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Original Article

Dental Experience, Anxiety and Oral health in Low Income Chennai Children

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Abstract

Background: Dental problems are more common in children nowadays due to the change in food habits. Various treatment modalities are available including fillings, root canal treatment, and crown. The ambience in the dental clinic and the noise created by the compressor, suction apparatus make the child apprehensive, low-income children have more exposure to noises and their fear threshold are more compared with high-income children. This study was to evaluate the prevalence of dental anxiety and the factors influencing dental anxiety and poor oral health among low-income children in Chennai. **Materials and Methods:** One hundred and fifty children were examined who reported to Pedodontic Department in Saveetha Dental College, Chennai. The oral health status of male and female patients was assessed based on the decayed, filled teeth index, simplified oral hygiene index (OHI), and *Streptococcus mutans* score. The assessment excluded the patient who had facial deformities, and mentally retardant, suffering from congenital diseases. Dental anxiety was assessed using the facial image scale and Frankl scale. Early dental experience was classified as: no previous dental visits; preventive control; restorative treatment; and emergency visit. **Results:** Dental caries is the key factor for the child to visit the dental clinic. The dental setup and its factors are one of the triggering agents to child's anxiety and previous dental experiences. Patients with systemic problems have a high rate of dental caries. **Conclusion:** In low-income children, prior dental experiences of six-year-old children were directly related to their dental caries experience. Children who had preventive visits and those who had never seen a dentist before had low rates of dental caries. Patients have a low percentage of dental visits for their preventive treatment due to the unawareness of their parents. Simplified OHI and dental anxiety levels showed no statistically significant differences among the types of previous dental experiences

Keywords: Anxiety, Dental caries, Dental experience, Fear, Oral Health, Preventive treatment

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INTRODUCTION

Dental caries is the most common chronic disease of childhood and is, therefore, of great importance to public health. Dental caries is the key factor for the child to visit the dental clinic. The dental setup and its factors are one of the triggering agents to child's anxiety and previous dental experiences.[1,2]

Patients with systemic problems have high rate of dental caries. Anxiety and fear toward dental treatment are common problems frequently experienced by patients worldwide, hence for better understanding, management, and development of treatment strategies for dentally anxious patients, and their dental experience and oral health the present study was undertaken.[3]

The study aimed to evaluate the prevalence of dental anxiety and the factors influencing dental anxiety, poor oral health among the low-income children in Chennai and is about the anxious and experience of the child in the dental clinic and how their anxious makes the treatment complicated and the background of their anxious is dental caries.[4] The severity of dental caries is measured by the decayed, missing, filling teeth and Oral Hygiene Index-Simplified (OHI-S) index.[5]

MATERIALS AND METHODS

One hundred and fifty children were examined under Indus an criteria both female and Male. Asample of 150 questionnaires were circulated containing 15 questions. Oral health status was assessed based on the decayed, extracted, or filled teeth index, OHI-S, and *Streptococcus mutans* score. Dental anxiety was assessed using the facial image scale and Frank l scale. The early dental experience was classified as: no previous dental visits; preventive control; restorative treatment; and emergency visit.[6]

QUESTIONNAIRE

Name: Sex: Male/Female

Age:

Socioeconomic Status:

(A) <25,000/Year,

(B) 25,000-50,000/Year,

(C)50,000-1,00,000/Year

Questions:

1) Does your child had any previous dental visits?
   A) Yes
   B) No
2) How was the child's experience for the first dental visit?
   A) Pleasant
   B) Fair
   C) Poor
   D) Unpleasant

3) Does the child is anxious to any of the dental setup?
   A) Yes
   B) No
   If YES –To what:

4) Does your child had any treatment on his/her first dental visit?
   A) Yes
   B) No
   C) Emergency

5) Does your child has any forward-looking to the dentist after their first dental visit?
   A) Yes
   B) No-Why?

6) How was your child's oral health before visiting a dentist?
   A) Excellent
   B) Good
   C) Fair
   D) Poor

7) What's your child's daily frequency of brushing?
   A) Once
   B) Twice

8) Does your child brushes their teeth on their own?
   A) Yes
   B) No

9) What kind of snacks Does your child take often?
   A) Chocolate/sweets
   B) Beverages
   C) Icecream

10) Have your child had any preventive treatment for dental caries?
   A) Yes
   B) No

11) How was the child's behavior during the dental procedure?
   A) Uncooperative
   B) Cooperative

12) Are you aware of the preventive treatment for your child's dental caries?
   A) Yes-How?
   B) No

13) Does your child has any systemic problems?
   A) Malnutrition
   B) Communicable disease
   C) Infectious disease
   D) Congenital disease
   E) Learning/Speech difficulties
   F) Growth retardation

14) What's the rate of caries in children undergoing restorative

and emergency treatment?

