

EFFECT OF PARENTAL ANXIETY ON CHILD BEHAVIOUR IN THE DENTAL SURGERY

Faiza Kanwal, Yusra Jamil, Hasham Khan

Department of Paedodontics, Khyber College of Dentistry, Peshawar, Pakistan

ABSTRACT

Objective: To evaluate the effect of parental anxiety on child behavior in dental surgery.

Methods and Materials: One hundred and nineteen children, reporting to the Department of Paedodontics, Khyber College of Dentistry, Peshawar, participated in the study. A questionnaire was used to record the child behavior using the Frankl behavior rating scale and the parental anxiety level using Modified Dental Anxiety Scale. The data was then subjected to statistical analysis using statistical package for social sciences version 17.

Results: Parental anxiety was significantly related to child behavior. Majority of the parents were slightly anxious (35.3%) while extremely anxious parents (phobic) were found to be in the minimum (3.4%). Majority of the children behaved positively (33.6%). Only a few children were found to have definitely negative behavior (9.2%).

Conclusion: Parental anxiety significantly affects child behavior in dental surgery.

Keywords: Parental Anxiety, Child Behavior, Dental Treatment.

INTRODUCTION

Anxiety is a feeling of worry, nervousness or unease about something with an uncertain outcome¹. Child dental fear is a significant factor in the provision of dental health care. The uncooperative behavior of the children sometimes leads to termination of the treatment, even if it is very necessary. An unfavorable parental attitude towards dentistry is significantly associated with dental anxiety of the child².

Anxious children tend to avoid dental care and tend to have comparatively poor oral health with regard to less anxious and more cooperative peers³. Various studies have been done in different areas of the world regarding the etiology of dental fear in children^{4,5}. Different factors have been proposed that can stimulate, provoke and promote dental anxiety in children. One of these factors is the influence of parental anxiety on dental treatment of child. Various studies have been done and it has been concluded from

these studies that parental attitude to dental treatment can influence the child's behavior regarding dental treatment⁶. No such study has been carried out in this region especially Khyber Pukhtunkhwa. The aim of this study was to evaluate the effect of parental anxiety on child behavior in the dental surgery.

MATERIALS AND METHODS

This study was carried out in the Department of Paedodontics, Khyber College of Dentistry Peshawar from 7th March, 2011 to 3rd June, 2011. The study population included 119 patients with an age range of 5-16 years. Handicapped children and children accompanied by individuals other than biological parents were excluded. Informed consent was taken from parents and the use of data was completely explained to the parents of all children.

A customized questionnaire was used in this study. The first part of the questionnaire included demographic information and the second part included questions regarding parental dental experience and anxiety using the Modified Dental anxiety Scale (M-DAS)⁷. Simple Likert scoring was assigned to five categories of anxiety and with a high score denoting a highly anxious response. Scores equal to or exceeding 19 on M-DAS have been related to a very high level

Correspondence:

Dr. Faiza Kanwal

House Officer

Department of Paedodontics, Khyber College of Dentistry,
Peshawar, Pakistan

Cell: 0332-9221042

Email: f.kanwal45@yahoo.com

of dental fear (possibly phobic) in adults^{8,9}. The child's behavior was recorded and assessed using Frankl Behavior Ranking scale¹⁰. The scale classifies child behavior as category # 1 Definitely negative, Category # 2 Negative, Category # 3 Positive, Category # 4 Definitely positive.

The data was subjected to statistical analyses using SPSS version 17 and the Pearson chi square test was applied to assess the significance of the effect of parent anxiety on child behavior in dental surgery.

RESULTS

A total of 119 children were included in the study with an age range of 5-16 years and with a mean age of 10.5 years. The parents of these children were questioned to evaluate their level of anxiety regarding dental treatment using Modified dental anxiety scale.

Out of 119 parents, the majority were slightly anxious, (35.3%), followed by non-anxious (33.6%). Few of the parents were phobic of dental treatment (3.4%). Amongst the children, 40 (33.6%) behaved positively followed by children whose behavior was definitely positive. Definitely negative behavior was noted in only a few children. The children belonging to non anxious and mildly anxious parents behaved more positively as compared to other categories especially phobic parents. The details are given in Table 1 below. The result of Pearson Chi square test revealed that parental anxiety was significantly related to child behavior in the dental surgery (p-value = 0.037).

