ORIGINAL ARTICLE

DENTAL HEALTH SELF CARE AMONG SCHOOL GOING CHILDREN OF PESHAWAR

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ABSTRACT

Objectives: To assess the knowledge of oral health, practices/care of oral hygiene and pattern of dental problems among school going children of Peshawar.

Material and Methods: This cross-sectional study was conducted during September, 2016 and October, 2016. A total of 400 children from three different schools of Peshawar with age range 12 to 17 years were evaluated. A pre-designed/ pre-tested questionnaire was used to collect the data. The major questions asked were regarding the knowledge of oral health, self dental care, and about dentist visits. Then dental examination was performed by the trained dentists. The data was analyzed with standard statistical methods.

Results: Male to female ratio was 3.2:1 in the current study. The overall level of oral health knowledge was found below the standard level among the participants. The frequency of toothpaste, brushing once a day was observed in 62.75% and two times per day in 9.75% children. Only 09% school children had visited the dentists within the past 6 months. Dental caries was found the most common dental problem (27.5%) followed by the plaque (20.25%) while fluorosis was least common (1%) in our study subjects. The prevalence of sensitivity, bleeding gum, malocclusion and tooth loss was 5.25%, 2.75%, 10.25% and 4.75% respectively. Females and higher class students were found comparatively more careful regarding the oral health and dentist visits.

Conclusion: The knowledge and practices cum care of the school children of this particular area related to oral health is below satisfactory level.

Key Words: Dental problems, dental services, Knowledge of oral health, Schools, self care.

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INTRODUCTION

Dental health care is the maintenance of teeth in order to keep the teeth clean and prevent dental disorders. Basic dental or oral care involves regular brushing and flossing the teeth, eating a mouth-healthy diet and regular dental checkups as per schedule. Hence the dental health care is essential for general health, quality of life and prevention of oral diseases. The causes of dental diseases are primarily rooted in poor socioeconomic and physical environment; unhealthy lifestyles and oral health related behaviour[1]. Some scientists demonstrated that dental health is seen from a health perspective as a balance between destructive factors such as sugar-rich diet, tobacco use and poor oral hygiene versus protective factors including good oral hygiene[2]. There are reports showing that a correlation do exists between increased knowledge and better oral health[3, 4].

So a good dental health is the state of teeth free of any disease affecting the individual's general health and over-all well-being. In spite of the great triumphs in dental health, burden of oral health diseases remains high all over the world[5]. In our country, the prevalence rate of dental caries, gingivitis and calculus was found as 45.9 %, 14.5%, and 14.3% respectively[6]. Moreover, behaviors that promote oral health and prevent disease include brushing teeth with fluoride toothpaste, reducing the frequency of sugar-rich foods and resisting to-

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bacco use[7]. Countries where the oral disease preventive programs have not been implemented still remain in the shadow of high prevalence of dental caries[5]. Maintaining good dental hygiene is not only important for healthy teeth but also enables a person to look and feel good, resulting better oral functions and general health[3].

Besides, dental health, directly or indirectly influences the quality of life of a person. Especially in children the negative impact of oral diseases, on quality of life has been reported since many years[8-11]. In young children the burden of oral disease restricts activities in school, work, and home leading to loss of many potential working hours[12-14]. A study showed that children with chronic dental pain are unable to focus, easily distracted and may have problems with school work completion[15]. School age children represent a good ratio of population and contribute significantly to the overall health status in our community.

In addition, school-based oral health assessment ensures the timely receipt of dental care and the habit once develops at the early life is beneficial for age. Furthermore, if a disease is diagnosed at the early stage, it is cured easily and with low cost. Thus, the objective of this study was to assess the knowledge of oral health, care of dental hygiene and pattern of dental problems among school students of Peshawar.

