

Behavioral management techniques in pediatric dentistry: A literature review



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ABSTRACT

Fear and apprehension related to dental care are considered a significant health challenge, often

impeding the search for dental care. This obstacle takes on even greater proportions when it comes to children, as the effectiveness of procedures can be compromised if the dentist is not able to apply behavior management techniques. This study aims to address effective behavior management techniques to reduce fear and anxiety in child patients and their caregivers. To achieve this purpose, a literature review was carried out using the Virtual Health Library/LILACS, Pubmed and Scielo databases. The descriptors used included or combined: pediatric dentistry, fear, anxiety, child behavior. Children often experience fear and anxiety regarding dental treatment. To mitigate these feelings, it is crucial that the dentist knows and applies behavior management techniques, adapting them individually to each child and establishing a relationship of trust with both the child patient and their parents or guardians. This approach aims to minimize fear and anxiety, reducing the chances of behavioral problems, resulting in safe and smooth care.

Keywords: Pediatric dentistry, Child behavior, Fear, Anxiety.

1 INTRODUCTION

Children's dental care faces a variety of challenges, including anxiety, fear, pain, and negative experiences, whether experienced directly or reported by others. Over the years, these elements have become significant sources of obstacles in behavioral management in pediatric dentistry (KARAMEHMEDOVIC *et al.*, 2021; JUÁREZ-LÓPEZ *et al.*, 2022). These factors often result in postponement of dental office visits, motivated by fear of pain or a negative association with treatment. This posture not only harms general health, but can also aggravate the oral condition, transforming a simple dental problem into more specialized and, consequently, more costly procedures (KLINGBERG & BROBERG, 2007; KRONIÑA *et al.*, 2017).

Behavioral management in pediatric dentistry is a discipline that aims to establish a relationship of mutual trust between the patient and the dental surgeon (JAMALI *et al.*, 2018). It is essential for the dentist to consider not only the physical state but also the emotional and psychological state of their



patients (KARAMEHMEDOVIC *et al.*, 2021; JUÁREZ-LÓPEZ *et al.*, 2022). Professionals in pediatric dentistry must be knowledgeable about the stages of child psychological development and be able to build a relationship of trust with patients. It is crucial to remember that actions and words during treatment can influence the child's personality and individuality, resulting in greater manual dexterity and accurate diagnoses, which contributes to the success of treatment (KLINGBERG & BROBERG, 2007; KRONIÑA *et al.*, 2017; STABERG *et al.*, 2018). The ability to distinguish each stage of child development and understand the child's specific needs will provide the dentist with greater security, resulting in more comfortable care and offering peace of mind to parents (FUX-NOY *et al.*, 2022).

The behavioral management strategies currently used have the main objective of reducing the levels of anxiety, fear and stress in children during dental procedures. These strategies are categorized into two approaches: pharmacological and non-pharmacological (QUEIROZ *et al.*, 2015). Non-pharmacological techniques involve behavior management methods such as positive reinforcement, the tell-show-do approach, and the use of distractions (RØNNEBERG *et al.*, 2015; SANGLARD *et al.*, 2022).

By being aware of their patients' level of anxiety, the dentist will not only be prepared to deal with potential inappropriate behaviors, but they will also be able to act proactively to reduce the anxiety associated with dental procedures. Among the factors that contribute to minimizing anxiety are dialogue, trust-building, and detailed explanation of the child's doubts in the dental environment (ANABUKI *et al.*, 2021; GAZZAZ *et al.*, 2022).

The purpose of this study is to address techniques that contribute to behavioral control in pediatric dental consultations, with the aim of strengthening the bond between the professional, the child and the family.

2 MATERIALS AND METHODS

This study consists of a literature review carried out exploring works and authors that address the theme presented. Data collection was conducted using the LILACS, PubMed and Scielo databases, using the following descriptors: "Pediatric Dentistry", "Fear", "Dental Anxiety" and "Child Behavior".

