Journal of Pediatric Nursing 90 (2026) 176–183

Contents lists available at ScienceDirect

Journal of Pediatric Nursing

journal homepage: www.pediatricnursing.org

Postoperative thirst in children: Experience of children's, parents and health professionals

Özlem Şensoy, RN, PhD [a,*], Sabiha Mert, RN, PhD [b], Ayfer Aydın, RN, PhD [c], Ceyhan Şahin, MD [d]

[a] Department of Pediatric Nursing, School of Nursing, Istanbul University, Istanbul, Türkiye
[b] Anesthesia Program, Vocational School, Istanbul Galata University, Istanbul, Türkiye
[c] Department of Nursing, Faculty of Health Sciences, Istanbul Atlas University, Istanbul, Türkiye
[d] Department of Pediatric Surgery, Umraniye Training and Research Hospital, University of Health Sciences, Istanbul, Türkiye

ARTICLE INFO

Article history:
Received 2 December 2025
Revised 8 June 2026
Accepted 8 June 2026
Available online xxxx

Keywords:
Children
Health personnel
Parents
Postoperative care
Qualitative research

ABSTRACT

Purpose: Thirst is one of the most distressing symptoms experienced by pediatric patients after surgery. This study aimed to explore and document the experiences of children, parents, and health professionals regarding postoperative thirst, providing insights to develop care strategies that address the emotional and psychological needs of pediatric patients.
Design: A qualitative approach was employed to gather in-depth insights into the experiences of children, parents, and health professionals regarding postoperative thirst.
Methods: Purposive sampling was employed in a Pediatric Surgery Unit, involving a total of 40 participants: ten children, sixteen parents, and fourteen health professionals. Semi-structured interviews were conducted with all participants, and the transcribed data were analyzed using qualitative content analysis.
Findings: The content analysis revealed five themes: physical symptoms, feeling of discomfort, lack of knowledge, coping strategies, and suggestions.
Conclusions: This qualitative study highlights the critical importance of addressing postoperative thirst in enhance the physical and emotional well-being of pediatric patients, emphasizing that thirst is not merely a physical symptom but a multidimensional experience that significantly affects children and their families.
Implications to practice: This findings supports health professional should be educated on recognizing and managing postoperative thirst as a symptom in postoperative care. Integrating evidence-based thirst management strategies into postoperative care protocols can significantly improve patient outcomes, reduce anxiety, and promote recovery, ultimately advancing the quality of pediatric surgical care.
© 2026 Elsevier Inc. All rights are reserved, including those for text and data mining, AI training, and similar technologies.

Introduction

Surgery under either local or general anesthesia is a stressful experience for both the child and the family. While preoperative evaluation is crucial for safe anesthesia and successful surgery, postoperative care plays a critical role in ensuring fast recovery and preventing complications. In children, postoperative care requires a multifaceted, evidence-based, and interdisciplinary approach due to their unique physiological and psychological needs (Ying et al., 2022).

Among the various postoperative challenges, thirst is a frequently reported but often underestimated problem (Chen et al., 2025; Perrott et al., 2018; Yin et al., 2020).Thirst is an innate physiological response that is characterized by the need to drink fluids, and it plays a vital role in regulating fluid balance and maintaining homeostasis (Zheng et al., 2025). The prevalence of postoperative thirst among pediatric patients has been reported to range from 39.7%–93.5% (Chen et al., 2025; Riviera et al., 2022). Multiple factors, including the effects of anesthesia, postoperative medications, surgical stress response, and fasting, contribute to children's experience of thirst (Chen et al., 2025; da Mata et al., 2024; Engelhardt et al., 2011; Klemetti et al., 2010; Perrott et al., 2018; Riviera et al., 2022). Fasting refers to the practice of restricting food and fluid intake before surgery to reduce the risk of aspiration during anesthesia[2,3], which may contribute to postoperative thirst (Chen et al., 2025; Klemetti et al., 2010; Riviera et al., 2022; Zhang et al., 2022).

Postoperative thirst affects children significantly both physically and psychologically. Physically, it can cause discomfort, dry mouth, and nausea, and psychologically, it may lead to agitation, anxiety, and distress (Özdemir & Dolgun, 2021; Zhang et al., 2022) especially when the thirst remains unaddressed for an extended period (Al-Robeye et al., 2020; Engelhardt et al., 2011) all of which may negatively affect recovery

* Corresponding author at: Istanbul University School of Nursing, Beyazit Campus, 34116 Fatih/Istanbul, Turkiye.
E-mail address: ozlem.sensoy@istanbul.edu.tr (Ö. Şensoy).

https://doi.org/10.1016/j.pedn.2026.06.008
0882-5963/© 2026 Elsevier Inc. All rights are reserved, including those for text and data mining, AI training, and similar technologies.

(Dolgun et al., 2017; Engelhardt et al., 2011; Zhang et al., 2022). Due to developmental factors, children often have difficulty expressing themselves, which poses challenges for healthcare providers when assessing and addressing their needs (Aroonpruksakul et al., 2023; Riviera et al., 2022).

Strict surgical protocols often intensify thirst feelings, contributing to postoperative discomfort (Aroonpruksakul et al., 2023; Chen et al., 2025; Zhang et al., 2022). Current fasting guidelines including Enhanced Recovery After Surgery (ERAS) for elective surgical procedures involving anesthesia, recommend fasting periods of 2 h for clear liquids, 4 h for breast milk, 6 h for formula milk, nonhuman milk, and light snacks, and 8 h for fatty or fried foods (Aroonpruksakul et al., 2023; Brunet-Wood et al., 2016; Charoenkwan & Matovinovic, 2014; Li et al., 2022; Rattray et al., 2018). Additionally, these guidelines advocate for early postoperative refeeding to support the recovery of gastrointestinal function and reduce hospital stays. Despite the existence of standardized guidelines, significant variability in their practical implementation is observed (Frykholm et al., 2018). Studies consistently report fasting periods longer than those recommended in the guidelines (Brunet-Wood et al., 2016; Zhang et al., 2022).

