

## Original Article

# DO PARENTS UNDERSTAND THE DENTAL FEAR IN THEIR CHILDREN? : EVALUATION USING CFSS-DS

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### ABSTRACT:

**Introduction:** Dental anxiety is a very common phenomenon in children and adolescents. The Dental Subscale of the Children's Fear Survey Schedule (CFSS-DS) is a well known instrument for assessing dental fear in children, initially presented by Cuthbert and Malamed. In most studies, the parental version of CFSS-DS is used; however, a very little information is available concerning the extent to which parents are able to report dental fear on behalf of their children. **Aim:** This study aims to assess whether parents are accurate reporters of their child's dental fear. **Methodology:** The CFSS-DS was filled out by children (7-11 years old) and their parents on the behalf of their child. The children were asked to fill out the child version of CFSS-DS in their classrooms and the parental version was handed out to the children, together with a letter asking the mothers to fill the questionnaire on behalf of them, without any help of their children.

**Result and Conclusion:** By using the cut off value as 32, the mean dental score of this study was  $30.66 \pm 6.2245$ . This study showed that most of the parents are able to report the dental fear of their children with a tendency to rate it somewhat higher than their children did.

**Keywords:** dental fear, CFSS-DS.

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## INTRODUCTION

Dental fear affects a considerable number of patients and is linked to avoidance of dental treatment, often resulting in pain and the need to undergo more invasive treatment when patients do come to the dentist. It represents a problem to both dentists and patients as it may lead to neglect of dental care on the behalf of children. Research has shown that adverse effects of child dental fear may well persist into adolescence and, in turn, may lead to avoidance of dental care or disruptive behaviour during treatment.<sup>1</sup> Clinicians and researchers alike have the need for valid measures of dental fear.

Questionnaires are such methods which have several advantages over other methods of assessing fear. First, these are quick and inexpensive to administer and score. Second, these have high face

validity, making them appropriate tasks for patients and research subjects to engage in.<sup>2,3</sup> The Dental Subscale of the Children's Fear Survey Schedule (CFSS-DS) is a well-known instrument for assessing dental fear in children, initially presented by Cuthbert and Melamed in 1982.<sup>4</sup> This instrument has been translated into several languages and has been used to assess the level of dental fear of children in a number of studies. Studies in several countries showed the scale to have good reliability and validity.

The CFSS-DS consists of 15 items to be answered on a 5- point scale ranging from 1 (not afraid at all) to 5 (very afraid) related to different features of treatment. Total scores accordingly ranged from 15 to 75 and a score of 32 or more has been associated with clinical dental fear.<sup>4</sup>

15 items being:

1. Dentists
2. Doctors
3. Injections
4. Having somebody examine your mouth
5. Having to open your mouth
6. Having a stranger touch you
7. Having somebody look at you
8. The dentist drilling
9. The sight of dentist drilling
10. The noise

11. Having somebody put instruments in your mouth
  12. Choking
  13. Having to go to the hospital
  14. People in white uniforms
  15. Having the nurse clean your mouth.
- (Fig. 1)

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**PROFORMA FOR ASSESSMENT OF CFSS-DS**

Name _____		O.P.D. NUMBER- _____			
Age _____ Sex _____					
Address _____					
		Child was :		yes	no
		Cooperative		yes	no
		Anxious about questions		yes	no
		Answered questions		yes	no
		Understood questions		yes	no
	Not afraid At all	A little afraid	A fair amount	Pretty much afraid	Very afraid
Items	1	2	3	4	5
1. Dentists	_____	_____	_____	_____	_____
2. Doctors	_____	_____	_____	_____	_____
3. Injections (shots)	_____	_____	_____	_____	_____
4. Having somebody examine your mouth	_____	_____	_____	_____	_____
5. Having to open your mouth	_____	_____	_____	_____	_____
6. Having a stranger touch you	_____	_____	_____	_____	_____
7. Having somebody look at you	_____	_____	_____	_____	_____
8. The dentist drilling	_____	_____	_____	_____	_____
9. The sight of the dentist (dr)ing	_____	_____	_____	_____	_____
10. The noise of the dentist (dr)ing	_____	_____	_____	_____	_____
11. Having somebody put instruments in your mouth	_____	_____	_____	_____	_____
12. Choking	_____	_____	_____	_____	_____
13. Having to go to the hospital	_____	_____	_____	_____	_____
14. People in white uniforms	_____	_____	_____	_____	_____
15. Having the nurse clean your teeth	_____	_____	_____	_____	_____

