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Status of Oro-Dental health problems and treatment needs among urban population of South-West Delhi

Madam,

Oral health is an integral part of general health.^[1] Two most common oral diseases, dental caries and periodontal diseases are strongly age related; exist in all population; varying only in severity and prevalence; and are irreversible. According to WHO Oral Health Report 2003, oral diseases are fourth most expensive disease to treat in most industrialized countries.^[1] Present study was conducted in Raj Nagar part 1 of South West Delhi, between Nov. 2005 and Dec. 2006 to assess the status and pattern of oro-dental health problems and treatment needs among residents of this area.

The study population was categorized into 5-15, 35-44 and >60 years, based WHO Oral Health

Survey (4th Edition), Basic Methods.^[2] A total of 418 subjects were covered (10% of the eligible population). Self made, semi structured interview schedule adopted from WHO was used for data collection. Individual signed consent was taken before data collection and oral examination procedure. For quality assurance, investigator had undergone two month training in Dept. of oro-dental surgery of the institution.

Out of 418 subjects who were interviewed 214 (51.1%) were in 5-15 years; 141 (33.7%) in 35-44 years and 63 (15.2%) in >60 years age group, respectively. Females were 55.9%, illiterate (78, 18.7%); and Hindu were (406, 97.1%). Majority of study subjects were of middle socio-economic class (397, 95%) and belonged to general category (219, 52.4%) followed by SC (99, 23.7%); OBC (82, 19.6%); and ST (18, 4.3%) category.

Periodontal disease found to be commonest oro-dental morbidity [Table 1]. Mean number of the sextants per person showing calculus and bleeding on touching probe were 3.3 and 3.8 respectively, severity of which increases with age. Mean number of excluded sextants (sextant without teeth or less than two teeth without disease) among 35-44 and >60 year were 0.23 and 2.05, respectively. Edentulousness was present in (2, 1.4%) and (9, 14.5%) among 35-44 and >60 year of age groups.

Mean DMFT (decayed, missed and filled teeth) index was 1.8, 4.81 and 13.4 among 5-15, 35-44 and >60 years, respectively. It was a decayed component 175 (82%) in 5-15 year and missed component 52 (83%) in >60 years which contribute maximum and filled component least. Dental fluorosis was present among 207 (49.5%) subjects. Enlarged lymph nodes were commonest extra oral lesion 107 (25.5%). Commonest mucosal lesion was ulceration on buccal mucosa of nutritional and traumatic origin. Precancerous condition like leukoplakia, lichen planus and Oral sub mucosal fibrosis (OSMF) constituted around 15 (3.5%) and it was more common in >60 year 7 (11.1%) as compared to 35-44 year 7 (4.9%).

Treatment needs were highest for filling 205 (49.8%) followed by preventive care 160 (38.3%) and other care. Almost one-fifth of study subjects of >35 years require extraction of their teeth. Out of 41 (65%) in >60 year who need prosthesis, only 11 (17.4%) were using any type of prosthesis.

Table 1: Pattern of oro-dental morbidity and treatment needs among study population

Oro-dental morbidity*	Age groups (n)			
	5-15 years (214)	35-44 years (141)	>60 years (63)	Total (418)
Mucosal lesion n (%)	16 (7.5)	35 (24.5)	13 (20.6)	64 (15.6)
Extra oral lesion n (%)	104 (49.1)	44 (30.8)	16 (25.4)	164 (39.7)
Dental caries n (%)	118 (55.7)	109 (76.2)	55 (87.3)	282 (67.5)
Periodontal disease** n (%)	NA	122 (85.3)	61 (96.8)	183 (89.7)
Dental fluorosis n (%)	89 (41.6)	88 (62.4)	30 (47.6)	207 (49.5)
Treatment need n (%)				
Preventive care	80 (37.4)	48 (32.0)	32 (50.8)	160 (38.3)
Filling	112 (52.3)	69 (48.9)	24 (38.1)	205 (49.8)
Crown	2 (0.9)	8 (5.7)	0 (0)	10 (2.4)
Pulp care	2 (0.9)	14 (9.9)	4 (6.3)	20 (4.8)
Extraction	7 (3.3)	24 (17.0)	13 (20.6)	44 (10.5)
Other care***	8 (3.7)	59 (41.8)	49 (77.8)	116 (27.8)
Total treatment need	131 (61.2)	105 (74.5)	63 (100)	299 (71.5)