Studies have determined that many factors affect thirst (Gan et al., 2024). The child's age, duration of fasting, and the knowledge of parents and health professionals can influence the feeling of thirst and its severity. Despite the clinical importance of managing this problem, very few studies have focused on how children perceive and cope with thirst after surgery, and how parents and health professionals respond to these experiences (Campana et al., 2015; Riviera et al., 2022). Understanding the perspectives of children, parents, and health professionals is essential for improving postoperative care and ensuring that young patients' physical and emotional needs are met.

This study aims to explore and document the experiences of children, parents, and health professionals regarding thirst in the postoperative period. Understanding these views is essential for developing care strategies that are more responsive to the physiological and psychological needs of pediatric patients.

Method

Design

The phenomenological approach was used to collect data to gather in-depth insights into the experiences of children, parents, and health professionals regarding postoperative thirst, and semi-structured interviews were conducted with all participants.

Participants

The participants comprised children, parents, and health professionals. Inclusion criteria for children were: aged 6–18 years; restricted oral intake for at least 4 h pre- and postoperatively; oriented to time and place in the postoperative period; fluent in Turkish; able to express thirst spontaneously or verbally when asked; and having parental consent to participate. Children were included only if they were at least six years old, to ensure they could understand the questions and provide answers (Al-Robeye et al., 2020; Yin et al., 2020). Inclusion criteria for parents were: aged ≥18 years; able to communicate their experiences in Turkish; and having a child who underwent surgery with restricted oral intake for at least 4 h pre- and postoperatively. Inclusion criteria for health professionals were being part of the surgical team and providing care for children in the pre- and postoperative periods. Eligible parents and health professionals were asked for their consent to participate during the postoperative period. Fluency in Turkish was required for all participants to ensure clear communication during semi-structured interviews and to prevent loss of meaning or nuance in responses. No translators were available or used during the study.

Data collection and procedures

Data were collected between April and August 2024 using semi-structured interview forms developed by the authors based on the current literature (Al-Robeye et al., 2020; Engelhardt et al., 2011; Özdemir & Dolgun, 2021; Riviera et al., 2022; Zhang et al., 2022). The interviews were held with the children, parents, and health professionals in a clinic of a training and research hospital.

Before starting the interview, the purpose of the research was explained, and permission was obtained for recording the interview. The interviews were conducted face-to-face in a quiet room at the clinic suitable for private conversations. Examples of the questions that were used are shown in Table 1.

Interviews were continued until data saturation was reached, with no new information or themes emerging. There are varying perspectives in the literature regarding the appropriate sample size for qualitative research. Therefore, interviews continued until no new codes or information emerged, indicating data saturation (Braun & Clarke, 2023; Saunders et al., 2018). After conducting interviews with ten children, sixteen parents, and fourteen health professionals, no new data or themes were identified, and data saturation had been achieved.

All interviews were carried out by the same researcher (XX). Each interview lasted between 25 and 35 min. Interviews were audio-recorded.

Ethical considerations

The study followed the principles outlined in the Declaration of Helsinki and was approved by the Ümraniye Training and Research Hospital Ethics Committee (Date: 27/02/2024, Reference Number: 72).

Data analysis

All interviews were transcribed word-for-word by one of the authors (ÖŞ). Interviews were continued until data saturation was achieved, defined as the point at which no new codes, themes, or meaningful insights emerged from successive interviews. Data collection and analysis were conducted concurrently, and saturation was monitored throughout the coding process in line with contemporary recommendations for qualitative research (Ahmed, 2025; Saunders et al., 2018). Thematic analysis followed Braun and Clarke's six-step approach (Braun & Clarke, 2023). Initially, three researchers (ÖŞ, AA, SM) read the transcripts multiple times to become fully immersed in the data. Each researcher independently produced initial codes, ensuring that recurring sections were coded consistently. Codes sharing conceptual similarities were then organized into early thematic categories, which were subsequently compared with the full dataset for coherence.

Afterward, themes and subthemes were defined, labeled, and refined through joint discussions among the research team. For example, codes such as ‘dry mouth’, ‘sticky tongue’, and ‘cracked lips’ were grouped to form the theme of Physical Symptoms; codes such as ‘crying’, ‘helplessness’, and ‘worry’ contributed to the theme of Feelings

Table 1
Interview questions.

Questions for children
Can you describe how you experienced thirst?
How did you alleviate your thirst? What did you do?
How did they help you to quench your thirst? What did they do? Who were they?
Questions for parents
How did fasting before and after surgery affect your child and you? What did you experience?
How did you relieve the child's thirst during this period? What did you do?
What were you told about your child's fasting period before the operation?
Do you think you were adequately informed?
Questions for health professionals
How do you think thirst affects children?
What are your experiences?
Do you have any routine practices to relieve thirst?
How should health professionals' approach postoperative thirst?

of Discomfort. Illustrative quotations were selected to demonstrate each theme. The final set of themes was then shared with all researchers involved for feedback and further refinement.

The analysis initially generated 214 codes. These codes were iteratively reviewed, and those that were conceptually similar or overlapping were merged. This process resulted in 38 final codes, which were subsequently organized into five overarching themes. Representative codes for each theme and their distribution across participant groups are presented in Table 2.

