

ORIGINAL RESEARCH

Assessment of DMFT index among deaf children of a known population: A cross-sectional study

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ABSTRACT

Background: The American Health Association defines a child with disability as a child who for various reasons cannot fully make use of all his or her physical, mental and social abilities. Hence; the present study was undertaken for analyzing DMFT index among deaf children of known population. **Materials & methods:** A total of 200 deaf children within the age range of 10 to 17 years were enrolled Complete demographic and clinical details of all the patients were obtained. Oral examination was carried out. DMFT index was assessed. All the oral examination procedures were carried out in the presence of parents/guardians. **Results:** Mean DMFT index among males, females and overall was 2.35, 1.86 and 2.12 respectively. Mean Dft index among males, females and overall was 0.38, 0.25 and 0.32 respectively. **Conclusion:** Deaf children are associated with compromised oral health status with males having more poor oral health status in comparison to female children.

Key words: Deaf, DMFT

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INTRODUCTION

The disabled form a considerable section of the community, and it is estimated that there are about 500 million people with disabilities worldwide and they are on the increase in proportion to the general population. The American Health Association defines a child with disability as a child who for various reasons cannot fully make use of all his or her physical, mental and social abilities. Patients with disabilities consist of a unique population deserving special consideration. Previously, they have been ignored or even hidden away in institutions.¹⁻³

Oral health of these children depends on age, type of disability, severity of impairment and living conditions. Other factors that cause high caries prevalence, poor oral hygiene and high proportion of untreated lesions are parents and caregivers lack of information, knowledge and care about oral health of disabled children, their socio-economic status and education level. Many individuals with special needs may have great limitations in oral hygiene performance due to their manual dexterity, sensory and intellectual disabilities, and so are prone to poor oral health.⁴⁻⁶ Hence; the present study was undertaken for analyzing DMFT index among deaf children of known population.

MATERIALS & METHODS

The present study was undertaken for analyzing DMFT index among deaf children of known population. A total of 200 deaf children within the age range of 10 to 17 years were enrolled Complete demographic and clinical details of all the patients were obtained. Oral examination was

carried out. DMFT index was assessed. All the oral examination procedures were carried out in the presence of parents/guardians. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software.

RESULTS

62.5 percent and 37.5 percent of the patients belonged to the age group of 10 to 13 years and 14 to 16 years respectively. 58.5 percent and 41.5 percent of the patients were males and females respectively. Mean DMFT index among males, females and overall was 2.35, 1.86 and 2.12 respectively. Mean Dft index among males, females and overall was 0.38, 0.25 and 0.32 respectively.

Table 1: Demographic data

Variable		Number of patients	Percentage
Age group	10 to 13	123	62.5
	14 to 17	77	37.5
Gender	Males	117	58.5
	Females	83	41.5

Table 2: DMFT index

Variable	DMFT	Dft
Male	2.35	0.38
Female	1.86	0.25
Overall	2.12	0.32

DISCUSSION

Dental care is the most common unmet need of disabled children. Good oral health is imperative for proper mastication; appearance and speech. Children with disabilities appear to have poorer oral health than their non-disabled counterparts. Variable access to dental care, inadequate oral hygiene and many other disability-related

factors may account for differences however their diet, medication, physical limitations, lack of oral hygiene and the attitude of their parents and the health care providers all contribute to the poor oral health. Individuals with various impairments have greater limitations in oral hygiene performance due to their potential motor, sensory and intellectual disabilities and are thus are prone to poor oral health.^{5- 8} Hence; the present study was undertaken for analyzing DMFT index among deaf children of known population.

62.5 percent and 37.5 percent of the patients belonged to the age group of 10 to 13 years and 14 to 16 years respectively. 58.5 percent and 41.5 percent of the patients were males and females respectively. Venugopal K Reddy et al compared the oral hygiene status and dental caries experience among institutionalized visually impaired and hearing impaired children of age between 7 and 17 years in Bhopal city of Madhya Pradesh located in Central India. A total of 95 hearing impaired and 48 visually impaired children of age between 7 and 17 years were recruited from special care institutions (one institution of hearing impaired and two institutions of visually impaired) in Bhopal city. Information related to different study variables was obtained from both groups. Oral hygiene index simplified (OHI(S)), decayed,extracted, filled teeth (deft and DECAYED, MISSING, FILLED TETHH (DMFT)) indices were used to record the oral hygiene status and dental caries experience. Mean OHI(S) score for hearing impaired was 1.15 ± 0.72 while it was 1.51 ± 0.93 for visually impaired children ($P < 0.05$). Mean DMFT score was 1.4 ± 1.95 and 0.94 ± 1.45 among hearing impaired and visually impaired respectively. The hearing impaired had a mean deft score of 0.47 ± 1.01 and in visually impaired it was 0.19 ± 0.79 and the difference was statistically significant ($P < 0.05$). Oral hygiene status of hearing impaired children was better than visually impaired and the difference was statistically significant.⁹ Z Al-Qahtani et al determined the caries experience and oral hygiene status in blind, deaf and mentally retarded female children in Riyadh, Saudi Arabia. All (N=218) the 6-7-year-old and 11-12-year-old blind, deaf and mentally retarded female children registered with the Presidency of Girls' Education schools in Riyadh were examined for dental caries and oral hygiene in a dental operatory setting. All (100%) the blind 6-7-year-old had caries with a mean dmft score of 6.58 (SD 2.02). The caries prevalence in blind 11-12-year-olds was 88.2% with a mean DMFT score of 3.89 (SD 2.67). Among 6-7-year-old blind children 8.3 %, and in 11-12-year-old blind children 29.4% had good oral hygiene. The caries prevalence in deaf 6-7-year-olds was 95.7% with a mean dmft score of 7.35 (SD 3.51). The caries prevalence in 11-12-year-old deaf children was 93% with a mean DMFT of 5.12 (SD 3.45). Less than one-fifth (17.4%) of the 6-7-year-old deaf children and only 7.0% of 11-12-year-old deaf children had good oral hygiene. The caries prevalence in mentally retarded 6-7-year-old was 93.9% with a mean dmft of 8.00 (SD 4.1). All the mentally

