

## PalArch's Journal of Archaeology of Egypt / Egyptology

### EVALUATION OF FACTORS AFFECTING THE BEHAVIOUR OF UNCOOPERATIVE PEDODONTIC PATIENTS

*Gokul Gunasekaran<sup>1</sup>, Mahesh Ramakrishnan<sup>2</sup>*

<sup>1</sup>Saveetha dental college and hospitals, Saveetha Institute of Medical and Technical Science,  
Chennai, India

<sup>2</sup>Clinic Head, Department of Pedodontics Saveetha dental college and hospitals, Saveetha  
Institute of Medical and Technical Science, Chennai, India

<sup>2</sup>mahesh@saveetha.com

**Gokul Gunasekaran, Mahesh Ramakrishnan. EVALUATION OF FACTORS AFFECTING THE BEHAVIOUR OF UNCOOPERATIVE PEDODONTIC PATIENTS-- Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(7), 2027-2038. ISSN 1567-214x**

**Keywords: Uncooperative patients, Behaviour management, Pedodontic treatment, Voice control, Enhance control**

#### **ABSTRACT:**

The behaviour of pedodontic patients is essential to continue pedodontic procedures and help to avoid mishaps and provide proper treatment. Pedodontists are faced with uncooperative children whose behaviour may hinder the treatment process and may cause possible harm to themselves and the pedodontist. The causes for their behaviour may be due to past traumatic experiences, fear due to sharp instruments, fear of doctors and hospital environment. The age and cultural upbringings of the child would also play a role in their behaviour in the dental chair. This review is done in order to understand the factors which influence the behaviour of pedodontic patients and help in their management.

#### **INTRODUCTION:**

Dental fear among children is an issue of great concern to both dentists and their patients' parents. The etiology of a child's dental anxiety can be multifactorial. Various causes have been proposed which include direct or indirect influences of the past experiences of the child and his/her family members and peers. (1,2) Information on the origin of dental fear and uncooperative behavior in a child patient prior to the treatment procedures may help the pediatric dentist plan appropriate behavior management and

treatment strategy(3). Dental fear and behavior are likely to have multifactorial origins which are broadly divided into personal characteristics, environmental factors, or situational factors(1). Most of the existing literature on factors affecting dental fear and behavior focuses on the preschool age group as they most often present with behavior problems. However, school-aged children through adolescence can also present with behavior problems where communication cannot be established by the clinician(4). Though personality characteristics are said to influence dental fear and behavior the most, they are also strongly affected by social and family environments. Although the effect of personality factors like temperament, general fearfulness, and behavioral problems have been studied extensively, the effect of environmental and situational factors have been comparatively less studied(5).

Among environmental factors, it has been well documented that parental dental fear strongly correlates with that of the child(6). Environmental and situational factors such as socioeconomic status, family situation, frequent exposure to invasive medical care, and past experience of operative dental care have been explored as potential causes of dental fear and behavior problems, but the results have been inconsistent(1,3). Studies considering environmental and situational factors are few and most of them have been carried out in European and South-east Asian countries. As cultural factors are known to influence the environmental factors affecting dental fear and behavior(1), this study was designed to know the association of past medical experience, previous dental history and family characteristics on dental fear, and behavior of a hospital cohort of 7 to 14 year old children in India.

