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Parental Acceptance Towards Behavioural Management Techniques in Pediatric Dentistry

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ABSTRACT

Behavioral management has shown to provide a successful treatment of young children. There are young children which will exhibit disruptive behavior in dental appointments, which can either be easy or difficult for the dental practitioner to carry out the dental treatment. However, the behaviour management techniques require the approval and the acceptance of the parents before performing on children. Thus, the aim of this study is to assess the attitude of the parents towards various behaviour management techniques used. A total of 100 parents volunteered for this study. Participants were made to see the photographs which demonstrate the frequently used behavioural management techniques. A questionnaire was given to the parents to rate each of these management techniques in accordance with their willingness to have them used on their children upon dental treatment. Each parent will score each question out of 10. The level of acceptance was compared by taking the mean for each of the 9 behavioral management techniques. The most accepted methods of management which were widely accepted by parents are tell-show-do (91.5%), positive reinforcement (89.2%) and voice control (76.8%). 60.8% of the parents were moderately accepting of HOME being used to manage pediatric patients. The least accepted behavioral management techniques used by dentists towards pediatric patients was found to be physical restraint (27.4%), general anesthesia (16.3%) and papoose board with (14.7%) acceptance. Parents prefer a management technique which requires the dentist to communicate and interact with their child.

Key words: Parental acceptance, Behavioural management techniques, Questionnaire, Most and least accepted

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INTRODUCTION

Behavioral management has shown to provide a successful treatment of young children [1,2]. There are young children who will exhibit disruptive behavior in dental appointments, which can either be easy or difficult for the dental practitioner to carry out the dental treatment [3]. Young children who exhibit these kinds of disruptive behavior can interfere with the dental treatment and lead to a poor quality of dental care. American Academy of Pediatric Dentistry (AAPD) has introduced 10 behavior management methods in their 1991-1992 and was revised the guidelines in 2015 for Behavior Management [2]. Five management techniques consist of communication techniques, including: Voice control, tell-show-do, positive reinforcement, distraction, and nonverbal communication. Besides that, are the hand-over-mouth exercise (HOME) technique and physical restraint. There are pharmacological interventions such as conscious sedation, nitrous oxide, and general anesthesia. Dentists find these techniques useful in ensuring a better quality of dental care and reduce the risk of injury towards the child.

Dentists can no longer conduct these techniques without the awareness and consent received from the parents. They should not assume that the young children's parents are completely aware and approve of these techniques [3]. Health professionals should obtain an informed consent form the young children's parents/guardians before conducting any behavioral management towards the patient. The health professional can be held liable if any sort of management technique was conducted on the patient before obtaining consent from the parents [4].

Previously our department has conducted extensive research on various aspects of prosthetic dentistry, like in vitro studies, surveys, clinical trials, and review [5-23]. Hence, the aim of this study is to assess the parents towards various behavior management techniques used. The objective of this study helps us determine the acceptance of the patient's parents towards various techniques used by dental practitioners towards young children patients. With this study we analyze the most and least preferred behavior management technique by parents towards their children in a dental clinic.

MATERIALS AND METHODS

Ethical clearance for the study was obtained from the Institutional Ethical Review Board of Saveetha Dental College, Chennai. This study included a total of 100 parents between the age of 30-40 years. These parents have children who fall under the age group of 6-12 years. The study was conducted in Saveetha Dental College and Hospitals from November 2017 to January 2018. Parents who had come for dental treatment of their ward for the first time were only included in the study. Prior to conducting the study, it was informed to the parent regarding the study content.

A set of 8 photographs showing the different behavioral management techniques being used on children was prepared. The photograph was taken by dental students with the aid of pediatric dentists. Hard copies of the photograph were made. Before conducting the questionnaire, the parents were shown the 8 photographs. The photographs shown were explained in detail. After which the parents were given an appropriate amount of time to evaluate each photograph, and score each of the techniques depending on their acceptance of the technique, should they be used on their children upon a dental visit.

Once all 100 questionnaires have been filled the data was tabulated. The data was entered in an excel sheet using Microsoft Excel Version 12.0 (2007). To compare the level of acceptability, the mean rating of each of the 8 behavioral management techniques was determined. With the mean rating it was determined which management technique was mostly accepted by the parents and which was least accepted by the parents.