Rigor and trustworthiness

Several strategies were employed to ensure rigor and trustworthiness in this qualitative research throughout the study process. The research adhered to the consolidated criteria for reporting qualitative research (COREQ) checklist, ensuring comprehensive and transparent reporting (Tong et al., 2007). Credibility was established through multiple measures. The researcher (ÖŞ), who conducted all interviews, maintained consistency by using semi-structured interview forms to guide the conversations. To enhance credibility, the research team held debriefing sessions during the data collection phase, in which they read and thoroughly reviewed the transcriptions to identify emerging findings, discuss interpretations, and reach consensus on coding and themes. This peer debriefing process minimized individual bias and allowed for a more nuanced understanding of the data. Transferability was supported by providing a detailed description of the study context, including participant criteria, setting, and data collection procedures. By documenting these aspects, readers are provided with sufficient context to assess the applicability of the findings to other settings or groups. Dependability was ensured by maintaining an audit trail of the research process. This included detailed records of data collection procedures, transcription methods, and coding strategies. Researchers (ÖŞ, AA, SM) collaborated closely to refine codes, subthemes, and themes and ensure consistency in data analysis. Confirmability was strengthened by reflexive practices. The primary researcher (ÖŞ) kept field notes to capture observations and reflections, acknowledging any potential biases or preconceptions. Additionally, the final themes were shared with the research team for feedback, promoting impartiality and alignment with participants' expressed experiences. Data Triangulation was incorporated by including diverse participants-children, parents, and health professionals-enhancing the comprehensiveness and richness of the data. The iterative coding and theme development process, involving multiple researchers (ÖŞ, AA, SM), also contributed to the confirmability of the findings.

Findings

Forty participants were interviewed for the study. Ten children, sixteen parents, and fourteen health professionals, comprising eight nurses and six physicians, participated in this study. Participant characteristics are outlined in Table 3.

The analysis revealed that children, parents, and health professionals had similar views on postoperative thirst but in different aspects. Our analysis revealed five main themes describing views on postoperative thirst in children (see Fig. 1).

Table 3
Participant demographics ($N = 40$).

Characteristics of Children	Frequency (n = 10)	%
Sex		
Male (M)	4	40
Female (F)	6	60
Type of Surgery		
Appendectomy	4	40
Inguinal Hernia	2	20
Excision	2	20
Thyroidectomy	1	10
Phimosis	1	10
Type of Anesthesia		
Sedation	3	30
General Anesthesia	7	70
Age[a,b]	12.5 ± 3.53 (8–17)	
Fasting Duration[b]		
Preoperative	14.47 ± 8.43 (9.42–38) h	
Postoperative	6.00 ± 5.96 (4–23) h	
Characteristics of Parents	Frequency (n = 16)	%
Parent		
Mother	16	100
Education Level		
Primary school	4	25
High school	7	43.75
Undergraduate	5	31.25
Age[a,b]	38.43 ± 5.32(30–51)	
Characteristics of Health Professionals	Frequency (n = 14)	%
Sex		
Male	5	35.71
Female	9	64.28
Profession		
Nurse	8	57.14
Physician	6	42.85
Work experience[a]		
1–3 years	4	28.57
4–6 years	1	7.1
7–10 years	1	7.1
More than 10 years	8	57.14
Age[a,b]	37.57 ± 12.89(23–59)	

h: Hour.
[a] Years.
[b] Mean ± standard deviation, range.

Physical symptoms

In the postoperative period, children most frequently reported thirst-related physical symptoms, such as dry lips and a dry throat. This sensation of dryness emerged as one of the most prominent aspects of postoperative thirst experienced by children.

> *'My lips were dry, my mouth was dry, and I was extremely thirsty. I just waited. It was really bad.'*
> [*(P36, F, 9 years old, appendectomy, general anesthesia, pre-op fasting 12 hours, post-op fasting 4 h)*]

Table 2
Themes, representative codes, and number of codes.

Theme	Representative codes for children ($n = 10$)	Representative codes for parents ($n = 16$)	Representative codes for health professionals ($n = 14$)	Number of codes
Physical symptoms	Dry mouth, dry throat, repeated request for water, sticky tongue	observing dry lips, cracked lips, repeated requests for water	Observed dry lips, weakness, and cracked lips	8
Feelings of discomfort	Crying, shouting, repeated requests for water	Sadness, helplessness, worry, crying	Observing agitation, distress, and perceived discomfort	6
Lack of Knowledge	Uncertainty about fasting, lack of answers	Insufficient information about thirst management	Lack of protocol, no guidance	10
Coping strategies	Lip moistening, IV fluid infusion	Lip moistening, IV fluids, no action	IV infusion, lip moistening	5
Suggestions	Earlier oral intake	Planned fasting based on surgery	Implementation of ERAS protocol	9

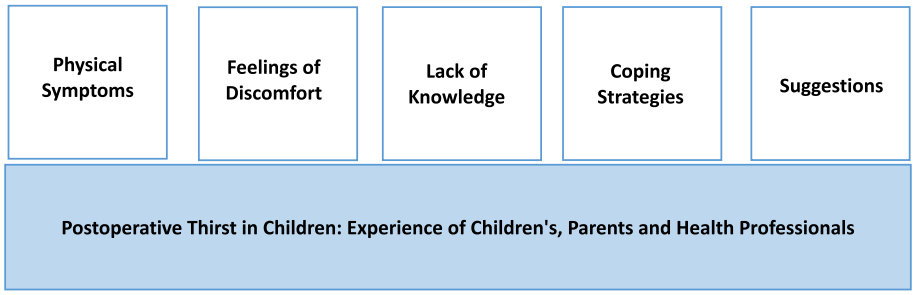

Fig. 1. Themes on postoperative thirst in children.

'My throat was drying, my tongue was drying, then my tongue and throat were drying so much that I couldn't breathe… it affected my breathing comfortably, I was breathing through my nose.'
[*(P31, M,11 years old, excision, sedation, pre-op fasting 10 h, post-op fasting 4 h)*]

'I was very thirsty; crusts were coming off my lips like this. My throat was dry and my tongue sticks to my tongue when I swallow.'
[*(P39, M, 14 years old, appendectomy, general anesthesia, pre-op fasting 11 h, post-op fasting 4 h)*]

Parents also reported that their children's lips were dry. Some parents reported that the prolonged fasting made their child's thirst worse. These parental observations directly reflected the physical symptoms associated with thirst in children, while also revealing parental awareness of the stress experienced by their children.

