

Oral Health Status and Treatment Needs of Primary and Middle School Teachers of Davangere City, Karnataka State, India

Sunitha S^{1*}, Mythri H², Vidya GD³ and Sushma R¹

¹Department of Public Health Dentistry, JSS Dental College and Hospital, Mysore, India

²Department of Public Health Dentistry, Siddartha Institute of Dental College, Tumkur, India

³Department of Oral Pathology, JSS Dental College and Hospital, Mysore, India

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*For Correspondence

Sunitha S, Department of Public Health Dentistry, JSS Dental College and Hospital, SS Nagar, Bannimantap Road, Mysore 270015, India,
Tel: 91-9986226392.

E-mail: drsunitha_s@rediffmail.com

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ABSTRACT

Background and objective: School teachers are among best available health personnel who help in improving the health of the community. Few studies conducted regarding knowledge, attitude and practices of the teachers. There is no available data regarding their oral health status which may cast an indirect impact on the children. Thus, the objective of this study is to assess the Oral Health Status and Treatment Needs of primary and middle school teachers of Davangere city, Karnataka.

Methods: Using stratified random sampling technique, 300 school teachers were selected. Personal data was collected by questionnaire and oral health examination was conducted as per WHO Criteria of 1997. The simplified oral hygiene index (OHI-S), periodontal status (CPI), dental caries status (DMFT) and prosthetic status and treatment needs were recorded and statistically analysed.

Results: Of total 300 teachers examined, 84.3% (n=253) were females and 15.7% (n=47) were males. The results were analysed based on age groups, area of location, education, gender and type of schools. The mean OHI-S score was 2.3 ± 1.2 . OHI-S ($P < 0.001$, HS), DMFT ($P < 0.01$, S), CPI ($P < 0.001$, HS), Prosthetic status and treatment needs ($P < 0.01$, S) scores increased with age. Mean dental caries experience DMFT was 2.3 ± 2.4 and DMFS 4.9 ± 6.7 ($P < 0.001$, HS), 95% needed health education and 38.6% needed complex periodontal therapy. No one was in need of a complete denture and only 19.6% needed partial dentures.

Conclusion: The teachers demonstrates, poor oral hygiene due to lack adequate of knowledge regarding oral hygiene. This study brings out the oral health status and treatment needs related to teachers. There is an imperative need for oral health education to the school teachers to make them help themselves, their students and the community.

INTRODUCTION

In every community and country, children are the most important natural resources. They must be at the very heart of 'development'. To achieve this potential, school children must participate fully in educational activities. To do this they must be healthy, attentive and emotionally secure. School is a location, which helps to promote the health of staff, families and community members along with that of the students^[1]. A school teacher hold influential, community gatekeeper, decision making roles that may affect not only student/family knowledge, but also their opinion and decision about the health are worth, and thus lead implementation of dental public health programs^[2]. It is through them that, children can be reached at the time the health habits are forming^[3].

Teacher's preparedness to teach about the link between personal habits and health outcomes reflect their beliefs about the oral health benefits accruing from carrying out those activities. Strengthening health beliefs in the presence of correct knowledge might successfully promote adoption and maintenance of oral health enhancing behaviours among teachers training, thereby improving their status as role models for the school children^[3]. The advantages of using school personnel are the potentials for reaching all the children for continuity in the instructions, and for integration of health and oral health with other activities and the

at 50-58 years), but MT was greater in older age group, it was zero at 18-20 years to 0.9 ± 1.4 at 50-58 years which was similar as compared with Varenne B, et al. [19].

In the present study there was no much difference between the DT (mean=1.3) or FT (mean=0.9) component of the older age group. This was in contrast with the results found in the study conducted at Syria by Beiruti N, et al. [20], where in they found the DT component to be major contributor to the DMFT scores in the younger than the older and MT to be major contributor in the DMFT of the older age group. This difference could be because of, the upper age limit of the study population being 58 years.

