

Dr. S. Roy Chowdhury*

Abstract

Dental treatment of pediatric patients is a challenging task for dental professionals. A sizable portion of pediatric dental patients are fearful in the dental settings. Fear of dentists keep them away from dental treatment. Pediatric patients often respond in a disruptive manner in the dental operatory. Behavior management of child dental patients is therefore an important section in pediatric dentistry. Nonaversive behavior management has become more important than pharmacological or restraining techniques.

Key Words Dental settings; disruptive; nonaversive ;restraining.

INTRODUCTION

Fear and anxiety in a pediatric dental patient is a great challenge while the clinician is rendering care for their child patient.¹ Modification of behavior of a pediatric patient congenial to the requirements of the professionals to develop a quality procedure, is a primary requisite. The child patient makes the task more difficult due to fear and discomfort. Dental fear is described as a normal emotional reaction to one or more threatening stimuli in a dental setting. Dental anxiety denotes a state of apprehension that something dreadful is going to be consequent on dental treatment and it is coupled with a sense of losing control. Dental fear and dental anxiety are the terms used for strong negative feelings associated with dental treatment among children and adolescents as recommended by Klingberg et al.² As children age, with increasing ability to anticipate, understand and control impulses fear may be expected to decline. But if fear or anxiety is disproportionate to the situation an unpleasant experience is likely and the child may become uncooperative, displaying disruptive behavior.³ The clinician is expected to identify and treat pediatric dental diseases the knowledge of which is learned during professional training. This application requires modifying child's behavior. Behavior guidance is a continuum of interaction involving the dentist and dental team, the patient and the parent directed towards communication and education. Its goal is to ease fear and anxiety while promoting a positive attitude towards good oral health and the process by which that is achieved.

ETIOLOGY: The origin of fear in dental settings is multifactorial with several etiological factors and divided into (a) child related (2) dentist related and (3) environmental factors. Child related factors are age, gender, general fear, temperament, general behavior, attention, negative experience undergoing dental treatment. Dentist related factors are dentist's behavior and conduct of dental staff. Patient's dental fear, child rearing, family background, culture and socioeconomic factors constitute the environment.² There is no cause and effect model of children's development of dental anxiety and child's perception of fearful situations depend on numerous factors that contribute to dental anxiety. Dental anxiety has been suggested as the result of interaction between dispositional and situational concomitant factors.⁴ Child dentist relationship, children's coping skills, painful experience, parental fear and negative information are the different situational factors. The dispositional factors refer to subjective direct conditioning factors eg. child's fear disposition and negative emotions, its coping style, pain sensitivity and temperament including its proneness to express aggressive behavior. In the final outcome the interference between situational and dispositional factors, child's age, gender, social background play a role in the etiology of dental

ABOUT THE AUTHORS

*Associate Professor, Department of Dentistry, NRS Medical College, Kolkata.

anxiety and behavior management problem.

The knowledge of how dental fear develops in children is important in understanding and reducing dental fear and anxiety. According to psychologists fears are learned and Rachman advocated THREE main pathways of learning fear : Conditioning, Informative and Modeling /Vic-arious learning.⁵ Albert Bandura developed Social Learning theory in late 1960s and explained how children acquired new fear and help to cope with it. Bandura states “many intractable fears arise not from personally injurious experiences but from seeing others respond fearfully or hurt by threatening objects”. Observing a child patient tantrum or any negative reaction can provoke dental anxiety in the observing child and he becomes fearful.

Fear is a natural response to a new situation and behavior problem may be a natural response to fearful situations. According to a study negative Frankl behavior ratings showed significant relationship with child dental fear. Some children apprehend but are able to cope with situation and some children experience dental fear and present behavior management problem. Significant reduction in dental fear begins between 6-7yrs. Of age and indicates the psychology-cal maturity of child. It is shown that extremely anxious children have a history of treatment in early ages especially extraction of teeth in first appointment and rated the dentist's behavior as less sympathetic and less friendly.⁶

