



ORAL HEALTH STATUS OF GOVERNMENT SCHOOL TEACHERS OF PANCHKULA DISTRICT, HARYANA.

Dentistry

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ABSTRACT

Background: Childhood is the age when lifelong sustainable oral health related behaviors, beliefs and attitudes are being developed. Schools are important settings for health promotion. School teachers have a great potential for influencing the behavior of the child. **Objective:** To assess the Oral health status of government school teachers of Panchkula District, HARYANA. **Methods:** A Multistage probability sampling was used. The primary sampling unit comprised of Panchkula district. The teachers were selected by multistage cluster sampling method. The clinical examination of all the subjects was done by a single examiner. **Results:** A total of 380 subjects were examined. Out of 380 subjects, 280 were females and 100 were males. Among 25-34 years age group, there were 36 subjects, out of which 32 (11.4%) were females and 4 (4%) were males. Majority of the subjects i.e. 184 were in the age group of 35-44 years, out of which 150 (53.6%) were females and 34 (34%) were males. **Conclusion:** In the present study, the school teachers show satisfactory oral health status but they still have a lot of potential to improve their own oral health status and also disseminate good oral health practices among their students.

KEYWORDS

School teachers, Oral health status, health services research, informatics.

INTRODUCTION

Dental disorders are a significant public health burden in India and across the globe^[1]. The high prevalence of dental disorders like caries, malocclusion and lack of access to the required services leads to significant economic losses, manpower, absenteeism apart from the ill effects of the disease on the health of the person affected.^[2]

It is estimated that 50% of school children are suffering from dental caries and more than 90% of the adult population is affected by periodontal disorders^[3].

The importance of imparting lessons on hygiene to children had been recognized as early as 1878^[4]. Nyswader stated that the child cannot be helped to assume responsibility for his health through campaigns carried out by specialists, sound attitudes can be developed through unified teaching and through one source of instruction, the teacher^[5].

It is a well-known saying that a mediocre teacher tells, a good one explains, a superior one demonstrates but a great one inspires^[6]. In a study, Luo et al had concluded that compared with parent based oral health education, teacher based oral health education has a better effect on improvement of the oral health status among school students^[7].

Depending on local infrastructure and available resources, various approaches have been adopted by schools to promote oral health education. Some schools have incorporated a number of initiatives simultaneously while others have built on an existing established system of good practice in India^[8].

Teachers having good oral health status can play an important role in the implementation of various school-based health education and prevention programmes which aim at improving oral behavior and status of school children^[9]. However, there is paucity of literature on oral health status of government school teachers in Northern India. So, the present study was undertaken with the aim to assess the oral health status of government school teachers of Panchkula district, Haryana.

MATERIALS AND METHODS

The ethical clearance was obtained from the ethical committee of Swami Devi Dyal Hospital and Dental College, Barwala, Panchkula prior to the start of the study. Permission to conduct the study was obtained from the District education officer of Panchkula. The clinical

examination of all the subjects was done by a single examiner.

Prior to the start of the study, a pilot study was carried out on 30 government school teachers.

A multistage probability sampling was used. The primary sampling unit comprised of Panchkula district. The teachers were selected by multistage cluster sampling method and all the teachers who were available on the day of examination in the schools were examined till the desired sample size was achieved.

Inclusion Criteria:

1. Subjects who were regular teachers of government schools.
2. Subjects who were present on day of examination
3. Subjects who were willing to participate in the study.

Exclusion Criteria:

1. Subjects who were not present on the day of examination.
2. Subjects who were unwilling for examination.
3. Subjects who were medically compromised and those having any systemic disease.

The study was systematically scheduled to spread over a period of 6 months. The study was carried out during the months of March 2018 to August 2018. The study was conducted in natural day light and at a fixed time of the day i.e. 10.00 am to 1:00 pm and 2.00 pm to 4:00pm within government school premises. A maximum of 20 subjects were examined on each day. Battery operated torch was used in cases where proper illumination of the oral tissues could not be achieved with natural light. (ADA Type -III Examination). The details of each subject were recorded and entered in the appropriate places in the proforma.

The data collected was entered in the Microsoft word excel sheet 2007 version and processed using the SPSS version 20 software package (SPSS Inc. Chicago, IL, U.S.A). Cohen's kappa statistics was used to assess the intra examiner reliability. The statistical procedures included the Chi square test, one -way ANOVA and t-test. The significance for all statistical tests was predetermined at a probability value of 0.05 or less.

RESULTS

Out of 380 subjects, 280 were females and 100 were males. Majority of

the subjects i.e. 184 were in the age group of 35-44 years, out of which 150(53.6%) were females and 34 (34%) were males. In all the age groups, the majority were females. In the study, majority of school teachers 207(54.5%) were postgraduates. Total mean DMFT in the present study came out to be 6.9 ± 2.7 for females and 10 ± 2.1 for males. Ninety one subjects had gingival bleeding, out of which 55 (60.5%) were females and 36 (39.5%) were males. Out of 380 subjects, 316(83.1%) had no oral mucosal lesion among which 270(85.85%) were females and 46(14.5%) were males. Among 380 subjects, 350 subjects showed no sign of injury.