3 LITERATURE REVIEW

3.1 FEAR AND ANXIETY IN DENTAL CARE

Dental fear and phobia are categorized as a distressing expectation that impairs the normal functioning of dental care (GIZANI *et al.*, 2022). This phenomenon represents not only a significant challenge to dental procedures, but also a worrying public health issue (LIN *et al.*, 2017). This anxiety directly influences the quality and duration of treatment, and is often associated with postponement of



the visit to the dentist and previous experiences through the sight of instruments such as needles and auditory and tactile stimuli, such as the sound of the drill (SILVA *et al.*, 2022).

Dental anxiety, defined as an apprehension in relation to dental treatment (GIZANI *et al.*, 2022), *has a multidimensional nature, involving behavioral, cognitive, and physiological factors* (SILVA *et al.*, 2022). This anxiety can vary according to the child's age, parental influences, distorted information from family and friends, and even imagination in relation to dental care (STENEBRAND *et al.*, 2013; WU & GAO, 2018).

Child patients often manifest fear and anxiety through behaviors such as crying, refusal, and, in some cases, aggression, negatively impacting quality of life and resulting in postponement or impairment of dental treatment (LIN *et al.*, 2017; GIZANI *et al.*, 2022).

3.2 CHARACTERIZATION OF BEHAVIOR IN DIFFERENT AGE GROUPS

Understanding the developmental phases that the child patient goes through is crucial for the dentist, allowing the level of possible interaction to be assessed (KVAAL & HAUGEN, 2017). This knowledge enables a more accurate approach to the child's needs, resulting in a more comfortable, smooth, and reliable service, not only for the child, but also for the parents (PAGLIA, 2021). Generally, younger children are more prone to anxiety, with those aged four showing higher levels compared to those aged five or six (SUJATHA *et al.*, 2021).

According to studies, from the age of seven, children tend to cooperate more calmly, as they begin to develop social skills, adapting better to dental treatment (TREMBLAY *et al.*, 2016). In the period between two and six years, they are more susceptible to manifesting fears and behavioral problems during dental care (WELLS *et al.*, 2018). Research indicates that children up to six years of age are more likely to experience dental anxiety compared to those aged seven to twelve (DONNELL, 2023). The relationship between age, dental anxiety, and behavior during care is a crucial aspect in preventing adverse reactions in children to treatment (TREMBLAY *et al.*, 2016; DONNELL, 2023).

3.3 BEHAVIORAL CONTROL

3.3.1 Tell-Show-Do Technique

The behavior management technique known as "tell-show-do", developed by Adelson in 1959 (CHAVES *et al.*, 2023), maintains its relevance today, being widely used by specialists in pediatric dentistry (MOREIRA, 2020). This approach comprises a verbal description appropriate to the age group and stage of development of the child patient, a detailed visual, auditory, olfactory and tactile presentation of the entire process to be performed, and practical execution, providing the child patient with familiarity with the dental environment (ROBERTS *et al.*, 2010). This technique is one of the most used by professionals to manage behavior, requiring a previous dialogue and a demonstration of



the procedure before its performance, performed by the dentist in his office (ARMPFIELD & HEATON, 2013).

This demonstrative approach has been shown to be effective in reducing fear and anxiety in children (APPUKUTTAN, 2016). The technique is particularly effective, as children express interest in observing and interacting with objects present in the dental office (ROBERTS *et al.*, 2010; Armfield & Heaton, 2013). In the context of pediatric dental offices, the tell-show-do technique is widely employed to promote behavior modification using appropriate communication, which represents a significant challenge in dental care (JAIN *et al.*, 2016; MAC GIOLLA PHADRAIG *et al.*, 2023). In addition, this technique has no contraindications, being adaptable for any patient (MAC GIOLLA PHADRAIG *et al.*, 2023).