Dental anxiety is described as state anxiety as it occurs due to the dental treatment procedure and is related with negative expectations which are often linked to earlier traumatic experiences, negative attitudes in the family (7), fear of pain and trauma and perceptions of an unsuccessful and/or a painful previous dental treatment(8). In children with no previous dental experience, fear may be due to the uncertainty they feel about what awaits them after the initial appointment check-up. Alleviating a child's anxiety about dental treatment is important not only in mitigating the immediate fear but also in preventing apprehension continuing into adulthood(9). Children visit their dentist equipped with a learned set of behaviours that have successfully helped them to cope with other difficult or anxiety-inducing situations, and they will naturally use these coping strategies in the dental setting. Some of their strategies will be helpful while others will make it more difficult to deliver quality dental care. Behaviour management is widely agreed to be a key factor in the care of children in Paediatric Dentistry. Indeed, if a child's behaviour in the dental surgery/office cannot be managed then it is difficult if not impossible to carry out any dental care that is needed. Behaviour management is therefore one of the cornerstones of the speciality. For these reasons guidelines have been published by many interested groups, societies and academies in paediatric dentistry and similarly the European Academy of Paediatric Dentistry (EAPD) has always had a major interest in this area. In recent years the journal of the EAPD, European Archives of Paediatric Dentistry, has published papers dealing with aspects of behavior management(10).

## Studies

Several factors are known to influence the child's behaviour during a visit to the dentist such as the children's developmental age and the corresponding level of cognition and emotionality play a prominent role in clinical behaviour(11). Children can acquire their parent's emotional reaction or Anxiety to dentistry or dental practitioners(12). Age was significantly associated with dental behavior in this study. This means that in 7 to 14 year olds, the ability to comply with dental treatment increases with age. The effect of treatment variables and subjective experiences on child dental fear seems to diminish over time. Based on this finding, dentists should keep in mind the effect of conditioning and gradual exposure in children to obtain cooperation during dental treatment. However, the gender of the child patient was unrelated to behavior. Kyritsi *et al*(12) In another study in Greek population, found that dental behavior is unrelated to gender but related to age of the child patient. Children in a joint family or with siblings are likely to learn lessons of patience, tolerance, and cooperation. In a nuclear family, parents play an important role in shaping the personality characteristics of the child. But this difference did not have an effect on behavior, indicating that child-rearing practices may not be related to dental behavior. Children who view their previous medical experience positively are more likely to be cooperative in the dental clinic. It should be noted that the emotional quality of past visits rather than number of visits is significant. This is evident in this study as a recent visit to a pediatrician or prior history of hospitalization was not associated with behavior of the patient in the dental clinic. Thus, a mere history of hospitalization or presence of health problems is not an indicator of the behavior in the dental setup.

## Uncooperative child

Regarding the previous dental experience, the age at first dental visit, number of visits to dentist, and number of dentists visited was not associated with dental fear. Children of those parents who perceived their child's previous appointments to be unpleasant showed negative behavior. This perception of the parent can arise due to pain experienced by the child and negative behavior during previous appointments. Also, a parent's perception of dental appointments being unpleasant may be passed onto the child creating more anxiety. Versloot *et al*,(13) also found that a child with a previous negative dental experience displayed more anxiety and uncooperative behaviour. To guide dentists working with children, the American Academy of Pediatric Dentistry (AAPD) has developed its Clinical Guidelines on Behaviour Guidance for the Pediatric Dental Patient.(14) The guidelines identify both basic and advanced behaviour guidance techniques, as well as indications for their respective uses. These basic techniques, including communicative management, voice control, nonverbal communication, tell-show-do, positive reinforcement, distraction, parental presence/absence, and nitrous oxide/oxygen inhalation sedation, are indicated for all child patients and have few noted contraindications. Protective stabilisation (formerly known as "medical immobilization"), sedation, and general anaesthesia were listed as advanced behavioural management techniques by the AAPD. Their use is recommended only to those dentists who have completed commensurate

