

# Knowledge of Care Providers Regarding the Oral Health Care of Visually Impaired Children

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**Objective:** To assess the awareness of care providers of visually impaired children regarding their oral hygiene. **Method:** A simple pre-structured questionnaire was given to the care providers and the awareness regarding their oral health was assessed. **Results:** There was a general lack of awareness among the care providers of these children regarding dental diseases and its prevention. Furthermore, the importance of oral hygiene was found to be very low. **Conclusion:** The results obtained showed that most of the caretakers were unaware of the difficulties faced by these children in the maintenance of their oral health.

**Keywords:** Visually impaired children, awareness, attitude, care providers.

## INTRODUCTION

Parents' responsibilities include supervising and maintaining their young children's oral hygiene and dietary routines. Parents also play an important role in formation of their children's oral hygiene and dietary habits. It has been reported that parents with good oral health knowledge can play a better role in maintaining optimal oral health in their children. Oral health knowledge is of greater importance in parents of children with special care needs.<sup>1</sup>

Visually impaired children are challenged in learning everyday skills, maintaining proper oral hygiene being one. These children have been found to have poorer oral hygiene as compared to their sighted peers. Adequate instructions towards proper care of the teeth and oral tissues is essential.<sup>2,3</sup>

The maintenance of oral hygiene is important for preventing the development of periodontal disease and dental caries. The visually impaired depend much more on noise, speech and touch to orient themselves to a situation. They are to be encouraged to ask questions to relieve fears and apprehension often caused by their visual impairment.<sup>1</sup> Since there is a paucity of data regarding the knowledge of care providers towards the oral health of the visually impaired children, this study was carried out.

## MATERIALS AND METHOD

221 blind children from various blind centers were randomly selected and a simple pre-structured questionnaire was given to their care providers to assess their knowledge regarding the oral health of these children including dental visits, oral hygiene practices, possible causes of tooth decay, importance of fluoride. The questionnaire was made available in both English and Kannada. Details of these questionnaires were discussed with the school teachers/wardens before it was distributed. The results were subjected to chi square analysis.

## RESULTS

Two hundred and twenty one questionnaires were distributed, out of which 209 care providers and 12 parents completed the questionnaires. Of the 221 children, 209(94.6%) of the children lived with the care providers while only 12 (5.4%) of them lived with their parents. 52.9% of the children brushed their teeth using tooth paste and brush and 47.1% used tooth paste and powder. All the children brushed their teeth only once a day. In addition, all the children practiced unsupervised tooth brushing. Knowledge about the fluoride content in the toothpaste used by these children was notably absent amongst the care providers. None of the care providers used dental floss as an aid in cleaning their child's teeth. Only 9.1% of the care providers advised tongue cleaning. Powered toothbrushes were not provided to any of these children nor had any modifications been done to their toothbrushes or any new methods taught to these children to brush their teeth. The recommended change for toothbrushes once in 3 months was not followed by any of the care providers. 28.6% of the children complained of tooth ache and remaining did not. 66.5% of the care providers were aware of the problems affecting the teeth of their children. Only 54.7% of the care providers were aware that accumulation of deposits on the tooth surface would cause dental diseases.

54.7% of the respondents were aware that daily removal of deposits through tooth brushing is essential to prevent dental disease. Almost all the care providers were aware that frequent consumption of sweets could induce tooth decay. 16.3% of the children had unrepaired fractured anterior teeth. None of the care providers were

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**Table 1.** Questionnaire to the Care providers

Questions asked	FREQUENCY	PERCENTAGE
Use of tooth paste and brush	117	52.9
Tooth powder and brush	104	47.1
Brushing of teeth only once daily	221	100
Unsupervised brushing	221	100
No use of powered/ electric tooth brush	221	100
Aware of any problem affecting the teeth	147	66.5
Unaware of any problem affecting the teeth	72	33.5

aware of any fluoride therapies as a preventive measure for dental caries. 66.1% of the respondents observed bleeding from gums of the blind children while brushing. 42.2% of the care providers had never taken their child to a dentist. Out of the 128 children who had dental consultations, 6.4% received treatment. 5.9% of the respondents noticed irregularities in alignment/arrangement of teeth in these children. However, all the care providers felt that there was a need for special dental care for the blind. (Table 1)