DISCUSSION

Child dental anxiety has been a matter of concern for many years. Dental fear has the potential to

play an important and detrimental role in a child's dental and general health. For that reason, considerable effort has been invested in understanding the etiology, development and treatment of dental fear in children¹¹. The etiology of child dental fear is considered multifactorial and different pathways of acquiring fear have been described. For example Rachman¹², proposed a three pathway model of acquiring fear: directly via direct conditioning or indirectly through modeling or negative information. While researching dental fear, it was found that direct conditioning is often assumed to play an important role^{13,14} but this concept is more suitable to adults with dental phobia, who tend to attribute their fear to conditioning experiences¹⁵. Other studies have provided support for the modeling pathway i.e. child dental fear and behavioral management problems repeatedly have been associated with dental fear in parents^{16,17}. In general medical settings, parental presence and behavior have been related to children's ways of coping with and reacting to aversive medical situations¹⁸.

The present study supports the fact that parental dental anxiety significantly affects the child behavior in the dental surgery. The results of this study are in agreement with other similar international studies¹⁹⁻²⁴ but are contradictory to the studies carried out by Klaassen^{25,26} Arnrup^{27,28}, Balmer²⁹, Kyritsi³⁰ and Ten Berge³¹. Some of these authors used MDAS scale while others used tools like history form on child's dental experience and family environment, reaction to prophylaxis, medical and psychosocial history.

Children are usually dependent on their parents who act as role models for them. The significant relationship of the parental dental anxiety and child behavior in Peshawar (Khyber Pukhtun-khwa) may be

Table 1: Effect of parental anxiety on child behavior

Parent anxiety	Child behavior				Total
	Definitely Negative	Negative	Positive	Definitely Positive	
Non anxious (5)	6 (5.0%)	8 (6.7%)	13 (10.9%)	13 (10.9%)	40 (33.6%)
Slightly anxious (6-9)	3 (2.5%)	6 (5.0%)	17 (14.%)	16 (13.4%)	42 (35.3%)
Fairly anxious (10-14)	0 (0%)	10 (8.4%)	6 (5.0%)	5 (4.2%)	21 (17.6%)
Very anxious (15-18)	0 (0%)	4 (3.4%)	4 (3.4%)	4 (3.4%)	12 (10.1%)
Extremely anxious (Phobic) (19-25)	2 (1.7%)	1 (0.8%)	0 (0%)	1 (0.8%)	4 (3.4%)
Total	11 (9.2%)	29 (24.4%)	40 (33.6%)	39 (32.8%)	119 (100.0%)

attributed to the strong and dominant influence of parents on their children. Age of the child was not controlled for different parental groups; it might have affected our results because age is a factor which almost always affects behavior of child in dental surgery³².

CONCLUSION

Parental anxiety significantly affects child behavior in dental surgery.

RECOMMENDATIONS:

More valid results may be obtained if a study is carried out controlling the age of children for various parental groups.