advanced postdoctoral training (i.e., residency or continuing education)(15). A recent survey of predoctoral pediatric dentistry programs found little change in the nature of behavioral management training(16). Fear-related behaviors have long been recognized as the most difficult aspect of patient management and can be a barrier to good care(17). The past medical experience and dental experience had significant influence on dental fear. This is in accordance with previous studies wherein the multifactorial etiology of dental fear, direct conditioning due to past medical and dental experiences were shown as the most prominent factors(16,18). Children visit the pediatrician and acquire some medical experience which affects their attitude to future dental treatment(19). Painful and threatening experiences such as injections in the medical setup provoke fearful reactions in the dental setup. The stressful and fearful reaction exists regardless of pain etiology(20). Dental fear due to previous visits to dental clinics could be due to stressful events that might have occurred during previous appointments. In the study, dental fear was associated with unpleasant experience at the first dental visit. It also found that invasive dental treatment and painful experience during first dental visit were predictors of CFSS-DS score. According to Davey,(19) traumatic experiences are more likely to give rise to dental anxiety if they occurred in the first dental visit than during the subsequent dental visits. This is in accordance with latent inhibition theory, whereby children tend to become less afraid if they have had more neutral visits (e.g., check-up, cleaning) before exposure to invasive dental treatments (e.g., restorations, extractions). In this sample, more than half of the children had undergone extractions or restorations during the first visit. Presence of siblings was associated with dental fear when analyzed independently, but not when other factors were considered. The results indicate that within the direct conditioning pathway of Rachman's theory of fear(20), objective experience such as previous visit to pediatrician or experience during first visit plays a greater role in the child's fear acquisition than subjective dental experiences due to siblings or child-rearing practices in the family.

### **Dental Fear**

A relaxed and calm child during the administration of local anaesthesia is important for the success of the clinical process as well(21–23). Fear of "injections" has been shown to be the major cause of dental fear and uncooperative behaviour in 7- to 14-year-old children(16). Many techniques have been described for managing child behaviour in the dental office, including both pharmacological and non-pharmacological methods(16). Once a child has grabbed the syringe or bumped the operator's hand and driven the needle into the tissue of the bone, it may be too late to respond, and a lasting impression has been made in the child's mind relative to pain associated with the local anaesthetic injection(24). It is recommended that the practitioner should have a control of the child's head and a good finger rest, to control the syringe in case the child moves or resists. The dental assistant should be prepared to restrain the child's hand, gently but firmly(23). Injection of local anesthetics should always be made slowly, preceded by aspiration to avoid intravascular injection and systemic reactions to the local anesthetic agent or the vasoconstrictor(25,26). On the other hand, some dental practitioners do not administer local anesthesia due to concerns regarding lip and cheek biting

(27,28). In respect of dental procedure, extraction of teeth is the most common reported dental procedure for which local anesthesia is delivered (29). Informed consent issues are having an increasing impact on behaviour management of children. The courts maintain that treatment by health care professionals without prior consent is battery and the health professional who touches a patient without consent may be liable (30).

Participants at the consensus conference and workshop on behaviour management sponsored by the American Academy of Pediatric Dentistry in 1988 agreed that informed consent must be obtained from parents before specific behaviour management techniques may be performed. Certain previous studies (31), examined the attitudes of parents toward common behaviour management techniques and how these attitudes were affected by different treatment situations. These data revealed that pharmacological techniques, hand-over-mouth, and restraint were rated as unacceptable by the majority of parents. Voice control and mouth prop were marginally accepted, while positive reinforcement and tell-show-do were overwhelmingly accepted. This hierarchy of acceptance was demonstrated by several methods, but the type of treatment rendered altered the parents' approval of the management techniques.

### **Behaviour management in uncooperative pedodontic patients.**

Behavior management of the pediatric patient is an important part of pediatric dental practice. A significant percentage of children do not cooperate in the dental chair, hence causing difficulty in maintaining the quality dental care. In case of an uncooperative pedodontic patient, the dental practitioner has to rely on other behaviour management techniques as a substitute or addition to communicative management and provide the necessary dental care with utmost quality.

The main objectives of child behaviour management are:

- \*To keep the child comfortable
- \*To help relieve the pain
- \*To make the treatment viable
- \*To execute the procedure safely.