'I had never seen her like that before. Her mouth was completely dry. She was very, very thirsty. She was right. The hours were very difficult. She was weak and exhausted.'
[*(P20, mother of 17 years old F)*]

'Yes, yes, she was very thirsty; she was even shouting for water.'
[*(P25, mother of 9 years old F)*]

'It was a very long time until the operation and then he suffered from thirst. He wanted water as soon as he woke up. His lips are never dry. It was the first time.'
[*(P17, mother of 6 years old M)*]

Health professionals reported observing dry lips and weakness as physical symptoms of thirst, with these symptoms worsening in children during prolonged fasting. Strikingly, health professionals reported that although they explained to parents when their children could drink water, they were repeatedly asked when their children's thirst worsened, which disrupted workflow, especially for nurses, caused tensions between parents and health professionals, and sometimes led to violence.

'We frequently observed dry lips, dry mouth, weakness, and children repeatedly asking for water. Some children became quieter and more fatigued.'
[*(P9, M, Physician, 10 years and more experience of work)*]

'Of course, we observe thirst especially in surgeries that stay afternoon. I observe it in preschool children. And this already shows itself as a weakness. I have observed dry lips and so on. After all, there is a child here, whose parents are always telling you the same thing, complaining.' (P8, F, Nurse, 1–3 years' experience of work)

We generally see dry lips, and they constantly express that they are thirsty. This feeling of thirst causes agitation in children; this time, the family becomes agitated, and the family's agitation is reflected in the health professional.'
[*(P10, M, Physician, 10 years and more experience of work)*]

Feelings of discomfort

Children reported experiencing intense discomfort due to thirst during prolonged fasting periods and described this condition as unbearable. The waiting time before being allowed to drink water emerged as a significant source of distress in the postoperative period.

'Like I was gonna pass out.'
[*(P37, M, 10 years old, phimosis, sedation, pre-op fasting 11 h and 35* min*, post-op fasting 4 h)*]

'I got impatient while waiting.'
[*(P34, F, 8 years old, inguinal hernia, general anesthesia, pre-op fasting 13 h and 50 min, post-op fasting 4 h)*]

'It was hard, very hard. Even thinking about it now makes me thirsty. Waiting was very difficult.
[*(P33, F, 11 years old, excision, sedation, pre-op fasting 12 h and 50 min, post-op fasting 4 h)*]

Parents described the emotional and behavioral changes caused by postoperative thirst in children as a distressing experience. This distress not only affected the children but also placed parents in an emotionally challenging situation, leaving them feeling helpless in alleviating their children's suffering.

'She became very angry because he was thirsty and became very aggressive. She seemed quiet, but he was extremely tense. It was very exhausting and difficult.'
[*(P26, mother of 15 years old F)*]

'I'm very sad for my son not feeling okay and I'm not doing much, I mean I'm sad (crying).'
[*(P18, mother of 11 years old M)*]

Health professionals reported that children were agitated because of thirst in the postoperative period. This situation caused anxiety in parents, and they frequently asked both nurses and doctors when their children could drink water. Health professionals stated that they were psychologically tired and stressed while working.

'Children became emotionally distressed because they could not understand why they were not allowed to drink water. Some cried continuously, became irritable, or repeatedly begged for water.'
[*(P5, F, Nurse, 10 years, and more experience of work)*]

'We are observing agitation in our patients. This situation also affecting us psychologically.' (P4, F, Nurse, 4–6 years' experience of work)

'Agitation in the child and the family because of the thirst may cause a decrease in the quality of the work.'
[*(P10, M, Physician, 10 years, and more experience of work)*]

Lack of knowledge

Children demonstrated limited knowledge regarding strategies to relieve postoperative thirst, often feeling uncertain about how to manage their discomfort during the postoperative period. This situation was related to inadequate information provided by health professionals regarding thirst management, leaving children unsure of how to manage or relieve their thirst.

'I said I was thirsty. (To the nurse) She didn't say anything, so there's nothing to do.'
[*(P40, F, 16-year-old, Thyroidectomy, General anesthesia, pre-op fasting 14 h and 50* min*, post-op fasting 23 h)*]

'My mother asked the nurse, but there was no solution.'
[*(P34, 8-year-old F, Inguinal hernia, General anesthesia, pre-op fasting 13 h and 50 min, post-op fasting 4 h)*]

Children felt more emotionally and physically distressed when their questions regarding the duration of thirst and methods to relieve it remained unanswered. Parents were aware of this distress and reported not receiving adequate information about thirst management, which made it difficult for them to calm their children and relieve their discomfort.

'Honestly, they don't make the explanation clear either, whether it's nurses or physicians, although we don't see physicians, nurses… nurses need to be more enlightening, you know, we want more attention. The slightest word from them can comfort us. No, no information was given. So we couldn't do anything. But we could have wet her lips. We could have done it as a comfort, but no information was given. We didn't even touch it out of fear…'
[*(P24, mother of 15 years old M)*]

'We were told not to give anything until the nurses informed us. No one provided any detailed information. I know from experience how difficult it is to be thirsty. When we fast, we get very thirsty. My child struggled a lot. Even something like rinsing the mouth with cold water during ablution can be very relieving. No one said anything. We just waited.'
[*(P15, mother of 14 years old M)*]

The main reason why healthcare professionals did not provide information to children and parents regarding thirst management was their own lack of knowledge on the subject. Health professionals stated that they had no knowledge about methods to reduce the feeling of thirst in the postoperative period.

'We don't know if there is a method to relieve the feeling of thirst…'
[*(P1, Female, Nurse, 10 years or more experience of work)*]

'There is uncertainty about how thirst can be safely relieved. Some recommended lip moistening, whereas others avoided it due to concerns about aspiration.' (P8, Female, Nurse, 1–3 years' experience of work)

Coping strategies

When children did not know how to relieve their thirst symptoms, they attempted to cope in their own ways. Some children reported licking their lips as a coping strategy, whereas others stated that they could do nothing but wait or receive intravenous fluids.

