



An Assessment of Oral Health Status and Treatment Needs of Institutionalized Differently Abled Persons in Chennai City – a Cross Sectional Survey

* Dr. M. Dinesh Dhamodhar ** Dr. P. D Madan Kumar
 *** Dr. S. Shyam **** Dr. I. Nandabalan

* ** , *** , **** Ragas Dental College and Hospital, Chennai.

ABSTRACT

Background: Oral health affects the general health and vice versa. Differently abled individuals are highly likely to neglect their oral health due to their disability. This study was undertaken to assess the oral health status of the institutionalized differently abled individuals in Chennai city, Tamilnadu and thereby formulate an intervention based on the results obtained.

Objectives: To assess the oral health status and treatment needs of institutionalized differently abled individuals in Chennai city.

Materials and methods: After obtaining ethical clearance, a cross sectional survey was conducted among 95 institutionalized differently abled individuals. Type III oral examination was done by a single investigator and W.H.O oral health assessment form 1997 was used for recording their oral health status. Data analyses were carried out using SPSS version 19.

Results: Among the study population, 72 were males and 23 were females. Majority (n = 43) of the study population belonged to the age group of 13-20 years. The mean DMFT for males was 1.78 and for females it was 2.48 (p > 0.05). About 12 % of the subjects were periodontally healthy while 83.2% of the subjects had bleeding on probing and calculus and 7.35 % had pocket formation. The prevalence of enamel hypoplasia was 6.38%.

Conclusion: The periodontal status of the study population was poor. Further, they had higher prevalence of malocclusion.

Keywords : Differently abled population, institutionalized individuals, oral health status, treatment needs

INTRODUCTION

The WHO defines disability as a “restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being” – a functional limitation or activity restriction by an impairment¹. Impairment would mean “any loss or abnormality caused of psychological, physiological or anatomical structure or function such as loss of limb, organ or other body structure, as well as defects or loss of a mental function¹.

Impairment might be physical, mental or social. It might manifest as loss of mobility, loss of dexterity due to physical impairment and loss of a part of body affecting their ability to hold any object firmly. On the other hand Mentally differently abled individuals have compromised listening ability and low IQ (Individual quotient), thereby affecting their ability to interpret and follow instructions. Their stress and anxiety takes a toll on their general health and they usually resolve to eating delicious food, as a stress reliever which is an unhealthy diet pattern.

The above mentioned factors also inturn affect the ability to maintain oral health. Tooth brushing is a very simple and effective method for removing daily dental deposits and for preventing dental diseases. However, it can cause considerable manipulative difficulties among some populations, e.g., young children, physically handicapped and mentally retarded patients due to loss of manual dexterity as a result of poor psychomotor skills. Low IQ(Intelligence quotient) also comes in the way of understanding and responding to oral hygiene instructions. A significantly higher prevalence of caries (89.1%), malocclusion, and poorer periodontal status was observed among children with special health care needs compared to the healthy control group².

As per the Census data 2001, total population of differently abled persons in India is 2,19,06,769 of which 16,42,497 reside in the state of Tamil Nadu ³. A sum of Rs.170.88 lakhs

has been provided in the Budget Estimate for the year 2012-2013 for EARLY INTERVENTION CENTRES FOR MENTALLY RETARDED CHILDREN scheme. Mentally Retarded persons with percentage of disability of 60% and above are given maintenance allowance of Rs.1000/- per month⁴. However all the funds are granted towards the general health and improving quality of life. There is negligence when the oral health is concerned. The individuals depend on tertiary health centres like dental hospitals for dental care delivery. The individuals also depend on care takers to do the needful regarding the maintenance of oral health. The present study was contemplated to assess the oral health status of institutionalized differently abled individuals in Chennai city so as to initiate a comprehensive oral health care program for the subjects with special health care needs.

MATERIALS AND METHODS

Sampling procedure:

Ethical clearance was obtained from the Institution Review Board. There are 183 institutions for differently abled individuals in Chennai city. A convenient sample of 95 institutionalized differently abled individuals were selected from three randomly selected institutions in one of the zones.