### **Tell-show -do**

1. Tell: Words to explain procedures in language suitable to the level of accepting for each child
2. Show: Exhibition of the procedure in a watchfully defined, non-threatening setting; and
3. Do: Complete the procedure with no deviating from the clarification and demonstration

### **Enhancing Control**

At this point, the patient is given a scale of control over their dentists' behavior during the use of stop signals. Such signs have been shown to diminish pain during regular dental treatment as well as during injection.

### **Voice Control**

This technique is a controlled modification of voice volume, pace and tones, to influence straight the child's behavior. It is specified for the uncooperative or distracted patient to gain attention and observance, avoid negative behavior, and establish authority. It is not used among children who due to age, disability, or emotional immaturity are incapable to understand or cooperate. Once the required behavior is achieved, it is waged and positively reinforced.

### **Positive Stabilization**

Protective stabilization involves limiting a patient's movement to decrease the risk of injury to everybody while allowing safe conclusion of treatment. Varieties of protective stabilization can be engaged ranging from a family member/caregiver holding the kid's hands to the utilize of a stabilization tool (i.e., papoose board or pedo wrap). Informed acquiesce must be obtained about the use of protective stabilization, and if a family member has a problem at any time to the use of protective stabilization, the technique is stopped immediately.

### **Distraction**

Distraction intends to move the attention of the patient's attention away from the treatment procedure. This could be in the form of cartoons, books, music or stories. An additional well standard method is for dentists to speak to patients as they work so that patients pay attention to them rather than focusing on the treatment procedure. Short-term distractions, such as pulling the cheek or lip and chatting to the patient when injecting local anaesthesia can also be done.

### **Hand Over Mouth Exercise (HOME)**

HOME involves restraining the child in the dental chair, placing a hand over the mouth (to allow the child to hear) .The dentist then talks quietly to the child explaining that the hand will be removed as soon as crying stops. As soon as this happens the hand is removed, and the child praised. If protests start again, the hand is replaced. The technique aims to gain the child's attention and enable communication, reinforce good behaviour and establish that avoidance is futile. Those who practice the technique recommend it for children aged 4-9 years when communication is lost or during temper tantrums.

### **Modeling**

Assessing another parallel aged child or elder siblings having dental treatment fruitfully can have an encouraging influence on an anxious child.

### **General Anaesthesia**

General anaesthesia is an inhibited state of unconsciousness escorted by a loss of protective impulses, including the capability to maintain an airway separately and respond decisively to physical stimulation or verbal instruction. The use of common anaesthesia sometimes is essential to provide class dental care for the child. Depending on the patient, this can be done in a medical hospital or an ambulatory setting, counting the dental office

A recent study of practicing paediatric dentists indicated that nearly all dentists report using non-pharmacological behaviour management techniques, and many also use general anaesthesia, nitrous oxide, and active immobilisation. The use of hand over mouth began to lose favour in clinical practice even prior to its removal from the AAPD guidelines, with only 24 percent of paediatric dentists in a recent study (prior to the guideline change) reporting a plan to soon use this technique(32).

A number of factors are changing the use of behaviour management techniques. General anaesthesia is not available universally because of its cost and the lack of coverage by third party payers.(33) Part of the solution is understanding the reasons behind the unwanted behaviour (e.g. fear of the unknown) and then addressing these issues using techniques such as 'tell, show & do' or positive reinforcement(34) Heap and Aravind (35) define hypnosis as an interaction in which the hypnotist uses suggested scenarios ("suggestions") to encourage a person's focus of attention to shift towards inner experiences in order to influence the subject's perceptions, feelings, thinking and behaviour. Response to hypnotic suggestion is characteristically experienced by a person as feeling involuntary or effortless (36). Used as an adjunctive procedure in medicine, dentistry and applied psychology, hypnosis can enhance the efficacy of various treatment interventions (37).