MATERIAL AND METHODS

This cross-sectional study was conducted by the Department of community dentistry, Sardar Begum Dental College, Peshawar during months of September-October, 2016. A total of 400 (male 304 and female 96) school-going children from three schools located in the same city was examined (Table-1). All children falling between age limit 12 to 17 years and permanent residents of the area were included. Those children who were not willing to participate in the study and under dental treatment were excluded. The schools were randomly selected by a computer-generated list. Those schools were finalized for the study which have separate branch for boys and girls. Written permissions were obtained from the school authorities. The study was approved from the local ethical research committee of the institute. Parents of the participants were explained the objectives of the study and assured of the confidentiality. A written consent was taken from all of them. The sample size was calculated by WHO calculator. The calculated sample size was 381 which were rounded off to 400. The designed questionnaire contained questions that were closed-ended and some were multiple-choice items with alternative statements. The questions asked were about demographic characteristics like age, sex, class, family income and habits like cigarette smoking and chewing tobacco. The participants were then subjected to questions like oral self care, utilization of professional dental services, most recent dental visit and its reason, and finally knowledge of oral health. The questionnaire was pretested for validity and respondent understanding of the questions. The dental volunteers were given training and then they asked the questions verbally from the participants in mother language (Pashto or Urdu) and filled the questionnaire to assess the outcome of the study.

Children were examined in their respective schools on predefined dates. An examination was carried out in broad daylight. Children were seated on an ordinary chair in an upright position. Intra-oral examinations were made using a mouth mirror and an explorer. Instruments were dis-infected with an antiseptic solution after every use. The children were examined with standard procedures by two trained examiners in the presence of the dentistry students.

The completed data was entered through a trained computer operator and imported into statistical package for social sciences (SPSS) version 17 for statistical analysis. Frequency distribution tables were produced with percentages.

RESULTS

In the present study, students of 06 to 10 classes were evaluated. Most of the children were not able to disclose their father's income and occupation reliably. As the standard and fee structure of the three schools are same. Therefore, the socioeconomic status was considered to be homogenous. Eleven male students from high classes were found habituated to cigarette smoking and two were using Naswar (chewing tobacco). The distribution of different school children is shown Table 1.

Knowledge of the participants regarding the oral health is described in table-2. Females scored more favorably in knowledge and behaviors concerning dental health particularly a significant difference ($P < 0.05$) in brushing habit was observed between the two genders. Twenty four (06%) students mentioned that they used miswak, as believed it to be the best oral care from the religious point of view. While 27.5 % were not cleaning their teeth every day. The Interdentally cleaning habit was observed only in 03% cases. Girls were observed to consume more sweets, snacks and soft drink as compared to boys. Professional dental care of the participants is described in Table 3. Most of these patients visited the dentistry hospital for tooth pain followed by mouth infection, bleeding during brushing, extraction and periodontal problem. The most common reasons for the hesitation or refusal of dental visits were viral transmission due to dental instruments, unpleasant/

Table 1: Distribution of subjects

Name of School	Male Branch	Female Branch	Total Students
Islamia Collegiate School, Peshawar	127	43	170
Warsak Model School, Peshawar	98	31	129
Frontier Children Academy, Peshawar	79	22	101
Total	304 (76 %)	96(24 %)	400

Table 2: Knowledge of the respondents regarding oral health

Knowledge	Frequency of subjects %
Increase brushing frequency decreases the problem:	
Yes	183 (45.75)
No	79 (19.75)
Don't Know	138 (34.50)
Sugar rich diet increases the problem:	
Yes	243 (60.75)
No	28 (7.0)
Don't Know	129 (32.25)
Smoking is hazardous for Oral Health:	
Yes	134 (33.5)
No	74 (18.5)
Don't know	192 (48.0)
For oral problem:	
Consult a physician	86 (21.5)
Consult a dentist	138 (34.5)
Consult a Hakim	22 (5.5)
Not care	154 (38.5)

Table 3: Practices of the respondents regarding oral health

Practice	Frequency of Subjects (%)
Tooth brushing:	
Once in a day	251 (62.75)
Twice in a day	39 (9.75)
Last visit to the dentist:	
<06 months	36 (9.0)
06-12 months	70 (17.5)
1-2 years	114 (28.5)
> 2 years	180 (45.0)

time consuming dental procedure and the expensive treatment.

