ORAL HYGIENE KNOWLEDGE AND SOURCE OF INFORMATION AMONG 12 TO 16 YEARS’ OLD KARACHI SCHOOL CHILDREN

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ABSTRACT

The aim of this study was to assess the knowledge of school children about dental diseases, oral hygiene practices, dietary habits and pattern of visit to dental clinic and also to identify the source of information regarding dental health. This cross-sectional study was conducted from January 2012 to June 2012, among students aged between 12 to 16 years studying in schools. Results of the study showed that 100% students believed that caries had negative effect on their dental health and sweets were the most common cause of dental caries. About the question of caries affecting dental health, 76 (25%) acquired knowledge from their dentists while 114 (37.75%) learned from school teacher and rest 113 (37.25%) gained their knowledge from parents/guardians. Moreover, regarding the source of information of soft drink as a hazard to oral health 76 (25%) got the knowledge from their dentists while 110 (36%) of students thought that soft drinks did not affect their dental health and 117 (39%) students said that they had not known the negative effect of soft drinks on their dental health. In the study, 56% responded that caries prompt them to visit dentist whereas only 10.7% visited dentist when they had bleeding gums.

School teachers, parents and dentists were the main source of oral health information. The results of the present study showed that majority of the children obtained oral health information from their school teachers. Schools may provide effective settings for oral health screening and oral health educational programs.

Key Words: Oral Health, Oral Hygiene habits, Diet, Secondary Class Students, Parents, School Teachers, Media.

INTRODUCTION

Oral health is fundamental to general health and well-being, significantly impacting on quality of life. Oral health enables an individual to speak, eat and socialize without active disease, discomfort or embarrassment. In both developing and developed countries, Oral diseases are major public health problems especially affecting underprivileged groups. Dental caries and periodontal diseases are the two leading oral diseases occurs worldwide.

Caries affects nearly 100% of the population in the majority of countries worldwide. It is caused by the interaction between microorganisms and fermentable carbohydrates in the diet resulting in destruction of tooth structure. The prevalence of caries has declined in developed countries during the last two decades, but still caries affects over 60% of school children and a majority of adults. In Asia, the prevalence of dental caries in children is reported to be low to moderate.

Globally most children and adolescents also have signs of gingivitis, a disease characterized by inflammation of the gum. Periodontitis is an infectious disease resulting in inflammation of the supportive tissues, attachment loss and bone loss.

Oral health is affected by one's lifestyle, habits and risk behavior such as diet, consumption of tobacco and alcohol, oral hygiene, fluoride usage, Para-functional behavior and regular dental checkups.

Diverse social factors like social status, education, employment status and work conditions, physical envi-
environment, personal hygiene and health habits, children’s healthy development and health services also affect oral health. Oral hygiene habits learnt during childhood are of great importance for one's oral health in later life.6

The critical approach to health education considers that economic, social and cultural factors are the principal determinants of disease. The responsibility for unhealthy behavior lies with society, not with the individual. Thus educational programs targeted at the individual, aiming to change an unhealthy conduct, will be a complete failure if they do not consider the different aspects of the subject’s life, both socioeconomic and environmental, that influence their behavior and are responsible for diverse health problems.7

The aim of the study was to assess the knowledge of school children about dental diseases, oral hygiene practices, dietary habits and pattern of visit to dental clinic and also to identify the source of information regarding dental health.

METHODOLOGY

This cross-sectional study was conducted from January to June 2012, among 303 students of class 6 to 10, aged 12 to 16 years studying in schools of North Nazimabad, Karachi. The students were approached in the classrooms and anonymously were asked to fill out a structured questionnaire.

For the purpose of data collection, informed verbal consent was taken before distribution of the pretested structured questionnaire. Assurance was given for confidentiality of information collected. The data was entered and analyzed using the statistical software SPSS version 11.0. Frequency and percentage were computed for categorical variables like gender and knowledge of students. Mean were estimated for quantitative variables like age. Frequencies were calculated for level of knowledge and practices and are shown in bar charts. Level of knowledge was cross-tabulated with source of information. Chi square test were used.

RESULTS

Total number of 303 students of class six to ten were surveyed and categorized as 61 (20.1%) from class six, 59 (19.5%) from class seven, 59 (19.5%) from class eight, 61 (20.1%) from class nine and 63 (20.8%) from class ten. Out of which 162 (53.5%) were male and 141 (46.5%) were female. The response rate was 100%.

TABLE 1: FREQUENCY OF BRUSHING TEETH WITH SOURCE OF INFORMATION (TOTAL 303)

<table>
<thead>
<tr>
<th>How often one should brush their teeth</th>
<th>Dentist</th>
<th>School Teachers</th>
<th>Parents/Guardians</th>
<th>TV/News-paper Ads/Internet</th>
<th>Total</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twice a day</td>
<td>108 (35.65%)</td>
<td>75 (24.75%)</td>
<td>0</td>
<td>0</td>
<td>183 (60.40%)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>One a day</td>
<td>0</td>
<td>0</td>
<td>120 (39.60%)</td>
<td>0</td>
<td>120 (39.60%)</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 2: FREQUENCY DISTRIBUTION AND SOURCE OF INFORMATION ABOUT HOW DOES CARIES AFFECT DENTAL HEALTH (TOTAL 303)