A) <2
B) 2-5
C) >5

15) Oral health assessment:

A) OHI-S:
B) DMFT/S: Decay- Missing-Filling-

RESULTS

Figure 1 shows the previous dental visit. 54% of the study participants didn't report to dentist. In Figures 2 and 3, 30% had unpleasant experience, while 60% answered yes for visiting the dentist. 40% of the participant had poor oral health and 65% were anxious to dental set up, 60% of them didn't undergo any preventive treatment and 685 brushed their teeth twice daily [refer Figures 4-7]. 58% didn't brush their teeth on their own and 54% of the participants were uncooperative during dental procedure and 55% had the habit of snacking chocolate and sweets, 60% had caries in 3 to 5 teeth and 28% were malnourished [Figures 8-12]. Figures 13,14 showed that 48% didn't undergo any treatment in their first visit. And 60% showed no awareness about the preventive treatment. Oral health in low-income population is less.

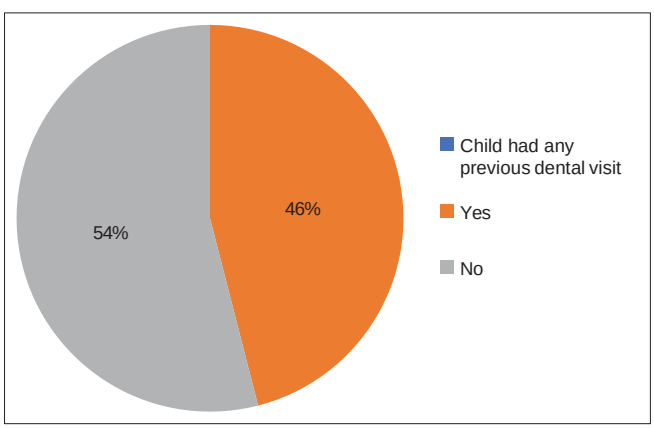

Figure 1: Previous dental visit

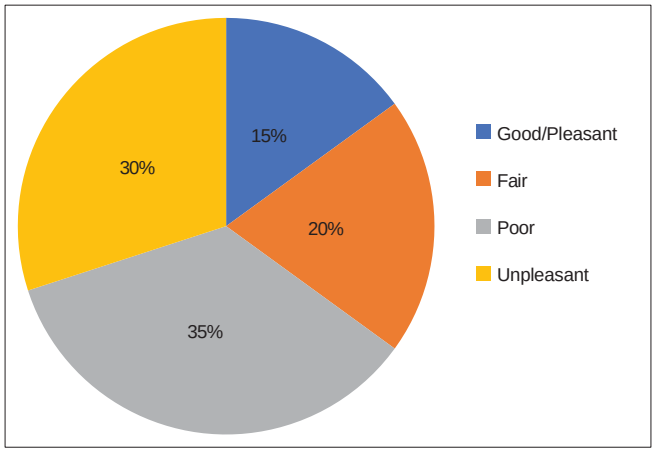

Figure 2: Dental experience of child

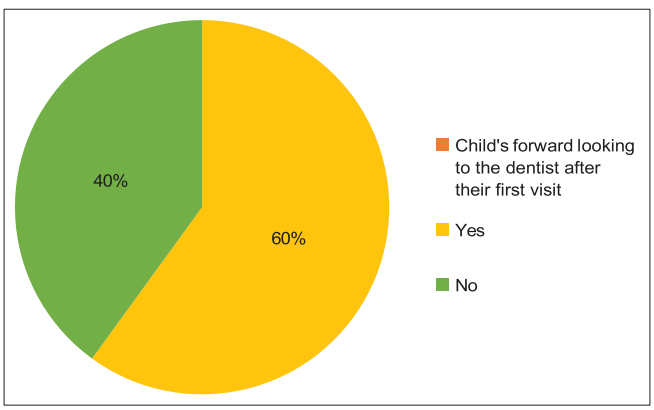

Figure 3: Child's forward-looking to the dentist after their visit

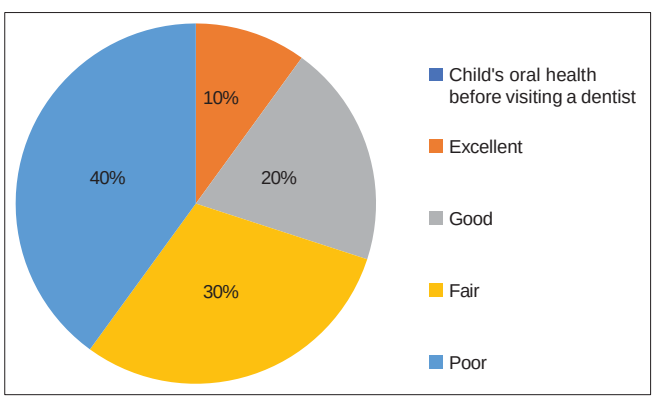

Figure 4: Child's oral health before visiting a dentist

