

Distracting the Dread Towards Dentistry in Children: The Digital Way

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Abstract

Dental anxiety is one of the most common emotional conditions breaking off a dental appointment by a child. Managing and treating an anxious child is tough task for dentist. Diverting the children helps in reducing anxiety. Distraction shifts the focus of the child to something interesting and attractive to actively prevent the child's ability to participate in painful stimuli, thereby reducing pain and anxiety. Distraction technique, a simple and safe method, and more helpful for the dental professional to treat the child. This article reviews the various distraction technique for managing anxiety in children.

Keywords: Child behavior, Dental anxiety, Distraction technique.

INTRODUCTION

Dental anxiety is the most common problem many children face in their daily life. A stressful or traumatic experience by dental treatment may give rise to anxiety. Despite the advance in technology and treatment modalities children avoid visiting dentist due to anxiety. Anxiety, fear, and pain are common reasons many children give for not visiting a dentist and are present with poorer oral health. Fear of unpleasant procedures, noise created in the dental clinic, new settings, parental influence, and a previous painful healthcare intervention can all contribute to dental anxiety.^[1-3]

For dentally nervous children, the vision, sensation, and dread of pain generated by the needle and dental drill have been found to be the most fear-inducing stimuli.^[2] Treating children with dental anxiety and behavioral issues is challenging and takes more time, which may make the encounter stressful and unpleasant for both the patient and the treating dentist.

According to McCaul and Mallet they pointed out that an individual should concentrate on the painful stimuli in order to perceive pain; therefore, perception of pain decreases when a person's attention is distracted away from the stimulus.^[3] Distraction techniques can assist children with dental anxiety overcome their fears.

The purpose of this article is to review the distraction technique used to reduce dental anxiety in children [Table 1].

DISCUSSION

Distraction is a modern approach of behavior management technique that distracts a child from the noises and sight of dental treatment and contributes to anxiety reduction. Distraction is a method used by a dentist to alleviate discomfort and suffering through the procedure. It works on the notion that the attention of a child is hampered by the unpleasant stimuli by turning its focus to something interesting, thereby decreasing pain, trouble, and anguish. This allows for a reduction in discomfort perception and the avoidance of negative or avoidance behavior. The child may choose their own distraction technique, which will help them acquire control over the unpleasant stimuli and give them a sense of being in a safe dental setting.

AUDIO DISTRACTION

Audio distraction is a non-aversive approach in which the child is permitted to listen to music throughout the dental procedure. The music relieves pain and anxiety while also acting as a diversion, shifting the child's focus away from unpleasant stimuli to something more positive. It involves the patient's

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Table 1: Review of literature

Author	Year	Technique
Nuvvula <i>et al.</i> ^[4]	2015	Audiovisual distraction
Kaur <i>et al.</i> ^[5]	2015	Audio distraction
Srishty Chaturvedi ^[6]	2016	Audiovisual distraction
Anthonappa <i>et al.</i> ^[7]	2017	Dental anxiety
Shah <i>et al.</i> ^[8]	2017	Smart phone
Gupta <i>et al.</i> ^[9]	2017	Non pharmacological methods
Al-Halabi <i>et al.</i> ^[10]	2018	Audio visual distraction
Daokar <i>et al.</i> ^[11]	2018	Audio distraction
Koticha <i>et al.</i> ^[12]	2019	Virtual reality
Elicherla <i>et al.</i> ^[13]	2019	Smart phone
Radhakrishna <i>et al.</i> ^[14]	2019	Behavior modification techniques
Raseena <i>et al.</i> ^[15]	2020	Virtual reality
Gowdham <i>et al.</i> ^[16]	2021	Audio distraction
Coutinho <i>et al.</i> ^[17]	2021	Smart phone
Silva <i>et al.</i> ^[18]	2021	Behaviour management

mind with something familiar and soothing, allowing a patient to escape into his or her “own world.”