*Responses are not mutually exclusive, **Periodontal disease has been assessed only in 35-44 and >60 years using CPI (community periodontal index) probe, ***other care includes the root canal treatment, prosthesis requirement

Oro-dental morbidity was less among more educated people, males, general cast and younger age group. However, none of the predictor reached significant level except for middle and older age people in which presence of disease is significantly more than younger age groups. Similar findings were there for treatment need for disease, except for female in which treatment need was significantly higher than males [Table 2].

Periodontal disease, found to be the commonest 187 (88.7%) oro-dental morbidity in our study, also reported by National oral health survey (NOHS) 2004,^[3] periodontal disease among 12-15, 35-44 and 65-74 years was (30-50%), (85.0%) and (90.1%), respectively. It has been reported that incidence of periodontitis increases with age, and much higher among subjects with poor oral hygiene.^[4] These findings reflect that prevalence and severity of periodontal disease increases with age due to cumulating infection inside the oral cavity. Our finding of high prevalence of dental caries and high mean DMFT index, also supported by NOHS 2004 (dental caries among 5-15, 35-44 and >60 year were 40-60%, 77.4 and 94% respectively)^[3] and other studies.^[5,6] We reported a higher prevalence of dental fluorosis (49.5%) as contrast to findings of NOHS 2004 (1.6-2.8%, 3.3% and 4.8% in 5-15,

Table 2: Logistic regression analysis for Socio-demographic predictors of disease occurrence and treatment need

Disease presence	N (%)	P value	Exp (B)	95.0% C.I. for EXP (B)	
				Lower	Upper
Illiterate	77 (98.7)				
Primary	162 (83.5)	0.414	0.409	0.048	3.494
Elementary	60 (90.9)	0.461	0.423	0.043	4.163
More than elementary	73 (91.2)	0.110	0.158	0.017	1.517
General	195 (89.0)				
SC	85 (85.9)	0.932	1.034	0.481	2.221
ST	16 (88.9)	0.580	1.575	0.315	7.865
OBC	76 (92.7)	0.305	1.679	0.624	4.519
Male	155 (84.2)				
Female	217 (92.7)	0.063	1.929	0.964	3.860
5-15 years	171 (79.9)				
35-44 years	138 (97.9)	0.000*	13.686	3.466	54.042
>60 years	63 (100)	1.000	9.948E12	0.000	.
Treatment needed					
Illiterate	69 (88.5)				
Primary	118 (60.8)	0.017*	0.331	0.133	0.822
Elementary	48 (72.7)	0.218	0.550	0.212	1.425
More than elementary	64 (80.0)	0.379	0.656	0.257	1.677
General	162 (74.0)				
SC	64 (64.6)	0.447	0.809	0.469	1.397
ST	11 (61.1)	0.960	0.974	0.342	2.772
OBC	62 (75.6)	0.929	1.029	0.546	1.942
Male	117 (63.6)				
Female	182 (77.8)	0.007*	1.944	1.199	3.151
5-15 years	131 (61.2)				
35-44 years	105 (74.5)	0.891	0.957	0.508	1.800
>60 years	63 (100)	1.000	1.192E13	0.000	.

*P value <0.05 considered to be significant

35-44 and >60 years respectively). This was due to high fluoride content in water in this area as shown by previous study.^[3] We found higher prevalence of extra oral lesions and mucosal precancerous lesion in present study than as reported by NOHS 2004, (precancerous lesion 3.4% among 65-74 years age group), which could be because of small sample size of our study as compared to NOHS 2004.

High treatment needs, as reported by us in form of filling, extraction, pulp care and prosthetic requirement also confirmed by other studies.^[7,8] It reflects a gap in requirement and usage of oral health services. Steps must be taken for improving oral health services and its integration into national and community health program, setting up of health promoting school and oral health information system.^[9,10]

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