

“The Tooth Fairy”: An Experience Report on a Desensitization and Behavioral Management Strategy in Pediatric Dental Practice

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Abstract

Objectives. To assess the perceptions of children treated at a university dental teaching clinic regarding the “Tooth Fairy” and aspects related to oral health and dental treatment, as well as the influence of this character on children’s cooperation during dental care.

Methods. This descriptive study was conducted as part of an extension project and included 22 children aged 3 to 10 years and their respective caregivers, who were treated at the teaching clinics of the School of Dentistry of the Federal University of Pernambuco (UFPE), Recife, Brazil, during the first semester of 2025. Data were collected through questionnaire-based interviews conducted in the waiting room in May and June 2025. The children were assessed before and after the participation of a dental student dressed as the “Tooth Fairy” in a playful manner during dental care.

Results. The mean age of the children was 7.05 ± 1.93 years, and most were accompanied by their mothers (77.3%). The main reason for seeking dental care was dental caries associated with toothache (45.4%). Only one child had never heard of the “Tooth Fairy,” whereas six had heard of the character but were unfamiliar with its

representation. All children had a positive perception of the character, associating it with a “good” figure, mainly because she was a fairy and because she “gives money.” Following the playful participation of the “Tooth Fairy” during dental care, the children reported reduced fear and greater feelings of happiness during dental visits.

Conclusion. *The playful use of the “Tooth Fairy” proved to be a promising strategy for desensitization and behavior management in pediatric dental care, fostering more positive perceptions of dental visits and potentially contributing to children’s cooperation. Further studies with larger samples and analytical designs are needed to assess its effectiveness.*

Keywords: Imagination, Behavior, Oral health, Pediatric dentistry.

Introduction

Childhood is characterized by a period of intense discovery and symbolic development, which plays an important role in social, emotional, and cognitive development. Within this context, characters from children’s imagination and play may acquire different meanings throughout development, facilitating children’s self-expression, stimulating creativity, strengthening affective bonds, and contributing to communication and coping strategies when facing potentially challenging situations. However, evidence regarding playfulness in childhood and the influence of cognitive functions on children’s interactions with symbolic elements remains limited^{1,2}.

Developing oral health education initiatives for children is challenging because it requires health professionals to possess not only technical and scientific knowledge but also the ability to provide a welcoming environment, establish rapport, and adapt educational strategies to the cognitive, emotional, and communication characteristics of children. In this context, playful approaches may represent valuable resources for encouraging children’s active participation and making the educational process more meaningful by integrating learning, interaction, and elements of enjoyment. Among these strategies, the use of children’s characters may facilitate communication and identification with the content being addressed, encouraging emotional expression, understanding of concepts, and the development of positive experiences in healthcare settings³.

Regarding the Tooth Fairy, evidence suggests that the origins of this myth can be traced to France in the late seventeenth century, through the tale *La Bonne Petite Souris*, written by Madame d’Aulnoy. In the story, a fairy disguised as a mouse helps an imprisoned queen by hiding beneath the king’s pillow and taking revenge on him at night. Over time, the character acquired different forms across cultures. In Brazil, the Tooth Fairy became particularly well known during the twentieth century as the character who exchanges children’s lost teeth for money. In France, at the University of Bordeaux, the Tooth Fairy also gives its name to a collection of naturally exfoliated primary teeth from children whose life histories have been documented since 2014^{4,5}.

Despite its popularity across different cultural contexts, few studies have investigated children’s perceptions of the

Tooth Fairy in Brazil, particularly within clinical settings. Understanding how children perceive this character may provide insights for more humanized approaches to pediatric dental care, strengthening the patient–professional relationship and supporting comprehensive healthcare.

Therefore, this study aimed to assess the perceptions of children receiving care at a university dental teaching clinic regarding the Tooth Fairy, with particular emphasis on the symbolic and behavioral meanings associated with the character.

Materials and Methods

This study was approved by the Research Ethics Committee of the Federal University of Pernambuco (UFPE), Brazil, under CAAE No. 77741417.0.0000.5208.

This was a descriptive study integrated into the *Sorrindo em Família* (SOFA) extension project and constituted one of the products developed from listening sessions and psychotherapy workshops conducted within the project.

The study was conducted in the waiting room and pediatric comprehensive dental care clinic of the UFPE School of Dentistry. The study population comprised children and their parents or caregivers who received care between May and June 2025.

