

Behavior Management Techniques Adopted by Pediatric Dentists in Egypt: A Cross - Sectional Study

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Abstract

Introduction: The concept of behavior management techniques (BMT) was developed from the concept of dealing with children and building with them a relationship that is based on satisfying child's oral health needs.

Aim of study: Identify the degree of employment of: Positive pre-visit imagery, Ask-tell-ask and Memory restructuring by pediatric dentists in Egypt.

Methods: Ninety two (92) questionnaires were delivered to pediatric dentists of three governmental universities. They were designed to record participants demographic and practice information, their current use of behavior management techniques, the most used behavior management techniques for each patient age.

Results: Questionnaires were returned by 72 pediatric dentists (27.8% were males and 72.2% were females). Positive pre-visit imagery was used by 62.5% of participants, Ask-tell-ask (81.9%) and Memory restructuring (80.6%). Ninety seven percent of pediatric dentists considered that audio-visual distraction is effective aid in anxiety management.

Conclusion: Various BMT are selected for different patient's age groups. Audiovisual distraction technique is a very effective technique for pediatric patients especially for three to five years old children.

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Introduction

In the last decades, the concept of behavior management techniques (BMT) was developed from dealing with children and building a relationship between the child, the parent and the dentist based on satisfying child's oral health needs ¹. Managing child behavior is a continual method that eventually builds trust as well as alleviate child anxiety ².

As the origin for dental anxiety is multifactorial, it is difficult to propose a single therapy for its management ³their perceptions about dental anxiety and its management were surveyed in a descriptive study. A mailed questionnaire was completed by 216 randomly selected Danish private dentists. Of these, nearly 60% perceived dentistry as more stressful than other professions. Dentist perceptions of the most intense stressors were (ranked ⁴. So, it would be imperative that dentists have variety of BMT to suit different pediatric patients.

The American Academy of Pediatric Dentistry (AAPD) has developed Clinical Guidelines on guiding behavior of child dental patient, in which some new techniques and terminologies are added to the basic behavior guidance techniques, such as positive pre-visit imagery, ask-tell-ask and memory restructuring ². The purpose of this study was to identify the degree of employment of these new behavior management techniques by pediatric dentist in Egypt for managing uncooperative children.

Methodology

This cross-sectional study was carried out in Egypt at pediatric dentistry and Dental Public Department of Cairo, Ain-Shams and Al-Azhar governmental Universities. Ethical approval was

obtained from the Research Ethics Committee, Faculty of Dentistry, Cairo University on 24/10/2016. Ninety two (92) questionnaires have been hand-delivered to pediatric dentists, which were either university staff members (master's degree or PhD holding) or PhD students. Questionnaire was in English language and designed to record participants demographic and practice information and their current use of BMT to determine the most common techniques used for each patient age; and their relationship to practitioner gender, total years in practice and position in the faculty. Descriptive statistics, Chi-square (χ^2) test and Friedman's test were used to compare participant's use of BMT at *p*-value less than 0.05 (statistically significant) or less than 0.01 (highly statistically significant).

Results

This cross sectional study was used to collect data from pediatric dentists at Pediatric Dentistry Departments of Cairo, Ain Shams and Al- Azhar universities in Egypt. A convenient consecutive sampling approach was used. Surveys were returned by seventy-two pediatric dentists (78.3% response rate), those 20 (27.8%) were males and 52 (72.2%) were female. The distribution of participated pediatric dentists according to their total years in practice and nature of primary practice are summarized in table (1).

Table (1): Personal and demographic information of study participants		
Variable	n	%
Total years in practice		
< 5 years	7	9.7%
5 - 10 years	25	34.7%
10 - 20 years	32	44.4%
> 20 years	8	11.1%
Nature of primary practice		
Private	41	56.9%
Hospital-based	22	30.6%
Military services	2	2.8%
National health insurance	3	4.2%
Academic staff	61	84.7%
Other	5	6.9%

Regarding practitioner's general use of BMT were as follow: Positive pre-visit imagery (62.5%), Ask-tell-ask (81.9%) and Memory restructuring (80.6%). The percentages of using each of those techniques for the different patient age group were summarized in figures (1), (2) and (3).

