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Research Article

### A CROSS-SECTIONAL RESEARCH TO ESTIMATE THE KNOWLEDGE LEVEL AND ITS SOURCE ABOUT ORAL HEALTH AMONG SCHOOL GOING CHILDREN

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**Objective:** The objective of this research was to evaluate the awareness of the school-going children about oral hygiene practices, dental diseases, dental clinic visit pattern and dietary habits in order to indicate the information source about dental health.

**Patients and Methods:** We carried out this cross-sectional research at Ganga Ram Hospital, Lahore from October 2018 to August 2019 on students who were attending school and they were enrolled in the age bracket of (12 – 16) years. The research sample included a total of 303 children from sixth grade to tenth grade. They were made the part of this research after verbal consent and fulfilling the inclusion criteria. All the participants fulfilled the dedicated questionnaire in order to record the responses of the students.

**Results:** All the students had a strong believe about caries that it poses a negative effect on the oral and dental health and it also attributes in the onset of dental caries. The response about the effect on dental health was reported by 76 students (25%) for getting aware by the dentists; whereas, 114 students (37.75%) got themselves educated from their teachers and remaining 113 students (37.25%) gained knowledge from their guardians or parents. A total of 76 students (25%) also knew that soft drink deteriorates oral health which was communicated by their dentists; while 110 students (36%) do consider soft drinks harmful for the oral health and 117 students (39%) did not know the harmful effects of soft drink. About 56% children reported that they visit dentists because of caries; whereas, bleeding gums was reported the other reason among 10.7% children to pay a visit to dentist.

**Conclusion:** The major sources of information were dentists, parents and school teachers who informed children about the importance of oral health along with its association with brushing frequency and effect of caries and soft drinks on oral health. Most of the students got informed at school by their teachers. School play a pivotal role in the education of oral health to children through formal and informal awareness programmes.

**Keywords:** Oral Hygiene Habits, Oral Health, Students, Diet, Teachers, Parents and Media.

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**INTRODUCTION:**

General health fundamentally depends on oral health which is the foremost thing for the maintenance of overall well-being as it significantly impacts life quality. Oral health capacitates the individual in speaking, eating and especially in socializing with others. It also avoids embarrassment, discomfort and active oral disease chances [1]. Oral disease is an increasing trend in the developed and underdeveloped societies which is drastically affecting the lower tiers of the society. Periodontal diseases and dental caries are leading reasons behind oral disease trend all over the world [2].

Globally no one is left out of the risk of caries which is alarming [3]. Caries is caused due to the correlation between fermentable carbohydrates and microorganisms in diet attributing in tooth structure decay/destruction [4]. Developed countries are overcoming this issue in the past twenty years; whereas, 60% school children are still at risk including a chunk of adult population [5]. Asian population has been reported for low to moderate onset of dental caries [4]. Globally, majority of the children are also reported for gingivitis features which are characterized by gum inflammation. Periodontitis is infectious in nature which causes inflammatory supportive tissues, bone loss and attachment loss [5].

Lifestyle, risk behaviour, habits, diet, tobacco consumption, alcohol intake, fluoride usage, oral hygiene, regular checkup and para-functional behaviour do affect the overall oral health. Diverse social factors such as education, social status, work conditions, employment status, personal hygiene, physical environment and health habits also affect the overall oral health. It is also affected by the healthy development of the children. Childhood habits of taking care of oral hygiene are very much valuable for the maintenance of oral health [6]. Health educationists critically consider that cultural, social and economic factors majorly define the disease determinants. Society is blamed for an unhealthy behaviour not the individual. Therefore, awareness campaigns target unhealthy conduct of the individual to change subject's lifestyle along with influential and diverse factors [7]. Therefore, the objective of our research was to evaluate the awareness of the school-going children about oral hygiene practices, dental

diseases, dental clinic visit pattern and dietary habits in order to indicate the information source about dental health.

**METHODOLOGY:**

We carried out this cross-sectional research at Ganga Ram Hospital, Lahore from October 2018 to August 2019 on students who were attending school and they were enrolled in the age bracket of (12 – 16) years. The research sample included a total of 303 children from sixth grade to tenth grade. They were made the part of this research after verbal consent and fulfilling the inclusion criteria. All the participants fulfilled the dedicated questionnaire in order to record the responses of the students. Every participant fulfilled a pretested questionnaire for the collection of important data. We maintained the confidentiality of the patients. SPSS software was used for statistical analysis. Awareness and gender were reflected in number and percentage. Age was a quantitative variable which was measured in Mean value. We also used ChiSquare Test for outcomes analysis.