Children of both sexes, aged 3 to 10 years, were eligible for inclusion. Children with neurodivergence, those presenting with an urgent or emergency condition at the first dental visit, those experiencing pain while in the waiting room, and those with communication or comprehension limitations that prevented them from understanding or answering the questions because of their age were excluded.

Regarding parents or caregivers, individuals without a family relationship with the child at the time of the interview were excluded. Undergraduate dental students who provided care to the participating children were also asked to report their perception of the children’s cooperation during dental treatment, allowing comparison with the perceptions reported by parents or caregivers.

Data collection included variables related to the study objectives: child’s age, sex, and educational status; caregiver’s

age, sex, and educational level; oral health problems reported for the child and caregiver; time elapsed since the child's and caregiver's most recent dental visit; and the child's feelings toward dental treatment and the dentist.

Specific questions addressing the study topic assessed whether the child had heard of the Tooth Fairy, how the character was perceived, whether the child considered the character good or bad, and whether and how the Tooth Fairy could help the child.

All parents or legal guardians provided written informed consent before participation.

Data were analyzed descriptively using measures of central tendency and dispersion for quantitative variables and absolute and relative frequencies for categorical variables. In addition, children's descriptions of the Tooth Fairy were qualitatively organized and examined descriptively according to the meanings attributed to the character. The database was organized using Microsoft Excel.

Results

The findings were organized into three tables (Tables 1–3). Among the approximately 176 children receiving care in the pediatric clinic during the study period, across the morning and afternoon/evening shifts, 22 children and their respective parents or caregivers participated in the interviews. Sampling was non-probabilistic and based on convenience.

As shown in Table 1, most children were of school age and female, with a mean age of 7.05 ± 1.93 years. Mothers represented the majority of accompanying caregivers, and the mean caregiver age was 39.7 ± 8.51 years. Complete secondary education was the most frequent educational level among caregivers.

According to Table 2, dental caries was the most frequently reported oral health problem among the children. Among

caregivers, responses were more heterogeneous, with several participants reporting unspecified oral health problems or complaints. Most children had visited the dentist within the previous six months, whereas caregivers generally reported longer intervals since their last dental visit, with some reporting more than 10 years or being unable to recall their last visit.

Regarding children's feelings toward dental treatment, positive feelings were associated with dental cleaning, receiving care, and interacting with professionals perceived as kind or as people who made them feel happy because they took care of their teeth. Negative feelings were mainly associated with the excessive noise in the dental clinic. Responses categorized as "normal" were associated with feeling calm or accustomed to the dental environment. Feelings such as "a little nervous," "afraid," and "embarrassed" were reported particularly when children knew that tooth extraction was going to be performed.

As shown in Table 3, most children (95.5%) reported having heard of the Tooth Fairy. One child reported not knowing the character. Most children associated the Tooth Fairy with exchanging a lost tooth for money, while some identified the Tooth Fairy with their mother, father, or godmother.

Although the Tooth Fairy was predominantly associated with tooth loss and receiving money or a gift, several children also attributed caregiving and emotional functions to the character. These included helping them overcome fear, calming or reassuring them, distracting them, caring for their teeth, making them happy, and helping their parents understand how to provide oral care.

An improvement in children's cooperation during dental appointments was reported by all groups involved in the study, including the children themselves, their parents or caregivers, and the undergraduate dental students. Some children specifically reported that they were "helping the dentist more."

Table 1: Demographic characteristics of children treated at the UFPE university dental teaching clinics and their parents/caregivers. Recife, Brazil, 2025.

Variable	n	%
TOTAL	22	100.0
Age group (years)		
3 a 5	5	22.7
6 a 10	17	77.3
Sex/gender		
Male	8	36.4%
Female	14	63.6%
School level (n=21)*		
Preschool	5	23.8
Elementary school (early grades)	16	76.2

Relationship to the child		
Mother	17	77.3
Father	2	9.1
Aunt	1	4.5
Maternal grandmother	2	9.1
Education level of parents		
Incomplete elementary education	2	9.1
Complete elementary education	2	9.1
Incomplete secondary education	1	4.5
Complete secondary education	11	50.0
Incomplete higher education	2	9.1
Complete higher education	3	13.7
Teacher training	1	4.5

* Educational information for one child was missing.

Table 2: Dental history and children's feelings about dental treatment among those treated at the UFPE university dental teaching clinic. Recife, Brazil, 2025.

