



Original Article

Parental Acceptance of Various Behaviour Management Techniques used in Pediatric Dentistry: A Pilot Study in Odisha, India

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Abstract

Objective: To assess the parents' acceptance towards the behavior management techniques commonly used in the pediatric dentistry. **Materials and Methods:** Fifty parents participated in the study. Parents were asked to view a power-point presentation on 10 behavior management techniques: 1) Voice control, 2) Tell-Show-Do, 3) Positive reinforcement, 4) Mouth prop, 5) Modelling, 6) HOME, 7) Physical restraint, 8) Oral premedication 9) N₂O-O₂ sedation and 10) General anesthesia. Parents were asked to arrange various behavior management techniques from most accepted technique to least accepted technique. **Results:** In the present study population, the preferred behavior management technique was Tell-Show-Do followed by positive reinforcement and the least preferred behavior management technique was HOME followed by voice control and physical restraint. **Conclusion:** The parental acceptance of various behaviour management techniques have changed. Tell-show-do technique is still the most acceptable technique; however, sedation and general anesthesia acceptance has increased as shown in this study.

Keywords: Child Behavior; Behavior Observation Techniques; Child.

Introduction

There has been a dramatic shift in the approach towards children in recent times in pediatric dental care. The major barrier for any pediatric dentist during treatment is the behaviour management of the child patient. The dental profession has been slower in incorporating child friendly approaches into dental care although slowly many changes are being seen in recent times. Behavior management techniques control and alter the behavior of the child and help to build relationship between child, parent and doctor, thus maintaining a good relation between each other and ultimately fostering a positive dental attitude in the child. Enhancing the skills of all dentists and staff members in basic behaviour management techniques. The two keywords which are important for any behaviour management technique to be successful are – capacity and perception [1].

Children have varying capacities to deal with different situations. Some children have zero capacity while others have a great deal of it. Perception is another important component in managing the child's behaviour. It is always helpful if we know how the children perceive different stressful stimuli in different situations to know how to manage them. All behaviour management techniques are not equally acceptable to all parents and some of them are unacceptable to many [2].

The acceptability of behaviour management techniques depends on the treatment needs of the child and its urgency and treatment type which influence the type of management techniques to be used and their acceptance by the parents [3]. Parental attitudes are constantly changing as society evolves so it is important to regularly reassess their beliefs and update our understanding of their attitudes toward behavior management techniques [4]. There have been many studies assessing the parental acceptance and rating of various behaviour management techniques in children; however, few studies were conducted on Indian parents [5,6].

Therefore, the aim of this study was to assess the parents' acceptance towards the behavior management techniques commonly used in the pediatric dentistry.

Material and Methods

Study Design

The present study was designed as a cross-sectional study to evaluate the parental participation in accepting behavior management techniques for their child's oral care. The study was conducted in the outpatient department of the pediatric dentistry of our hospital. Informed consent was obtained from the parents after outlining the goal of the study.

Participant Selection

A total of 50 parents (age 20 to 40 years) who accompanied their children (age 3 to 6 years) to the outpatient department were invited to participate in the study. A Power Point presentation and questionnaire were used to examine parents' attitudes toward certain behavior management techniques. Socio-demographic variables were assessed, e.g. education, socio-economic status, etc. Attitude toward the following behavior management techniques were examined. 1) Voice control, 2)

Tell-Show-Do, 3) Positive reinforcement, 4) Mouth prop, 5) Modelling, 6) HOME, 7) Physical restraint, 8) Oral premedication 9) N₂O-O₂ sedation and 10) General anesthesia.

Each of the behavior management techniques used in this study has been approved by the American Academy of Pediatric Dentistry (AAPD). According to the AAPD guidelines of behavior management techniques, the techniques were divided into two broad categories: (1) Basic behavior management and (2) Advanced behavior management.

Various behavior management techniques were explained to parents through Power-Point presentation individually. Parents were asked to arrange various behavior management techniques from most accepted technique to least accepted technique, according to their view.

Parents were requested to rate the techniques using Visual Analog Scale (VAS), which has been widely used in behavioral and neurophysiological disciplines. VAS is a 100-mm horizontal line with words "completely acceptable" and "completely unacceptable" at the left and right ends of the line. The words "completely acceptable" and "completely unacceptable" were illustrated by using images - green-colored (happy) face and red-colored (glum) face - at the left and right ends of the VAS to facilitate easy understanding of the scale. Anchor points depicted by coffee cups with different volumes of the liquid at respective places were incorporated at regular intervals of 25 mm for accurate marking of the perceptions. The subjects were asked to mark their opinion using a vertical mark that crossed the horizontal reference line.

Following each technique, 10 sec were allotted for the subjects to rate the technique using VAS, as well as to express their consent to use the technique with "their" child if deemed essential during the dental procedure. The most acceptable rating possible was 1 and the least acceptable rating possible was 99. The ratings on the scale were considered acceptable/unacceptable depending on their position relative to 50. A score below 50 was considered acceptable; the lower the score more acceptable was the technique, and vice versa (Figure 1).

