

Knowledge and Practices Regarding Oral Hygiene Among School Children: A Survey Based Study

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ABSTRACT

Objective: To assess the knowledge and practices among school children regarding their oral hygiene status.

Subject and Methods: This Descriptive cross-sectional study was conducted at government high schools of Jamshoro district. Total sample size calculated was 108. All the school children were interviewed by using a questioner in easy languages containing multiple questions regarding knowledge and practice of oral health.

Results: Mean age of patients was 13.46+2.47 years, minimum 07 years and maximum 15 years. All the children recruited in the study were girls. Teeth and gums status were statistically non-significant according to age. 9.3% said that they had faced toothache many times in past 12 months, and 34 children felt it rarely.

Conclusion: Mostly children were observed with good teeth and gums health and knowledge was also found to be satisfactory, while oral hygienic practice was found be unsatisfactory and consumption of biscuits, lemonade and coca cola, sugar, tea and chew gum was found to be very high, which will be harmful in future.

Keywords: Oral Hygiene, Knowledge, School Children, Practices

INTRODUCTION

By practicing good dental hygiene, you may protect your mouth from diseases including tooth decay, gum disease, stomatitis, and ulcers.^{1,2} Maintaining oral hygiene in school-aged children is crucial since dental health has an impact on overall wellbeing.¹ In addition to being a major problem in high income countries, oral illnesses such dental caries, periodontal disease, tooth loss, and oral mucosal lesions are becoming more prevalent in low and medium income nations.³

The majority of oral diseases, notably dental caries and periodontal disease, are found in underdeveloped nations, particularly in youngsters, including Pakistan. These oral illnesses cause discomfort and tooth loss, which negatively impacts their quality of life in terms of nutrition and physical attractiveness, ultimately affecting their maturation and development.^{4,5} Research has shown that improved oral care practices, which in turn encourage healthy behaviors, are shown by increased understanding of oral disease warning indicators and good oral health understanding.^{6,8} Additionally, schoolchildren who lack appropriate awareness of dental health are twice as likely to get caries than those who do.⁷

Even before school or in kindergarten, young children under the age of six spend the majority of their time with their parents and guardians, particularly their mothers. It has been shown that parents' knowledge and views have an impact on their children's dental health and results. It is possible to think of socialization as a modeling process that imitates parental conduct, which is accessible to children and serves as an important role model for their offspring.⁹⁻¹¹ When these behaviors are instilled in children in their early years, they become a part of their daily routines organically, requiring only positive reinforcing as they become older.⁹ Persistent behavioral patterns are formed at home, where mothers in particular serve as the key role models. In order to preserve their children's dental hygiene, mothers are essential. According to surveys, a bad mindset on the part of parents toward the dental health of newborns and young children is linked to a higher frequency of caries.⁹

Pakistan is now experiencing significant issues with its dental health as well as other issues.¹² Moving away from curative therapy is necessary to lessen the strain oral illness puts on the nation's limited resources. In this research, a strategy for handling these issues from a wider perspective is offered. This strategy makes use of the fundamentals of the primary health care approach to start by addressing the larger determinants of health,

which are the true roots of illness.¹² Oral health education is a sporadic activity in Pakistani schools, only being implemented in a select few affluent institutions that, in accordance with their resources, set up awareness campaigns and regular dental checkups for their students.⁴ However, it must be regularized and standardized in order to ensure a uniform distribution of oral health information across schools.⁴ However this survey based to explore the knowledge and practice among school children regarding oral hygienic status among school children in Jamshoro.

This study assesses the knowledge and practice among school children regarding oral hygienic status. It will emphasize attention on the need for enhancement of children knowledge education and their practice concerning to maintenance of the oral health. The results of this study can be helpful for the health educational department to develop the strategies in schools to develop the awareness and practice rules for good oral health.

MATERIAL AND METHODS

This Descriptive cross-sectional study with non-probability convenience sampling was conducted at government high schools of Jamshoro district in the month of April 2021. Sample size was calculated by raosoft sample size calculator by using the proportion of (91.3%) of school children having adequate knowledge. Proportion taking with 95% confidential level and 5% margin of error the study sample size stand to be 108

Inclusion criteria:

- Age (10 -20 years)
- Gender (females)

Exclusion criteria:

- Those students who were not willing to participate in the study.
- Not understanding regarding study questions

Data collection tool: The school students were the subjects of the study and all the school children were interviewed by using a questioner in easy languages containing multiple questions regarding knowledge and practice of oral health. A knowledge practice survey questionnaire was filled by the students. Self-modified questionnaire was made according to the target population. The oral health status of the school including gums etc was done by the principal investigator. All the data was collected via study proforma including questioner.

Data analysis: Data was analyzed by SPSS version 23.0. Frequencies and percentages were computed for categorical

variables like (gender, residential status, method of brushing, knowledge and attitude). Mean+standard deviation was used for continuous variables like age etc. Chi- square test was applied and a p-value <0.05 was considered as a level of significance.

Ethical considerations:

- The project was started with the approval of the supervisor and other competent authorities of LUMHS.
- Written informed consent was taken from the parents/guardians for undertaking the research on their children.
- The data recorded was kept confidential and no one except the concerned investigators was allowed to access the data.
- During data collection, the queries regarding hygiene of denture from subjects were addressed properly.
- During data collection the proper guidance was also given to the school children as per need

RESULTS

Total 108 individuals were studied; mean age of patients was 13.46+2.47 years, minimum 07 years and maximum 15 years.