(Children's Fear Survey Schedule Dental-Subscale) Cuthbert & Melamed in (1982)

**Figure 1:** The performa used in the study

**MATERIALS AND METHODS**

This study was conducted among 213 children and their parents visiting two regular primary schools in Shimla, Himachal Pradesh, India. The children were 7–11 years old. Informed consent was taken from school authorities as well as parents of the children. The children were asked to fill out the questionnaire of the Dental Subscale of the Children’s Fear Survey Schedule (CFSS-DS) in their classrooms. Another questionnaire of CFSS-DS was handed out to the children, together with a letter asking the mothers of the children to fill out the questionnaire on behalf of them, without any help of their children. The mothers were asked to return the questionnaire as soon as possible.

Dental fear was measured using the english version of the Dental Subscale of the Children’s Fear Survey Schedule (CFSS-DS). Questionnaire consists of 15 items, related to different aspects of dental treatment. The possible item responses varied from 1 (not afraid at all) to 5 (very afraid), giving a range of possible scores of 15–75.

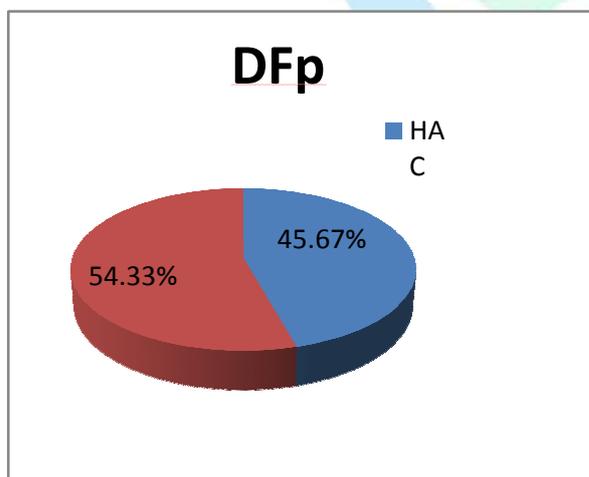
**RESULTS**

Study was carried out on 213 children in the age group 7-11 years and their parents, 113 males and 100 females. (Table 1) Parents who responded were 162.

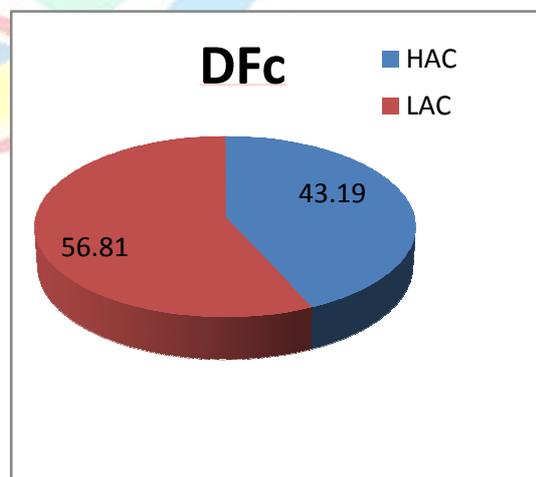
**Table 1:** Age-wise distribution of the study group.