Variable	n	%
TOTAL	22	100.0
Oral health problems related for children		
Dental caries	10	45.5
Pain (unspecified)	1	4.5
Malocclusion	7	31.8
Other (unspecified problem)	4	18.2
Oral health problems reported for the parents/caregivers		
None	11	50.0
Dental caries	2	9.1
Need for minor oral surgery	2	9.1
Other (unspecified problem)	7	31.8
Child's most recent dental visit		
< 6 months ago	21	95.5
De 6-12 months ago (up to 1 year)	1	4.5
Parent/caregiver's most recent dental visit		
< 6 months ago	9	41.0
6 months to 10 years ago or cannot remember	13	59.0
Child's feelings about dental treatment		
Like it	12	54.5
Neither like or disliked it	3	13.7
Do not like it	2	9.1
A little nervous or afraid	5	22.7

Table 3: Children's knowledge and perceptions of the "Tooth Fairy" among those treated at the UFPE university dental teaching clinic. Recife, Brazil, 2025.

Variable	n	%
TOTAL	22	100.0
- Has the child ever heard of the "Tooth Fairy"		
Yes	21	95.5
No	1	4.5
- How does the child perceive the "Tooth Fairy"?		

Good	22	100.0
Bad	-	-
- How can the Tooth Fairy help?		
By leaving money	9	41.0
By helping the child overcome fear	4	18.2
By helping the child take care of their teeth or with anything they need	6	27.3%
By making the child happy	1	4.5
By helping parents understand how to care for their child's teeth	1	4.5
In no way (I do not believe in the Tooth Fairy)	1	4.5

Discussion

Pediatric dentistry encompasses oral healthcare from infancy through adolescence, covering different stages of human development characterized by continuous cognitive, emotional, social, and behavioral changes. Consequently, the quality of pediatric dental care depends not only on the clinician's technical and clinical skills but also on the ability to recognize and appropriately respond to each child's individual characteristics and needs. Behavioral management is therefore an essential component of pediatric dental practice, particularly when children exhibit fear, anxiety, resistance, or difficulties cooperating during treatment 6,7. Evidence from systematic reviews indicates that basic behavioral management techniques can positively influence children's anxiety, fear, and behavior during dental treatment, although evidence supporting the superiority of one technique over another remains limited.

Several strategies have been described for managing children's behavior in pediatric dental settings, including communication techniques, tell-show-do approaches, distraction, desensitization, and other interventions adapted to children's developmental level and individual characteristics. Regardless of the strategy selected, behavioral management should take into account cognitive, emotional, cultural, and behavioral factors, as well as parental involvement in the care process. When appropriately individualized, these approaches may support a therapeutic relationship based on acceptance, communication, and trust, contributing to more positive dental experiences and potentially supporting continued engagement with oral healthcare 8,9. Systematic review evidence also indicates that distraction-based approaches may reduce anxiety during pediatric dental treatment.

Within this context, play-based strategies and elements drawn from children's imagination may represent relevant resources for facilitating communication between dentists and children. Incorporating such resources may make the clinical environment more familiar and encourage forms of interaction that are compatible with children's developmental characteristics. Accordingly, knowledge and mastery of communication and behavioral management strategies should be incorporated into undergraduate dental education to enhance dental students' ability to provide child-centered care ^{10,11}.

The choice of the Tooth Fairy as the central character in the present investigation arose from an experience observed in the pediatric dental teaching clinic at the UFPE School of Dentistry. During preparation for pediatric dental appointments, students used different resources to make the clinical environment more welcoming to children, including toys, colorful materials, and other elements associated with children's everyday experiences. From this experience, the possibility emerged of incorporating a fairy costume into the clinical setting and adapting it to the dental context as the Tooth Fairy.

The use of the character during children's initial clinical experiences was accompanied by spontaneous expressions of interest, including approaching the character, interacting with it, and requesting photographs. Although these observations alone do not allow conclusions to be drawn regarding effects on children's behavior or dental anxiety, they represented an initial experience that contributed to the formulation of the present investigation by suggesting that the character might have symbolic significance for children receiving dental care.

The character was subsequently used intentionally by the teaching team when interacting with children experiencing the transition from primary to permanent dentition. On these occasions, the Tooth Fairy served as a communication mediator when discussing the natural exfoliation and replacement of primary teeth, allowing this developmental process to be addressed through concepts compatible with children's symbolic world. This experience created opportunities for listening and dialogue and broadened the possibilities for interaction among the dental team, children, and their caregivers.

