

THE KNOWLEDGE, ATTITUDE & PRACTICES (KAP) ABOUT ORAL HYGIENE IN SCHOOL CHILDREN OF RURAL AREAS, PESHAWAR: A CROSS-SECTIONAL STUDY

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ABSTRACT

A cross-sectional study was conducted to evaluate the knowledge, attitude and practices of oral hygiene in 10–15-years school children of both genders in rural areas, Peshawar. The sample size was 405, male (197) and female (208). A systematic random sampling technique was used and a well-designed questionnaire was administered to evaluate the knowledge, attitude and practices of oral hygiene. Pilot study was applied on 10% of the sample population. The data analysis was done by using SPSS version 21.0. The results showed that both genders had significant knowledge about oral hygiene while female had more knowledge than boys having p -value <0.001 . Majority of students had positive attitude toward oral hygiene as they were aware of benefits of brushing teeth, effects of dental carries and effects of chocolate and sticky foods. The children preferred the use of toothpaste over miswak whereas they followed 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 is the practice of keeping the mouth clean and free of disease. It is vital to do it regularly for prevention of dental and oral diseases. General health cannot be attained without oral health¹, as it serves a source of information to overall health.² The knowledge, attitude and practice about oral health are interconnected. Better knowledge of oral hygiene support practices which lead to a positive attitude, an essential tool for healthy practice.³ Good oral health habits are important from a young age to ensure better long-term oral welfare.⁴ Moreover, according to a general guideline, brushing two times a day and cleaning between the teeth after breakfast and before bedtime is an important practice for maintaining the oral cavity clean.⁵ Therefore, personal control over oral health results in self-care practices. The attitude and practice are better in developed countries due to adequate knowledge.⁶ Gingivitis and periodontitis are common due to inadequate practice and maintenance of oral hygiene.⁷ Globally, poor oral hygiene has been reported

among children and adolescents with increased plaque and calculus deposits. World Health Organization (WHO) recommends oral hygiene timetable in schools.¹⁰ Rural region has high frequency of dental diseases, whereas the urban areas have low frequency.⁸ In the past, literature has shown that there was association between dental diseases and cultural differences. Low economic and emotional impacts, low educational level, inadequate knowledge regarding oral hygiene, lack of information, high cariogenic diet and fewer visits to the dentist on a regular basis, initiates negative attitude and practice that leads to toothache, and other dental issues and eventually inadequate general health promotion.⁹ Prevention of oral diseases is very low in rural areas. Therefore, it is essential, to fight oral diseases with the preventive approach, health education and promotion. There is a need for providing knowledge and behavior relating to oral health, especially for the rural population.¹⁰ Community and professional knowledge need to be acquainted with ensuring a healthy community that is free from oral and systemic diseases. The focal areas are schools where students are educated to accept their responsibilities for oral and general health. The attitude of the students for oral hygiene improves with experience and information from parents, teachers and press media.¹¹ As local studies were lacking informa-

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tion regarding the topic, this study was structured to evaluate the knowledge, attitude and practice of oral hygiene in school children aged 10 –15 years of rural area, Peshawar, Pakistan.

METHODOLOGY

A cross-sectional study was administered on 405 school children age 10 to 15 years to evaluate the knowledge, attitude ad practices regarding oral hygiene in a rural area of Peshawar. One hundred and ninety seven boys and 208 girls were included. The data was collected from April-November 2017. Approval for this study was taken from the Ethical Committee of Gandhara University. The participants had a low socioeconomic background with sufficient awareness regarding the topic. Systematic random sampling technique was applied for data collection. Participating schools were; Government Girls Higher Secondary School University Town, Government Girls Middle School Patwaar Bala, Government Girls Primary School Patwaar Bala, Government High School Regi, Shaheen Public School Achini Payan, Government Girls High School Regi No.2, and Government High School Achini Bala. The exclusion criteria were; the students with congenital defects, allergies and major systemic disease. A questionnaire was designed and developed to measure the knowledge, attitude and practices with experts. It had 30 items that were intended to measure all the three domains. It was implemented on the study groups of both the gender of 10-15 years of age. An informed consent was taken after permission from the above schools by their authorities, necessary explanation of the study to the students and the staff was in the form of presentation. On 10% of the sample groups, a pilot study was conducted. The variable distribution was evaluated by the chi-square test and analyzed on SPSS 21.0.