'I lick my lips.'
[*(P31, 11 years old M, excision, sedation, pre-op fasting 6 h, post-op fasting 4 h)*]

'I could not quench (my thirst). They put IV fluids.' (P35, 15 years old M, appendectomy, general anesthesia, pre-op fasting 9 h and 25 min*, post-op fasting 4 h).*

'I slept. I tried to sleep.' (P34, F, 8 years old, inguinal hernia, general anesthesia, pre-op fasting 13 h and 50 min, post-op fasting 4 h).

It was found that, due to their lack of knowledge about how to alleviate their children's thirst symptoms, parents attempted to relieve their children's thirst using methods they came up with on their own.

'He cried so much and begged me to please give me water… and his mouth was dry, I mean it was sticky… now I wet the napkin out of obligation and moistened his lips. I repeated it 3-4 times. I couldn't stand his thirst. I just wet it to satisfy him, I think it worked well, I mean, after that, he stopped, and he said that it was good anyway. I found it myself.'
[*(Mother P28, mother of 14 years old M)*]

'No one told us anything, but I couldn't stand it. I wet a tissue a little and wiped his lips. His lips were very dry, and since I use it myself, I applied lip balm to my son's lips. It relieved him a little.'
[*(Mother P18, mother of 11 years old M)*]

There was considerable inconsistency among healthcare professionals regarding the techniques that could be used to reduce thirst. Based on the statements of health professionals, it was determined that while some professionals advise wetting the lips of children, others do not.

'We put IV fluids in, maybe it reduces it to some extent, but I have still observed thirst a lot. If there is still time for the child to drink water, we say that the child's lip can be wetted with a cotton, but the child should not swallow the water.' (P4, Nurse, Female, 4–6 years' experience of work)

'For example, I saw them (families) wetting their lips with cotton. I said, you know, that is also forbidden…… Of course, they get upset too. Sometimes they get angry. We try to explain enough, but we cannot be sure that the child will not swallow water.' (P8, F, Nurse, 1–3 years' experience of work)

'We tell families that they can wet their children's lips. IV fluid is already being taken. If the child is conscious and awake, there is no harm in wetting his/her lips to relax… The child relaxes. Because he/she has no fluid deficit, that is, a feeling of thirst.'
[*(P14, Female, Physician, 10 years and over experience of work)*]

Suggestions

All children in our study were fasted for at least 6 h before surgery, and they were taken to the operating room according to the order on the surgery list. Children stated that the time they waited to drink water in the postoperative period was too long.

'It would be better to be able to drink water and eat earlier.'
[*(P34, 8 years old F, Inguinal hernia, general anesthesia, pre-op fasting 13 h and 50 min, post-op fasting 4 h)*]

'I waited for a very long time before that. My thirst got even worse. The time to go into surgery was delayed a lot.'
[*(P38, 14 years old F, appendectomy, general anesthesia, pre-op fasting 38 h, post-op fasting 4 h)*]

Parents agreed that children's preoperative fasting period should be planned according to the surgery list.

'So, we stayed for a very long time. From 7:30 am until 2 pm, he was not taken into surgery. When we ask the nurse, they say we don't know either, and I don't say anything to them (surgery time).'
[*(P17, mother of 6-year-old M)*]

'If he had to wait a little longer before going into surgery, I don't know what we would have done. I was very afraid that he wouldn't be able to endure it.'
[*(P16, mother of 10-year-old F)*]

Health professionals agreed that children stay hungry and thirsty for a very long time, and if the ERAS protocol is implemented, this period will be shortened, and children may feel less thirsty.

'If the ERAS protocol were implemented in this clinic, children would be less thirsty and less agitated.'
[*(P1, Female, Nurse, 10 years or more of work experience)*]

'We know that the earlier the oral intake starts, the faster the metabolism accelerates and supports the healing process, and we want to start oral intake earlier. I don't know if we can agree with Anesthesia to implement the ERAS protocol.'
[*(P12, Male, Physician, 10 years or more of work experience)*]

These findings, reported by children, parents, and healthcare professionals, emphasize that prolonged and poorly planned preoperative fasting periods cause thirst in children and increase its severity. They also point to the need to improve the planning of fasting periods and to implement evidence-based protocols such as ERAS in order to reduce fasting duration and enhance patient comfort.

Discussion

This study provides valuable insights into the perspectives of children, parents, and health professionals on postoperative thirst in pediatric patients, emphasizing the significant physical and emotional impact of this unmet need. The findings emphasize the need for postoperative care protocols that address both the physical and emotional well-being of children, advocating for a more integrated and comprehensive approach to pediatric surgical recovery.

Physical symptoms

Both children and parents described physical symptoms of thirst following surgery. Children reported dry lips and throat, while parents expressed concern over their child's inability to eat or drink immediately after the procedure. Children reported sensations of dry mouth and fatigue, which were intensified by prolonged fasting. These symptoms not only contribute to immediate physical discomfort but also impede recovery by increasing difficulty with rest, both of which are essential for healing (Gungor et al., 2024; Oztas & Oztas, 2022). Parents similarly observed these physical symptoms, expressing frustration at being unable to alleviate their children's symptoms. From the perspective of healthcare providers, including nurses and physicians, the physical discomfort associated with postoperative thirst is acknowledged. However, their attention frequently centers on other clinical markers of recovery, often placing less priority on alleviating thirst. In this situation, parents often ask nurses and physicians when their children can drink water, which can cause workflow issues in the clinic and cause tension between families and health professionals to the point of violence. This oversight underscores an opportunity to improve postoperative care by incorporating thirst management as a standard component of patient care (Gan et al., 2024).