Hypnotic techniques can be used to manage a range of common problems relevant to dentistry such as dental anxiety, specific dental phobia, pain control in conservative treatment and extractions, improved tolerance for orthodontic appliances, as an adjunct to inhalation sedation, or as part of the induction of GA and modification of unwanted oral habits such as thumb sucking, bruxism, gagging and smoking(38–40). A number of advantages of using hypnosis in dentistry have been mentioned in the literature and include the following:

- No requirement for specialist equipment
- The patient remains conscious
- Non-pharmacological approach so no side effects or associated environmental pollution
- Combines well with nitrous oxide inhalation sedation (41).
- Safe.

Hypnotic techniques are particularly effective when used with children between 8 and 12 years however children as young as 4 years old can be responsive to hypnosis(42), yet hypnosis as an adjunct to paediatric dental procedures is generally underused, and therefore needs more research and practice. Ethnicity affects pain management from both a patient and health care professional perspective. It is clear that ethnicity is an important contributor to an individual's pain perception as well as to manifested behavioural distress and anxiety(43)(44)(45). Paedodontist treat most children adequately using behavioural techniques. However, certain children cannot receive treatment via these methods(46,47). Dental treatment using general anaesthesia (GA) is a rehabilitation treatment for paediatric patients (48). GA is a controlled state of unconsciousness in which protective reflexes is lost (49). It is nearly three decades that comprehensive dental rehabilitation under GA has been offered to paediatric population (50). In some cases, dental GA is the most practical and cost-effective mode of treatment (51). According to the American Academy of Paediatric Dentistry (AAPD), a certain patient population who may not

tolerate routine dental treatment can only be treated under GA(46). Paediatric patients with a very young age, or those suffering physical, mental, cognitive or emotional immaturity or disability or those with extreme anxiety who need extensive rehabilitation are treated using GA (46) These children are not suitable candidates for conventional in-office treatments and are more safely and effectively treated under GA (52). The majority of dental GA candidates are children who suffer from one prevalent health problem, early childhood caries (ECC), and are otherwise healthy. Attitude of parents regarding GA have changed over time in the favour of it. Nowadays, there is a shift toward increasing acceptability of GA in parental opinion. Parents perceive dental GA as a treatment method which positively affects children's quality of life .

### CONCLUSION:

Various factors such as previous experiences, cultural and parental influences, innate problems, physical or mental handicapped patients, influence the practitioner to use different behaviour management techniques even use properties for distraction to relieve the patient from the anxiety of treatment. Proper behaviour management techniques must be taught to students and practitioners to help compose the **uncooperative** patients and provide proper treatment for them.

### REFERENCES:

1. Klingberg G, Broberg AG. Dental fear/anxiety and dental behaviour management problems in children and adolescents: a review of prevalence and concomitant psychological factors [Internet]. Vol. 17, International Journal of Paediatric Dentistry. 2007. p. 391–406. Available from: <http://dx.doi.org/10.1111/j.1365-263x.2007.00872.x>
2. Freeman R. A fearful child attends: a psychoanalytic explanation of children's responses to dental treatment [Internet]. Vol. 17, International Journal of Paediatric Dentistry. 2007. p. 407–18. Available from: <http://dx.doi.org/10.1111/j.1365-263x.2007.00871.x>
3. Colares V, Richman L. Factors associated with uncooperative behavior by Brazilian preschool children in the dental office. ASDC J Dent Child. 2002 Jan;69(1):87–91, 13.
4. Pinkham JR. Behavior management of children in the dental office. Dent Clin North Am. 2000 Jul;44(3):471–86.
5. Gustafsson A, Arnrup K, Broberg AG, Bodin L, Berggren U. Psychosocial concomitants to dental fear and behaviour management problems. Int J Paediatr Dent. 2007 Nov;17(6):449–59.
6. Arnrup K, Berggren U, Broberg AG, Lundin S-A, Hakeberg M. Attitudes to dental care among parents of uncooperative vs. cooperative child dental patients. Eur J Oral Sci. 2002 Apr;110(2):75–82.
7. Cohen LA, Snyder TL, LaBelle AD. Correlates of dental anxiety in a university population. J Public Health Dent. 1982 Summer;42(3):228–35.
8. Quteish Taani DS. Dental fear among a young adult Saudian population. Int Dent J. 2001 Apr;51(2):62–6.