The different behavioral management techniques demonstrated to the participants were:

1. Tell-show-do (TSD): The dentist or assistant explains to the child what is to be done using simple terminology and repetition and then shows the child what is to be done by demonstrating with instruments on a model or the child's or dentist's finger. Then the procedure is performed exactly as described. Praise is used to reinforce cooperative behavior.

2. Voice control (VC): The attention of a disruptive child is gained by changing the tone or increasing the volume of the voice. Content of the conversation is less important than the abrupt or sudden nature of the command.

3. Positive reinforcement (PR): This technique rewards the child who portrays any behavior which is desirable. Rewards include compliments, praise,or affectionate physical contact.

4. Hand-over-mouth-exercise (HOME): The disruptive child is told that a hand is to be placed over the child's mouth. When the hand is in place, the dentist speaks directly into the child's ear and tells the child that if the noise stops the hand will be removed. When the noise stops the hand is removed and the child is praised for cooperating. If the noise resumes the hand again is placed on the mouth and the exercise repeated.

5. Physical restraints (PR): The dentist restrains the child from movement by holding down the child's hands or upper body, placing the child's head between the dentist's arm and body, or positioning the child firmly in the dental chair.

6. Papoose Boards and Pedi-Wraps (PR): These are restraining devices for limiting the disruptive child's movement. The child is wrapped in these devices and placed in a reclined dental chair.

7. Sedation (SED): Sometimes drugs are used to sedate a child who does not respond to other behavior management techniques or is unable to comprehend the dental procedures. Often, these drugs are administered orally.

8. General anesthesia (GA): The dentist performs at the Olympic Medical Corp., Seattle, WA. b Clark Associates, Worcester, MA. dental treatment with the child anesthetized in the operating room.

This questionnaire allowed the parents to rate each of these management techniques in

accordance to their willingness to have them used on their children upon dental treatment. As well as getting their cooperation prior to the dental treatment. Each parent will score each question out of 10. The higher the scoring will indicate the most accepted and the least will indicate the least accepted. The level of acceptance is compared by taking the mean for each of the 8 behavioral management techniques.

RESULTS AND DISCUSSION

Based on the present study, the most accepted methods of management which was widely accepted by parents were tell-show-do (91.5%), positive reinforcement (89.2%) and voice control (76.8%) Most of the parents prefer a proper communication between the child and the dentist 60.8% of the parents were. Moderately accepting of HOME being used to manage pediatric patients. This is then followed by sedation, in which nitrous oxide or any sort of sedation methods with 45.8% acceptance. Lastly, the least accepted behavioral management techniques used by dentists towards pediatric patients was found to be physical restraint (27.4%), general anesthesia (16.3%) and finally the least accepted method of all is the usage of papoose board with 14.7% acceptance (Table 1).

There is various behavioral management techniques made available. Behavioral management techniques are often used by the dentist to effectively deal with pediatric patients with many different responses. Each child will respond to dentistry differently. For each child's behavior there will be a dentist who will respond in a way that could help the child to adapt to the dental experience in a positive manner, the dentist should be capable of changing his/her own behavior to meet the individual child's needs at a particular moment [24].

Based on our results the most accepted behavioral technique is tell-show-do followed by positive reinforcement. There has been a study conducted in which forty-six parents completed survey forms for analysis and it was deduced that tell-show-do was rated as the most acceptable technique followed by, followed (in order of decreasing acceptance) by nitrous oxide sedation, general anesthesia, active restraint, oral premedication, voice control, passive restraint, and hand-over-mouth. Comparing our study as well as the study mentioned above, we can say that the common factor is having the most accepted technique to be tell-show-do. However, the difference is that positive reinforcement is the 2nd most accepted in our study but in the other study sedation is found to be the most accepted after tell-show-do [25]. In another study, they have found similar rustles having tell-show-do to be the most accepted management technique [26]. The most accepted technique in another study [27] was positive reinforcement (81.1%) followed by TSD (76.7%). It is as expected that the least invasive and aggressive technique is the most accepted. This statement was similarly said in another article whether they have found the least invasive methods, tell-show-do and positive reinforcement, to be the most accepted [28].

Table 1: Percentage of respondents and the mean value.