Another factor contributing to the formulation of the study was the experience observed during listening sessions conducted as part of the SOFA extension project. During activities involving children, the Tooth Fairy spontaneously appeared in drawings produced by some patients as a representation associated with their dental experiences. These drawings contained different symbolic elements: in some, the character was associated with teeth and expressions of fear or sadness; in others, it appeared alongside smiles, teeth represented by stars, and other positive images. Although these drawings were not subjected to systematic psychological or iconographic analysis, their recurrence drew attention to the possible relevance of

the character within the imaginative world of the children receiving dental care.

These different forms of representation raised the need to systematically understand how children perceive the Tooth Fairy and what meanings they attribute to the character in the context of oral health and dental care. From this perspective, it was also considered relevant to investigate the perceptions of parents or caregivers, since their experiences and attitudes may influence how children experience dental care.

Regarding the sociodemographic characteristics presented in Table 1, female caregivers, particularly mothers, predominated among the participants. Complete secondary education was the most frequent educational level among caregivers. Caregiver education, particularly maternal education, has been associated with several aspects of children's oral health, including preventive practices, oral hygiene behaviors, and the use of dental services. Nevertheless, given the descriptive design and small sample size of the present study, these findings should be interpreted cautiously, and no causal relationship can be established between caregiver education, frequency of dental visits, and children's receptiveness to the Tooth Fairy.

The high frequency of recent dental visits among the participating children may be related to the care provided within the university dental teaching clinic. Likewise, it cannot be concluded that caregiver participation or involvement determined children's receptiveness to the character. Nevertheless, these findings reinforce the importance of considering the family as part of the child's healthcare context and of developing oral health education strategies that encourage caregiver participation while respecting the characteristics and needs of each child.

Comparison of the present findings with the available literature was limited by the scarcity of studies specifically investigating the Tooth Fairy as a resource for desensitization, behavioral management, or oral health promotion in clinical settings. Existing studies have predominantly been conducted in English-speaking countries and have approached the character from different cultural and educational perspectives. For example, Dias and Karramkan¹² investigated the Tooth Fairy as a symbolic resource for oral health education among children aged 6–12 years, using a puppet-theater approach to encourage imagination and communication about oral health. Patel et al.¹³ also described a large-scale Tooth Fairy initiative in London, illustrating the use of the character in a broader oral health context.

In Brazil, although the Tooth Fairy is present in books, educational materials, digital media, and other oral health initiatives, scientific evidence regarding its systematic use in pediatric dental care remains limited. Among national initiatives, the "Fada Cidadã" (Tooth Fairy Citizen) project

developed by the School of Dentistry of the University of São Paulo¹⁴ is noteworthy for using the Tooth Fairy concept to stimulate children's interest in donating naturally exfoliated teeth for scientific research.

Within this context, the findings of the present study should be regarded as exploratory evidence. Despite its limitations, particularly the small sample size and descriptive design, the study provides preliminary insights into children's perceptions of the Tooth Fairy in pediatric dentistry and may contribute to the development of subsequent investigations using analytical designs, larger samples, and validated instruments for assessing children's dental fear, anxiety, behavior, and treatment experience.

The receptiveness observed during the use of the character also suggests the potential for developing more structured interventions within university dental teaching clinics. A protocol incorporating fantasy, storytelling, symbolic interaction, and age-appropriate communication strategies could be investigated as a complementary resource to conventional behavioral management techniques. Future studies should systematically assess whether the use of the Tooth Fairy is associated with measurable changes in dental fear, anxiety, cooperation, and children's perceptions of the dental experience. Such studies could help determine the effectiveness of this approach and identify which children may benefit from it.

Conclusion

1. The children interviewed in this study expressed predominantly positive perceptions of the Tooth Fairy.
2. The character was associated not only with the traditional exchange of a lost tooth for money but also with several forms of symbolic and emotional support. In particular, children described the Tooth Fairy as someone who could help them cope with fear or nervousness related to dental visits or treatment, take care of their teeth, and help caregivers understand how to provide oral care.
3. An improvement in children's cooperation during dental treatment was reported by children, parents or caregivers, and undergraduate dental students.
4. These findings should be interpreted in light of the small, convenience-based sample and the specific context of a university dental teaching clinic at UFPE. Further studies with larger samples, analytical designs, and validated behavioral and psychological measures are warranted to investigate the potential role of the Tooth Fairy as a complementary resource in pediatric dental care.

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