ORIGINAL ARTICLE

Oral Health Knowledge, Attitude and Practices Amongst Teachers of Public School Set-up of Karach, Pakistan

Narendar Dawani,[1] Ashar Afaq[2] and Sobia Bilal[3]

ABSTRACT

Background: Schools provide an effective forum to enhance general as well as oral health awareness among children and the teachers may serve as pioneer role models to motivate children towards healthy lifestyle. The current study reflects at one of the components of a school-based oral health education initiative, projected by a public dental institute of Karachi, Pakistan. The objective was to assess the knowledge, attitude and practices relate dental health amongst teachers of public schools of Karachi, Pakistan.
Methodology: It was a 6-month cross-sectional study. Two-stage cluster sampling was utilized; in first stage, a list of public schools located in Saddar town was acquired and ten schools were randomly selected. In second stage, 12 teachers were selected at random from the list of teachers acquired from each selected school. Hence, total 120 teachers were requested to participate in questionnaire-based study.
Results: Sixty-two percent teachers lacked knowledge about tooth decay. Seventy-four percent identified sugar as an etiological factor for caries while 44% identified bacteria as the primary cause of tooth decay. Sixty-six percent teachers were aware about the protective role of fluoride against dental caries and 48% did not feel that brushing teeth of babies with a tooth-paste was a necessity. Sixty-five percent rated their oral health as good and 67% had visited a dentist. All teachers brushed regularly but only 9% used favorable amount of toothpaste.
Conclusion: Teachers had poor knowledge regarding dental diseases and etiology of tooth decay however; they were informed about benefits of fluoride as well as importance of dental visits.

Key words: School teachers, oral health, knowledge, attitudes, Pakistan.

How to cite this article: Dawani N, Afaq A, Bilal S. Oral Health Knowledge, Attitude and Practices Amongst Teachers of Public School Set-up of Karach, Pakistan. J Dow Uni Health Sci 2013; 7(1): 15-19.

INTRODUCTION

Education plays a very important role in people's lives because it empowers them to distinguish between favorable and harmful habits and also enhance their knowledge as well as practices related to their life-style. School being the first level of learning; may be the most essential aspect in an individual's life. In this regard, World Health Organization (WHO) in 1995 launched a Global School Health Initiative[1] in which the importance of schools in the delivery of health education to the school-children was highlighted. The schools can provide an effective forum to enhance general as well as the oral health awareness among children.[2]

Teachers play an important part in a child's life. The most significant period of a child's life is spent at school and it is here that their lifetime beliefs and habits develop.[3] School-teachers may serve as pioneer role models to motivate children towards healthy lifestyle on regular basis. Hence, in ideal terms, oral health promotion can possibly be carried out in such settings.

In Pakistan, the total Government spending on public sector education is only 12% of its federal budget. Overall, there are 256,088 educational institutions in our country out of which 71% are in public sector. The total student enrollment is 37,462,884 out of which 25,213,894 students are enrolled in public institutes. A total of 1,363 million teachers are employed to provide teaching services of whom 0.756 million are employed by public institutes.[4]

In local educational sector, promotion of health has not yet attained any importance. In public settings, school curriculums lack integration of importance of general as well as oral health issues. Whereas, in some of the private schools, to some extent basic oral health awareness and dental check-up surveys are sporadically conducted at their own expense and self-interest.[5]

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Similarly, the teachers are not trained for disseminating oral health knowledge to their students since such health educational courses are not integrated in their respective degree courses. Bokhari and Almas, 2001[6] reported that majority of secondary school-teachers of Sahiwal had knowledge about tooth decay and its relationship with dental plaque but they did not visit dentist on regular basis except when suffering from any sort of dental pain and had limited experience of undergoing any sort of dental treatment.

Various researches[7-10] related to awareness and attitudes of schoolteachers' towards oral health conclude that "majority of teachers recognized the relationship between sugars, bacteria and tooth decay and were also familiar with effective caries preventive strategies. Most teachers demonstrated a positive approach towards school-based oral health education and promotion. They were willing to participate in oral health education sessions by receiving relevant training to enhance their understanding related to oral health issues. Overall, school-teachers displayed healthy oral hygiene practices but in regard to routine dental visits, limited proportion affirmed on visiting a dentist regularly".

The current study reflects at one of the components of a school-based oral health education initiative, projected by a public dental institute in Karachi, Pakistan. The aim of this study was to assess the knowledge, attitude and practices of school teachers of public sector.

OBJECTIVE

To evaluate the knowledge, attitudes and practices regarding dental health amongst teachers of public schools of Karachi, Pakistan.

METHODOLOGY

It was a cross-sectional study lasting a period of 6 months (September 2011-February 2012); incorporating a self-administered questionnaire to assess dental knowledge, attitude and practices of schoolteacher's employed in public schools of Karachi city.

Two-stage cluster sampling was employed for this study. In first phase, a list of public schools functioning in Saddar Town of Karachi city was obtained and ten schools were selected through random allocation technique. In second phase, a list of school teachers posted in the selected schools was obtained and 12 teachers from each school were randomly selected. Hence, total 120 teachers were approached for this questionnaire-based study.