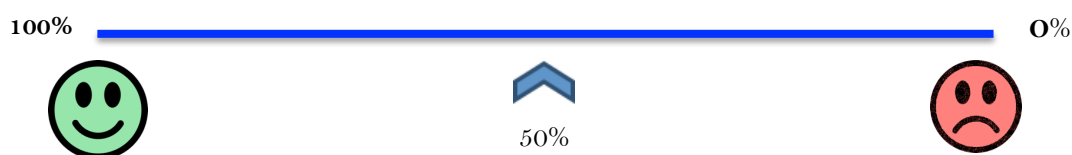


Figure 1. Visual Analogue Scale

Results

All parents invited to participate agreed to complete the questionnaires (100% compliance). Among 50 children, 30 children (N = 60%) ranged in the age from 2 – 4 years and 20 children (N = 40%) ranged in the age from 4 – 6 years. Among 50 parents, 32 (N = 64%) parents ranged in the age from 20 to 30 years and 18 (N = 36%) parents ranged in the age from 30 to 40 years. Description of demographic variables is shown in Table 1.

In the present study population, the most preferred behavior management technique was Tell-Show-Do (86%) followed by positive reinforcement (76%) and the least preferred behavior management technique was HOME followed by voice control and physical restraint (Table 2).

Table 1. Distribution of socio-demographic variables for the study.

Socio-demographic Variables	N	%
Gender		
Male	32	64.0
Female	18	36.0
Socioeconomic Status		
High	19	38.0
Medium	16	32.0
Low	15	30.0
Education		
No education-below high school	03	6.0
High school	25	50.0
Degree	22	44.0

Table 2. Ranking and acceptability of each technique.

Technique	Rank	Acceptability in %
Teel Show Do	1	86.0
Positive Reinforcement	2	76.0
Modelling	3	76.0
General Anaesthesia	4	56.0
Sedation	5	44.0
Mouth Props	6	42.0
Oral Premedication	7	40.0
Voice Control	8	28.0
Physical Restraints	9	26.0
Hand Over Mouth	10	24.0

Discussion

In the last several decades, the acceptability of various behaviour management techniques have changed with pharmacological techniques like sedation and general anesthesia getting better acceptance than previously described [7]. It is interesting to note that the acceptability of some techniques has changed, while the acceptability of other techniques has remained more constant over time.

Examining the results, oral premedication (sedation) and general anesthesia were ranked the lowest acceptable techniques in 1984 and 1991 [1]. However, acceptability for both pharmacologic methods increased in subsequent studies from 2005 till 2015 [6-9]. Now it is quite interesting to speculate the reasons of this paradigm shift towards pharmacological methods. Changing attitudes toward acceptability of behavior management techniques may be attributed to changes in parenting styles over the past years. A recent study reported parents are more overprotective and less likely to set limits on children's behavior. As a result, there may be a shift towards more pharmacologic behavior management techniques [10].

Furthermore, there has been a significant increase in the number of outpatient surgical centers and outpatient surgeries, due to simpler and safer procedures; thereby, increasing parental

accessibility and familiarity with outpatient general anesthesia. Apart from this, increased use of the internet for information and the trend of medical television shows may have increased exposure and awareness of both general anesthesia and oral premedication (sedation). Changes in medications, with increased safety profiles and efficacy, used for oral premedication (sedation) over the years may also contribute to the rising acceptability. Overall, parents may perceive oral premedication (sedation) and general anesthesia to be less risky, more cost-effective, more comfortable for their children than in the past [11-13].

Most parents in the present study preferred Tell – Show – Do followed by Positive reinforcement to be employed on their children. These findings were consistent with a previous study, in which the most preferred techniques were Tell-Show-Do, Positive reinforcement and Distraction [14]. Findings were also consistent with previous study [15], which found that most parents preferred an explanation as proper approach for treating their children.

Most parents in the present study did not prefer HOME followed by physical restraint and voice control. These findings were consistent with another study which found physical restraint technique unacceptable by parents, however, the parents accepted GA in emergency dental situations [16]. The acceptance of general anesthesia and sedation has shown an increase in the present study when compared other studies conducted on Indian populations [5,6]. In the present study, parents received explanations on the various behavior management techniques intended to be used by the dentists involved in the research, what may be the reason why parents showed general acceptability toward various behavior management techniques. This finding is consistent with the finding of the studies conducted previously. The most significant outcome of the study was the increased acceptance of pharmacologic behaviour management techniques.

Conclusion

The changing trends in parenting styles have influenced the acceptance of behaviour management techniques in pediatric dentistry. In our study, tell-show-do technique was the most accepted behavior technique and HOME the least accepted behavior technique. Parents seem to be more acceptable to pharmacologic methods than in previous studies.

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