Eligibility criteria –

Individuals whose intellectual quotient score was below 70 and those individuals who were present on the day of examination were included. Written consent was obtained from the parents or their care-takers at the institution. The individuals who cannot cooperate because of their disability, those who refuse to open the mouth for oral examination and those subjects who exhibits violent behaviour towards the examiner were excluded from the survey .

Oral examination:

A single calibrated examiner carried out the examination. Assessment of oral health status and treatment needs was carried out using W.H.O preforma 1997. ADA Type III exam-

ination was used to carry out both intraoral and extraoral examination. In order to conduct the study, the subjects were made to sit on an ordinary chair or a wheel chair with comfortable head rest facing the natural light in a upright position with sufficient headrest and the oral examination was carried out. A trained personnel for recording the data was seated on the left side of the patient close to the examiner, so that data recorder was able to hear the examiner's instructions and codes and also the examiner was able to see the data being entered.

STATISTICAL ANALYSIS:

The data was analyzed using SPSS(version 19). Mann whitney u test was used for the comparison of the difference in the DMFT status between males and females, difference in distribution of males and females based on highest CPI code, Severity of malocclusion between the male and female population was analyzed using Chi square test.

RESULTS :

The majority of the study population were males consisting 72 subjects. The mean DMFT of the population was 2.13 with the mean DMFT of male population being 2.43 and That of the female population was 1.78. Most of the subjects had gingivitis (table 1). Majority of the population had malocclusion (table 2). Four individuals were in need of pulp care. Thirteen individuals were in need of maxillary prosthesis. Fourteen individuals were in need of mandibular prosthesis.

DISCUSSION:

In the present study complete oral examination was done in all the subjects and their oral diseases were assessed and treatment needs were recorded. Some of the subjects also had physical disability apart from mental disability. The majority of the study population were males consisting of 72 subjects. The rest of the population consisting of females of 23 numbers. The mean DMFT of the present study is 2.13 which is line with a study conducted by Manish Jain et al⁵ in the year 2009 in Udaipur in which the mean DMFT of the subjects were 2.64.

In the present study (n=11)12% of the subjects had healthy gingiva which is more when compared to a study conducted by Siddibhavi et al. The reason may be attributed to personalized attention by the care takers and following proper oral hygiene measures by the subjects. In the present study the 25% (n=24) and 58%(n=55) of the subjects having gingivitis and calculus respectively which is in line with the study conducted by Siddibhavi et al¹. Seven percentage of the study subjects had periodontitis.

In the present study 83%(n=77) of the subjects had malocclusion which is less, as compared to a study conducted by Dinesh R. B. et al⁶. The reason may be attributed to the facilities provided by the care takers.

Due to lack of permission in some institutions, a convenient sample of 95 was chosen for the present study. Further studies are required to be conducted in all the zones of Chennai to know the prevalence of dental diseases among institutionalized differently abled individuals. The resulting identification of dental diseases and treatment needs among the differently abled individuals, will be helpful to improve their oral hygiene and quality of life.

CONCLUSION:

The present study shows poor oral hygiene and higher prevalence of periodontal diseases and malocclusion in the subjects which may be attributed to the lack of co ordination, understanding, physical disability or muscular limitations. Further studies are required to see assess the oral health status of differently abled individuals on a wider population.

Table 1 Comparison of highest CPI codes between male and female population

Highest CPI code	Males n(%)	Females n(%)
0	5(5.3%)	6(6.3%)
1	19(20%)	5(5.3%)
2	47(49.5%)	8(8.4%)
3	1(1%)	3(3.2%)
4	1(1%)	0(0%)

**Chi square value is 17.22
P value is 0.002**

Table 2 Prevalence of malocclusion

MALOCCLUSION ACCORDING TO DAI INDEX	NUMBER OF INDIVIDUALS
Minor malocclusion	44
Definite malocclusion	11
Severe malocclusion	7
Handicapping malocclusion	15
TOTAL	77

Table 3 Comparison of the difference of DMFT status and severity of malocclusion

	Male mean (S.D)	Female mean(S.D)
DMFT	1.78 (2.26)	2.48(3.03)
DAI score	27.62 (10)	22.70(10.68)

**Z value for DMFT is -0.66, Z value for DAI score is -1.91
P value for DMFT IS 0.51, P value for DAI score is 0.06**

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