DISCUSSION:

In the present study, majority of the teachers were females (73.7%) as compared to males. This can be attributed to the fact that teaching is a profession dominated by females. Most (54.5%) of the teachers in the present study were post graduates. These findings were in accordance with Maranhao MC et al (2014)^[10] who conducted a study on school teachers in Maceio, Brazil, in which majority (50.7%) were post graduates.

In the present study, none of the females were smoking. Similar were the results from the study by Erick PN et al^[11] on 1732 school teachers of Botswana in 2013 where only 0.4% females were smoking tobacco. Tobacco use is not an acceptable norm among females, because of the social taboo attached with it in India^[12].

The values for DT, MT, and FT tend to increase with age. The highest Mean DMFT was in the age group of ≥ 45 years in both females and males (DMFT in females 2.0 ± 0.7 and 4.8 ± 1.4 males). The result was similar when compared with the study by Sunitha S et al (2017)^[13] on 300 teachers in Davangere where the mean DMFT showed an increasing trend from 1.2 ± 2.0 in 18-20yrs age group to 3.0 ± 2.0 at 51-58 yrs age group. The high DMFT scores observed in this age group may be attributed to a long time presence and exposure of permanent teeth to oral environment. It may also be due to the fact that the dental caries is a cumulative disease and the DMF values show the cumulative experience of caries and its consequences.

In the present study, most (73%) of the teachers had no pockets. These results were in accordance with the results of Haloi R et al (2015)^[14] who conducted a study on primary school teachers in Mathura in which only 14% subjects had deep pockets. Loss of attachment also increased with increase in age, as was seen in the study by Mary V et al (2015)^[15] who conducted a study on 1059 school teachers of Chennai city in 2015.

In our study, 16.9% teachers had oral mucosal lesions. The prevalence of lesions increased with age, which is same as reported by Saintrain MV et al (2012)^[16] but contrary with the study done by Markkanen et al (1984)^[17].

Oral mucosal lesions tend to increase with age and were more common in males. It was seen that non-tobacco users had less than 1% oral mucosal lesions. These findings clearly suggest that tobacco use has a causative role in oral mucosal lesions. These results were consistent with a previous study by Patil S (2008)^[18] in which 3749 patients were studied in Jodhpur in 2008 where a strong relation was found between tobacco usage and oral . Loss of attachment also increased with increase in age, as was seen in the study by Mary V et al (2015)^[15] who conducted a study on 1059 school teachers of Chennai city in 2015. This relationship is explained due to the prolonged exposure to risk factors over a person's life. Dental erosions happen when acids wear away the tooth layers. They tend to occur more commonly with intake of acidic drinks and food. In the present study, it was very scarcely present in all the age groups, within both the genders, with enamel erosions (2.9%) being the most common lesions. In a study conducted by Costa F et al (2017)^[19] in Brazil, the most common lesion was enamel erosion (6%).

Dental Trauma is not a result of disease but is a consequence of several factors that accumulate to form the main cause. The factors most studied are age, sex, cause of trauma and the place of occurrence of trauma. Traumatic dental injuries have been seen to be more prevalent among males of younger age group. Young males tend to be more energetic and inclined towards vigorous physical activities and rough outdoor activities than females. The restricted and mature behavior of females enforced by conservative parents due to cultural reasons could be a possible factor for low prevalence of dental trauma among Indian

females. In our study, also the prevalence of dental trauma was more among males of younger age group (69%). Similar results were seen in a study by Loreidsen E et al (2012)^[20] where 4754 patients of dental trauma treated at Copenhagen University Hospital were analyzed, which showed that traumatic lesions were more common in the males (67%).

CONCLUSION

Most of the oral health promotion programs are targeting the school children only, sidelining this other most important group. In view of the present study results, there is a need to take measures in this regard and conduct oral health awareness programs for the teachers as well. The encouraging thing is that teachers are willing to work for oral health education. All the teachers should be trained at regular intervals, comprehensively regarding importance of oral health and creating awareness on oral health promotion for their students with the help of health care personnel or organizations.

Acknowledgement: Source of funding: Nil

Conflicts of interest: Nil

Tables.1 Distribution Of Study Subjects According To Age And Gender

GENDER	25-34yrs N=36 (%age)	35-44yrs N=184(% age)	≥ 45 yrs N=160 (% age)	TOTAL N=380 (% age)
FEMALE	32 (11.4)	150(53.6)	98(35)	280 (100)
MALE	4 (4)	34(34)	62(62)	100(100)

Distribution Of Study Subjects According To Qualification (table 2)

TYPE OF TEACHERS	N	(% age)
JUNIOR BASIC TEACHERS(JBT)	79	20.8
POST GRADUATE TEACHERS (PGT)	207	54.5
TRAINED GRADUATE TEACHERS(TGT)	94	24.7
TOTAL	380	100.0