Feelings of discomfort

Thirst was not only a physical experience but also emotionally charged (Gan et al., 2024). Some children felt anxious or frustrated, while parents reported feeling helpless to alleviate their child's discomfort. The study revealed that emotional discomfort caused by thirst is an equally significant factor affecting children's overall recovery experience. Many children expressed feelings of frustration and sadness due to their inability to eat or drink, which added to the anxiety and stress often associated with surgical recovery (Aroonpruksakul et al., 2023; Balkaya et al., 2022).The emotional toll of unmet thirst needs, as described by children, points to the importance of providing comfort and reassurance, especially in the vulnerable postoperative period. Studies have shown that postoperative thirst lead to discomfort and agitation in pediatric patients, as evidenced by reports indicating that thirst can intensify the overall suffering experienced by children after surgery (Campana et al., 2015; Wang et al., 2021). Parents also expressed concern about the emotional impact of thirst on their children and felt helpless as they observed their children struggling with these feelings. Parents expressed a strong desire to be more involved in managing their child's comfort, suggesting that collaborative care approaches involving parents may be beneficial. According to the health professionals' reports, the children's discomfort caused agitation among the parents, which in turn created tension among them. Health professionals acknowledged discomfort but felt constrained by clinical protocols, highlighting the need for revised guidelines that acknowledge these uncomfortable dimensions of recovery.

Lack of knowledge

A noteworthy theme among health professionals, especially nurses, was the lack of comprehensive knowledge on addressing postoperative thirst in pediatric patients. Many expressed that while they understood the importance of hydration and nutrition, they lacked the resources and protocols to effectively address hunger and thirst in the immediate postoperative period. This lack of knowledge often resulted in delayed responses to children's needs, adding to their discomfort. In addition, health professionals' lack of knowledge prevents them from informing parents about thirst management and leaves parents feeling helpless.

Moreover, both nurses and physicians highlighted the need for structured interventions to address these symptoms without compromising safety. Potential strategies discussed in the literature include ice popsicles or cold sprays. For instance, some studies suggest that offering ice popsicles in the immediate postoperative period may help reduce the intensity of thirst and contribute to patient comfort (Celik et al., 2024; Tereza et al., 2021). Similarly, menthol water sprays have been reported as potentially beneficial in relieving thirst symptoms among patients recovering from abdominal surgery (Ma et al., 2023). In addition, early oral hydration has been associated with reduced thirst and improved overall comfort in children recovering from anesthesia (da Mata et al., 2024; Klemetti et al., 2010). This knowledge and resource gap presents a clear opportunity to develop evidence-based interventions to address thirst within postoperative safety parameters and the ERAS protocol.

Coping strategies

Both children and parents described different strategies they employed to cope with the discomfort. Children and parents shared various

coping methods, including wetting lips to mitigate the discomfort of thirst. Parents played a critical role in supporting their children's physical and emotional needs, often using these techniques to help their children endure the fasting period more comfortably. This finding underscores the importance of empowering parents to actively participate in postoperative care, especially in providing support to alleviate thirst-related discomfort.

Health professionals highlighted a lack of standardized strategies for managing these needs in postoperative settings. Nurses and physicians suggested that guidelines for supporting children's emotional well-being during recovery could improve the postoperative experience. This gap suggests a need for training programs that equip healthcare providers with skills in addressing not only medical but also emotional and comfort needs in postoperative care.

Suggestions

Children, parents, and health professionals were united on the suggestion to develop more lenient fluid management protocols and to include early postoperative hydration plans. Prolonged fasting has been linked to higher incidences of thirst, with some studies reporting that up to 75% of children experience significant thirst postoperatively (Campana et al., 2015; Wang et al., 2021). This is particularly relevant in pediatric populations, where the physiological need for hydration is greater due to their smaller body size and higher metabolic rates (Balkaya et al., 2022). Research conducted by Dolgun et al. (2017) highlighted that children's actual preoperative fasting times often exceeded the recommended durations (Dolgun et al., 2017). Abebe et al. (2016) further revealed that preoperative fasting durations were, on average, 2.5 times longer than the guidelines suggested, with periods without water being up to 7.65 times longer than recommended (Abebe et al., 2016). ERAS protocols emphasize early oral intake and may reduce the duration and intensity of thirst in children (Wu et al., 2021; Ying et al., 2022; Zhang et al., 2022). However, integrating such protocols requires interdisciplinary collaboration and consensus among surgical teams. Health professionals suggested integrating thirst management strategies into current clinical guidelines and offering greater flexibility in postoperative care plans. These suggestions align with findings from other qualitative and quantitative studies that stress the importance of a patient-centered approach in perioperative care.

Strengths and limitations

This study has several important strengths. First, it is one of the limited number of qualitative studies that simultaneously explores postoperative thirst from the perspectives of children, parents, and health professionals, providing a multidimensional understanding of this often-overlooked symptom. The inclusion of different participant groups enabled data triangulation and enriched the interpretation of the findings by capturing the physical, emotional, and clinical dimensions of postoperative thirst. Furthermore, the use of a phenomenological approach and in-depth semi-structured interviews enabled participants to describe their experiences in detail, thereby enriching the data.

Despite these strengths, several limitations should also be acknowledged. The study was conducted in a single teaching and research hospital, which may limit the transferability of the findings to other healthcare settings or cultural contexts. Although the relatively small sample size was appropriate for qualitative research and sufficient to achieve data saturation, it may have limited the diversity of experiences represented. Additionally, all participating parents were mothers; therefore, fathers' experiences and perspectives regarding their children's postoperative thirst were not represented. Finally, children undergoing different surgical procedures and types of anesthesia were evaluated together, and their thirst experiences may vary depending on the type of surgery, duration of fasting, or clinical condition. These limitations should be considered when interpreting the findings and planning future research.

Conclusion

This study underscores the significant impact of postoperative thirst on the physical and emotional well-being of pediatric patients, as perceived by children, parents, and health professionals. The identified themes-physical symptoms, feelings of discomfort, coping strategies, lack of knowledge, and suggestions-provide a valuable framework for understanding this issue comprehensively. Addressing these findings through targeted interventions, educational programs, and adaptable care protocols could alleviate postoperative thirst, ultimately enhancing patient comfort and recovery outcomes. Future research should prioritize developing and evaluating evidence-based strategies for effective thirst management to improve pediatric perioperative care.