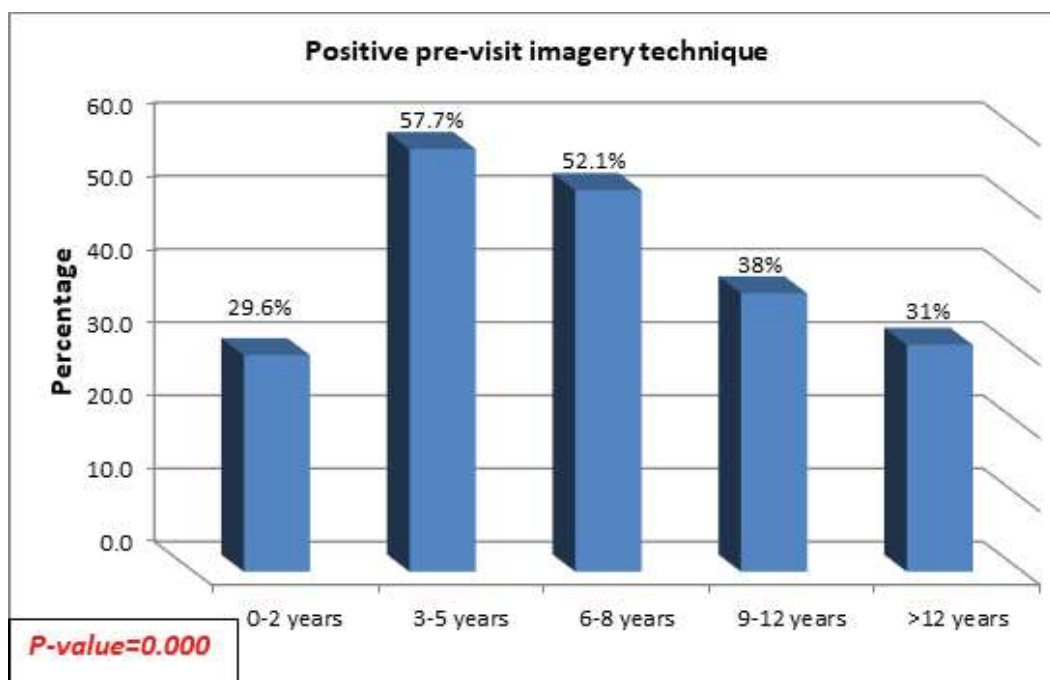


Figure (1): A bar chart showing percentages of positive pre-visit imagery technique for different age groups

Figure (2): A bar chart showing percentages of ask-tell-ask technique for different age groups

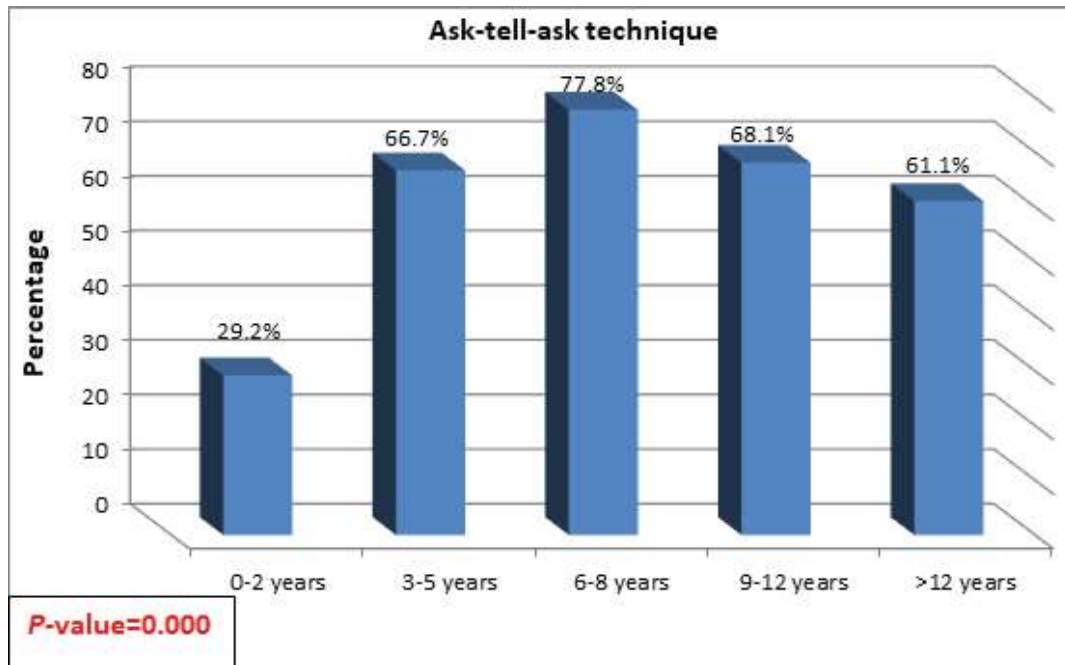
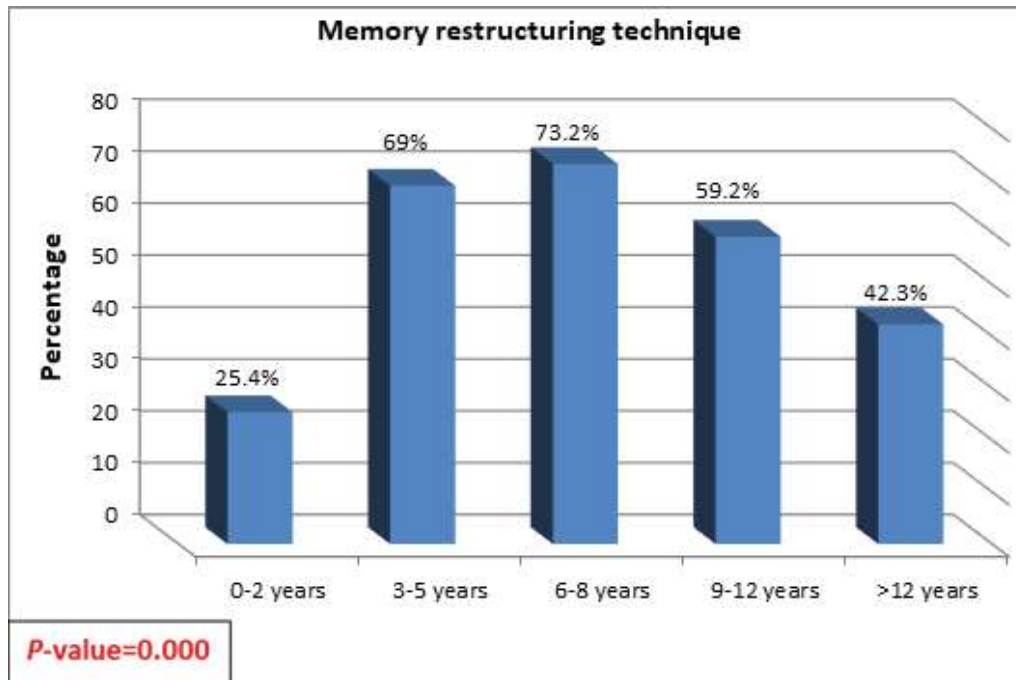