A written consent was acquired before administering the questionnaire which consisted of close-ended queries related to participant's demographic details, knowledge and attitude related to oral health as well as their oral hygiene practices.

Statistical Package for Social Sciences software (SPSS) version 17 was used to draw descriptive outcomes. Ethical Review Board of Dow University of Health Sciences provided approval for the study.

RESULTS

Response rate was 86%, since 103 out of total 120 teachers gave consent for the research study.

Socio-demography: Out of 103 school-teachers, 11% (11) were males and 89% (92) females. Half (50%) of the respondents were aged between 25-40 years, while 38% (39) were older than 40 years and 12% (12) were below 25-years of age. The mean age of the respondents was 38.9 years. Seventy-one percent (73) of teachers had a bachelors degree, 12.6% (13) completed intermediate whereas only 16.5% (17) were postgraduates. Thirty-four percent (35) had teaching experience of 5-years or below, while 60% (62) of teachers had been teaching for ten years or less and only six-percent (6) had a teaching experience of above 10-years.

Knowledge: On query related to awareness about dental diseases, 62% (61) of the respondents had no knowledge about dental decay, seven-percent (7) identified gum disease while only three-percent (3) acknowledged oral cancer as a dental disease. Seventy-four percent (76) school-teachers identified sugar as an etiological factor for tooth decay and 44% (45) thought that bacteria are the primary reason for tooth decay whereas 38% (39) responded in negative.

Regarding the function of fluoride in a tooth-paste, 66% (68) responded that it prevents tooth decay, while 12.6% (13) stated pleasant taste, 13.6% (14) responded that fluoride provides soft feeling, one-percent (1) thought that it reduces the cost of tooth-paste whereas seven-percent (7) had no idea about the functional importance of fluoride. While responding to query regarding soft drinks causing tooth decay; 73% (75) agreed to it. Regarding the need to brush teeth of baby using toothpaste after bottle feeding, 27% (28) agreed to it whereas 48% (49) thought that it is not required. Responding to the question about extraction being the only option to relieve dental pain, 73% (75) disagreed whereas 27% (28) responded affirmatively. Ninety-seven percent (100) of school-teachers did not know which specialist they should take the child to if he or she requires teeth alignment. There was a major (88%) consensus among school-teachers on association of tobacco consumption with oral cancer.

Attitudes: Regarding self-assessment of oral health status, 46% (48) teachers felt that they have some sort of dental disease whereas 29% (30) were unable to judge their oral health status. Sixty-five percent (67) school-teachers rated their overall oral health as being good, 5% (5) rated excellent whereas 30% (31) of them considered their oral health as poor. Twenty-three percent (24) teachers had never visited a dentist; last dental visit of 37% (38) teachers was a year ago while 18% (19) of them had not been to a dentist since more than two years. Among those who visited a dentist, 24% (25) went for general examination or cleaning of teeth, 26% (27) experienced a dental pain, and 26% (27) either needed a filling or extraction while 5% (5) went for advanced dental treatment.

Practices: All respondents brushed their teeth regularly, with 29% (30) of them brushing once a day and 61% (63) brushing twice a day. Regarding use of fluoridated toothpaste, 86% (89) affirmed to using it while 8% (8) of them did not know if the toothpaste they were using is fluoridated or not. As for the amount of toothpaste used, only 9% (9) teachers dispensed the ideal amount of toothpaste i.e. less than half the length of tooth-brush, 43% (44) dispensed half length of a brush, whereas 32% (33) of them applied toothpaste on whole length of the brush.

Table 1: Socio-demography of school teachers

Variables	Frequency (n=103)	Percent
Gender:		
Male	11	10.7
Female	92	89.3
Age:		
< 25 years	12	11.7
25 – 40 years	52	50.5
> 40 years	39	37.9
Education Level:		
Intermediate	13	12.6
Bachelor's	73	71
Postgraduate	17	16.5
Teaching Experience:		
5 years or less	35	34
10 years or less	62	60
More than 10 years	6	6

DISCUSSION

Majority of respondents were females which indicate that these are preferably employed in educational institutes at a higher proportion compared to males[11] and study sample ranged from well educated to highly educated teachers by majority attaining either a bachelor's degree or postgraduation. One-fourth of teachers had teaching experience of less than 5-years