9. Kuhn BR, Allen KD. Expanding child behavior management technology in pediatric dentistry: a behavioral science perspective. *Pediatr Dent*. 1994 Jan;16(1):13–7.
10. Weinstein P. Child-Centred child management in a changing world. *Eur Arch Paediatr Dent*. 2008 Feb;9 Suppl 1:6–10.
11. Casamassimo PS, Fields HW Jr, McTigue DJ, Nowak A. *Pediatric Dentistry: Infancy through Adolescence*, 5/e. Elsevier India; 2012. 10 p.
12. Kyritsi MA, Dimou G, Lygidakis NA. Parental attitudes and perceptions affecting children's dental behaviour in Greek population. A clinical study. *Eur Arch Paediatr Dent*. 2009 Jan;10(1):29–32.
13. Clinical Affairs Committee-Behavior Management Subcommittee, American Academy of Pediatric Dentistry. Guideline on Behavior Guidance for the Pediatric Dental Patient. *Pediatr Dent*. 2015 Sep;37(5):57–70.
14. Ng MW. Behavior management conference panel IV report—Educational issues. *Pediatr Dent* [Internet]. 2004; Available from: <https://www.ingentaconnect.com/content/aapd/pd/2004/00000026/00000002/art00014>
15. Adair SM, Schafer TE, Rockman RA, Waller JL. Survey of behavior management teaching in predoctoral pediatric dentistry programs. *Pediatr Dent*. 2004 Mar;26(2):143–50.
16. Milgrom P, Coldwell SE, Getz T, Weinstein P, Ramsay DS. FOUR DIMENSIONS OF FEAR OF DENTAL INJECTIONS. *The Journal of the American Dental Association*. 1997 Jun 1;128(6):756–62.
17. Berge M, Hoogstraten J, Veerkamp JSJ, Prins PJM. The Dental Subscale of the Childrens Fear Survey Schedule: a factor analytic study in the Netherlands [Internet]. Vol. 26, *Community Dentistry and Oral Epidemiology*. 1998. p. 340–3. Available from: <http://dx.doi.org/10.1111/j.1600-0528.1998.tb01970.x>
18. ten Berge M, Veerkamp J, Hoogstraten J. Dentists' behavior in response to child dental fear. *ASDC J Dent Child*. 1999;66(1):36–40.
19. Davey GC. Dental phobias and anxieties: evidence for conditioning processes in the acquisition and modulation of a learned fear. *Behav Res Ther*. 1989;27(1):51–8.
20. Rachman S. The conditioning theory of fear-acquisition: a critical examination. *Behav Res Ther*. 1977;15(5):375–87.
21. Dower JS Jr, Simon JF, Peltier B, Chambers D. Patients who make a dentist most anxious about giving injections. *J Calif Dent Assoc*. 1995 Sep;23(9):35–40.
22. Simon JF, Peltier B, Chambers D, Dower J. Dentists troubled by the administration of anesthetic injections: long-term stresses and effects. *Quintessence Int*. 1994 Sep;25(9):641–6.
23. Troutman KC. Pharmacologic management of pain and anxiety for pediatric patients. *Pediatric Dentistry Total Patient Care Philadelphia: Lea and Febiger*. 1985;156–62.
24. Wilson SW, Dilley DC, Vann WF Jr, Anderson JA. Pain and anxiety control (Part I: Pain perception control) In: Pickham J, Casamassimo PS, Field HW, Mctigue DJ, Nowak A, editors. *Pediatric Dentistry*,

Infancy Through Adolescence, 3rd ed, Philadelphia, PA: WB Saunders. 1999;15.