REFERENCES

- (<http://oxforddictionaries.com/definition/anxiety>).
- Shaw O. Dental anxiety in children. *Br Dent J* 1975; 139: 134-9.
- Bankole OO, Aderinokun GA, Denloye OO, Jeboda SO. Maternal and child's anxiety – effect on child's behaviour at dental appointments and treatments. *Afr J Med Sci* 2002; 31: 349-352.
- Majstorovic M, Skrinjaric I, Glavina D, Szivovicza L. Factors predicting a child's dental fear. *Coll Antropol* 2001; 25: 493-500.
- Milgrom P, Mancl L, King B, Weinstein P. Origins of childhood dental fear. *Behav Res Ther* 1995; 33: 313-9.
- Majstorovic M, Glavina D, Skrinjaric I. Child's dental anxiety: The role of previous medical experience and Social Status. *Paediatr Croatica* 2001; 45: 117-22.
- Humphris GM, Freeman RE, Tutti H, Desouza V. Further evidence for the reliability and validity of the Modified Dental Anxiety Scale. *Int J* 2000; 50: 367-70.
- Humphris GM, Morrison T and Lindsay SJE. The Modified Dental Anxiety Scale: Validation and United Kingdom Norms. *Community Dent Health* 1995; 12: 143-50.
- Humphris G, King K. The prevalence of dental anxiety across previous distressing experiences. *J Anxiety Disord* 2011; 25(2): 232-6.
- Frankl SN, Shiere FR, Fogels HR. Should The parent remain with the child in the dental operator. *J Dent Child* 1962; 2: 150-63.
- Winer GA, a review and analysis of children's fearful behavior in dental settings. *Child Dev* 1982; 53: 1111-33.
- Rachman S. The conditioning theory of fear acquisition: a critical examination. *Behav Res Ther* 1977; 15: 375-87.
- Liddell A. Personality characteristics versus medical and dental experiences of dentally anxious children. *J Behav Med* 1990; 13: 183-94.
- Townend E, Dimigen G, Fung D. A clinical study of dental anxiety. *Behav Res Ther* 2000; 38: 31-46.
- Lautch H. Dental phobia. *B J Psych* 1971; 119: 151-8.
- Cardoso CL, Loureiro SR, Nelson-Filho P. Paediatric dental treatment: manifestations of stress in patients, mothers and dental students. *Braz Oral Res* 2004; 18: 150-55.
- Klingberg G, Berggren U. Dental Problem Behavior in children of parents with severe dental fear. *Swed Dent J* 1992; 2: 27-32.
- Bush JP, Melamed BG, Sheras PL, Greenbaum PE. Mother-child patterns of coping with anticipatory medical stress. *Health Psychol* 1986; 5: 137-57.
- Milsom KM, Tickle M, Humphris GM, Blinkhorn AS. The relationship between anxiety and dental treatment experience in 5 year- old children. *Br Dent J* 2003; 194: 503-6.
- Peretz B, Nazarian Y, Bimstein E. Dental anxiety in a student's paediatric dental clinic: Children, parents and students. *Int J Paediatr Dent* 2004; 14: 192-8.
- Gazal G, Mackie IC. Distress related to dental extraction for children under general anesthesia and their parents. *Eur J Paediatr Dent* 2007; 8: 7-12.
- Maragakis GM, Musselman RJ, Ho CC. Reaction of 5 and 6 year olds to dental injection after viewing the needle: pilot study. *J clin Paediatr Dent* 2006; 31: 28-31.
- Rantavuori K, Zerman N, Ferro R, Lahti S. Relationship between children's first dental visit and their dental anxiety in the Veneto Region of Italy. *Acta Odontol Scand* 2002; 60: 297-300.
- Rantavuori K, Lahti S, Hausen H, Seppa L, Karkkainen S. Dental fear and oral health and family characteristics of Finnish children. *Acta Odontol Scand* 2004; 62: 207-13.
- Klaassen M, Veerkamp J, Hoogstraten J. Predicting dental anxiety. The clinical value of anxiety questionnaires: an explorative study. *Eur J Paediatr Dent* 2003; 4: 171-6.
- Klaassen MA, Veerkamp JS, Hoogstraten J. Dental fear, communication and behavioural management problems in children referred for dental problems. *Int J Paediatr Dent* 2007; 17: 469-77.
- Arnrup K, Berggren U, Broberg AG, Bodin L. A short – term follow-up of treatment outcome in groups of

- uncooperative child dental patients. *Eur J Paediatr Dent* 2004; 5: 216-24.
28. Arnrup K, Broberg AG, Berggren U, Bodin L. Treatment outcome in subgroups of uncooperative child dental patients: an exploratory study. *Int J Paediatr Dent* 2003; 13: 304-19.
29. Balmer R, O' Sullivan EA, Pollard MA, Curzon ME. Anxiety related to dental general anesthesia: Changes in anxiety in children and their parents. *Eur J Paediatr Dent* 2004; 5: 9-14.
30. 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; 10: 29-32.
31. Ten Berge M, Veerkamp JS, Hoogstraten J, Prins PJ. Childhood dental fear in relation to parental child rearing attitudes. *Psychol Rep* 2003; 92: 43-50.
32. Kamran M, Qiam F, Khan H. Evaluation of age, gender and parental factors affecting child behavior in the dental surgery. *J KCD* 2011; 1(2): 82-6.