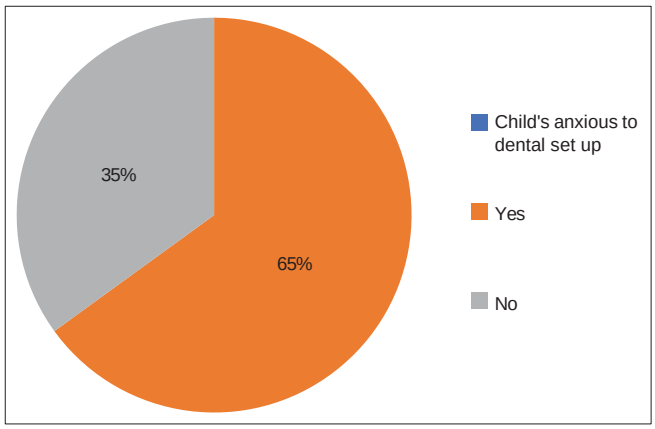

Figure 5: Child's anxious to dental set up

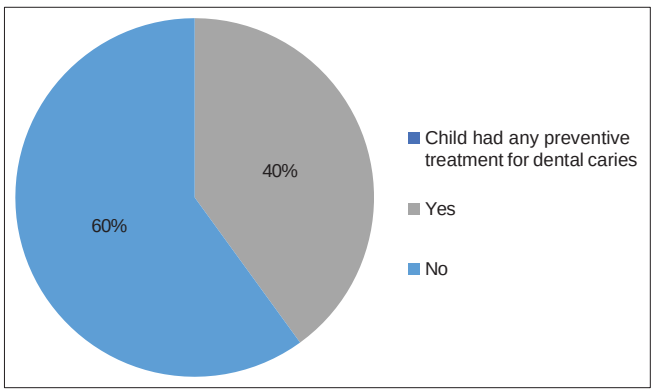

Figure 6: Child had any preventive treatment for dental caries

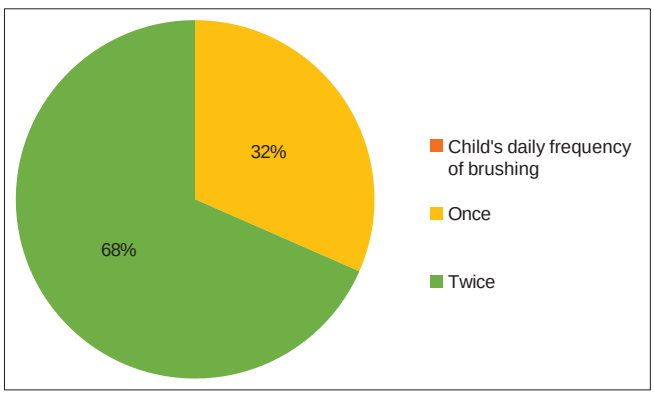

Figure 7: Child's daily frequency of brushing

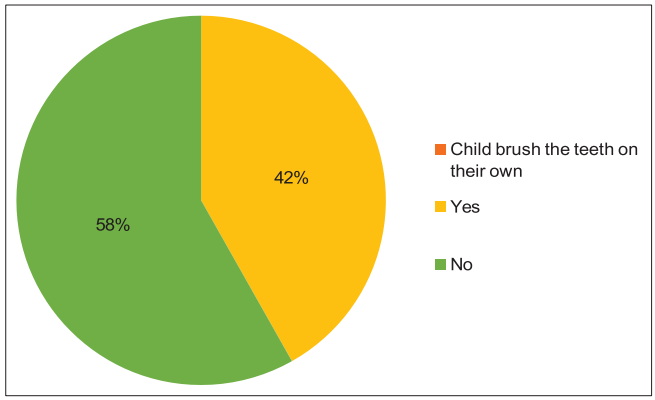

Figure 8: Child brushing habit

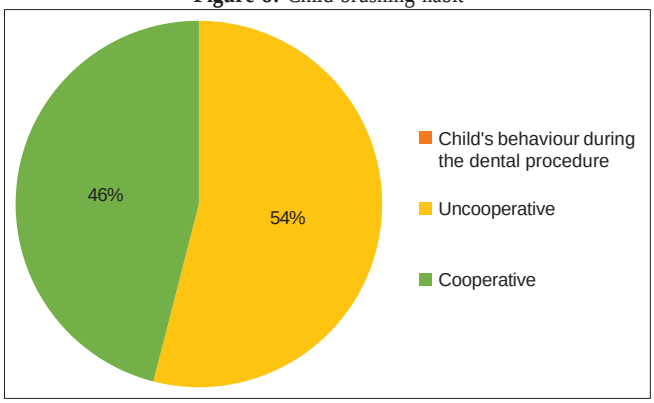

Figure 9: Child's behavior during the dental procedure

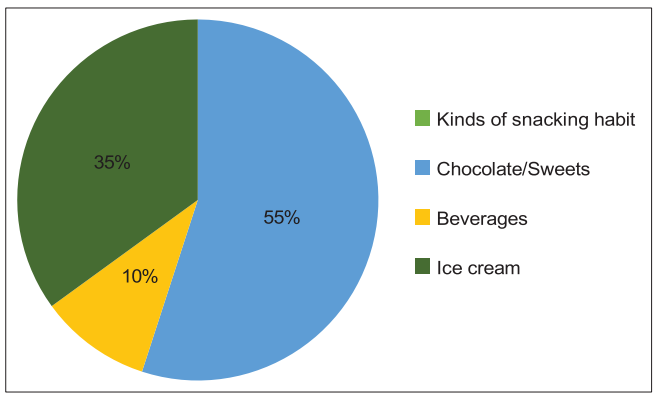

Figure 10: Snacking habit

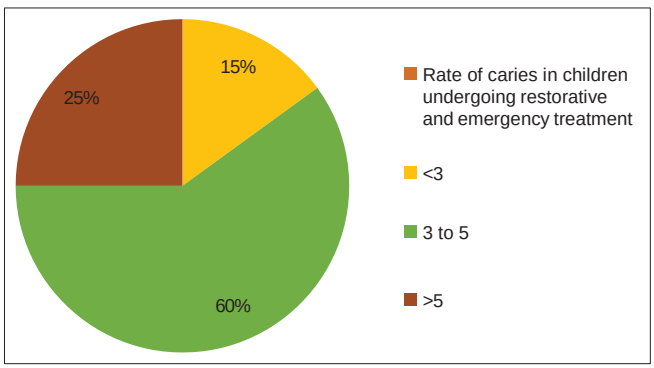

Figure 11: Rate of caries in children undergoing restorative and emergency treatment