**DISCUSSION**

The sensory modalities are often taken for granted as long as they function normally. However, when this functioning is interfered by illness or medication, perception of our environment may be affected. It is through the senses that we learn about our world; therefore, the development of a child maybe severely compromised by loss of one or more of the sensory modalities.<sup>4</sup>

Frequently, there is a lack of understanding by the family of children with disabilities of the need for dental treatment. Often these families are so emotionally, physically and financially disturbed to attend the child’s medical condition that they find it difficult to keep dentistry at the forefront of their minds.

The present study was an effort to assess basic information on oral health care knowledge of parents/care providers of the visually impaired children. It was interesting to note that none of these children, who are usually less self-sufficient than normal children, got any assistance from their care providers in tooth brushing. All children practiced unsupervised brushing. This reveals the profound lack of awareness of the care providers regarding the special problems that these children face in maintaining their oral hygiene. The lack of supervision during tooth brushing could also be attributed to the preoccupation of the care providers with other demanding aspects of health care in these children. The awareness of fluoride in the tooth-paste and their caries preventive properties and the need for use of dental floss for interproximal cleaning was totally lacking in them.

None of the care providers changed their child’s toothbrush in the recommended period of three months. Knowledge on the use of powered/electric tooth brushes and their efficacy in effective

cleaning or any other innovative measures for oral care was absent. 45.3% of the respondents were not aware that accumulation of deposits on the tooth surface would cause dental decay and/or gum disease and that the daily removal of these deposits through tooth brushing was essential to prevent dental disease. This reveals a general lack of awareness about the causative factors and progression of oral diseases. Only 16.3% of the respondents were aware that their child had unrepaired fractured anterior teeth which show the ignorance of the care providers regarding these children. Almost half (42.2%) of the care providers interviewed had never taken their child to the dentist. Out of 221 children only 128 were taken to the dentist by their caretakers, out of which just 14 children sought dental treatment when they suffered from pain. The high number of children with decayed teeth along with lack of dental consultation shows that these children have unmet preventive and restorative treatment need. However, almost all the care providers interviewed felt the need for regularized professional dental care for these special children.

The results of this survey display the ignorance and apathetic attitude of majority of the care providers towards the oral health of these children. Most of the care providers did not know the importance of oral health and the unique problems faced by the blind child in maintenance of their oral health. It was seen that almost half the children have never received any form of professional dental health care/consultation. To improve the oral hygiene status of individuals with disabilities is a daunting task, but it can be achieved if the parents or guardians are given suitable dental health education.<sup>5-7</sup> As both oral health status and disability are related to the patient’s social acceptability, it is important for disabled children to have proper oral hygiene.<sup>8-11</sup> Fortunately for children with sensory disabilities affecting sight, a variety of innovative teaching methods and technical aids are available to enhance their development towards a meaningful and productive life. These techniques are most effective when introduced early. Therefore early screening and intervention programs are essential. Education and motivation of the care providers of the visually impaired children is vitally important towards improving and maintaining the oral health and hence the overall general health of these children.<sup>12</sup>

**CONCLUSION**

The results shows that the attitude and awareness of the care providers towards the oral health care of the visually impaired children was not satisfactory and that there is a need for a specific education program to strengthen the importance of oral care in these children.

**Recommendations to the care providers**

- Daily oral hygiene practices should be encouraged including tongue cleaning and preferably supervised by care providers. Use of dental floss is also recommended for children above 8 years.
- Care providers should be instructed that these children should perform oral hygiene procedures twice daily, once after breakfast and just before bedtime.
- Regular professional dental consultation and care for every child should be emphasized from birth, once every 6 months.

