

KNOWLEDGE, ATTITUDE & PRACTICE ON ORAL HYGIENE AMONG SCHOOL-GOING CHILDREN OF URBAN AREAS OF DISTRICT PESHAWAR

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ABSTRACT

Objective: To assess the knowledge, attitude, and behavior of school children toward oral health.

Materials and methods: School children (n=390) aged 10 to 19 years were recruited from Peshawar public and private schools and stratified according to the monthly fee structure of the schools into three strata, low SES status (fee < 1000 PKR), middle SES (fee = 1000-2500 PKR), and high socioeconomic status (SES) (fee > 2500 PKR). Two schools were selected using a stratified random technique from each stratum. A simple random sampling technique (balloting) was used to select students from each selected school. Participants completed a pre-validated questionnaire that aimed to evaluate young school children's behavior, knowledge, and perception of their oral health and dental treatment. Data were analyzed using SPSS and percentages were calculated.

Results: The results showed that both genders had significant knowledge about oral hygiene while the female had more knowledge than boys with a p-value < 0.001.

Conclusion: Majority of students had a positive attitude toward oral hygiene as they were aware of the benefits of brushing teeth, the effects of dental caries, and the effects of chocolate and sticky foods. The children preferred the use of toothpaste over miswak whereas they followed the horizontal technique of brushing. In this study, children showed that they brushed their teeth once a day.

Key Words: Oral Hygiene, Gender, KAP, Rural School Children

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INTRODUCTION

Oral hygiene education and promotion is considered as one of the main priorities for school children, since they are at high risk of developing dental problems. It is recommended by WHO those programs focusing on awareness of oral health among school children, should be planned for prevention and control of diseases. KAP study is necessary before launching oral health education programs. Knowledge is the measure of a person's ability to comprehend causes, symptoms, and preventive measures for a certain oral disease such as dental caries. The better the knowledge, the better the oral hygiene, and vice

versa. 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 a few years back.¹⁻⁴ There are also reports showing that a correlation does exist between increased knowledge and better oral health.⁵⁻⁶ Good dental health is a state of teeth free from any diseases affecting the individual's general health and overall, well-being. Some scientists demonstrated that oral or dental health is a kind of balance between destructive factors such as sugar-rich diet, tobacco use, and poor oral hygiene versus protective factors such as good oral hygiene.⁽⁷⁾

A sound mouth is one of a kind and an invaluable treasure, and it is viewed as a principal option to keep up a decent oral well-being.⁸ Oral health is customarily characterized as an oral status that is free of infections, which makes individuals look wonderful, yet additionally adds to the ordinary capacity of the mouth.⁽⁹⁾

In 2016, the Federal Dental International (FDI) Dental World Federation re-imagined oral well-being comprehensively, recognizing that oral well-being was multiplicat-

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ed and included the capacity to smell, contact taste, bite, swallow, grin, talk, and pass on a lot of feelings through outward appearances with certainty and without distress, torment, and sickness of the craniofacial region.⁽¹⁰⁾ Good oral hygiene is key to good oral health which in turn promotes overall body health. Research indicates that schools can play an important role in children's health, by encouraging healthy behaviors among them. The most significant period of a child's life is spent at school. School teachers may serve as pioneer models to motivate children towards a healthy lifestyle on a regular basis. Hence oral health promotion can possibly be carried out in such settings. In the local educational sector, the promotion of health has not yet attained any importance. In public settings, school curriculum lacks integration of the importance of general as well as oral health issues. Similarly, the teachers are not trained for disseminating oral health knowledge to their students since such health education courses are not integrated into their respective degree courses.⁽¹¹⁾

Oral hygiene is the practice to keep the mouth clean and free of disease. This study aimed to assess the knowledge, attitude, and practice of school children about it.

MATERIALS AND METHODS

The study was conducted in public and private schools in urban areas of District Peshawar. It was a cross-sectional descriptive type of study. The sample size was 390, calculated using the WHO sample size calculator and taking 50% prevalence. The study population consisted of students of grades 6 to grade 10 of the age group 10-19 years including both males and females. A questionnaire was designed and developed to measure the knowledge, attitude, and practices of experts. It had 30 items that were intended to measure all three domains. It was implemented in the study groups of both genders of 10-19 years of age. Informed consent was taken after permission from the above schools and their authorities, necessary explanation of the study to the students and the staff was in the form of a presentation. All those volunteer students of age 12-19 years, both males and females, who consented to participate in the study were included. Children having unacceptable social behaviors like chewing tobacco and smoking and those suffering from congenital oral defects were excluded from the study.

Data were analyzed by SPSS version 23. Descriptive statistics like mean and standard deviation were calculated

for numerical variables like age. Frequency tables and percentages were calculated for other categorical variables like the association between age and knowledge and practice level, gender and attitude, and grade of study and attitude. $P < 0.05$ was considered significant for different variables.

RESULTS

Table-1 represents knowledge about oral hygiene. There was significant knowledge in both genders, as the female response was 76.0% while the male response was 60.0% respectively. In Table-2, results revealed that there was a significant difference in attitude, <13 years with $p < 0.01$. Whereas in Table 3, >13 years showed $p < 0.003$ regarding practices of oral hygiene.

