Journal of Applied Dental and Medical Sciences
NLM ID: 101671413 ISSN:2454-2288
Volume 1 Issue 3 October-December 2015

Original Research

Oral Health Perception And Practices Among School Teachers In A South Indian City

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ARTICLE INFO

Access this article online :

Keywords:
Dental caries, oral health, school teachers

ABSTRACT

Objectives: A study was conducted to assess oral health perception and practices of school teachers in Chennai city which would help in planning school training program for teachers.

Methodology: The selection of a school was done in such a way that the particular school type was present in adequate numbers in all the zones of the city. Cluster sampling methodology was used to select the samples. The final sample consisted of 1059 school teachers who were examined from various zones of Chennai.

Results: It was seen that though the major source of information about oral health were doctors, dentists or nurse (45.1%) but 29.1% had never visited a dentist. Less than three-forth, i.e. 69.3%, 70.9% and 65.3% were aware about the relationship between general and oral health, oral cancer and tobacco chewing and sugar consumption and dental caries, respectively.

Conclusion: The knowledge, attitude and practices of teachers towards oral health need to be improved..

Introduction

Oral health is a very important component of general health. However, it is one component about which there is very little awareness and little clear understanding of the implications of the consequences of ill-health.[1] The high prevalence of the dental diseases, like dental caries, periodontal disease, various stages of malocclusion, besides lack of access to the required service leads to significant absenteeism and economic loss, apart from the ill-effects on the health of the person afflicted. In view of the adverse effects of the poor oral health, it is important to take preventive measures and create the required services.[2]

In education, a teacher is a person who teaches; a person who guides, instructs, trains or helps another in the process of understanding, learning knowledge, behaviour or skills, including thinking skills. A teacher who teaches an individual student may also be described as a personal tutor.[3]

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'. [4]

Teachers properly instructed in the principles of oral hygiene and gifted with enthusiasm and persistence can stimulate children to seek dental service as effectively as dentists or dental hygienists. A teacher with good oral health status, sufficient knowledge on dental health can be a cornerstone in encouraging and motivating children

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who are the future, to maintain good oral health. As there is scarce information regarding oral health perception and practices of the school teachers of Chennai, this study was conducted which would help in planning school training program for teachers.

Materials And Methods

A survey was conducted to assess the perception and practices of school teachers in Chennai city. According to the Department of School Education, in Chennai comprises of four zones which are east, central, north and south. A total of 19,150 teachers were teaching in various schools of Chennai city.

Inclusion Criteria

Selection of a school was done in such a way that the particular school type was present in adequate numbers in all the zones. This was to ensure that almost equal number of school teachers could be selected from each zone. As there are only 11 government schools, 22 unaided schools, 16 Anglo-Indian schools and a few special schools in Chennai which were not equally distributed in all four zones, they were excluded from the study. Meeting the above said criteria only the government-aided, corporation and matriculation schools were selected, since they were present in adequate numbers in all four zones.

Exclusion Criteria

The school teachers who were not willing to participate and/or were absent on the successive days of examination were excluded from the study.

Demographic details were collected and a closed ended questionnaire was used to collect information about oral health knowledge, attitude and practices.

The **cluster sampling methodology** was used to select the samples. Each school formed a cluster. Schools were randomly selected to reach the required sample size of 250 from each zone. All the teachers in that selected school were examined.

Results

The final sample consisted of 1059 school teachers who were examined from various zones of Chennai. In the study subjects, 72 (6.8%) were of the age group <24 years, 260 (24.6%) were of 25-34 years, 434 (39.9%) were of 35-44years, 216 (20.4%) were of 45-54years and 77 (7.3%) were of >55years. Among the 1059 school teachers, 725 (68.5%) were females and 334 (31.5%) were males. In the study subjects, 235 (22.2%) were secondary grade trained teachers, 444 (41.9%) were graduates while the rest 380 (35.9%) were holding a post graduate degree.

The distribution of study subjects according to their perceptions and practices in oral health is given in tables 1 and 2.