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**APPENDIX A:**

**QUESTIONNAIRE TO PARENTS / CARE TAKERS REGARDING THE ORAL HEALTH OF THEIR CHILD/WARD**

1. Name and address of the person who is supplying the information \_\_\_\_\_.
2. Relationship with the child \_\_\_\_\_  Father  Mother  Others  If 'others' please specify \_\_\_\_\_
3. With whom does the child live? Parents  Others  If 'others' please specific \_\_\_\_\_
4. How does your child clean his/her teeth?  Toothpaste & brush  Tooth-powder & brush  
 Toothbrush alone  Toothpaste & finger  
 Tooth powder & finger  Charcoal powder  
 Other methods Please specify \_\_\_\_\_
5. How often does your child brush?  Once a day  Twice a day  
 More than twice  Sometimes not even once a day
6. Does the toothpaste used by your child contain fluoride?  Yes  No  Don't know
7. Who usually cleans your child's teeth?  Child alone  Child with others assistance
8. Is 'Dental floss' used to clean you child's teeth?  Yes  No
9. Do your advice tongue cleaning for your child?  Yes  No
10. Are powered / electric toothbrushes used instead of manual toothbrushes?  Yes  No
11. Are any modification done to the tooth brush of the child?  Yes  No  If yes specify \_\_\_\_\_
12. Were any new / innovative methods used to teach the child how to brush the teeth?  Yes  No
13. How often do you change your child's brush?  a) Once a month  b) Once in 2 months  
 c) Once in 3 months  d) More than 3 months
14. Do you notice foul breath in your child?  Yes  No
15. Does your child ever complain of toothache?  Yes  No
16. Are you aware of any problems affecting the teeth of your child?  Yes  No  If yes specify  
 a) Color change / white spots  b) Holes in the teeth  
 c) Fractured teeth  d) Deposits on tooth surfaces  
 e) Any other Specify \_\_\_\_\_
17. Are you aware that accumulation of deposits on tooth surfaces cause dental caries (decay) and / or gum disease?  Yes  No
18. Are your aware that daily removal of these deposits through tooth brushing is essential to prevent dental disease?  Yes  No
19. Are you aware that frequent consumption of sweets can cause tooth decay?  Yes  No
20. Has your child ever sustained injury in the teeth or jaws?  Yes  No
21. Are you aware that fluoride therapy will reduce the incidence of dental decay?  Yes  No

22. Have you noticed bleeding from the gums in your child while brushing?  Yes  No
23. Are you aware of any other problems affecting the gums of the child?  Yes  No  
 If yes, what is the problem?  a) Redness  b) Bleeding  
 c) Ulcers  d) Any other Specify \_\_\_\_\_
24. Do you think there is any problem affecting the other soft tissues in the mouth of your child?  
 If yes, what is the problem?  a) Ulcers  b) White patches  
 c) Boils  d) Any other Specify \_\_\_\_\_
25. Did you notice any of these habits in your child?  
 Nail biting  Lip biting  
 Mouth breathing  Thumb / digit sucking  
 Tongue Thrusting  Teeth grinding during sleep  
 No habit  Don't know
26. Did you notice any irregularities in the alignment/arrangement of your child's teeth?  Yes  No
27. Has your child ever been seen by a dentist?  Yes  No

**If yes answer the following questions from 28 to 30**

28. What type of dental treatment did your child receive so far?  Only check up done  Treatment specify \_\_\_\_\_
29. How often do you take your child to the dentist?  a) Once in 3 months  b) Once in 6 months  
 c) Once a year  d) Only when there is a problem
30. Where do you take your child for dental care?  a) General private dentists  b) Specialist in children's dentistry  
 c) School dental program  d.) Govt. Hospital / Public health center  
 e) Dental college hospital
31. Do you feel there is a need for special dental care for the blind child?  Yes  No
32. Do you have any suggestions to improve the dental care of your child in the future?