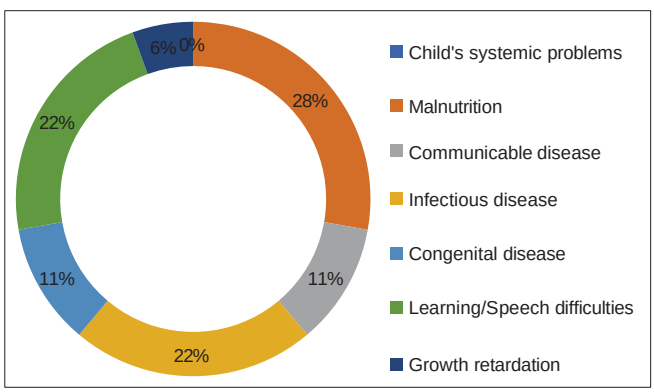

Figure 12: Child's systemic problems

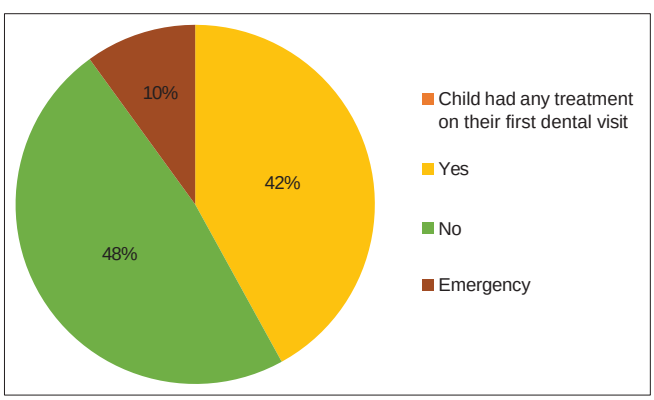

Figure 13: Child's treatment on their first dental visit

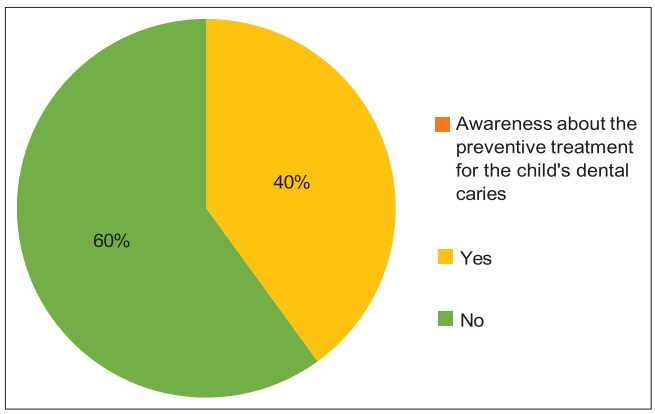

Figure 14: Child's awareness about the preventive treatment

DISCUSSION

This study aimed to assess the relationship between early dental experience and clinical/microbiological indicators of oral health status and dental anxiety at the time of admission to a dental clinic for oral health assessment of the children. Few children who visited to the dental clinic due to emergency visits had a dmft/S index of zero. The emergency in these cases was most likely not related to dental caries but to other causes, such as dental trauma. The preventive control had a significantly lower prevalence of caries and comprised the highest percentage of children without caries.

The oral health assessment showed that the child who underwent restorative treatment and emergency visits to the dental clinic had a higher caries risk than child who had preventive control treatmentand no prior dental visit groups. Our results are consistent with those of Wennhall *et al.*, who showed that an early start in oral health programs has a significant benefit in the prevention of caries and that the more children attend dental examinations, the lower the incidence of caries. In this study, children attending the dentist for the first time at six years of age did not exhibit significant differences in dmft/S scores compared to children who had previous preventive treatment. However, there was a significant difference in the caries component, with higher values for the Non-Visitors to the dental clinic than children whom already had preventive treatment groups. Therefore, while the values for the dmft/S index were similar, children who never had a dental visit had poorer oral health than children who attended Preventive treatment highlighting its importance.

Luoto *et al.*,[7] in which associations between Child Perceptions Questionnaire and dental fear were not statistically significant. This may be because nonschool going children are mainly street children, and among them, there is a false impression that dentistry is mainly involved with extraction and is a painful procedure that may be further complicated by the wide range of health problems, including malnutrition, communicable and infectious disease, poor oral health, cognitive disorders and learning difficulty.[8] The study showed that subjects who rated their oral health as poor had higher levels of dental anxiety than those subjects who rated their oral health as good or average, this was in accordance with the findings by Locker and Liddell,[9] Doerr *et al.*[10]

Contrary to the findings of Erten *et al*.,[11] Skaret *et al*.,[12] Hägglin *et al*.[13] the results from the present study showed no significant difference in dental attendance based on anxiety level and this was similar to the reports from Indian studies by Acharya,[14] Malvania and Ajithkrishnan[15] but contrary to the findings of Pavi *et al*.,[16] Stole *et al*.[17] The relationship between dental anxiety and socioeconomic status has not been clearly determined. In this study uneducated patients and patients with less or no income had no knowledge about their child's dental caries preventive treatment; this is in accordance with other studies.[18,19]

CONCLUSION

Based on the results of this study, the following conclusion can be made

1. Prior dental experiences of 6-year-old children were directly related to their dental caries experience
2. Children who had preventive visits and those who had never seen a dentist before had low rates of dental caries
3. Patients have low percentage of the dental visit for their preventive treatment due to the unawareness of their parents
4. OHI-S and dental anxiety levels showed no statistically significant differences among the types of previous dental experiences.

Dental anxiety refers to the fear of going to the dentist. It exists in a considerable number of children and it is a major plight and concern in pediatric dental practice.[20]

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Nil.

Conflicts of interest
There are no conflicts of interest.

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