It was seen that though the major source of information about oral health were doctors, dentists or nurse (45.1%) but 29.1% had never visited a dentist. Less than three-forth, i.e. 69.3%, 70.9% and 65.3% were aware about the relationship between general and oral health, oral cancer and tobacco chewing and sugar consumption and dental caries, respectively. About half of the population (52.9%) brushed for clean and bright teeth and 52.6% said that they will visit a dentist if they encounter bleeding gums. More than one-third (41.0%) were brushing twice or more and 99.1% were using a toothbrush.

Discussion

Oral cavity is the gateway of many infections and therefore oral hygiene is very much necessary for the overall health of a person. The school plays a pivotal role in the growth of young minds and also is an ideal place

for learning new information. This platform may be used for disseminating inputs about health and hygiene, which will have long lasting effects. Teachers are instrumental in ushering a healthy environment in school as well as in society. A teacher with good oral health status and a positive attitude towards oral health is a corner stone in creating awareness about oral health amongst school children. It is an economical and powerful means of raising the community health of future generations.[2]

In a study by Paik D et al[3] among Koreans, all age groups responded that mass media (television, newspapers and magazines) were more important sources of general oral health information than were dentists. In another study by Lang P et al[4] among elementary school teachers in two areas of Michigan, the most important source of oral health information was Dental office/clinic (82.3%), followed by magazines/books (74.4%), newspapers (53.9%), TV/Radio (52.4%), friends/neighbours/family (38.2%) and physicians office/health clinic (38.0%). In the present study, doctor/ dentist/ nurses (45.5%) were more important sources than the newspapers, magazines, books and pamphlets (30.5%) which could be because a large number of dentists and other health care personnels are available in the city.

In a study by Dileep CL et al[2] among teachers in Kalyanpur locality of Kanpur, a majority of the teachers (88.6%) knew about the harmful relationship between tobacco and cancer while in the present study, 70.9% were aware. This suggests that there is more necessity for propagation of awareness about tobacco and oral cancer among school teachers.

In a study by Al-Beiruti N[5] among schoolteachers, physicians and nurses in the Syrian Arab Republic, 146 participants (69.5%) reported that they visited the dentist when they had toothache while in the present study, only 29.5% visited the dentist when they had tooth ache. In a study by Tanwir F et al[6] among adult Pakistani, over 80% seldom or never visited a dentist. This was much lower in the present population being 27.6%. This could be because Chennai being a metropolitan city has more dental facilities and is also utilized more.

In a study by Jamjoum H[7] among Arabian population in Jeddah, Saudi Arabia, about 94.9 % of the respondents brushed their teeth regularly. In a study by Paik D et al[3] among Koreans, 97% of the respondents that they brushed their teeth one or more times a day. In a study by Dileep CL et al[2] amongst school teachers in Kalyanpur locality of Kanpur, 58% of the teachers brushed their teeth twice daily. In the present study 41% brushed twice or more daily and 58.4% brushed once daily.

In a study by Tanwir F et al[6] more than 70% used a toothbrush but in the present almost all (99.1%) used tooth brush. This could be because being educated; the study subjects they would have known that a tooth brush can clean a tooth surface better than fingers or other indigenous products.

In a study by Al-Beiruti N[5] among schoolteachers, physicians and nurses in the Syrian Arab Republic, only 7.6% of the participants used dental floss. In a study by Jamjoum H[7] among Arabian population in Jeddah, Saudi Arabia, a large percentage of respondent 90.7 % did not floss their teeth. In the present study population, only 4.2% were flossing while 95.8% were not. This could be because the mass media is not yet propagating the usage of floss and people are not aware and in the people who are using, it may be because the dentist had prescribed it. It looks like among the teachers, the use of dental floss is negligible.

In a study by Al-Beiruti N[5] (1997) among schoolteachers, physicians and nurses in the Syrian Arab

Republic, 86 (41.0%) said that they used toothpaste with fluoride, 32 (15.2%) used toothpaste without fluoride, and 92 (43.8%) did not know if the toothpaste contained fluoride or not. While in the present study, 65.5% were using fluoridated tooth paste, 10.3% were not and 18.8% did not know. This could be because in India, most of the toothpastes available in the market are fluoridated toothpastes and the toothpastes the mass media propagates usually tend to be fluoridated which people tend to buy.