The highest mean of dental caries was in the age group of 50-58 years (DMFT 3.0 ± 2.0) wherein the major contributor was the DT (1.3 ± 2.1) followed by MT (0.9 ± 1.4). The result was similar when compared with Oral health survey and fluoride mapping Karnataka, India [10]. The high prevalence of dental caries and high DMFT/DMFS scores observed in this age group may be attributed to a long time presence and exposure of permanent teeth to oral environment almost extending 5-6 decades. It may also be due to the fact that the dental caries is a cumulative disease and DMF value shows the cumulative experience of caries and its consequences.

When the dental caries status was compared with regards to urban and the semi urban areas, there was no significance observed ($p > 0.05$). The mean DMFT in urban areas was 2.44 as compare with 2.10 in semi urban areas. Hardwick KS, et al. [21] conducted a study in Madagan Oblast which showed that there were lesser incidences of caries in the other areas as compared with that of towns. This might be given a reason as also found by the study conducted at Madagascar by Petersen PE, et al. [22] wherein they found that DMFT increases with urbanization.

The gender showed no significant findings in relation to dental caries occurrence as found by Thessaly et al. [23], Slade GD, et al. [24] whereas it was dissimilar to Alvarez-Arenal A, et al. [25], Kerosuo E, et al. [11], Jones CM, et al. [26], wherein they found higher caries experience among women.

When DMFT was tabulated in relation to the oral hygiene status of the total sample of teachers, it was observed to be significant i.e., as the oral hygiene status was poor the severity of occurrence of dental caries also was greater. Mean DMFT was 1.33 at good oral hygiene status to 2.76 at poor oral hygiene status. This finding was similar to Frentzen M, et al. [27]. The reason for this finding may be the microbial plaque, one common factor that increases the poor oral hygiene and dental caries.

Treatment Needs

It was observed that 8 (61.5%) of teachers who belonging to age groups 18-20 years. 55 (45.1%) of age group 21-30 years, 24 (34.3%) of age group 31-40 years, 16 (22.5%) of teachers belonging to 41-50 years and 2 (8.3%) of 51-58 years age group had no dental caries i.e., making up to 35% of overall population as caries free. An overall requirement of 41.3% of restoration need was observed as similar to the study held by Hescot P, et al. [27] with 48.8% requiring restoration for one or the other teeth. This requirement could be because of the negligence of oral health treatment needs by the elderly which is very commonly observed in the developing country. Thus the highest treatment need when compared to extraction was that of restoration which was similar to survey conducted in the eastern states of India by Mandal KP, et al. [28].

Oral Hygiene Status and Treatment Needs

The overall mean oral hygiene status was 2.3 ± 1.2 , which was near to findings by De la Maza FJ, et al. [13], Sendilkumar S, et al. [29].

The gender differences showed no significance with regards to oral hygiene status, which was not similar to findings by Alvarez-Arenal A, et al. [24] Ettinger RL, et al. [9] where they found that oral hygiene status was better in women [30].

As mentioned earlier with the raise in OHI-S scores, the scores of DMFT also increased as found by Frentzen M, et al. [26], Athanassouli T, et al. [22].

As mentioned earlier, there was significant raise in DMFT and CPI with poorer the OHI-S scores as the oral health is found to be inter related to each of them similar to the study conducted by Athanassouli T, et al. at Greece [22].

Periodontal Status

The periodontal condition of different age groups was measured by the CPI index with four different indicators bleeding, calculus, shallow pockets and deep pockets.

There was gradual increase in the CPI scores with age and almost doubled when it came to older age group as recorded by Gaengler P, et al. [12], Songpaisan Y, et al. [17], Frentzen M, et al. [27], Slade GD, et al. [24]. The occurrence of pockets also increased with increase in age. Similar to Songpaisan Y, et al. [17], Slade GD, et al. [31], Mosha HJ, et al. [14] Adegbembo AO, et al. [32], Gamonal JA, et al. [33], Brindle R, et al. [34], El-Qaderi SS, et al. [35], Hugoson A, et al. [36], Burt BA [37], Papapanou PN [38] this relationship is explained due to the prolonged exposure to risk factors over a person's life, creating a cumulative effect with time span.

Overall bleeding on probing was recorded in 157% (n=47) of total sample. It was higher in younger age groups when compared

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