25. Website [Internet]. [cited 2020 Jul 12]. Available from: American Academy of Pediatric Dentistry ([www.aapd.org](http://www.aapd.org)) Guideline on Use of Local Anesthesia for Pediatric Dental Patients. Clinical Guidelines, reference manual. 2009.
26. Malamed SF. Handbook of Local Anesthesia, 6/e. Elsevier India; 2012.
27. Townsend JA, Hagan JL, Smiley M. Use of Local Anesthesia During Dental Rehabilitation With General Anesthesia: A Survey of Dentist Anesthesiologists [Internet]. Vol. 61, Anesthesia Progress. 2014. p. 11–7. Available from: <http://dx.doi.org/10.2344/0003-3006-61.1.11>
28. Townsend JA, Martin A, Hagan JL, Needleman H. The use of local anesthesia during dental rehabilitations: a survey of AAPD members. *Pediatr Dent*. 2013 Sep;35(5):422–5.
29. Peyman GA. Vitreoretinal Surgical Techniques, Second Edition. Routledge; 2019. 832 p.
30. Fields HW Jr, Machen JB, Murphy MG. Acceptability of various behavior management techniques relative to types of dental treatment. *Pediatr Dent*. 1984 Dec;6(4):199–203.
31. Mason KP. Pediatric Sedation Outside of the Operating Room: A Multispecialty International Collaboration. Springer; 2014. 755 p.
32. Wright GZ, Kupietzky A. Behavior Management in Dentistry for Children. John Wiley & Sons; 2014. 264 p.
33. Nathan JE, Professor A, Department of Otolaryngology/Dentistry, Northwestern University, Feinberg School of Medicine, USA, et al. Discretionary Parental Presence in the Dental Operator: A Survey of Pediatric Dentists and Parents [Internet]. Vol. 2, Pediatrics and Neonatal Nursing - Open Journal. 2015. p. 50–61. Available from: <http://dx.doi.org/10.17140/pnnoj-2-109>
34. Fayle SA, Tahmassebi JF. Paediatric Dentistry in the New Millennium: 2. Behaviour Management – Helping Children to Accept Dentistry [Internet]. Vol. 30, Dental Update. 2003. p. 294–8. Available from: <http://dx.doi.org/10.12968/denu.2003.30.6.294>
35. Smith N. Hartland's medical and dental hypnosis, 4th edition. By: Michael Heap and Kottiyattil K. Aravind. Churchill Livingstone, London, UK. 2002. Pp 522. ISBN: 0443072175 [Internet]. Vol. 21, Contemporary Hypnosis. 2004. p. 47–9. Available from: <http://dx.doi.org/10.1002/ch.288>
36. Humphreys RB, Fromm, E. & Nash, M. (Eds.)(1992). Contemporary Hypnosis Research. New York: Guilford Press, xv, pp. 591, \$60.00 (Hardcover) [Internet]. Vol. 36, American Journal of Clinical Hypnosis. 1993. p. 143–5. Available from: <http://dx.doi.org/10.1080/00029157.1993.10403060>
37. Kirsch I, Montgomery G, Sapirstein G. Hypnosis as an adjunct to cognitive-behavioral psychotherapy: A meta-analysis [Internet]. Vol. 63, Journal of Consulting and Clinical Psychology. 1995. p. 214–20. Available from: <http://dx.doi.org/10.1037/0022-006x.63.2.214>
38. Patel B, Potter C, Mellor AC. The Use of Hypnosis in Dentistry: A Review [Internet]. Vol. 27, Dental Update. 2000. p. 198–202. Available from: <http://dx.doi.org/10.12968/denu.2000.27.4.198>