The insights emphasize the importance of a patient-centered approach that considers both physical and emotional needs during postoperative recovery. Incorporating thirst management within recovery protocols could improve patient and family satisfaction, reduce anxiety and restlessness, and promote quicker recovery. Future guidelines should include strategies such as phased fluid reintroduction and comfort-focused support techniques.

Engaging parents as active participants in the recovery process is essential. Providing them with knowledge and coping strategies can empower them to better support their child's emotional well-being. Additionally, training healthcare providers to identify and address postoperative thirst can improve the quality of care, ensuring both physical and emotional needs are met.

Overall, this study highlights an often-overlooked aspect of postoperative recovery in pediatric care. Recognizing the perspectives of children, parents, and health professionals point to the importance of integrating thirst management as a routine part of postoperative care. These findings lay the groundwork for developing comprehensive care protocols that prioritize the comfort and well-being of young patients, thus enhancing the overall quality of pediatric surgical care.

CRediT authorship contribution statement

Conceptualization- Ö.Ş., S.M., A.A., C.Ş.; Investigation- Ö.Ş., S.M, A.A.; Methodology- Ö.Ş., S.M., A.A., C.Ş.; Formal Analysis- Ö.Ş., A.A., S.M.; Data Curation- Ö.Ş. Supervision- A.A., S.M., C.Ş.; Writing-original draft preparation- Ö.Ş., A.A.; Visualization- Ö.Ş., A.A.; Writing-Review & Editing- Ö.Ş., S.M., A.A., C.Ş.

Funding sources

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of generative AI use

During the preparation of this study, the authors used artificial intelligence assisted tools for translation and language editing. ChatGPT was used for translation, and Grammarly was used improve grammar, spelling, and clarity of the text. No generative artificial intelligence tools were used for content creation, data analysis, or interpretation. After using these tools, the authors carefully reviewed and edited the manuscript and take full responsibility for its content.

Declaration of competing interest

None to report.

Data availability

The data supporting the findings of this study are not available due to confidentiality and ethical restrictions.

References

Abebe, W. A., Rukewe, A., Bekele, N. A., Stoffel, M., Dichabeng, M. N., & Shifa, J. Z. (2016). Preoperative fasting times in elective surgical patients at a referral Hospital in Botswana. *The Pan African Medical Journal*, *23*, 102. https://doi.org/10.11604/pamj.2016.23.102.8863.

Ahmed, S. K. (2025). Sample size for saturation in qualitative research: Debates, definitions, and strategies. *Journal of Medicine, Surgery, and Public Health*, *5* Article 100171.

Al-Robeye, A. M., Barnard, A. N., & Bew, S. (2020). Thirsty work: Exploring children's experiences of preoperative fasting. *Paediatric Anaesthesia*, *30*(1), 43–49. https://doi.org/10.1111/pan.13759.

Aroonpruksakul, N., Punchuklang, W., Kasikan, K., Laotaweesuk, N., Phoson, P., Khongrod, R., & Kiatchai, T. (2023). The actual duration of preoperative fasting in pediatric patients, and its effects on hunger and thirst: A prospective observational study. *Transl Pediatr*, *12*(2), 146–154. https://doi.org/10.21037/tp-22-358.

Balkaya, A. N., Yilmaz, C., Baytar, C., Demirel, A., Kilicarslan, N., Ata, F., ... Gamli, M. (2022). Relationship between fasting times and emergence delirium in children undergoing magnetic resonance imaging under sedation. *Medicina (Kaunas, Lithuania)*, *58*(12). https://doi.org/10.3390/medicina58121861.

Braun, V., & Clarke, V. (2023). Thematic analysis. In H. Cooper, M. N. Coutanche, L. M. McMullen, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology: Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 65–81) (2nd ed.). American Psychological Association.

Brunet-Wood, K., Simons, M., Evasiuk, A., Mazurak, V., Dicken, B., Ridley, D., & Larsen, B. (2016). Surgical fasting guidelines in children: Are we putting them into practice? *Journal of Pediatric Surgery*, *51*(8), 1298–1302. https://doi.org/10.1016/j.jpedsurg.2016.04.006.

Campana, M., Fonseca, L., Lopes, D., & Martins, P. (2015). Perceptions of caregivers about surgical children's thirst. *Revista Rene*, *16*(6), 799–808. https://doi.org/10.15253/2175-6783.2015000600005.

Celik, S. S., Mert, S., & Arslan, H. N. (2024). The effect of cold Oral applications in the Management of Postoperative Thirst: A systematic review. *Journal of Perianesthesia Nursing*, *39*(5), 907–914. https://doi.org/10.1016/j.jopan.2023.11.014.

Charoenkwan, K., & Matovinovic, E. (2014). Early versus delayed oral fluids and food for reducing complications after major abdominal gynaecologic surgery. *Cochrane Database of Systematic Reviews*, *2014*(12) Article CD004508. https://doi.org/10.1002/14651858.CD004508.pub4.

Chen, Y., Zhang, X., Liang, T., Pan, Q., Peng, Y., Chen, L., & Lin, Y. (2025). Prevalence and factors associated with thirst in children after congenital heart disease surgery: A cross-sectional study. *BMC Pediatrics*, *25*(1), 657. https://doi.org/10.1186/s12887-025-06012-w.

Dolgun, E., Yavuz, M., Eroglu, B., & Islamoglu, A. (2017). Investigation of preoperative fasting times in children. *Journal of Perianesthesia Nursing*, *32*(2), 121–124. https://doi.org/10.1016/j.jopan.2014.12.005.

Engelhardt, T., Wilson, G., Horne, L., Weiss, M., & Schmitz, A. (2011). Are you hungry? Are you thirsty?–fasting times in elective outpatient pediatric patients. *Paediatric Anaesthesia*, *21*(9), 964–968. https://doi.org/10.1111/j.1460-9592.2011.03573.x.

Frykholm, P., Schindler, E., Sumpelmann, R., Walker, R., & Weiss, M. (2018). Preoperative fasting in children: Review of existing guidelines and recent developments. *British Journal of Anaesthesia*, *120*(3), 469–474. https://doi.org/10.1016/j.bja.2017.11.080.