S.No	Technique	Percentage (%)	Mean value
1	Tell-show-do (TSD)	91.5	9.15
2	Voice Control	76.8	7.68
3	Positive Reinforcement	89.2	8.92
4	Hand Over Mouth Exercise (HOME)	60.8	6.08
5	Physical Restraints	27.4	2.74
6	Papoose Board and Pedi Wraps	14.7	1.47
7	Sedation	45.8	4.58
8	General Anesthesia	16.3	1.63

Physical restraint and papoose board/pedi wrap was not generally well accepted by the parents. A supporting article shows that the least accepted technique was restraint (1.1%) [27]. In our study sedation is not completely rejected by the parent. However in another study and hypnosis were entirely unacceptable to 30.1% while sedation was unacceptable to 15.6% [27]. Another study showed that, Papoose Board and general anesthesia were viewed with equal disapproval whereas sedation was viewed distinctly more favorably than general anesthesia and was grouped with HOME [3]. This can be correlated to our study in which sedation was more accepted by parents compared to general anaesthesia, physical restraints and papoose board/pedi wraps. It was said by Wein- stein et al. [29] that physical restraint was used in pediatric dentistry in an attempt to control fear-related behaviour; however it was shown that in 85% of cases the child's poor behaviour continued. The same author later found that when chairside assistants held a child patient it was very effective [30]. Fields reported that whole-body restraint in the form of a Papoose Board was

the least acceptable management technique to parents [31]. In a later survey the great majority of mothers who had been involved in its use for their own children were very positive about the technique [32,33]. This study showed that, most parents (84.5%) responded they would prefer to stop the treatment of an uncooperative child, or to stop and calm the child and then resume treatment. The rest (14.5%) said they would help the dentist even to the point of restraining their children. In another study, their findings show that Papoose Board was ranked the least accepted technique and it was similar to our study as it was ranked below general anesthesia [34]. Similarly in a study conducted on mothers which reported that most mothers approved the use of Papoose Board [32,34]. They thought the Papoose Board was necessary to perform the treatment despite its being stressful for the child. It was found in a study that the use of a Papoose Board was consistently unacceptable with all dental procedures, but acceptance of this technique was greatest for use with an emergency extraction [35].

A study done by Marilyn Goodwin Murphy, there was a correlation between Hand Over Mouth Exercise and Voice Control. This author has found that there was a positive relationship between approval of HOME and approval of voice control [3]. In a study, they have found that only 7.8% of the parents accepted voice control as one of the behavioral management techniques [27,36], 60.8% of the parents have accepted Hand Over Mouth Exercise (HOME). There have been studies conducted to see whether or not there are pedodontist who practice this technique used on pediatric patients. There has been some concern which was expressed about HOME where use in times of intense media coverage of child abuse and molestation. However, this technique is intended to facilitate treatment without causing harm to the child [37,38]. It was acknowledged by Casamasimo et al. that using HOME as a skill on controlling the patient varies greatly between dentists and that while results can be impressive it can also be 'downright ugly' [39,40].

HOME was described by Craig the purpose of the technique is to gain the attention of a child to allow communication this aids in allowing the dentistry explaining what kind of treatment is being done towards the child [40,41]. There has been a study in which they have found that children do not remember, nor are affected by, hand over mouth/restraint experiences [42]. In a UK survey 51% of the paediatric dentists surveyed thought that the child would come to fear dental treatment if HOM were used [43]. General anesthesia is another way of managing pediatric patients if they are making it difficult for the dentist to conduct the treatment. This method can sometimes be used as it is said to be the best to put the child completely to sleep and finish of all the treatment in a single, stress-free visit [44].

The limitation of this study was explanation of each of the different management techniques to the parents was time consuming and a few parents found out it difficult to grasp the concept of these behavioral management techniques. The data obtained was solely based on the test sample size of this study.

CONCLUSION

We can conclude that parents prefer a management technique which required the dentist to communicate and interact with their child. By doing so this will create a bond between the dentist and the child. The child will not be afraid and will be more open towards accepting a treatment.

CONFLICT OF INTEREST STATEMENT

Nil.

STATEMENT OF INFORMED CONSENT

There was no need for any informed consent of the participant as there was no personal information taken during this survey. The identity of the participants remains anonymous.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

This research was done in accordance with the ethical standards of Helsinki Declaration of 1975, as revised in 2000. No animals or humans were harmed in this process.

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This research was self-funded.

ETHICAL CLEARANCE

Taken from International Committee of Medical

Journal Editors.

CLINICAL SIGNIFICANCE

With the acceptance of the parents towards the management technique used on their child it aids the dentist to perform the treatment without any distribution.

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