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Behaviour management techniques in pediatric dentistry: Revisited

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Abstract
Children are not young adults, their behavior, attitude, ability to understand, imagination, logical thinking, reasoning, etc. vary considerably from that of adults and also amongst the children themselves. Child is in dynamic state of growth and development, whereas the adult is in the static state. Behavior management is widely agreed to be a key factor in the care of children in Pediatric Dentistry. Behavior management techniques are meant to reduce the need for excessive and unsafe use of medications. There is evidence to indicate that an integration of good behavioural techniques leads to better results, lessened drug requirements, greater patient safety and reduced side-effects. Present review of literature focus to outline various behaviour management techniques used in pediatric dentistry.

Keywords: behaviour management, pediatric dentistry, fear and anxiety

Introduction

Every child is different and they exhibit a broad range of physical, intellectual, emotional, and social development and a diversity of attitudes and temperament. Therefore, it is important that pediatric dentists must have the knowledge of a wide range of behavior guidance techniques to meet the needs of the individual child [1]. Children are not young adults, their behavior, attitude, ability to understand, imagination, logical thinking, reasoning, etc. vary considerably from that of adults and also amongst the children themselves [2]. Child is in dynamic state of growth and development, whereas the adult is in the static state. Children have relatively limited communication skills and are less able to express their fears and anxieties. Their behavior is essentially a reflection of their inability to cope with their anxiety.[2] Fear and anxiety associated with dental treatment is well-recognized factors and have a negative impact on Child's willingness to get the treatment done.[3] Dental fear and anxiety (DFA), a common occurrence characterized by essential and inevitable emotion that appears as a response to various dental procedures. Fear is an unpleasant emotional state consisting of psychological and psychophysiological changes in response to real external threat or danger [4].

Dental anxiety among pediatric patients is a great challenge posed to every dentist in everyday dental practice. The child's uncooperative behavior may restrain the effective delivery of dental care that may compromise the quality of treatment provided. Behavior management of the pediatric patient is an essential part of pediatric dental practice. For a child who is not capable to co-operate, the dentist has to rely on other behavior management techniques as substitute or addition to communicative management. Behavior management techniques are meant to reduce the need for excessive and unsafe use of medications. There is evidence to indicate that an integration of good behavioural techniques leads to better results, lessened drug requirements, greater patient safety and reduced side-effects.[5]

Behavior management is widely agreed to be a key factor in the care of children in Pediatric Dentistry. Indeed, if a child's behavior in the dental surgery/office cannot be managed then it is difficult if not impossible to carry out any dental care that is needed. Behavior management is therefore one of the corner Stone's of the pediatric dental care [6].

Wright GZ in 1975 defined behavior management as the means by which the dental team effectively and efficiently performs treatment for a child and at the same time, instills a positive dental attitude.[2] He suggested that a "positive dental attitude" was the aim of behavior management. Behavior management has been defined by the American Academy of Pediatric Dentistry (2015) as "A continuum of interaction with a child/parent directed toward communication and education". There are number of non-pharmacological or psychological techniques that aim to manage patient behavior. Behavior management methods are about communication, education, shaping and motivation. Some methods aim to improve the communication process, while others are intended to eliminate inappropriate behavior or reduce anxiety. Most recommended techniques for modifying the child's behavior during dentistry have involved various forms of pre-exposure to the dental setting and procedures. The American Academy of Pediatric Dentistry had outlined behavior management methods for use with children including voice

control, tell-show-do, positive reinforcement, distraction and non-verbal communication, hand-over-mouth (HOM) technique, physical restraint and pharmacological interventions such as conscious sedation, nitrous oxide, and general anesthesia [1] Present review of literature focus to outline various behaviour management techniques used in pediatric dentistry.

Basic behaviour management Techniques

Communication and communicative guidance

Communicative management and appropriate use of commands are used universally in pediatric dental patients with both the cooperative and uncooperative child. At the beginning of a dental appointment, asking questions and active/reflective listening can help establish rapport and trust. The dentist may establish relationship to educated patient and deliver quality dental treatment safely [1].

Tell-show-do

The Tell-Show-Do technique is based on the principles of learning theory and is performed by dentists themselves in the operatory. The technique involves verbal explanations of the procedures in phrases appropriate to the developmental level of the patient (tell); demonstrations for the patient of the visual, auditory, olfactory, and tactile aspects of the procedure in a carefully defined, nonthreatening setting (show); and then, without deviating from the explanation and demonstration, completion of the procedure (do). The objectives of tell-show-do are to teach the patient important aspects of the dental visit and familiarize the patient with the dental setting, and shape the patient's response to procedures through de- sensitization and well-described expectations [1].

Tell Play Do

The Tell-Show-Do technique was modified into the Tell-Show-Play-doh technique, using the concept of learning by doing, in reducing children's fear and anxiety toward dental treatment and promoting adaptive behaviour [7].

Ask-tell-ask

This technique involves inquiring about the patient's visit and feelings toward or about any planned procedures (ask); explaining the procedures through demonstrations and non-threatening language appropriate to the cognitive level of the patient (tell); and again inquiring if the patient understands and how she feels about the impending treatment (ask). If the patient continues to have concerns, the dentist can address them, assess the situation, and modify the procedures or behavior guidance techniques if necessary. The objectives of ask-tell-ask are to assess anxiety that may lead to noncompliant behavior during treatment; teach the patient about the procedures and how they are going to be accomplished; and confirm the patient is comfortable with the treatment before proceeding [1].

Voice Control

This technique was suggested by Pinkham (1985). Voice control is a deliberate alteration of voice volume, tone, or pace to influence and direct the patient's behavior. The objectives of voice control are to gain the patient's attention and compliance; avert negative or avoidance behavior; and establish appropriate adult-child roles [8].