There are two causes for the reduction in fear and anxiety caused by music distraction. First, a child who is listening to music will close his or her eyes in order to focus on the aural presentation, obliterating the sight of dental treatment. Second, the sound of music will mask unpleasant dental sounds such as the sound of the handpiece, and these two benefits, along with the relaxing impact of music, will help the dentist manage the nervous patient successfully. By incorporating attention, distraction, emotion, imagery, catharsis, and relaxation, a kid actively listening to music modifies their.^[19,20]

Music interventions have developed as an inexpensive, useful, complementary technique that may be effective and more acceptable to parents and children.

AUDIO VISUAL (AV) DISTRACTION TECHNIQUE

AV distraction is a recent modality proposed and is a promising approach that gives an alternative non-pharmaceutical way of sedation designed to decrease the discomfort generally associated with dental treatments in children. It is a strong distraction technique since it takes control in a pleasurable way of feelings, hearing, and sight. AV technique partially occludes the environment by masking the sight of dental procedure and sound of dental drill which evokes the fear in children. By fully involving the sound and visual, the AV distraction approach hides the sound and vision of the operation and also generates a good emotional reaction, resulting in a calm experience, pleasant memories, and favourable attitudes about the dental treatment. The distressing impressions produced by the initial dentist visit become memories that influence behavior at subsequent sessions. The AV system can be offered to all patients without medical or psychological contraindications, it may be a particularly useful tool in the distraction of mild to moderately anxious patients. It is simple and inexpensive

and does not interfere with dental treatment. The use of AV distraction is successful in decreasing not only anxiety but also pain perception.

VIRTUAL REALITY

Virtual reality is most commonly defined as a technical system that consists of a computer capable of interactive three-dimensional visualization, a controller for interacting with the animations, a position tracker, and a head-mounted display to provide the visual output. Virtual reality is an effective pain distraction technique that helps to reduce anxiety and increasing the amount of fun children experience during painful dental procedures and allows the user to get immersed in a virtual environment, with three-dimensional vision and interaction through movements, which promotes distraction of the real senses. It is a type of human-computer interaction in which the patient is immersed in a computer-controlled virtual environment by experiencing auditory, tactile, and visual stimuli through a headset.^[21]

Virtual reality is immersive and interactive, using all five senses at the same time. This technology enables a person to hear and feel sensations that match a visual image, as well as interact with the virtual environment and the virtual world's response to those actions in real-time. Virtual reality helps to distract attention away from the mental processing of the child and to diminish the child's suffering. It enables the dentist to perform the treatment without interruption since the youngster is deeply engaged in the virtual environment. Reduces the procedure time and makes the dental professional concentrate on their work without being interrupted. It is a tool for pain management and helps in reducing the sense of pain by decreasing attention away from the stimulus. It is secure and non-invasive, requires no prior knowledge or training, and has long-term benefits such as better memory and more readiness for dental procedures.

MOBILE GAMES

In the era of digitization, dentists also have to adapt to the current technologies. With the advent of mobile phones, children have been exposed to a myriad of newer technologies since their infancy. It is generally seen that children from all the age groups, be it a toddler to a teenager, stuck up to the mobile phone playing interactive games or even browsing Internet.^[22] Mobile games are an interesting tool in the dental environment and help educating the patients about the procedures of their treatment. This may also help to calm the child and acquaint him or her with the dental equipment that will be used during treatment. Smartphone apps that teach the children how to operate popular dental equipment such as the airtoror, ultrasonic scalers, suction tip, and others might help reduce dental anxiety or apprehension by giving them personal experience with the equipment's operation, noises, and clinical effects^[8] Mobile games gives child an idea in an engaging environment as to what the nature of their treatment will be. The child was

basically made dentists and were made to do patients in the app that boosted their confidence toward the treatment and also showed the child how a traumatically and painlessly a dental operation could be done. Throughout the dental world, the smartphone dental application has been shown to be quite helpful in reducing the fear and uncertainty of pediatric patients.

CONCLUSION

Dental anxiety can be a major barrier to dental treatment for children. These fear and anxieties should be tackled or can harm patients and stop dental treatment. Sorrowful children require substantial commitment and competence from dentists and dentists in child management strategies. For anxious children, dental care involves the application of behavioral management strategies. The current tendency towards distraction methods has been beneficial with several management techniques. Distraction techniques can be used as an adjunct tool for controlling anxiety and reducing disruptive behavior during painful dental procedures in children.

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