Age (years)	N (no. Of children)
7-8	54
8-9	62
9-10	44
10-11	53

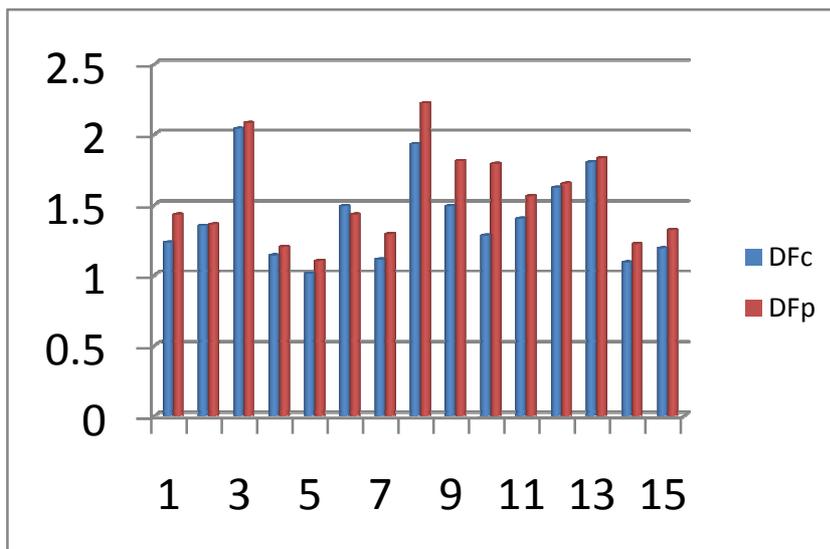
Of all the children, 43.19% reported dental fear (DFc). (Fig. 2) Of all the parents responded, 45.67% estimated dental fear in their children (DFp).(Fig. 3) Dental fear is reported when CFSS-DS scores  $\geq 32$ . Children who scored 32 or more on the CFSS-DS were defined as high anxious children i.e. HAC and children scoring less than 32 were defined as low anxious children i.e. LAC. DFc is fear reported by children and DFp is fear reported by their parents. Fear reported by parents (DFp) for their children has a very little difference from fear reported by children themselves (DFc). (Figure 4) Significant difference is found on a very few items. And it is noted that parents tend to rate the fear of their children higher than children themselves have reported.



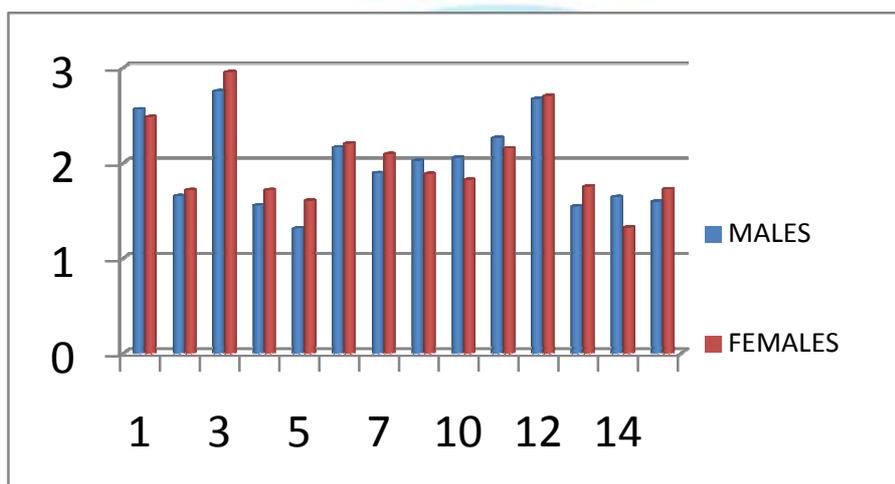
**Figure 3:** Dental fear reported by parents.



**Figure 2:** Dental fear reported by children.



**Figure 4:** Comparison of fear reported by children and their parents.



**Figure 5:** Comparison of dental fear between males and females.

It is interesting to see that significant differences on the item scores can be found on those items that seem primarily related to actual dental treatment like 1 i.e. Dentists, 7 i.e. Having somebody look at you, 8 i.e. The dentist drilling, 9 & 10 i.e. The sight and noise of the drilling. In all these items DFp > DFc.

We have studied one more aspect i.e. Difference in fear levels regarding dental treatment between males and females. (Figure 5)

We found fear levels amongst males and females regarding dental treatment have no significant differences except in few items like 5 i.e. Having to open your mouth, 8 i.e. The dentist drilling, 13 i.e. Having to go to the hospital and 14 i.e. People in white uniforms.

Most feared items for both the genders were 3 i.e. Injections and 8 i.e. The dentist drills one more interesting finding was that the dental fear is more amongst the younger age group as compared to older ones. So we can say that dental fear decreases with increasing age.