Modelling

Introduced by Bandura in 1969. He stated that learning occurs only as a result of direct experience which can be vicarious-witnessing the behavior and the outcome of that behavior for other people. The technique is based on the psychological principle that people learn about their environment by observing others' behaviour, using a model, either live or by video to exhibit appropriate behaviour in the dental environment. This may demonstrate appropriate behaviour via a third party, decrease anxiety by showing a positive outcome to a procedure a child requires themselves, and illustrate the rewards for performing appropriately [9, 10].

Distraction

Distraction is an easily utilized method of reducing a patient's apprehension during the occurrence of uncomfortable sensations. "Distraction" is a tactic designed to turn away child's attention away from their current behavior to focus their interest in something else.[11] Distraction techniques can be grouped into two main categories: physical methods and mental method.

Physical method includes cheek jiggling and leg rising. Other method include listening the music (songs, nursery rhyme, instrumental music) or recorded books through ear phone, playing video games, watching cartoon movies, or other recorded programs on monitors (laptop/mobile) or specially constructed glasses, rubbing the cheek of the patient or massaging the gums (during administration of local anesthesia) [12].

Mental method of distraction includes various mental exercises that engage the child while the dentist is performing stressful parts of the procedure that includes asking the patient to count backward to themselves from hundred by threes, then fours, saying the alphabet backwards, solving mathematical long division or multiplication problems in head, or thinking about different event such as holidays or birthday celebrations [12].

Memory Restructuring

Memory restructuring is a behavioral approach in which memories associated with a negative or difficult event (eg, first dental visit, local anesthesia, restorative pro-cedure, extraction) are restructured into positive memories using information suggested after the event has taken place. This approach been tested with children who received local anesthesia at an initial restorative dental visit and has been shown to change local anesthesia-related fears and improve behaviors at subsequent treatment visits. Restructuring involves four components: (1) visual reminders; (2) positive reinforcement through verbalization; (3) concrete examples to encode sensory details; and (4) sense of accomplishment. The objectives of memory restructuring are to restructure difficult or negative past dental experiences, and improve patient behaviour at subsequent dental visits. It can be used with patients who had a negative or difficult dental visits [1, 13].

Parental Presence/Absence

The presence or absence of the parent some-times can be used to gain cooperation for treatment. A wide diversity exists in practitioner philosophy and parental attitude regarding parents'

presence or absence during pediatric dental treatment. The objectives of parental presence/absence are:

For parents to: participate in infant examinations and/or treatment; offer very young children physical and psychological support; and observe the reality of their child's treatment For practitioners to: gain the patient's attention and improve compliance; avert negative or avoidance behaviour; establish appropriate dentist-child roles; enhance effective communication among the dentist, child, and parent; minimize anxiety and achieve a positive dental experience; and facilitate rapid informed consent for changes in treatment or behavior guidance [14, 15].

Nitrous Oxide/Oxygen Inhalational Sedation

Nitrous oxide/oxygen inhalation is a safe and effective technique to reduce anxiety and enhance effective communication. Its onset of action is rapid, the effects easily are titrated and reversible, and recovery is rapid and complete. Additionally, nitrous oxide/oxygen inhalation mediates a variable degree of analgesia, amnesia, and gag reflex reduction [16].

Advanced Behaviour Management Techniques

Most children can be managed effectively using the techniques outlined in basic behavior guidance. Children, however, occasionally present with behavioral considerations that require more advanced techniques. These children often cannot cooperate due to lack of psychological or emotional maturity and/or mental, physical, or medical disability. The advanced behavior guidance techniques commonly used and taught in advanced pediatric dental training programs include protective stabilization and general anesthesia [17].

Protective stabilization

Protective stabilization is the restriction of patient's freedom of movement, with or without the patient's permission, to decrease risk of injury while allowing safe completion of treatment. Partial or complete stabilization of the patient sometimes is necessary to protect the patient, practitioner, staff, or the parent from injury while providing dental care. Protective stabilization can be performed by the dentist, staff, or parent with or without the aid of a restrictive device. The objectives of patient stabilization are to: reduce or eliminate untoward movement; protect patient, staff, dentist, or parent from injury; and facilitate delivery of quality dental treatment [1, 18].

General Anesthesia

General anesthesia is a controlled state of unconsciousness accompanied by a loss of protective reflexes, including the ability to maintain an airway independently and respond purposefully to physical stimulation or verbal command.

Objectives of general anesthesia are to: provide safe, efficient, and effective dental care; eliminate anxiety; reduce untoward movement and reaction to dental treatment; aid in treatment of the mentally, physically, or medically compromised patient; and eliminate the patient's pain response.

Indications: General anesthesia is indicated for: patients who cannot cooperate due to a lack of psycho- logical or emotional maturity and/or mental, physical, or medical disability; patients for whom local anesthesia is ineffective because of acute infection, anatomic variations, or allergy; the extremely uncooperative, fearful, anxious, or un- communicative child or adolescent; patients requiring significant surgical procedures; patients for whom the use of general anesthesia may protect the developing psyche and/or reduce medical risk; and patients requiring immediate, comprehensive oral/ dental care.

Contraindications: The use of general anesthesia is contra-indicated for: a healthy, cooperative patient with minimal dental needs; a very young patient with minimal dental minimal dental needs that can be addressed with therapeutic interventions needs that can be addressed with therapeutic interventions [1].

Conclusion

Behavior management is widely agreed to be a key factor in the care of children in Pediatric Dentistry. The role of a pedodontist in managing a child with anxiety is twofold - firstly, to control and treat the problem with which the child reports and secondly, to teach the child appropriate ways of managing the anxiety. In order to relieve the child's anxiety, the dentist should be able to identify and implement appropriate behaviour management techniques which require thorough knowledge in this field.

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