In the present population, it can be noticed that the level of education plays an important role in knowledge, attitude and practices, since there is statistically significant difference in knowledge, attitude and practices among school teachers who are secondary grade, graduate and post-graduate (Table 2).

Conclusion

The peceptions and practices of teachers towards oral health need to be improved.

How to cite this article: Mary V A, Ebenezar A V, R. Kesavan , Preetha E C, Chandrasekhara R V, Ingle N. Oral Health Perception And Practices Among School Teachers In A South Indian City.JOADMS 2015;1(3):26-32.
Source of Support: Nil, Conflict of Interest: None declared

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TABLE 1 (a)

Distribution of study subjects according to peceptions and practices in oral health – According to sex

S. No.	Question		Males (n=334)		Females (n=725)		Total		'p' value
			No.	%	No.	%	No.	%	
1	Source of information about health of teeth	Doctors, dentist or nurse	161	48.2	317	43.7	478	45.1	0.06 NS
		Newspaper, Magazine, Books and Pamphlet	92	27.5	231	31.9	323	30.5	
		Television, Radio	71	21.2	152	21.0	223	21.0	
		Friends & Family	22	6.6	89	12.3	111	10.4	
2	Description of their state of teeth and gums	Excellent	46	13.8	58	8.0	104	9.8	0.02 Sig
		Good	152	45.5	327	45.1	479	45.3	
		Average	122	36.5	301	41.5	423	39.9	
		Poor	14	4.2	39	5.4	53	5.0	
3	Is general health and oral health related	Yes	232	69.4	502	69.2	734	69.3	0.46 NS
		No	57	17.1	108	14.9	165	15.6	
		Do not know	45	13.5	115	15.9	160	15.1	
4	Is there a relation between oral cancer and tobacco chewing	Yes	241	72.1	510	70.4	751	70.9	0.07 NS
		No	42	12.6	127	17.5	169	16.0	
		Do not know	51	15.3	88	12.1	139	13.1	
5	Is consumption of sugar and dental caries related	Yes	212	63.4	480	66.2	692	65.3	0.14 NS
		No	59	17.7	142	19.6	201	19.0	
		Do not know	63	18.9	103	14.2	166	15.7	
6	The ideal ways of avoiding caries	Brush regularly	119	35.6	220	30.3	339	32.0	0.005 Sig
		Visit the dentist	60	17.9	94	13.0	154	14.5	
		Use fluoride	17	5.1	20	2.7	37	3.5	
		Minimize sweet consumption	22	6.6	38	5.2	60	5.6	
		All of the above	121	36.2	362	49.9	483	45.6	
7	Reasons for brushing teeth	Clean, bright teeth	179	53.6	381	52.5	560	52.9	0.93 NS
		Prevention of caries and bleeding gums	106	4.8	245	33.8	351	33.1	
		Prevention of oral ulcers	34	10.2	70	9.6	104	9.8	
		To get rid of foul breath	36	10.8	90	12.4	126	11.9	

TABLE 1 (b)

Distribution of study subjects according to perceptions and practices in oral health – According to sex