The prevalence of dental caries was determined to be 27.5 % and it was found more in girls, however

Table 4: Sources of dental health knowledge among total subjects

Source	Frequency of subjects (%)
Treating physician	53 (13.25)
Dentists	79 (19.75)
Relatives	21 (5.25)
Print/electronic Media	42 (10.5)
Class fellow/friends	37 (9.25)
Not mentioned	168 (42.0)

increased with increasing age in both genders. Plaque was the second common problem found more in male as compared to female. The prevalence of sensitivity, bleeding gum and fluorosis were 5.25%, 2.75%, and 1.0% respectively reported more in the young children. Tooth loss was 4.93 % in boys and 4.12 % in girls. No significant difference was found among genders for the prevalence of malocclusion however increased with age in both male and female students of Peshawar.

Sources of the knowledge about dental health in our school children are shown in Table 4. Doctors were found the main source of awareness of oral health. Females and high class's students were found more alert regarding oral health care and visited the dentist regularly.

DISCUSSION

The findings of the present study revealed that knowledge and practice regarding dental health among students of Peshawar are not as per standard. The proportion of tooth brushing both twice and once per day in our population was considerably lower than the earlier study i.e. 38% and 83%, respectively[16]. Females and higher class students were strong predictors of brushing frequency same like an early study related to dental health behavior[17]. Besides, the interdentally cleaning which is important for proper dental care/ practices was observed only in 12 (3%) cases.

Moreover, tobacco use makes the oral complication worse if it is not cared properly. Despite few of our participants were using tobacco, but their oral hygiene practices were same as non tobacco users. A previous study showed that twice-daily brushing was more frequent among smokers[8]. Both cigarette and naswar (chewing tobacco) increase the risk of developing mouth cancer, throat cancer and gum diseases[17]. Only 09 % school children reported a dentist visit within the previous 6 months. Most of them visited the dentist only when they had a problem. The major hindrance noted is the lack of basic health knowledge regarding the subject. In Peshawar, dental caries was recorded in 45.6 % school children[18]. This could be mainly because of the lack of acceptance of healthy oral habits that are

crucial in controlling the most common oral behavioral diseases[19].

Besides, an early study reported a dynamic relation between sugar diet and oral health[20,21]. The authors of the same studies stated that food high in sugar is the common cause of tooth decay/caries. They also mentioned that sweet food and beverages available in the premises of and near the schools facilitated the consumption among students. The same work highlighted that girl students usually had greater preference for sweet food while boys for higher fat and soft contents fast food[20].

This might be the reason that caries was observed more i.e. among 27.5 % students. Previous study also reported high prevalence of dental caries (41 %) [22]. A study observed high figure among girls despite the girls spent longer time to brush and brush more frequently to clean their teeth[6]. The high prevalence of dental caries in the primary teeth may be due to structural differences and their lower calcium content as compared to permanent teeth.

Limitation of this study was observed in the area of budgeting. Lack of allocated budget restricted the research on convenient sampling method rather systemic random sampling. Lack of two separate girls and boys sections in majority of schools restricted uneven distribution of gender.

All other problems observed in our study are due to less knowledge of dental care among the study population and their parents. Previous workers showed that delay in seeking dental care among children could be attributed to factors like parental beliefs and practices, lack of economic resources and accessibility of dental services[20]. Since this is the preliminary data and further large-scale epidemiological studies can be undertaken at different parts of the country to asses the knowledge and practice of dental health and pattern of various dental problems among school children. Special attention of the government agencies as well as health professionals is essential to exploit the findings with further large scale studies in other areas of the country. Besides, the provision of safe and accessible dental services is mandatory to the people.

CONCLUSION

Most of our school children had knowledge of oral health below satisfactory level. The main reason of the dental problems is negligence regarding the subject and dental visits. As doctors were found the main source of awareness of oral health in children, so they may play the positive role regarding the scenario.

RECOMMENDATIONS

This needs educational motivation and awareness program regarding duration of brushing, appropriate way to brush the teeth and regular dentist visits. These measures will definitely improve the oral health status and decrease the burden of dental diseases. In addition, further study comprising of large sample size would be helpful in clarifying all these facts.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Khan AH: Planned the study and mange the work.

Ahad B: Overall supervision and gave final proof reading of the manuscript).

Amanat U: Data collection.

Khan KH: Data collection and dental examination.

Hassan D: Data collection and dental examination.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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