



A SCALE TO ASSESS CHILD'S DENTAL ANXIETY

L. Harsha* & Dr. Ganesh Jeevanandan**

* BDS Student, Saveetha Dental College and Hospitals, Chennai, Tamilnadu

** Senior Lecturer, Department of Pedodontics, Saveetha Dental College and Hospitals, Chennai, Tamilnadu

Cite This Article: L. Harsha, Dr. Ganesh Jeevanandan, "A Scale to Assess Child's Dental Anxiety", International Journal of Multidisciplinary Research and Modern Education, Volume 3, Issue 1, Page Number 301-303, 2017.

Copy Right: © IJMRME, R&D Modern Research Publication, 2017 (All Rights Reserved). This is an Open Access Article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract:

Aim: The aim of the study is to evaluate the child's dental anxiety levels when in a dental clinic and also determine which of the three chosen scales can be used effectively to evaluate dental anxiety levels.

Materials and Methods: The study was conducted among 100 children aged between 8-15 years were randomly selected on their first dental visit. The children were asked if they would participate in the study that would assess on how they emotionally feel about the dentist and the thought of getting a dental treatment. It was also ensured that it was the child's first dental visit. Parent's consent was also obtained for the same. The child's anxiety level was assessed using three different scales; RMS- pictorial scale; Facial image scale; Venham picture scale.

Results: The average score of RMS pictorial scale, Facial image scale, and Venom's picture scale is 2.71, 2.12, 2.65 respectively. On comparing the 3 scales, statistically significant results are obtained. This signifies that when the value of one scale increases there is also an increase in the value of the other two corresponding scales.

Conclusion: In this study, significant results were obtained on comparison of the scales. Hence any of the three scales can be used as an aid to assess the child's anxiety levels when in a dental clinic.

Key Words: Dental Anxiety, First Dental Visit, RMS Pictorial Scale, Facial Image Scale & Venham's Picture Scale.

Introduction:

One factor that still lingers among individuals when in a dental clinic is fear. Anxiety and fear is what a paediatric patient develops when in a dental clinic [1]. Anxiety is defined as an abnormal fear or dread [1]. Dental anxiety is defined as an abnormal feeling of fear, dread or uneasiness a patient develops when decided to visit the dentist for preventive care [1, 2]. Anxiety can be badly classified as "trait anxiety" or "state anxiety". Trait anxiety is something that is inherited and this represents general personality features while state anxiety is something that develops by certain events or situations [1-4]. The intensity of fear and anxiety varies from patient to patient. In some cases, there is just simple nervousness and this can either disappear or can be amplified during a dental treatment [2, 5, 6, 7]. The most common fears are, fear of injections, dislike of the dental operator, fear of sounds heard in a dental clinic, previous dreadful experiences during a dental treatment [1, 8]. First dental visit is also an important factor that causes fear and anxiety among children. This can influence the psychological as well as the physiological responses of the child. Hence assessment of dental anxiety in a child during his/her first dental visit is important [8]. The purpose of this study was to;

- ✓ Evaluate the child's dental anxiety levels during their first dental visit and
- ✓ To evaluate which scale shows greater significance and hence can be used routinely for the same.

Materials and Methods:

The study was conducted among 100 children aged between 8-15 years were randomly selected on their first dental visit. The children were asked if they would participate in the study that would assess on how they emotionally feel about the dentist and the thought of getting a dental treatment. It was also ensured that it was the child's first dental visit. Parent's consent was also obtained for the same.

Inclusion Criteria:

- ✓ Patients aged between 8-15 years
- ✓ Patients who had visited the dental clinic for the first time
- ✓ Patients who are communicative and mentally stable.

Exclusion Criteria:

- ✓ Patients below the age of 8 years
- ✓ Patients who had already undergone a dental treatment previously.
- ✓ Patients with mental disabilities or those who aren't able to communicate accordingly.

Three scales were used to assess the child's dental anxiety levels during their first dental visit.

- ✓ RMS Pictorial Scale
- ✓ Facial Image Scale
- ✓ Venham's Picture Scale

The child was asked to choose the appropriate option he/she feels when in a dental clinic. Scores were given accordingly and were tabulated. An average value of all the three scales were determined and the three scales were statistically compared to determine which one has a greater significance.

RMS Pictorial Scale: This scale was designed by Raghavendra, Madhuri, Sujata [RMS] from the department of pedodontics and preventive dentistry, Chhattisgarh dental college. It is a new anxiety scale designed by them. This scale consists of original photographs of both boy and a girl child whose photographs were taken after obtaining consent from their parents. This scale consists of a row of five faces which ranges from very happy to very unhappy. A photocopy of the scale was shown to the child and he/she was asked to choose one among the five faces according to how they feel at that moment in the dental clinic. The scale was scored as 1 for the very happy face and 5 for the very unhappy face [9].

Venham's Picture Scale: This scale was given by Larry L. Venham. The scale consists of eight segments, with two figures in each. One among the two is an anxious figure and the other is the non anxious figure. The children were asked to choose one among the two from each segment. The scale was scored 1 on choosing the anxious figure and 0 on choosing the non anxious figure in each segment. Scores from all the eight segments were obtained and summed to obtain the final score of this scale [1, 9, 10, 12, 13].

Facial Image Scale: This scale consists of 6 faces ranging from very happy to very unhappy. The child was asked to choose any one from the 6 faces that he/she feels currently. The scale was scored 0 for the very happy face and 5 for the very unhappy face [2, 4, 9, 10, 11].