<table>
<thead>
<tr>
<th>Does caries affect dental health</th>
<th>Dentist</th>
<th>School Teachers</th>
<th>Parents/Guardians</th>
<th>TV/News-paper Ads/Internet</th>
<th>Total</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>76 (25%)</td>
<td>114 (37.25%)</td>
<td>0</td>
<td>0</td>
<td>303 (100%)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 3: FREQUENCY DISTRIBUTION AND SOURCE OF INFORMATION ABOUT DO SWEETS AFFECT DENTAL HEALTH (TOTAL 303)

<table>
<thead>
<tr>
<th>Do sweets affect dental health</th>
<th>Dentist</th>
<th>School Teachers</th>
<th>Parents/Guardians</th>
<th>TV/News-paper Ads/Internet</th>
<th>Total</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>108 (35.5%)</td>
<td>171 (56.5%)</td>
<td>23 (7.6%)</td>
<td>1 (0.40%)</td>
<td>303 (100%)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
Regarding the question that how often one should brush their teeth, out of total 303 students, 183 (60.4%) said that the teeth should be brushed twice daily while 120 (39.6%) were in the favor of brushing only once a day. 108 (35.65%) of students who thought that they should brush twice daily acquired knowledge from their dentists and 75 (24.75%) learned from school teachers. All the students 120 (39%) who considered brushing their teeth once daily learned from their parents. (Table 1)

Regarding the question that does caries affect dental health, the response was 100% about the knowledge that dental caries affect their dental health. 76 (25%) acquired the knowledge from their dentists while 114 (37.75%) learned from school teachers and rest of the students 113 (37.25%) gained their knowledge from parents/guardians. (Table 2)

Regarding the question of risk factor of sweets had effect on dental health, 100% students had responded and aware that they that sweets had negative affect on their dental health 108 (35.5%) students acquired the knowledge from their dentists while 171 (56.5%) learned from their school teachers, 23 (7.6%) gained their knowledge from their parents/guardians while rest of 1 (0.40%) acquire from TV/Newspaper/Ads/Internet. P-value = 0.01. (Table 3)

Regarding the question that do soft drinks affect dental health, only 76 (25%) said yes, 110 (36.5%) said no, while 117 (38.5%) said that they didn’t know if soft drinks had any effect on dental health. 76 (25%) of students think that soft drinks affect dental health acquire knowledge from their dentists while out of 110 (36%) of students; 32 (10.5%) students thought that soft drinks did not affect dental health acquired knowledge from their parents/guardians and 78 (25.5%) students from TV/Newspaper/Ads/Internet. About 117 (39%) didn’t know whether soft drinks affect dental health or not. Question regarding the type of toothpaste used 35% students were in favor of having calcium added tooth paste benefit their teeth while 6% were in favor of fluoride added tooth paste. There were higher number of students 59% which states that they didn’t know which tooth paste should be used.

DISCUSSION

The study was conducted among secondary school students because it is considerably more important that children of this age should have basic knowledge regarding oral hygiene. Oral health education programs are an important influence on the oral health of children. According to Horowitz1 oral health education empowers individuals with accurate information to take actions towards their health. In this study it has been found that a majority of the students brushed their teeth two times every day. In contrast to Swedish study conducted in a multicultural environment shows that all families in the study, with different ethnical origins, performed brushing daily.8

Since daily cleaning is recommended13 it was only taken into consideration if they brushed daily or more seldom. The most common occasions were to brush after breakfast and after lunch.

In this study few students had knowledge about the addition of fluoride as active ingredient in tooth paste but most of them were unaware the composition of toothpaste. Similar study with same results was conducted in Sudan about the purpose of fluorides.14 These results are the same as several other similar studies carried out in various countries by different researchers.9

Regarding what is the recommended method of brushing teeth, 35.7% students replied stroking the brush horizontally and only 5.3% said stroking the brush vertically, while 59% didn’t know. Study in China showed that approximately half of the sample population of children knew the recommended method of brushing teeth i.e. stroking the brush vertically.10

There was a good sign of awareness among students since 100% believed that caries affected their dental health and that sweets are the most common cause 100 % where as 25% favored soft drinks.

Toothache and discomfort in teeth were common symptoms that prompted while dental visits of children in a study done in Africa11-12 while in our study 56% respond that caries prompt them to visit dentist whereas 10.7% visit dentist when they have bleeding gums.

School teachers, parents and dentists were the main source of oral health information. The role of mass media has been gradually increasing in providing health information to the public including oral health information but it is not the case in Pakistan. The need however, still exists to enhance the media utilization for children’s dental health awareness. The present study confirms the findings of other study20 in which parents were the main source of information for children but still there were a majority of children who didn’t have adequate knowledge. A useful way to raise children’s dental health awareness is by giving accurate information to parents. The children whose parents have sufficient oral health knowledge and a positive attitude are likely to adopt satisfactory healthy oral health habits.13

Children spend a good part of their daily time in schools. The results of the present study showed that majority of the children obtained oral health information from their school teachers but still there is a need
for increased provision of oral health information at schools and utilization of school teachers as provider of information on dental prevention.

CONCLUSION

Oral health education could play the most important role and the primary and secondary schools may provide effective settings for oral health educational programs. The school teachers can be focused for improvement in their knowledge about oral health and diseases and may be utilized for oral health promotion in schools. The health authorities should be encouraged to develop targeted community oriented oral health care promotion strategies aimed at further improvement of oral self-care, regular dental visiting habits of youth and better control of oral diseases. The need for oral health education of children and mothers is important and the continuous implementation of school oral health programs is most relevant.

REFERENCES