DISCUSSION

The worldwide age group of 10-19 has got attention for oral health-related behavior. A study conducted in India displayed that in government and non-government schools oral hygiene knowledge was low. It is important to review the oral health of adolescents, even though they are educated.¹² In Saudi Arabia the children (10-15), there was a significant difference between age and socio-economic status rather than gender.¹³ Tickle et al. performed a study on children in North London, and noted that poor family children had fewer visits to the dental clinics leading higher rate of dental diseases. Gender-wise assessment of knowledge about oral hygiene, there was a statistically significant difference between males and females with ($p < 0.001$). Students could understand the health effects of a healthy diet and refrain from sweet and sticky food but unluckily, didn't enter into practice.¹⁴ It is necessary to measure efficacious oral health facilities in the community. Globally, with age, more accumulation of plaque and calculus films has been seen in the young population. Through standard evaluation of oral hygiene, dental diseases could be prevented by effective plaque removal, and that oral self-care was suggested. In this study, according to the attitude of children, the age group <13 years reported that sticky food causes cavities (53.8%), whereas >13 years reported (59.0%) with $p < 0.02$. Certain international studies have reported higher consumption of sweets among children. Surveys revealed that besides desirable brushing behaviors there was gingival inflammation, plaque, and calculus accumulation in the young population, oral health attitudes, and behavior from low and middle-income countries, especially in rural areas.¹⁵

Table 1: Knowledge about Oral Hygiene

Gender	Yes	No	P value	Total
Male	125 (44%)	65 (59%)	$P = 0.2$	190
Female	155 (55%)	45(40%)	$P = 0.3$	200
Total	280 (71%)	110 (28%)		390

Table 2: The Attitude toward Oral Hygiene

Age	Effect of tooth brushing				Total	P value
	Prevent bad breath	Prevent caries	Whitens teeth	Other		
< 13 years	15% (60)	25 % (100)	20% (78)	0	390	< 0.01
> 13 years	7.6 % (30)	22% (87)	9% (35)	0		
	Effect of tooth brushing					
	Loss teeth.	Bad breath	Toothache	All		
< 13 years	27% (105)	8.4% (33)	20% (80)	5% (20)	390	< 0.05
>13 years	16.6% (65)	6.4 % (25)	13% (52)	25% (10)		
	Healthy food improves oral hygiene					
	Yes		No			
< 13 years	48% (190)		12.8% (50)		390	< 0.05
>13 years	30.76%(120)		7.5 % (30)			
	Effect of sugary food on teeth					
	Strength.	Make cavities	Harmful	All		
<13 years	5% (20)	35.8% (140)	9.8% (38)	7.6% (30)	390	< 0.05
>13 years	2.8 % (11)	21.7% (85)	7.6% (30)	9.2% (36)		

Table 3: Practices about Oral Hygiene

Age	Home remedy	Toothpaste	Tooth powder	Miswak	Total	P value
< 13 years	5.6% (22)	28% (110)	3% (11)	15% (60)	390	<0.003
> 13 years	1% (4)	40 % (155)	2% (9)	5% (19)		
	Frequency of Tooth brushing					
	Once	Twice	Thrice			
<13 years	39% (153)	8% (31)	1.2 % (5)		390	< .001
> 13 years	28% (111)	19 % (75)	4% (15)			
	Techniques for tooth brushing					
	Horizontal	Vertical	Circular	Combin		
< 13 years	23% (90)	15% (58)	14% (55)	5% (20)	390	<0.003
> 13 years	15% (60)	11% (43)	8.4% (33)	8% (31)		

By giving oral health education, prevention is possible at individual and community levels; hence perking up the oral health attitude and practices among the common people. In presnet study, the children preferred toothpaste (<13 years=49.6%, >13years=59.2%) over miswak (<13 years=32.1%, >13 years=32.5%).

According to the practice of oral hygiene, the current study revealed that there was variation in the different techniques of brushing teeth, most of the children followed the horizontal brushing technique and they preferred performing the practice once a day.

The published literature showed that Pakistan was among the countries where oral health was neglected and the majority of school-going children. Oral hygiene particularly with a general awareness of dental problems needs to be generated. Education and motivation in rural schools through regular visits will improve the prevention

and promotion of oral hygiene.

CONCLUSION

The knowledge of the girls was more than the boys in the rural area regarding oral hygiene. The girls were using more oral hygiene aids. According to this study, the attitude varied in age groups whereas there was variation in practices of oral hygiene. Moreover, boys needed more education regarding this topic and there is a need for dental services in rural areas.

Oral hygiene particularly with a general awareness of dental problems needs to be generated. Education and motivation in rural schools through regular visits will improve the prevention and promotion of oral hygiene.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under

- Noman M:** Conceptualization, Study design, data collection, data analysis, writing
- Rehman Z:** Conceptualization, Study design, data collection, data analysis, writing
- Khan S:** Conceptualization, Study design, data collection, data analysis, writing
- Noor I:** Conceptualization, Study design, data collection, data analysis, writing
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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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