Figure (3): A bar chart showing percentages of memory restructuring technique for different age groups



Distraction was selected by 90.3% of participants to be used for 3-5 years patients. Whereas, 97.2% of pediatric dentists considered that audio-visual distraction is effective aid in anxiety management as shown in figures (4) and (5).

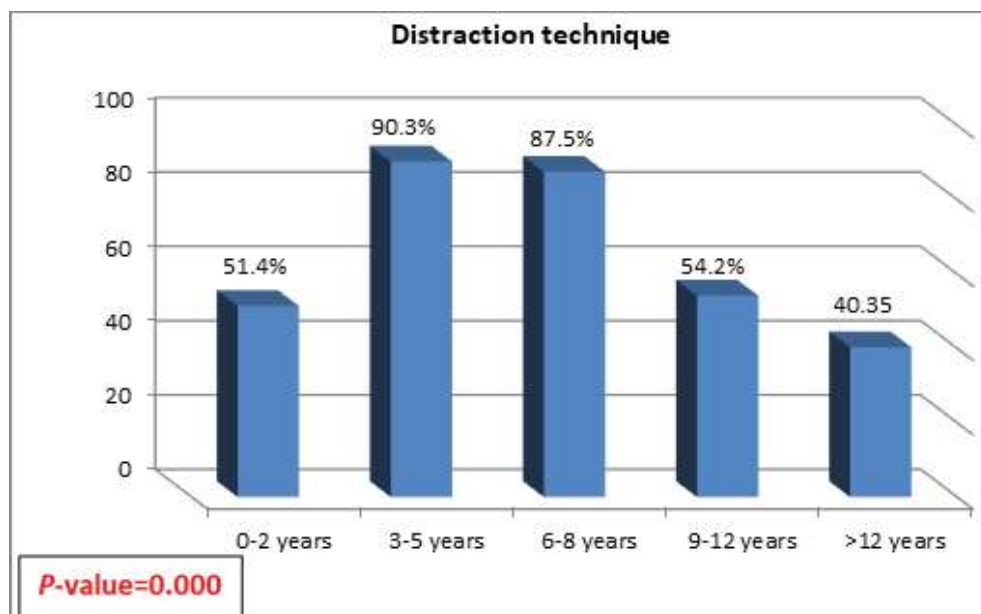


Figure (4): A bar chart showing percentages of distraction technique for different age groups