Result:

The scores of each scale were tabulated and an average was obtained. Statistically, the three scales were compared with each other to determine which scale has greater significance.

Table 1

Descriptive Statistics			
	Mean	Std. Deviation	N
RMS Pictorial Scale	2.71	1.387	100
Venham Picture Scale	2.65	2.595	100
Facial Image Scale	2.12	1.635	100

Table 2

Correlations					
			RMS Pictorial Scale	Venham Picture Scale	Facial Image Scale
Spearman's rho	RMS Pictorial Scale	Correlation Coefficient	1.000	.895**	.878**
		Sig. [2-tailed]	.	.000	.000
		N	100	100	100
	Venham Picture Scale	Correlation Coefficient	.895**	1.000	.873**
		Sig. [2-tailed]	.000	.	.000
		N	100	100	100
	Facial Image Scale	Correlation Coefficient	.878**	.873**	1.000
		Sig. [2-tailed]	.000	.000	.
		N	100	100	100

** . Correlation is significant at the 0.01 level [2-tailed].

Discussion:

Dental anxiety is a universal phenomenon which is observed in most of the paediatric patients [9]. According to Buchanan [14], an anxiety scale is considered to be ideal if

- ✓ short in length such that there is maximum response from the child
- ✓ less time consuming

- ✓ inclusion of items that is more relevant to the child's dental experience
- ✓ use of images which grabs the attention of the child
- ✓ limited cognitive thinking
- ✓ easy to score and interpret

The Venham's picture scale, Facial image scale and RMS pictorial scale were selected for this study. The average scores obtained for the 3 scales are 2.65, 2.12 and 2.71 respectively. On comparison of the three with each other, statistically significant results were obtained. This signifies that when the value in one scale increases there is also an increase in the value of the corresponding scale. This is also in accordance to the results obtained in a study conducted by Srinath Krishnappa et al [10]. In order to overcome problems related to diagnosis and treatment in paediatric patients it is necessary to accurately assess the dental anxiety levels [15]. In accordance to the present study any one among the three scales can be chosen to determine the dental anxiety levels in children. This would enable, better management of the child in a dental clinic.

Conclusion:

In this study, statistically significant results were obtained on comparison of the scales. This signifies that when the value of one scale increases there is also an increase in the value of the corresponding scales. Hence any of the three scales can be used as an aid to assess the child's anxiety levels when in a dental clinic.

References:

1. Agarwal M, Das UM. Dental anxiety prediction using Venham picture test: A preliminary cross sectional study. *J Indian Soc Pedod Prev Dent* 2013; 31:22-4.
2. Anca Maria, Victor Feraru, Claudiu Herteliu, Reghina Angheliescu. Assessment of the prevalence of dental fear and its cause among children and adolescents attending a department of paediatric dentistry in Bucharest. *OHDMBSC- Vol VIII- No 1-March, 2009.*
3. Spielberger CD. *Manual for the State-Trait Anxiety Inventory [STAI]*. Palo Alto, CA: Consulting Psychologists Press; 1983.
4. H. Buchanan, N. Niven. Validation of a Facial Image Scale to assess child dental anxiety. *International Journal of Paediatric Dentistry* 12: 47-52.
5. Chapman HR, Kirby NC. Dental fear in children: a pro- posed model. *British Dental Journal* 1999; 187[8]: 408-412.
6. Udoye CH, Oginni AO, Oginni FO. Dental anxiety among patients undergoing various dental treatments in a Nigerian teaching hospital. *Journal of Contemporary Dental Practice* 2005; 6[2]: 91-98.
7. Sumer Alaki, Alanoud Alotaibi, Eman Almadadi, and Ebtehal Alanquri. Dental anxiety in middle school children and their caregivers: Prevalence and severity. *J. Dent. Oral Hyg. Vol. 4[1], pp. 6-11, January 2012.*
8. Klingberg G, Berggen U, Carlsson SG, Noren JG. Child Dental fear: Cause related factors and clinical effects. *Eur J Oral Sci* 1995; 103:405-12.
9. M Khandelwal, S Rath, RM Shetty. RMS Pictorial Scale [RMS-PS]: An innovative scale for the assessment of child's dental anxiety. *Journal of Indian Society of Pedodontics and Preventive Dentistry, Vol. 33, No. 1, January-March, 2015, pp. 48-52.*
10. Srinath Krishnappa, Sahana Srinath, Vishwanath SK, Pravesh Bhardwaj, Ritu Singh. Evaluation of Facial Image Scale and Venham Picture Test Used to Assess Dental Anxiety in Children. *JIAPHD. 2013; 11[3]:31-35.*
11. Shinohara S, Nomura Y, Shingyouchi K, Takase A, Ide M, Moriyasu K et al. Structural relationship of child behavior and its evaluation during dental treatment. *J. Oral Sci.* 2005; 47[2]:91-96.
12. Venham LL, Gaulin-Kremer E. A self-report measure of situational anxiety for young children. *Pediatr Dent* 1979; 1:91-6.
13. Venham LL. The effect of mother's presence on child's response to dental treatment. *J Dent Child* 1979; 46:219-25.
14. Buchanan H. Development of a computerized dental anxiety scale for children: Validation and reliability. *Br Dent J* 2005; 199:359-62.
15. Stouthard M, Hoogstraten J. Ratings of fear associated with twelve dental situations. *J DentRes* 1987; 66[6]: 1175-8.