**RESULTS:**

In the total research sample, there were 162 males (53.5%) and 141 females (46.5%) in the total response rate of cent percent. All the students had a strong believe about caries that it poses a negative effect on the oral and dental health and it also attributes in the onset of dental caries. The response about the effect on dental health was reported by 76 students (25%) for getting aware by the dentists; whereas, 114 students (37.75%) got themselves educated from their teachers and remaining 113 students (37.25%) gained knowledge from their guardians or parents. A total of 76 students (25%) also knew that soft drink deteriorates oral health which was communicated by their dentists; while 110 students (36%) do consider soft drinks harmful for the oral health and 117 students (39%) did not know the harmful effects of soft drink. About 56% children reported that they visit dentists because of carries; whereas, bleeding gums was reported the other reason among 10.7% children to pay a visit to dentist. Tabular data shows the response of the students in terms of frequency of brushing teeth, the source of knowledge of brushing, sweets risk factor on dental health and the effect of soft drink on oral health along with their source of awareness.

**Table – I:** Frequency of Teeth Brushing

Brushing Teeth Frequency	Dentist	School Teachers	Parents/Guardians	TV/News Papers	Total	P-Value
Twice/Day	108	75	0	0	183	<0.01
Once/Day	0	0	120	0	120	
Don't Know	0	0	0	0	0	

**Table – II:** Does Carries Affect Dental Health

Does Carries Affect Dental Health	Dentist	School Teachers	Parents/Guardians	TV/News Papers	Total	P-Value
Yes	76	114	0	0	303	<0.01
No	0	0	0	0	0	
Don't Know	0	0	0	0	0	

**Table – III:** Does Sweet Affect Dental Health

Does Sweet Affect Dental Health	Dentist	School Teachers	Parents/Guardians	TV/News Papers	Total	P-Value
Yes	108	171	23	1	303	<0.01
No	0	0	0	0	0	
Don't Know	0	0	0	0	0	

**DISCUSSION:**

The research included school children as this age is very much crucial for the inculcation a healthy behaviour about getting oral hygiene knowledge. Children do get influenced by oral health awareness campaigns [10]. Horowitz opines that oral awareness empowers an individual with accurate data about the maintenance of oral health [11]. Most the students were in the habit of brushing their teeth twice a day; whereas, another reference provides varying patterns of brushing due to multicultural impact [8]. More consideration is given to regular and daily cleaning which is recommended the most with common occasions after taking breakfast and lunch [13]. Few students were aware of the addition of fluoride; whereas, majority were not aware of the composition of their toothpaste ingredients. Few other studies also present similar outcomes about the awareness of the composition of toothpaste [9, 14]. The response about the recommended teeth brushing method was such that 35.7% replied horizontal stroking and just 5.3% replied vertical stroking; while, 59% were not aware of the brushing method. Another author reported that recommended pattern of brushing the teeth was known

to 50% children which were vertical stroking [10]. It was good to know that every child was aware of carries and its effects on dental health. Soft drinks and sweets were respectively 25% and 100% as the common causes of dental caries. Children visited the dentists because of discomfort and toothache [11, 12]. In this research 56% children reported to dentists because of carries; whereas, 10.7% visited their dentists because of bleeding gums.

Major sources of information for children were dentists, parents and school teachers; whereas, the role of media is also gradually increasing with the advent in the field of electronic and social media [19]. Use of media is still required in multiple dimensions with increased focus. The outcomes about parents as a major source of information for a handsome number of children also agree with our results [20]. If we educate parents well than the outcomes will also be reflected in the behaviour and habits of children. Children with aware parents show positive habits about oral health and their attitude is also satisfactory about the maintenance of oral hygiene [13].

A handsome chunk of time is spent in school which makes the teachers another major source of knowledge about oral health. This research also shows that the majority of the children were educated during school time by their teachers. Schools have a positive contribution while educating children and moulding their behaviour about the concept of oral health for disease prevention and healthy lifestyle.

### CONCLUSION:

School plays an important role in the education of oral health maintenance. Teachers can play their role to increase the awareness level among students, especially for disease prevention. Mothers and children can implement better oral health state. The major sources of information were dentists, parents and school teachers who informed children about the importance of oral health along with its association with brushing frequency and effect of caries and soft drinks on oral health. Most of the students got informed at school by their teachers. School play a pivotal role in the education of oral health to children through formal and informal awareness programmes.

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