Distribution Of Study Subjects According To Tobacco Consumption-age And Gender Wise (table 3)

GENDE	AGE GROUP	N	25-34years (N=36) F-32 M-4	35- 44 years (N=184) F-150 M-34	≥ 45 years (N=160)F -98 M-62	p-value
R						<.001*
FEMAL E (N=280)	CHEWING	2	0(0%)	0(0%)	2(2.1%)	
	SMOKING	0	0(0%)	0(0%)	0(0%)	
	SMOKING AND CHEWING	0	0(0%)	0(0%)	0(0%)	
	NIL	278	32(100%)	150(100 %)	96(97.9%)	
MALE (N=100)	CHEWING	22	0(0%)	13(38.2 %)	9(14.5%)	
	SMOKING	46	4(100%)	8(23.5%)	34(54.8%)	
	SMOKING AND CHEWING	20	0(0%)	7(20.5%)	13(20.9%)	
	NIL	12	0(0%)	6(17.8%)	6(9.8%)	

*p value $\leq .05$ significant

Distribution Of Study Subjects According To Mean Dmft – Age And Gender Wise (table 4)

Age Group	DT Female	DT Male	MT Female	MT Male	FT Female	FT Male	DMFT Female	DMFT Male
25-34YR S	0.7 ± 0.4	1 ± 0.0	0.3 ± 0.7	0.0 ± 0.0	1.0 ± 0.5	1 ± 0.8	2.0 ± 0.9	2 ± 0.8
35-44YR S	1.2 ± 0.7	1.2 ± 0.7	0.2 ± 0.4	0.7 ± 0.7	1.4 ± 0.7	1.2 ± 0.6	2.9 ± 1.1	3.2 ± 0.9

≥45YR	1.8±0	1.7±0.9	1.0±0.	0.9±0	2.0±0.	2.1±	2.0±0.7	4.8±1.
S	.3		8	.5	7	0.6		4
TOTAL	3.7±1	3.9±1.6	1.5±1.	1.6±1	4.4±1.	4.3±	6.9±2.7	10.0±2
	.4		9	.2	9	2.0		.1

*p value ≤ .05 significant

Distribution Of Study Subjects According To Loss Of Attachment (table 5)

	N(%age)	GENDER	
		FEMALE N (%age)	MALE N (%age)
0-3 mm	293(77.1)	228(77.9)	65(22.1)
4-5mm	67(17.6)	36(53.8)	31(46.2)
6-8mm	20(5.3)	16(80)	4(20)
9-11mm	0	0	0
12mm or more	0	0	0
Excluded sextant	0	0	0
Not recorded	0	0	0
Total	380	280	100

Distribution Of Study Subjects According To Dental Erosion (table 6)

EROSION		N(%age)	FEMALE N(%age)	MALE N(%age)
	NO SIGN OF EROSION	362(95.3)	269(74.4)	93(25.6)
	ENAMEL LESION	11(2.9)	7(63.7)	4(36.3)
	DENTINAL LESION	7(1.8)	4(57.2)	3(42.8)
	PULP INVOLVEMENT	0(0)	0	0
	Total	380(100%)	280	100

Distribution Of Study Subjects According To Dental Trauma- Age And Gender Wise (table 7)

AGE GROUP	GEN DER	N	TYPE OF DENTAL TRAUMA				
			No Sign Of Injury N=350 F-273 M-77	Treated Injury N=12 F-3 M-9	Enamel Fractur e Only N=11 F-2 M-9	Enamel And Dentine Fracture N=4 F-0 M-4	Missing Tooth Due To Trauma N=3 F-2 M-1
25-34 YRS	FEM ALE	32	32(100 %)	0	0	0	0
	MAL E	4	0	4(100%)	0	0	0
p-value	<0.001*						
35-44YRS	FEM ALE	150	145 (96.6%)	3(2%)	2(1.4%)	0	0
	MAL E	34	25 (73.5%)	5(14.7 %)	4(11.8 %)	0	0
p-value	<0.001*						
≥45YRS	FEM ALE	98	96(97.9 %)	0	0	0	2(2.1%)
	MAL E	62	52(83.8 %)	0	5(8.0%)	4(6.5%)	1(1.7%)
p-value	<0.001*						

*p value ≤ .05 significant

Distribution Of Study Subjects According To Oral Mucosal Lesions (table 8)

	N (%age)	GENDER	
		FEMALE N(%age)	MALE N(%age)
NORMAL	316(83.1)	270(85.5)	46(14.5)
MALIGNANT TUMOR	0(0)	0	0
LEUKOPLAK IA	9(2.3)	3(33.3)	6(66.7)
LICHEN PLANUS	4(1.0)	0	4(100)
ULCERATION	20(5.2)	5(25)	15(75)
ANUG	0(0)	0	0

CANDIDIASIS	2(0.5)	0	2(100)
ABCESS	17(4.6)	2(11.8)	15(88.2)
OTHERS	12(3.3)	0	12(100)
NOT RECORDED	0(0)	0	0
Total	380(100%)	-	-

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