**DISCUSSION**

The children’s fear survey schedule (CFSS) was developed by Scherer and Nakamura. It consisted of 80 items on a 5-point likert-scale.<sup>5</sup> The Dental Subscale of Children’s Fear Survey Schedule (CFSS-DS) developed by Cuthbert and Melamed in 1982 consists of fifteen items.<sup>4</sup> It can be used to differentiate patients with high and low dental fears. Its reliability and validity has been aptly demonstrated.<sup>6</sup>

There is also a constructed Short Form of the Dental Subscale of the Children's Fear Survey Schedule (DFSS-SF) earlier used in the study by Carson and Freeman. It is a shorter form of the CFSS-DS consisting of only eight items.<sup>6</sup>

The CFSS-DS is quite popular and has been used for epidemiological studies of dental fear in a number of studies and even considered as 'gold standard' measure of the child dental anxiety. By using the cut off value as 32, the mean dental score of this study was  $30.66 \pm 6.2245$ . The CFSS-DS scores in the present study were similar to the data of previous study in Singapore(30.6) by Chellappah NK et al<sup>7</sup> in 1990. The mean score of this study was higher than the findings in Sweden(23.1) by Klingberg G et al<sup>8</sup> in 1994 and Netherlands(23.2) by Ten Berge M et al<sup>9</sup> in 1998. And the mean score was lower than finding in Croatian children(35.7) by Majstrovic M et al<sup>10</sup> in 2003.

The present study showed that there is no significant difference between boys and girls which is similar to previous studies.<sup>1,7</sup> Data obtained showed 43.1% of study population suffered from some degree of dental fear. No significant difference in fear scores between boys and girls were found in the present study. It was also found that dental fear decreases with increasing age which was also similar to previous study done by Raj S et al<sup>11</sup> in 2013.

The aim of the study was to find whether parents are accurate reporters of their children's dental fear and this study showed that most of the parents are able to report the dental fear of their children with a tendency to rate it somewhat higher than their children did. And this was also found in accordance with a previous study by Krikken JB et al<sup>12</sup> in 2013.

## CONCLUSION

1. Results from this study suggest that most of the parents are able to report the level of dental fear in their children with a tendency to rate it somewhat higher than their children did
2. Dental fear has no gender predilection.
3. And that the dental fear decreases with increasing age.

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**Conflict of Interest:** None declared

## REFERENCES

1. Krikken JB, Wijik AJ, Cate JM, Veerkamp JS. Measuring dental fear using the CFSS-DS. Do Children and parents agree?. *International Journal Of Paediatric dentistry*;2013.
2. Armfield JM, Stewart JF, Spencer AJ. The vicious cycle of dental fear: exploring the interplay between oral health, service utilization and dental fear. *BMC Oral Health*; 2007.
3. Aartman IHA, van Everdingen T, Hoogstraten J and Schuurs AHB. Self-report measurements of dental anxiety and fear in children: a critical assessment. *J Dent Child* 1998; 252-258.
4. Cuthbert MI, Melamed BG. A screening device: children at risk for dental fears and management problems. *ASDC J Dent Child* 1982; 49: 432-436.
5. Schuurs AHB, Hoogstraten J: Appraisal of dental anxiety and fear questionnaires: a review. *Community Dent Oral Epidemiol* 1993, 21:329-339.
6. Klingberg G. Reliability and validity of the Swedish version of the Dental Subscale of the Children's Fear Survey Schedule, CFSS-DS. *Acta Odontol Scand* 1994; 52: 255-256.
7. Chellappah NK, Vignehsa H, Milgrom P et al. Prevalence of dental anxiety and fear in children in Singapore. *Community Dent Oral Epidemiol* 1990; 18: 269-271.
8. Klingberg G, Berggren U, Noren JG. Dental fear in an urban Swedish child population: prevalence and concomitant factors. *Community Dent Health* 1994; 11: 208-214.
9. Ten Berge M, Hoogstraten J, Veerkamp JS et al. The Dental Subscale of the Children's Fear Survey Schedule: a factor analytic study in The Netherlands. *Community Dent Oral Epidemiol* 1998; 26: 340-343.
10. Majstrovic M, Veerkamp JS, Skrinjaric I. Reliability and validity of measures used in assessing dental anxiety in 5- to 15-year-old Croatian children. *Eur J Paediatr Dent* 2003; 4: 197-202.
11. Raj S, Agarwal M, Aradhya K, Konde S, Nagakishore V. 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.
12. Krikken JB, Veerkamp JS. Child rearing styles, dental anxiety and disruptive behaviour; an exploratory study. *Eur Arch Paediatr Dent* 2008; 9(Suppl. 1): 23-28.