39. Sacerdote P, Sacerdote P. Some Projective Techniques in Hypnotherapy: Induction of Dreams and Real versus Hallucinated Sensory Hypnoplasty [Internet]. Vol. 11, American Journal of Clinical Hypnosis. 1969. p. 253–64. Available from: <http://dx.doi.org/10.1080/00029157.1969.10402046>
40. Simons D, Potter C, Temple G. Hypnosis and Communication in Dental Practice. Quintessence Publishing Company; 2007. 280 p.
41. Rosen M. Hypnotic induction and nitrous oxide sedation in children. J Dent Assoc S Afr. 1983 Jun;38(6):371–2.
42. Griffin RB, Olness, Karen & Kohen, Daniel. (1996). Hypnosis and hypnotherapy in children (3rd Ed.). New York: Guilford Press, xiv 457 Pages, \$46.95 (Cloth) [Internet]. Vol. 41, American Journal of Clinical Hypnosis. 1998. p. 190–2. Available from: <http://dx.doi.org/10.1080/00029157.1998.10404207>
43. Lipton JA, Marbach JJ. Ethnicity and the pain experience [Internet]. Vol. 19, Social Science & Medicine. 1984. p. 1279–98. Available from: [http://dx.doi.org/10.1016/0277-9536\(84\)90015-7](http://dx.doi.org/10.1016/0277-9536(84)90015-7)
44. Wolff BB, Berthold Wolff B. Ethnocultural Factors Influencing Pain and Illness Behavior [Internet]. Vol. 1, The Clinical Journal of Pain. 1985. p. 23–30. Available from: <http://dx.doi.org/10.1097/00002508-198501010-00004>
45. Martinelli AM. Pain and Ethnicity [Internet]. Vol. 46, AORN Journal. 1987. p. 273–81. Available from: [http://dx.doi.org/10.1016/s0001-2092\(07\)66423-0](http://dx.doi.org/10.1016/s0001-2092(07)66423-0)
46. Sari ME, Ozmen B, Koyuturk AE, Tokay U. A retrospective comparison of dental treatment under general anesthesia on children with and without mental disabilities [Internet]. Vol. 17, Nigerian Journal of Clinical Practice. 2014. p. 361. Available from: <http://dx.doi.org/10.4103/1119-3077.130243>
47. Anesthesiology C on DS on, Committee on Drugs, Anesthesiology S on. Guidelines for the Elective Use of Conscious Sedation, Deep Sedation, and General Anesthesia in Pediatric Patients [Internet]. Vol. 135, Journal of Urology. 1986. p. 446–7. Available from: [http://dx.doi.org/10.1016/s0022-5347\(17\)45683-7](http://dx.doi.org/10.1016/s0022-5347(17)45683-7)
48. Schroth RJ, Morey B. Providing timely dental treatment for young children under general anesthesia is a government priority. J Can Dent Assoc. 2007 Apr;73(3):241–3.
49. Roberts M, Milano M, Lee J. Medical Diagnoses of Pediatric Dental Patients Treated under General Anesthesia: A 19 Year Review [Internet]. Vol. 33, Journal of Clinical Pediatric Dentistry. 2009. p. 343–5. Available from: <http://dx.doi.org/10.17796/jcpd.33.4.0g1011377763254n>
50. Lee P-Y, Chou M-Y, Chen Y-L, Chen L-P, Wang C-J, Huang W-H. Comprehensive dental treatment under general anesthesia in healthy and disabled children. Chang Gung Med J. 2009 Nov;32(6):636–42.
51. Thikkurissy S, Crawford B, Groner J, Stewart R, Smiley MK. Effect of Passive Smoke Exposure on General Anesthesia for Pediatric Dental Patients [Internet]. Vol. 59, Anesthesia Progress. 2012. p. 143–6. Available from: <http://dx.doi.org/10.2344/0003-3006-59.4.143>

52. Cantekin K, Yildirim MD, Delikan E, Cetin S. Postoperative discomfort of dental rehabilitation under general anesthesia. *Pak J Med Sci Q*. 2014 Jul;30(4):784–8.