IMPORTANCE : Dental fear and anxiety are not synonymous with dental behavior management problem (DBMP). The children with behavior problem show aggression and are more introvert in expressing their satisfaction with the dentist and the dental treatment. In a study of more than 3200 swedish children Klingberg and Berggren found 27% of patients with DBMP showed den-al fear/dental anxiety whereas 61% of those with dental fear/anxiety reacted with behavior problem.³ Frequently a visit to the dentist is a stressful condition for a pediatric patient and produce fear and anxiety in them. Hence to render dental care effectively to these type of patients management of child behavior is important.⁷

Fear during dental treatment is a predisposing factor to avoid visit to the dentist by a child patient. This avoidance of dental treatment leads to adverse effect on oral health and psychological health.⁸ About 20-25% of child dental patients show behavior management problem. Disruptive behavior delays the dental treatment, may also result in injury to the child. Many surveys indicate that clinicians express that uncooperative child to be most troublesome problem in clinical practise. There is parental objection against restraint techniques like HOM and pharmacological interventions. Besides, changes in legal and ethical standards dentists are

hesitant to apply traditional restraining techniques. AAPD in 1991-1992 have framed well established child dental behavior management methods to be followed during treatment of child dental patient.

Because dentists are interested in additional noninvasive, acceptable alternatives for management of uncooperative children AAPD has called for interdisciplinary research with behavioral sci-entists to identify new noninvasive procedures in the management of uncooperative child. Den-al fear can be reduced by relaxation, distraction, hypnosis and acupuncture for a long term basis. Psychotherapeutic measures like systemic desensitization can reduce dental anxiety level very effectively.² In child patients with acute dental fear application of general anesthesia during dental treatment is only a necessary step to improve their oral health related quality of life. But it does not subside their dental fear. Hence a behavioral therapy of children is an important requirement.

Survey by Kahn et al indicates that difficult to manage children are the main stress factor for every second dentist.¹⁰ According to Corah's study three quarters of dentists felt that patient's dental anxiety was the greatest barrier to regular dental care. This negative perception on the part of the dentist influences the child patient unpleasantly and creates a vicious cycle of a-nxiety between them. Nonpharmacological treatment technique and anxiolytic psychotherapeutic interventions (distraction, relaxation and hypnosis) as well as adequate training lectures have positive effect on selfesteem and assertiveness of dentists.

The AAPD in 2003 advocated modeling to be effective in reducing fear and anxiety of pediatric patients during dental treatment.⁷ It was suggested that live modeling with mother as the model was more beneficial than father. It reduced the heart rate of child patient during dental treatment than tell-show-do. To recognize the state of anxiety in a pediatric dental patient in the waiting room using facial image scale (FIS) it was perceived that small but significant number of children are anxious in anticipatory period.

It is important to know the different dental situations and procedures that can trigger dental anxiety.¹¹ Injections, drilling of teeth periodontal procedures are most painful. [Bedi et al 19-92] Social background and parental dental anxiety influence the child behavior in dental settings. The intention of psychological preparation in dentistry is to shape a behavior that enables the interventions always respecting the chronological age and comprehensional level of the patient. Patient with minimum level of comprehension can be conditioned to undergo dental procedure compared to those children who are comprehensionally restricted to undergo even a smaller procedure.

Importance of behavior management in children underlines the limitations of restraining techniques,

louder voice or being firm. There is chance of child being more anxious, aggressive avoiding. HOM have a high potential of improper use or it provokes perception of a punishing situation which in turn may condition the child to be fearful of the dentist.⁴ There lies the importance of social learning theory to be used as a preventive technique and thus reduce the use of restraining ones.

Patient's disruptive behavior can be controlled by diverting the attention and engaging them in watching T.V. or listening to audiotape. This distraction is a noninvasive behavior management procedure to gain control over an aspect of the patient's capability to respond (ie. Paying attention) that is incompatible with disruptive behavior.¹³ Ingersoll and her colleagues suggest that child's disruptive behavior can be reduced by giving access to a distractor (audiotape) contingent upon cooperative behavior.

