into better nurses' clinical reasoning and patient outcomes. Assessing patients' needs allows nurses to identity nursing diagnoses (Queirós et al., 2021), perceived as "the label assigned by a nurse to the decision about a phenomenon that the focus of nursing interventions" (International Council of Nurses, 2015, p.17). Once nursing diagnoses have been formulated, nurses are responsible for prescribing interventions that aim to change the condition of this diagnosis. When formulated incorrectly, nursing diagnosis can negatively impact the quality of care (Queirós et al., 2021).

Applying standardised language within the nursing discipline enhances semantic interoperability, improving care quality and understanding of the clinical nursing decision-making process. Identifying the components of the nursing process (a set of focus, clinical data, nursing diagnoses, and nursing interventions) constitutes one of the first steps towards systematising the body of nursing knowledge and can serve as a solid foundation for nurses' clinical decision-making, thereby resulting in better evidence-based patient care (Adubi et al., 2018; Neves et al., 2022). Furthermore, it is also important to map the available information about this topic to identify whether further research is necessary to address gaps in nursing knowledge. A preliminary search of PROSPERO, MEDLINE, Cochrane Database of Systematic Reviews, and JBI Evidence Synthesis was conducted and no current, or in-progress scoping reviews or systematic reviews on the topic were identified.

This scoping review aims to map the nursing focus in the existing literature on school-age children undergoing ENT surgery and their families, as well as their respective clinical data, nursing diagnoses, and nursing interventions. By synthesising the available evidence, this review will provide a foundation for enhancing clinical decision-making, improving the quality of nursing care delivered to this population, and identifying areas for future research.

Review question(s)

a) What are the nursing focuses related to the care provided to school-age children undergoing ENT surgery and their families?

b) What clinical data do nurses assess in this contexts?

c) Which nursing diagnoses can nurses identify?

d) What nursing interventions do nurses carry out when caring for school-age children undergoing ENT surgery and their families?

Inclusion criteria

Participants

This review will include studies conducted with school-age children, that is, children between 6 and 12 years old (Shields, 2010). Furthermore, it will consider studies developed with the families accompanying school-age children during the perioperative period of ENT surgery. Studies that include the family as a care client will also be considered. Children included in the studies should not have any diagnoses of pervasive developmental disorders, coded at ICD-10 as F84, which entails all the pathologies characterised by profound alterations in communication and socialisation (World Health Organization, 2016). In light of the complexity involved in caring for children with special needs (Shields, 2010) and the specific needs of these children in this context, we consider this a standalone study.

Concept

The concept of interest is the knowledge needed to develop the nursing process, specifically concerning nursing focus, nursing diagnoses and related clinical data, as well as the nursing interventions carried out in the care provided to school-age children undergoing ENT surgery and their families.

Context

This review will consider studies from all settings and contexts, namely ambulatory surgery or hospitalisation, in which nursing care is provided to school-age children undergoing elective ENT surgery and their families, regardless of country of origin or sociocultural limitations. Studies in which surgical procedures are carried out under sedation will not be considered. Moreover, this review will only consider studies where the surgical procedure was performed without intercurrence, which can lead to a postoperative period in a Paediatric Intensive Care Unit.

Types of sources

A range of study designs will be considered for inclusion in this scoping review, including quantitative, qualitative, and mixed methods study designs. Systematic reviews, text and opinion papers, and grey literature in this area of knowledge will also be considered.

2. Methodology

The proposed scoping review will be conducted following the JBI methodology for scoping reviews (Peters et al., 2020; Peters et al., 2022) and will be reported in line with the Preferred Reporting Items for Systematic Reviews and meta-analysis extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018).

The protocol for this scoping review was registered with the Open Science Framework (https://osf.io/n4ju8/).

Search strategy

The search strategy will aim to uncover both published and unpublished primary studies, reviews, and text and opinion papers. An initial limited search of MEDLINE (via PubMed) and CINAHL (EBSCO) was undertaken to identify articles on the

topic. The text words in the titles and abstracts of relevant articles and, the index terms used to describe the articles were used to develop a full search strategy for MEDLINE via PubMed (see Table 1).

Table 1 - *Search Strategy for Medline (via PubMed) conducted on 6th August 2024.*

Search	**Query**	**Records retrieved**
#1	Child*[Title/Abstract] OR Pediatric[Title/Abstract] OR "Young Children"[Title/Abstract] OR Paediatric[Title/Abstract] OR Parent*[Title/Abstract] OR Famil*[Title/Abstract] OR Father*[Title/Abstract] OR Mother*[Title/Abstract] OR Care-giver[Title/Abstract] OR Carer*[Title/Abstract] OR Caregiver*[Title/Abstract]	3,552,147
#2	nurs*[Title/Abstract]	560,015
#3	Tonsillectomy[Title/Abstract] OR Adenoidectomy[Title/Abstract] OR Otolaryngology[Title/Abstract] OR Adenotonsillectomy[Title/Abstract] OR "Tympanostomy tubes"[Title/Abstract] OR "throat surgery"[Title/Abstract] OR "ENT surgery"[Title/Abstract] OR Otorhinolaryngology[Title/Abstract] OR Myringotomy[Title/Abstract] OR “Head and neck surgery”[Title/Abstract] OR "ear surgery"[Title/Abstract] OR "Larynx surgery"[Title/Abstract] OR "Otorhinolaryngologic Surgical Procedures"[Title/Abstract]	44,801
#4	(((((("Child"[Mesh:NoExp]) OR "Parents"[Mesh]) OR "Caregivers"[Mesh]) OR "Family"[Mesh:NoExp]) OR "Mothers"[Mesh]) OR "Fathers"[Mesh:NoExp]	2,153,495
#5	"Nursing"[Mesh:NoExp]	51,979
#6	"Tonsillectomy"[Mesh] OR "Adenoidectomy"[Mesh] OR "Otolaryngology"[Mesh:NoExp] OR "Otorhinolaryngologic Surgical Procedures"[Mesh]	118,195
#7	#1 OR #4	4,364,796
#8	#2 OR #5	584,589
#9	#3 OR #6	139,490
#10	#7 AND #8 AND #9	590
Limited to English, Spanish and Portuguese		548

Source: Authors.