RESULTS

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

DISCUSSION

Globally, the age group 10-15 has been the center

of attention for detailed analysis of oral health related behavior. On this topic, substantial research has been ignored in Khyber Pakhtunkhwa (KPK). A study conducted in India had displayed that in government and non-government school’s oral hygiene knowledge was low.⁵ It is important to review the oral health of adolescents, even though they are educated.¹⁴ In Saudi Arabia the children (10-15), there was a significant difference between age and socio-economic status rather than gender.¹⁷ Tickle et al.⁸ performed a study on children in North London, and noted that poor family children had less visits to the dental clinics leading higher rate of dental diseases. Gender wise assessment of knowledge about oral hygiene, there was statistically significant difference among male and female with (p<0.001). Students could understand the health effects of a healthy diet and refrain of sweet and sticky food but unluckily, didn’t enter into practice.¹² It is necessary to measure efficacious oral health facilities in the community.¹³ Globally, with age more accumulation of plaque and calculus films have been seen in young population. Through standard evaluation of oral hygiene, dental diseases could be prevented by effective plaque removal^{2,12}, besides that oral self-care was suggested.¹⁵ In this study, according to the attitude of children, 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.¹⁰ Surveys revealed that beside desirable brushing behaviors there was gingival inflammation, plaque and calculus accumulation in young population, oral health attitudes and behavior from low and middle-income countries^{4,5,18} especially in rural areas.¹⁵ 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.¹⁴ 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 practice of oral hygiene, current study revealed that there was variation in the different techniques of brushing teeth, most of the children followed horizontal brushing technique and they preferred performing the practice once a day. The published literature showed that Pakistan was among countries where oral health was neglected and majority of school-going children

TABLE 1: KNOWLEDGE ABOUT ORAL HYGIENE

Gender	Yes	No	Chi Value	p-value	Total
Male	66.0% (130)	34.0% (67)	4.89	P=0.2	100% (197)
Female	76.0% (158)	24.0% (50)	4.42	P=0.3	100% (208)
Total	71.1% (288)	28.9% (117)	-	-	100% (405)

TABLE 2: THE ATTITUDE TOWARD ORAL HYGIENE

Age	Effect of tooth brushing				Total	Chi-square value	p-value	
	Prevent bad breath	Prevent carries	Whitens teeth	other				
<13 years	26.4% (65)	41.9% (103)	31.7% (78)	0.0% (0)	100% (406)	11.18	P<0.01	
>13 years	22.3% (35)	53.5% (84)	22.3% (35)	1.9% (6)				
	Effect of dental caries							
	Loss teeth	Bad-breath	tooth-ache	All above				
<13 years	44.9% (110)	12.7% (34)	31.8% (78)	10.6% (26)	100% (406)	1.59	P<0.05	
>13 years	43.9% (69)	16.6% (26)	31.2% (49)	8.3% (14)				
	Healthy food improves oral hygiene							
	Yes		No					
<13 years	78.1% (193)		21.9% ((53)		100% (404)	1.64	P<0.05	
>13 years	77.8% (123)		22.2% (35)					
	Effect of chocolate/sticky food on teeth							
	Strength-en	Make cavities	Harmful to gums	No effect	All the above			
<13 years	10.1% (25)	53.8% (133)	23.9% (59)	1.2% (3)	10.9% (27)	100% (405)	5.37	P<0.02
>13 years	7.0% (11)	59.5% (94)	19.6% (31)	3.8% (6)	10.1% (16)			

TABLE 3: PRACTICES ABOUT ORAL HYGIENE

Age	Dentifrices				Total	Chi-square value	p-value
	Home remedy	Tooth paste	Tooth powder	Miswak			
<13 years	14.2% (35)	49.6% (122)	4.1% (11)	32.1% (79)	100% (405)	13.67	P<0.003
>13 years	3.2% (5)	59.2% (93)	5.1% (9)	32.5% (51)			
	Frequency of Tooth Brushing						
	Once	Twice	Thrice				
<13 years	58.4% (143)	31.4% (78)	10.2% (25)		100% (405)	3.33	P<0.001
>13 years	51.6% (81)	32.8% (53)	15.9% (25)				
	Techniques of Tooth Brushing						
	Horizon-tal	Vertical	Circular	Combina-tion			
<13 years	35.9% (88)	27.8% (68)	7.3% (18)	29.0% (72)	100% (414)	3.35	P<0.003
>13 years	38.2% (61)	21.7% (43)	7.3% (18)	28.7% (46)			

had dental caries and periodontal diseases.¹⁵ Social factors were also linked with oral diseases.¹⁹

CONCLUSION

The knowledge of the girls were 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 need for dental services in rural areas.

LIMITATIONS

All schools in rural areas of Peshawar were not included in this study as there were certain areas which were difficult to reach due to security reasons.

RECOMMENDATIONS

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

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