Research indicates that marked reduction in disruptive behavior can be obtained by allowing children to observe one another during dental treatment. Live modeling is an effective way of preparing them to accept treatment and demonstrating what is expected of them. Simply being observed by peers during dental procedure was sufficient to decrease disruptive behavior. Observation suggests that most disruptive behavior is the end result of response chain that begins early in the dental visit. Contingent escape, allowing the child patient a break in dental procedure contingent upon being cooperative, if started early and maintained throughout has the advantage of potential to prevent more frequent and intense level of disruptive behavior

Behavioral management procedures should suit the routine practice and time as well as cost effective. Evidences suggest that techniques that are learned early in training are practiced in the clinics. But finding ways to encourage faculty to take core behavioral science didactic to clinic floor is more important.

CONCLUSION

In conclusion it is to be noted that prevalence of dental fear and anxiety and DBMP is not negligible. Persistence leads to avoidance of treatment resulting in poor dental health. Also these problems pose difficulty in giving dental care and stress on dentists. The behavior management techniques both conventional as well as additional noninvasive procedures are important in child behavior management.

REFERENCE

1. ROCHA JC. Study of the Psychological preparation on dental care of children with special needs. *Braz Dent Sci.* 2012 out./dez;15(4).

2. K. DIERCKE, I. OLLINGER, J. LORENZOBERMEJO, K. STUCKE, CHRISTOPHER, J. LUX & MONIKA BRUNNER. Dental Fear in children and adolescents : a comparison of forms of anxiety management practiced by general and pediatric dentists. *Int J Journal of Pediatric dentistry.* 2012;22:60-67.

3. McDonald and Avery's Dentistry for the child and Adolescent. 9e by Jeffrey A. Pg.30.

4. Do C. Applying the social learning theory to children with Dental Anxiety. *J Contemp Dent Pract.* 2004 Feb;(5) 1:126-135.

5. Rachman SJ. Fear and courage. New York: W.H. Freeman and company; 1990.

6. N. Asi Aminabadi et al. Impact of Temperament on Child Behavior. *J Dent Res Clin Dent Prospect.* 2011;5(4):119-122.

7. N. Farhat. McHayleh; A Harfouch; Psouaid. Technique of Managing Behavior in Pediatric Dentistry. *J Can Dent Assoc* May 2009, vol. 75 No. 4.

8. S. Raj, M. Agarwal, K. Aradhya, S. Konde, V. Nagakishore. Evaluation of Dental Fear in Children during dental visit using Children's Fear Survey Schedule-Dental Subscale. *Int J Clin Pediatr Dent* 2013;6(1):12-15.

9. H. Buchanan & N. Niren. Validation of a Facial Image Scale to assess child dental anxiety. *Int J Journal of Pediatric Dentistry* 2002;12:47-52.

10. Jennifer Creem Aitken, et al. The effect of music distraction on pain, anxiety and behavior in pediatric dental patients. *Pediatric Dentistry.* 24:2, 2002.

11. KEITH D. ALLEN, TED LOIBEN, SARAH J. ALLEN, AND ROBERT T. STANLEY. Dentist Implemented Contingent Escape for Management of Disruptive Child Behavior. *Journal of Applied Behavior Analysis.* 1992, 25, 62-9-636 Number 3 (Fall 1992).

12. M. MAJSTROVIC, J. S. J. VEERKAMP, I. SKRINJARIC. Reliability and Validity of measures used in assessing dental anxiety in 5 to 15 year old Croatian Children. *Journal of Pediatric Dentistry.* 4. 2003.

13. Ingersoll, B.G., Nash, D.A., & Gamber, C.A. (1984). The use of Contingent audio taped material with Pediatric dental patient. *Journal of the American Dental Association,* 109, 717-720.

Acknowledgment:

Dr. P. Kumar, HOD. Department of dentistry; NRS Medical College & Hospital.

Dr. S. Sarkar, HOD. Department of Pedodontics & Preventive Dentistry ; DR. R. Ahmed Dental College & Hospital.

Dr. S. bagchi. Professor; Department of Periodontia, DR. R. Ahmed Dental College & Hospital.

Dr. Kartik Chandra Mandal, Dental Surgeon. NRS Medical College & Hospital. For their able support and inspiration.