Figure 1: Frequency of Dental Visits by schoolteachers

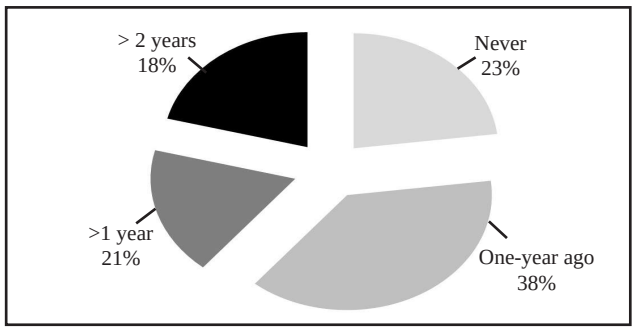
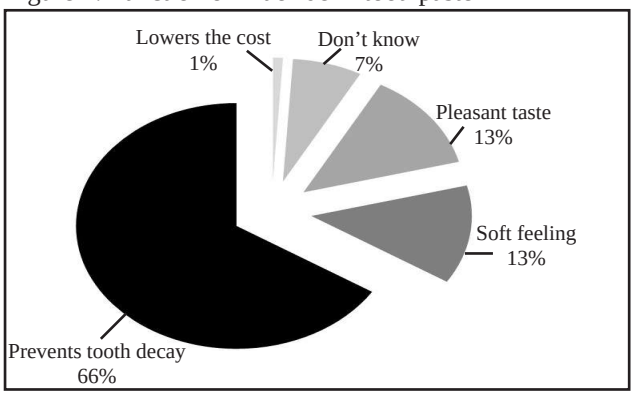


Figure 2: Function of Fluoride in toothpaste



while all remaining participants have been associated with field of education since a longer period of time. Less than two-third of teachers had no knowledge regarding dental decay which is comparatively poor in relation to reports from other countries such as Saudi Arabia[12] and Nigeria[13] possibly because of difference in the level of oral health awareness amongst teachers of local public school set-up. However, it was immensely better than the knowledge of Kosovo[14] schoolteachers regarding basic oral health issues since Kosovo is undergoing post-war internal migration.[14] A greater part of teachers had poor awareness concerning gum diseases in comparison to findings from other countries[12,13] which indicate that awareness related to gum diseases is not well disseminated in our teacher population. Local schoolteachers displayed comparatively better awareness regarding the causal relationship of sugar with dental caries[7,8,10] whereas knowledge regarding the primary role of bacteria in causing tooth decay was poor compared to other similar studies.[7,8,10] The plausible reason might be that it is a general norm that sweet consumables lead to tooth decay however; role of bacteria has not been well highlighted at mass level.

In response to a query regarding the protective role of fluoride in a tooth-paste, two-third of participants stated that fluoride does prevent tooth decay. This percentage is low in comparison to other similar reports from Malaysia,[15] Belarus[7] and Saudi Arabia.[16] This low

Table 2: Assessment of Oral Health Knowledge of schoolteachers:

Queries regarding "Oral Health Knowledge"	Aware	Unaware	Don't know
Dental Caries (tooth decay)	28% (29)	62% (61)	---
Gum diseases	7% (7)	93% (93)	---
Oral Cancer	3% (3)	97% (97)	---
Sugar is an etiological factor for tooth decay	73.8% (76)	3% (3)	23% (24)
Bacteria are the primary reason for tooth decay	43.7% (45)	38% (39)	18.4% (19)
Teeth of baby must be brushed with a toothpaste after bottle feeding	27% (28)	47.6% (49)	25% (26)
Fluoridated toothpaste prevents tooth decay	53% (55)	12.6% (13)	34% (35)
Soft drinks cause tooth decay	73% (75)	12.6% (13)	14.6% (15)
Oral cancer is associated with tobacco consumption	88% (91)	1% (1)	11% (11)

response might be due to a difference in the level of oral health information provided to the teachers via various mediums. The detrimental effect of soft drinks on teeth was affirmed by three-fourth of teachers and this was higher compared to knowledge of teachers residing in Saudi Arabia[16] and China.[8] Regarding their attitude towards regular visits to a dentist; approximately one-third of individuals had never been to a dentist whereas others have had an experience of visiting a dentist for some sort of dental ailment. This percentage is significantly lower than that reported by Ehizele et al.[13] and Almas et al.[17] but higher in comparison to a local study done Bokhari and Almas in Sahiwal Province[6] which reported a lower prevalence of regular dental visits. The above disparity might be due to multiple reasons namely; lack of awareness, un-affordability or lack of accessible oral health services. Less than one-third teachers brushed their teeth twice a day whereas the Saudi schoolteachers[16] preferred a miswak instead, probably since it is considered a Sunnah in Islam.

Even though, the schoolteachers are somewhat aware of the significance of frequency of tooth-brushing and advantages of using fluoridated toothpaste but regrettably they are overall negligent towards importance of routine dental visits and lack appropriate knowledge regarding oral health issues; hence, their capability to disseminate oral health education to the students needs consideration.

CONCLUSION

Public schoolteachers had poor knowledge regarding dental diseases and the etiology of tooth decay; however they were informed about the benefits of fluoride and at-least had experience of visiting a dentist although not on regular basis.

Acknowledgments: Immense appreciation goes to the school authorities and schoolteachers for their involvement and cooperation in this research.

Authors' contributions: Dawani N conceived the study, collected and analyzed the data and finally wrote manuscript. Afaq A managed, helped in analysis of data and editing of manuscript. Bilal S assisted in collection of data, literature search and editing manuscript.

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