The search strategy, including all identified keywords and index terms, will be adapted for each included information source and/or database. The reference lists of all articles selected for full-text review will be screened for additional papers.

All studies written in English, Spanish and Portuguese will be analysed, as the authors are fluent in these languages. There are no cultural or geographical limitations in this review.

The databases to be searched include MEDLINE (via PubMed), CINAHL (via EBSCO), PsycINFO (via EBSCO), Cochrane Central Register of Controlled Trials (via EBSCO), Cochrane Database of Systematic Reviews (via EBSCO), Scopus, JBI Evidence Synthesis and SciELO. This search will also include sources of unpublished studies such as ProQuest Dissertations and Theses and Repositório Científico de Acesso Aberto em Portugal.

3. Results

Study/Source of Evidence Selection

Following the search, all identified records will be collated and uploaded into EndNote version 20.5 and duplicates will be removed. The refined results will then be uploaded to Rayyan. Following a pilot test, the title and abstracts will then be screened by three independent reviewers (CA; IM;RP) for assessment against the inclusion criteria for the review. Potentially relevant sources will be retrieved in full. The full text of selected citations will be assessed in detail against the inclusion criteria by the same three independent reviewers (CA; IM;RP). Reasons for exclusion of full-text papers that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements between the reviewers at each stage of the selection process will be resolved through discussion with all reviewers. The search results will be fully reported in the final scoping review and presented in a PRISMA-ScR flow diagram (Tricco et al., 2018).

Data extraction

Data will be extracted from papers included in the scoping review by three independent reviewers (CA; IM;RP) using a data extraction tool. The data extracted will include specific details about the child and families, nursing care in the perioperative period of ENT surgery, the methods and key-terms relevant to the review questions. (Peters et al., 2020). The draft data extraction tool will be modified and revised as necessary while extracting data from each included paper. Modifications will be detailed in the full scoping review report.

Following the recommendation of Levac and colleagues, reviewers will meet after reading and extracting data on 5 to 10 studies to discuss the consistency and sensitivity of the data collection tool in use (Levac et al., 2010). Any disagreement that arises between the reviewers will be resolved through discussion. Authors of papers whose email addresses are available will be contacted to request missing or additional data, where required.

Data analysis and presentation

For research question a), a table (see Table 2) will be created using the International Classification for Nursing Practice (ICNP) to identify the study's focus.

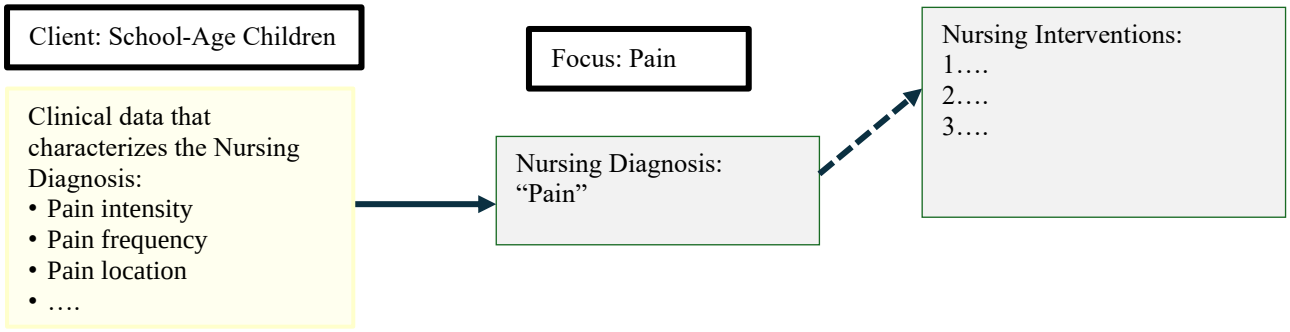
Table 2 - Focus on the care of school-age children undergoing ENT surgery and their family.

Focus	***Study Reference***
Pain	
Parent Role	

Abreu and colleagues (2024).

To address the research questions b), c) and d), a graph will be developed illustrating the relationship between the clinical data and respective emerging nursing diagnoses, as well as the corresponding nursing interventions (see Figure 1).

Figure 1 – *Example of graph presenting the data, diagnosis and nursing interventions addressed to the focus "Pain" for client school-age children undergoing ENT surgery.*



Abreu and colleagues (2024).

4. Conclusion

The perioperative period for school-age children and their families is highly specific. The nursing care provided is remarkably differentiated, covering different areas of attention, related to the client being cared for and the surgical intervention they have undergone. However, to uphold the continuity and safety of nursing care during the perioperative period, comprehensive, precise, and systematic documentation is imperative. This can be achieved by meticulously applying the nursing process, wherein nurses identify, diagnose, plan, implement, and evaluate their interventions tailored to each child and family to achieve health outcomes.

By systematically mapping the existing nursing knowledge, aligning it with the nursing process framework, and employing standardised terminology, it will not only be possible to organise the knowledge and relationships that exist between the different elements of the nursing process, but also to identify any existing gaps in this area of the nursing discipline. Identifying possible gaps in knowledge on this subject will provide guidance for future research, addressing areas inherent to the nursing process that remain understudied.

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Conflicts of interest

The authors declare no conflict of interest.

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