Gan, H. Y., Liu, H. C., Huang, H. P., & He, M. (2024). The prevalence and risk factors for postoperative thirst: A systematic review and meta-analysis. *Journal of Perianesthesia Nursing*, *39*(6), 1062–1068. https://doi.org/10.1016/j.jopan.2024.01.026.

Gungor, S., Tosun, B., Candir, G., & Ozen, N. (2024). Effects of cold spray on thirst, frequency of oral care, and pain of general surgery intensive care unit patients. *Scientific Reports*, *14*(1), 9997. https://doi.org/10.1038/s41598-024-58199-0.

Klemetti, S., Kinnunen, I., Suominen, T., Antila, H., Vahlberg, T., Grenman, R., & Leino-Kilpi, H. (2010). The effect of preoperative fasting on postoperative thirst, hunger and oral intake in paediatric ambulatory tonsillectomy. *Journal of Clinical Nursing*, *19*(3–4), 341–350. https://doi.org/10.1111/j.1365-2702.2009.03051.x.

Li, S., Mi, J., & Tang, Y. (2022). A qualitative study of nurses' perception on patients' thirst in intensive care units. *Intensive & Critical Care Nursing*, *69* Article 103184. https://doi.org/10.1016/j.iccn.2021.103184.

Ma, F., He, H., Xu, B., Zhou, J., & Pu, K. (2023). Effect of sterile ice water versus menthol spray on thirst symptoms of fasted children in the intensive care unit: A prospective cohort study. *Medicine (Baltimore)*, *102*(12) Article e33315. https://doi.org/10.1097/MD.0000000000033315.

da Mata, A. M. B., do Carmo Tomaz, A. G., Andrade da Cunha, G. C., Zamberlan, P., & Bonfim, M. A. C. (2024). Influence of shortened fasting time on perioperative outcomes in Pediatric patients: A systematic review. *Journal of Pediatric Surgery*, *59*(10) Article 161607. https://doi.org/10.1016/j.jpedsurg.2024.06.016.

Özdemir, Ş., & Dolgun, E. (2021). The effect of preoperative fasting on postoperative agitation, nausea, and vomiting in children with tonsillectomy. *Medical Science and Discovery*, *8*(6), 394–400. https://doi.org/10.17546/msd.928300.

Oztas, M., & Oztas, B. (2022). Effect of spray use on mouth dryness and thirst of patients undergoing major abdominal surgery: A randomized controlled study. *Journal of Perianesthesia Nursing*, *37*(2), 214–220. https://doi.org/10.1016/j.jopan.2021.04.018.

Perrott, C., Lee, C. A., Griffiths, S., & Sury, M. R. J. (2018). Perioperative experiences of anesthesia reported by children and parents. *Paediatric Anaesthesia*, *28*(2), 149–156. https://doi.org/10.1111/pan.13300.

Rattray, M., Roberts, S., Marshall, A., & Desbrow, B. (2018). A systematic review of feeding practices among postoperative patients: Is practice in-line with evidenced-based guidelines? *Journal of Human Nutrition and Dietetics*, *31*(2), 151–167. https://doi.org/10.1111/jhn.12486.

Riviera, A., Pierotti, I., Mello, C., Birolim, M., & Fonseca, L. (2022). Prevalence and thirst intensity in children in the immediate postoperative period. *Acta Paulista de Enfermagem*, *35*(eAPE02931). https://doi.org/10.37689/acta-ape/2022AO02931.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity*, *52*(4), 1893–1907.

Tereza, D. M., Baldasso, G. M., Paes, R. S., Pacheco, M. E. J., Rosa, P. P. S., Vendramine, B., ... Dutra, R. C. (2021). Evaluation of the protocol for thirst management using ice popsicles in the immediate postoperative period: A pilot study in southern Brazilian hospital. *Anais da Academia Brasileira de Ciências*, *93*(4) Article e20201260.

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, *19*(6), 349–357. https://doi.org/10.1093/intqhc/mzm042.

Wang, H. Y., Chen, Y. D., Xie, H., Chen, Y. Y., Wang, G. W., & Zou, Y. (2021). Effects of fasting and water deprivation regimen under the concept of enhanced recovery after surgery on the improvement of nursing quality during pediatric surgery. *International Journal of Clinical and Experimental Medicine*, *14*(1), 183–191.

Wu, M. H., Liu, C. Q., Zeng, X. Q., Jia, A. N., & Yin, X. R. (2021). The safety of early administration of oral fluid following general anesthesia in children undergoing tonsillectomy: A prospective randomized controlled trial. *BMC Anesthesiology*, *21*(1), 13. https://doi.org/10.1186/s12871-020-01230-4.

Yin, X., Zeng, X., Wang, T., Dong, B., Wu, M., Jia, A., & Ye, L. (2020). Early versus delayed postoperative oral hydration in children following general anesthesia: A prospective randomized trial. *BMC Anesthesiology*, *20*(1), 174. https://doi.org/10.1186/s12871-020-01086-8.

Ying, Y., Xu, H. Z., & Han, M. L. (2022). Enhanced recovery after surgery strategy to shorten perioperative fasting in children undergoing non-gastrointestinal surgery: A prospective study. *World Journal of Clinical Cases*, *10*(16), 5287–5296. https://doi.org/10.12998/wjcc.v10.i16.5287.

Zhang, W., Gu, Q., Gu, Y., Zhao, Y., & Zhu, L. (2022). Symptom management to alleviate thirst and dry mouth in critically ill patients: A randomised controlled trial. *Australian Critical Care*, *35*(2), 123–129. https://doi.org/10.1016/j.aucc.2021.04.002.

Zheng, Y., Chen, Q., Xia, C., & Liu, H. (2025). Thirst symptoms in patients with heart failure: An integrative review. *Journal of Advanced Nursing*, *81*(1), 35–52. https://doi.org/10.1111/jan.16250.