S. No.	Question		Males (n=334)		Females (n=725)		Total		'p' value
			No.	%	No.	%	No.	%	
8	Reason for last dental visit check-up	Gum problem	75	22.4	103	14.2	178	16.8	0.001 Sig
		Decay/ cavity	82	24.5	168	23.1	250	23.6	
		Toothache	103	30.8	223	30.7	326	30.8	
		Never visited a dentist	77	23.0	232	32.0	309	29.1	
9	If gums are bleeding what do you do	Stop brushing	32	9.6	42	5.8	74	7.0	0.008 Sig
		Go to see a dentist	186	55.7	371	51.2	557	52.6	
		Never had this problem	87	26.0	256	35.3	343	32.4	
		Don't know what to do	29	8.7	56	7.7	85	8.0	
10	Do you educate your students about oral health	Yes	269	80.5	615	84.8	884	83.5	0.08 NS
11	How do you brush your teeth?	up and down (vertical)	149	44.6	384	53.0	533	50.3	0.01 Sig
		to and fro (horizontal)	74	22.1	150	20.7	224	21.1	
		circular	118	35.3	222	30.6	340	32.1	
12	How often do you clean your teeth?	Never	0	0	1	0.1	1	0.1	0.001 Sig
		Occasionally	3	0.9	3	0.4	6	0.6	
		Once a day	227	68.0	391	53.9	618	58.3	
		Twice or more a day	104	31.1	330	45.5	434	41.0	
13	Do you use any of the following to clean your teeth	Toothbrush	332	99.4	717	98.9	1049	99.1	0.43
		Wooden/ Plastic toothpicks	48	14.4	94	13.0	142	13.4	0.53
		Thread (dental floss)	15	4.5	30	4.1	45	4.2	0.79
		Charcoal/ Chew stick/ other	14	4.2	36	5.0	50	4.7	0.58
14	Do you use toothpaste containing fluoride	Yes	209	62.5	485	66.9	694	65.5	0.59 NS
		No	38	11.4	71	9.8	109	10.3	
		Don't use toothpaste	19	5.7	38	5.2	57	5.4	
		Don't know	68	20.4	131	18.1	199	18.8	
15	Do you have the habit of cleaning your tongue	Never	23	6.9	31	4.3	54	5.1	0.001 Sig
		Occasionally	112	33.5	124	17.1	236	22.3	
		Once a day	151	45.2	432	59.6	583	55.0	
		Twice or more a day	48	14.4	138	19.0	186	17.6	

TABLE 2

Distribution of study subjects according to perceptions and practices in oral health – According to level of education

S. No.	Question		Secondary grade trained		Graduate		Post-graduate		Total		'p' value
			No.	%	No.	%	No.	%	No.	%	
1	Source of information about health of teeth	Doctors, dentist or nurse	96	40.9	215	48.4	167	43.9	478	45.1	0.07 Sig
		Newspaper, Magazine, Books and Pamphlet	59	25.1	119	26.8	145	38.1	323	30.5	
		Television, Radio	56	23.8	98	22.1	69	18.1	223	21.0	
		Friends & Family	29	12.3	42	9.4	37	9.7	108	10.4	
2	Is general health and oral health related	Yes	157	66.8	285	64.2	292	76.8	734	69.3	0.001 Sig
		No	54	32.7	76	17.1	35	9.2	165	15.6	
		Do not know	24	10.2	83	18.7	160	13.9	160	15.1	
3	Is there a relation between oral cancer and tobacco chewing	Yes	154	65.5	299	67.3	298	78.4	751	70.9	0.001 Sig
		No	47	20.0	85	19.1	37	9.7	169	16.0	
		Do not know	34	14.5	60	13.5	45	11.8	139	13.1	
4	Is consumption of sugar and dental caries related	Yes	144	61.3	275	61.9	273	71.8	692	65.3	0.001 Sig
		No	61	26.0	88	19.8	52	13.7	201	19.0	
		Do not know	30	12.8	81	18.2	55	14.5	166	15.7	
5	The ideal ways of avoiding caries	Brush regularly	91	38.7	146	32.9	102	26.8	339	32.0	0.01 Sig
		Visit the dentist	27	11.5	76	17.1	51	13.4	154	14.5	
		Use fluoride	12	5.1	17	3.8	8	2.1	37	3.5	
		Minimize sweet consumption	15	6.4	31	7.0	14	3.9	60	5.7	
		All of the above	91	38.7	185	41.7	207	54.5	483	45.6	
6	Do you use toothpaste containing fluoride	Yes		66.8	269	60.6	268	70.5	694	65.5	0.01 Sig
		No	21	8.9	48	10.8	40	10.5	109	10.3	
		Don't use toothpaste	9	3.8	35	7.9	13	3.4	57	5.4	
		Don't know	48	20.4	92	20.7	59	15.5	199	18.8	