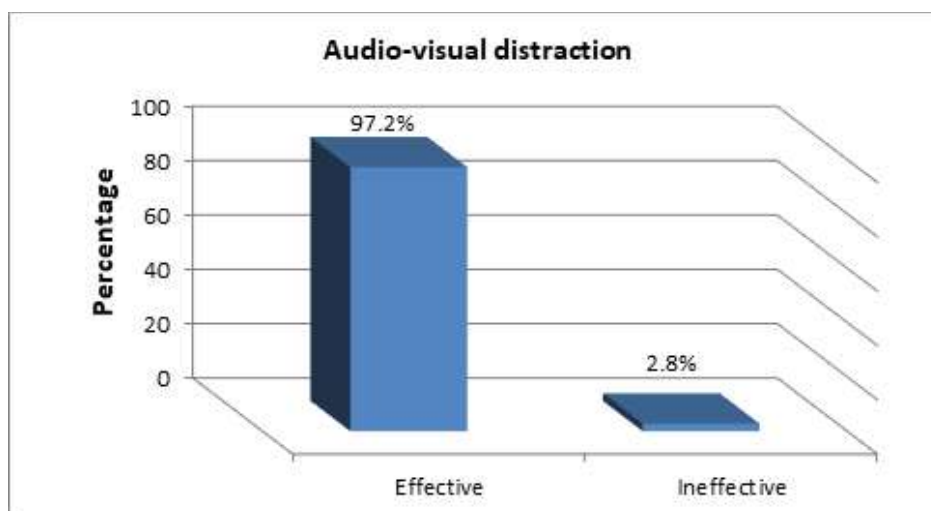


Figure (5): A bar chart showing percentages of pediatric dentist's opinions regarding audiovisual distraction

Regarding the availability of specially designed child rest area in pediatric dentist's clinics, 39.4% (28 responses) indicated having rest area specially designed for children, while 60.6% (43 responses) did not have such space.

Discussion

The American Academy of Pediatric dentistry (AAPD) presented clinical guidelines which reflect reviews of most recent literature regarding behavior management of pediatric patient to act as a reference for healthcare providers and source of professional expertise ².

Behavior management techniques are typically used with children, patient with special needs and uncooperative patients. The extent which these techniques have been utilized in pediatric dental practice was evaluated in several surveys over the past 40 years^{5 6 5 7} and identifies those factors that may have influenced the changes as perceived by the practicing dentists. **METHODS:** A questionnaire was mailed to 528 pediatric dentists who were members of the American Academy of Pediatric Dentistry, or The Southeastern Society of Pediatric Dentistry, or both. **RESULTS:** The response rate after one mailing and one reminder was 64%. The majority of dentists utilized less aversive behavior management techniques (e.g., parents in the operatory and nitrous oxide oxygen^{8 9 10} **use and factors for choice of behavior management techniques when attending paediatric dental patients. METHODS A cross-sectional study among dental practitioners in Dar es Salaam, Tanzania. Data collection was done through interview using a structured questionnaire. The recorded information included: awareness and application of behavior management techniques (BMT.** The application of these techniques has been modified by legal concerns, informed consent and changing parent attitudes regarding the management of their children in the dental setting.

The limitations of this study include those common to surveys. In which data quality is dependent on respondent conscientiousness. The nature and quality of the information obtained are also based on survey construction.

Positive pre-visit imagery was employed by relatively less number of pediatric dentists for

improving their patient behavior especially for patients three to five years old, this might be due to the fact that children in this age have active imagination¹¹. The limited use of this technique was unexpected as the use of still images may be easier and less time-consuming to implement in everyday practice. In addition, showing positive pictures and images about dentistry to children for a short period of time before dental treatment reduces anticipatory anxiety¹².

Although Ask-tell-ask considered new behavioral technique for child patient management, relatively high percentage of practitioners indicated their use of this technique because Ask-tell-ask is already associated with the patient communication strategies². It implies asking about the patient's attitude toward planned treatment (ask); demonstrating the procedures by non-threatening language suitable to the psychological development of the patient (tell); then asking if the child could understand and motivated toward the procedure (ask)¹³.

Most practitioners indicated using memory restructuring technique for children 3-8 years. Memory restructuring is another behavior management technique in that the attitude associated with unpleasant situation is restructured into positive memories¹⁴. The first study which applied this technique for dentistry was conducted by Pickrell et al., 2007, and found that children were improving their behavior after the second visit.

High percentage of respondents viewed that audiovisual distraction is effective approach in reducing child anxiety during dental treatment. While, practitioners who actually use distraction in their practice is relatively less, possibly due to the unavailability of its equipment in their operatory. Al-Khotani et al, 2016 reported better pediatric patient compliance and less dental anxiety when distraction was used¹⁵ blood pressure and pulse were

also taken. **RESULTS** The AV-group showed significantly lower MVAR scores than the CTR-group ($p = 0.029$).

Relating to the present study, most pediatric dentists did not have specially designed rest area in their clinic although child's perception of dental environment is a significant factor causing the anxiety. The changing expectations of children should persuade practitioners to apply more child-friendly spaces in dental clinics aiding children comfort, thus reducing dental anxiety ¹⁶.

Conclusions

Within all limitations of the study, it has been concluded that most pediatric dentists in Egypt are well acquainted by up-to-date behavior management techniques. The appropriate selection of them according to patient's developmental level will improve the child's attitude in subsequent dental visits. Audiovisual distraction technique is an effective technique in managing pediatric patients especially for three to five years old patients.

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