3.3.2 Voice Control

The voice control technique is based on the manipulation of the volume, rhythm, and tone of the voice (JAIN *et al.*, 2016), aiming to attract attention and obtain the desired behavior from the child, preventing the establishment of negative behaviors (MAC GIOLLA PHADRAIG *et al.*, 2023). This approach is often employed in younger children, as they do not respond easily to direct verbal instructions. Therefore, the dentist must speak softly and continuously, as intonation plays a crucial role in capturing the attention of the child patient (ROBERTS *et al.*, 2010; ZHOU *et al.*, 2011). In addition, the facial expression of the pediatric dentist is a crucial factor, conveying confidence to the child patient. In situations of negative behavior, voice control and facial expression can be employed to re-establish the desired behavior, redirecting the child's focus and attention from an unpleasant procedure to a more peaceful environment (Shindova & Belcheva, 2014).

3.3.3 Positive reinforcement

The positive reinforcement strategy in pediatric dentistry consists of rewarding the child patient when he or she demonstrates positive behavior, using this reward as a stimulus for subsequent visits (STABERG *et al.*, 2018; JAIN *et al.*, 2016). This approach is based on the ability to modify human behavior through conditioning, transforming it, over time, into an established habit (GIZANI *et al.*, 2022). To strengthen the desired behavior in the following consultations (JAIN *et al.*, 2016), *a motivational process is employed that includes praise, gifts, positive expressions, and gestures* (CHAVES *et al.*, 2023).

These reinforcers can be classified as non-social, such as gifts, prizes, and toys, or social, such as compliments and displays of affection. This technique aims to familiarize the child patient, reducing anxiety and fear (JAIN *et al.*, 2016). Offering gifts at the appropriate time is effective in seeking and maintaining the desired behavior (APPUKUTTAN, 2016). It is crucial to preserve positive behavior



by using rewards as a reward, without it being perceived as bribery (Klingberg & Broberg, 2007). For children, opening their mouths is a significant expression of trust, and praising them often contributes to cementing that trusting relationship. Simple reinforcers, such as a balloon souvenir with the dentist's glove, can be used in this context (CHAVES *et al.*, 2023). This technique has no contraindications and can be applied to all patients (KLINGBERG & BROBERG, 2007; APPUKUTTAN, 2016).

3.3.4 Audio-visual distractions

In the face of remarkable technological advances, there is a growing attraction of children to technological devices, and recent research highlights audiovisual distraction as a modern behavior control technique (GUJJAR *et al.*, 2019). One of the forms of this distraction is through a system of glasses that is placed in the child's eyes, allowing them to connect to various devices so that they can choose their favorite animation, aligned with their age group (CUNNINGHAM *et al.*, 2021). The personalization of this choice provides the infant patient with a sense of familiarity during the procedure, reducing the chances of uncooperative behavior (LIU *et al.*, 2019; SILVA *et al.*, 2021).

A study evaluating clinical anxiety highlighted a significant reduction in anxiety during dental procedures, including during the injection of local anesthesia, in the group that used audiovisual distraction compared to the group without this technique, indicating the effectiveness of this approach in reducing fear and anxiety in dental care (GUJJAR *et al.*, 2019; SILVA *et al.*, 2021). Audio-visual glasses have been shown to be more efficient in promoting cooperative behavior and reducing anxiety, surpassing relaxation techniques such as music or TV in the dental environment (LIU *et al.*, 2019). This is because the child patient diverts his attention to the animation in the audiovisual glasses, avoiding concentrating on the noises of the dental equipment (SILVA *et al.*, 2021). In addition, this approach enables the child to reduce the perception of pain sensation, relieving their discomfort (GUJJAR *et al.*, 2019; RICHARDS, 2019).

4 CONCLUSION

It is concluded that fear and anxiety related to dentistry are common throughout the population, especially when they originate in childhood. The correct use of behavior management techniques plays a crucial role in reducing these feelings, contributing to safer and calmer care. Among these techniques, the approach known as "tell-show-do" stands out, widely supported by the literature due to its easy applicability and effectiveness. By reducing fear and anxiety in children, establishing solid bonds between the child, the professional and the family, the chances of undesirable behaviors decrease. Therefore, the proper implementation of behavioral management techniques in children with fear and anxiety not only strengthens the bonds between the child, the professional, and the family, but also contributes to humanized and successful care.



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