retarded 11-12-year-old had carious teeth with a mean DMFT score of 5.81 (SD 2.95). Only 3.1% of the mentally retarded 6-7-year-old and none of the mentally retarded 11-12-year-olds had good oral hygiene. Caries prevalence and severity in all the three groups of female special children were very high, and the number of children with good oral hygiene was very low.¹⁰

In the present study, Mean DMFT index among males, females and overall was 2.35, 1.86 and 2.12 respectively. Mean Dft index among males, females and overall was 0.38, 0.25 and 0.32 respectively. Manish Jain et al assessed the prevalence of caries and treatment needs among 127 institutionalized subjects aged 5-22 years attending a special school for students with hearing impairment in Udaipur City, Rajasthan, India. The data were collected using the methods and standards recommended by the WHO for oral health surveys, 1997. Dentition status and treatment needs along with DMFT, DMFS, dmft, dmfs were recorded using a Type III examination procedure. ANOVA, chi-squared test and multiple regression analysis were conducted using the SPSS software package (version 11.0). The mean DMFT was 2.61. Of the 127 subjects, 111 (87.4 %) needed treatment. Filling of one tooth surface was necessary for 79.5% of the subjects. Pulp treatment was needed in less than 7%. There was a high prevalence (83.92%) of decayed teeth, whereas only 7.14% of subjects had filled teeth. Multiple regression analysis showed that DMFT had a close association with age. Linear regression analysis revealed that age explained a variance of 32% and 25.4% for DMFT and dmft respectively. The findings of this study demonstrated that young people with impaired hearing in this region have a high prevalence of dental caries, poor oral hygiene, and extensive unmet needs for dental treatment.¹¹

CONCLUSION

Deaf children are associated with compromised oral health status with males having more poor oral health status in comparison to female children.

REFERENCES

- 1.J Ainamo, D Barmes, G Beargrie. Development of WHO Community Periodontal Index for treatment needs. *Int Dent J.* 1982;32:281–291. [PubMed] [Google Scholar]
- 2.Organization World Health. Oral health surveys basic method, 4th ed. Geneva:WHO. 1987:760–871.
- 3.K Pieper, B Dirks, P Kessler. Oral hygiene and periodontal disease in handicapped adults. *Community Dent Oral Epidemiol.* 1986;14:28–30
- 4.Simon ENM, Matee MI, Scheutz F. Oral Health Status of Handicapped Primary School Pupils in Dar Es Salaam, Tanzania. *East African Medical Journal.* 2008;85(3):113–117.
- 5.Desai M, Messer LB, Calahce H. 1. Vol. 46. Australia: Australian Dental Journal; 2010. A study of dental treatment needs of children with disabilities in Melbourne; pp. 41–50.
- 6.Jain, et al. Oral health status of mentally disabled subjects in India. *Journal of Oral Science.* 2009;51(3):333–340.
- 7.H Vignehsa, G Soh, G Lo, N Chellappah. Dental health of disabled children in Singapore. *Aust Dent J.* 1991;36(2):151–156.

8. A Pradhan, GD Slade, AJ Spencer. Factors influencing caries experience among adults with physical and intellectual disabilities. *Community Dent Oral Epidemiol.* 2009;37(2):143–154.
9. Venugopal K Reddy 1, Kshitij Chaurasia, Ajay Bhambal, Ninad Moon, Eshwar K Reddy . A comparison of oral hygiene status and dental caries experience among institutionalized visually impaired and hearing impaired children of age between 7 and 17 years in central India. *J Indian Soc Pedod Prev Dent.* Jul-Sep 2013;31(3):141-5.
10. Z Al-Qahtani 1, A H Wyne. Caries experience and oral hygiene status of blind, deaf and mentally retarded female children in Riyadh, Saudi Arabia. *Odontostomatol Trop.* 2004 Mar;27(105):37-40.
11. Manish Jain 1, Anmol Mathur, Santhosh Kumar, Rushabh J Dagli, Prabu Duraiswamy, Suhas Kulkarni. Dentition status and treatment needs among children with impaired hearing attending a special school for the deaf and mute in Udaipur, India. *J Oral Sci.* 2008 Jun;50(2):161-5.