Fig.1

Teeth and gums status were statistically non-significant according to age (p->0.05). **Table.2**

Out of all children 9.3% said that they had faced toothache many times in past 12 months, and 34 children felt it rarely. Most of the children 38.9% and 33.3% did not visit to the dentist and never clean their denture, while mostly 48.1% were cleaning their teeth and gums once a day. Most of the children .90% were using fluoride contain tooth toothpaste as showed in **table 3**.

Out of all 38.9% children were not satisfied with the appearance of their teeth, 22.2% were avoid smiling and laughing because of their teeth, 14.8% said that other Children make fun of my teeth, 25.9% said they had difficulty biting hard food and have had difficulty in chewing, as shown in **table.4**

In this study uses of the fruits, biscuits, lemonade and coca cola, and chew gum was found to be frequent while use of the honey was very lower as shown in **table 5**.

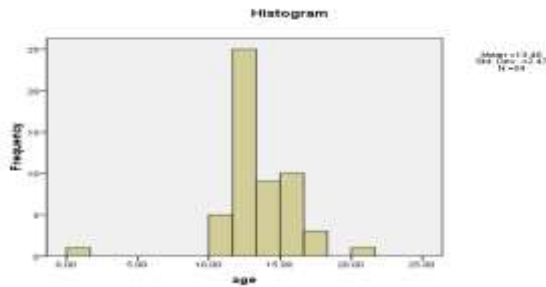


Fig.1: Descriptive statistics of age n=108

Table 2: Teeth and gums status according to age n=108

Teeth and gums status		Age groups		Total	p-value
		10-15 years	16-20 years		
Teeth status	Excellent	18	4	22	0.431
	Very good	18	2	20	
	Good	28	6	34	
	Average	12	4	16	
	Poor	10	0	10	
	Very poor	6	0	6	
	Total	92	16	108	
Gums status	Excellent	20	4	24	0.900
	Very good	18	4	22	
	Good	22	2	24	
	Average	18	4	22	

Teeth and gums status		Age groups		Total	p-value
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Teeth status	Excellent	18	4	22	0.431
	Very good	18	2	20	
	Good	28	6	34	
	Average	12	4	16	
	Poor	10	0	10	
	Very poor	6	0	6	
	Poor	12	2	14	
	Very poor	2	0	2	
Total	92	16	108		

Table 3: Knowledge and practice of oral hygienic status n=108

Questions regarding oral hygiene	Frequency	Percent
How often did you experience dental pain or discomfort over the course of the last 12 months?	Often	10 9.3
	Occasionally	16 14.8
	Rarely	18 16.7
	Never	60 55.6
	Don't know	04 02.8
In the last 12 months, how often did you see the dentist?	Once	14 13.0
	Twice	4 3.7
	four times	4 3.7
	I had no visit	42 38.9
	I have never gone to dentist	36 33.3
	I don't know	8 7.4
How often do you clean your teeth?	Never	4 3.7
	several time a month	2 1.9
	several time a week	4 3.7
	once a day	52 48.1
	2 or more times a day	44 40.7
Which of the following do you use to brush your teeth or gums?	Tooth brush	106 98.1
	Wooden toothpicks	00 00
	Plastic toothpicks	00 00
	Miswak	02 1.9
	Dental floss	00 00
Do you brush your teeth with toothpaste?	Yes	106 98.1
	No	2 1.9
Do you use tooth paste that contains fluoride?	Yes	98 90.7
	No	4 3.7
	Don't Know	6 5.6
Do you use tooth paste that contains fluoride?	Yes	98 90.7
		4 3.7
	No	6 5.6

Table 4: Problems Experienced Because of State of Teeth and Mouth

Questions regarding oral hygiene	Frequency	Percent
I am not satisfied with the appearance of my teeth	Yes	42 38.9
	No	56 51.9
	Don't know	10 9.3
I often avoid smiling and laughing because of my teeth	Yes	24 22.2
	No	78 72.2
	Don't know	6 5.6

Questions regarding oral hygiene		Frequency	Percent
I am not satisfied with the appearance of my teeth	Yes	42	38.9
	No	56	51.9
Other Children make fun of my teeth	Yes	16	14.8
	No	90	83.3
	Don't know	2	1.9
Toothache or discomfort caused by my teeth forced me to miss classes	Yes	8	7.4
at school or miss school for whole day	No	90	83.3
	Don't know	10	9.3
I have difficulty biting hard food	Yes	28	25.9
	No	76	70.4
	i don't know	04	03.7
I have difficulty in chewing	Yes	18	16.7
	No	82	75.9
	i don't know	08	07.5

Table 5: Dietary and addictive habits of the children n=108

Habits		Frequency	Percent
Fresh Fruit	Never	6	5.6
	several time a month	4	3.7
	once a week	8	7.4
	several time a week	42	38.9
	every day	40	37.0
	several time a day	8	7.4
Biscuits, cakes ,cream cakes, sweet pies, buns etc	Never	10	9.3
	several time a month	10	9.3
	once a week	6	5.6
	several time a week	8	7.4
	every day	56	51.9
	several time a day	18	16.7
Lemonade, coca cola or other soft	Never	18	16.7
Drinks	several time a month	42	38.9
	once week	12	11.1
	several time a week	30	27.8
	every day	6	5.6
Jam/ honey	Never	54	50.0
	several time a month	38	35.2
	once a week	6	5.6
	several time a week	6	5.6
	every day	2	1.9
	several time a day	2	1.9
Chewing gum containing sugar	Never	24	22.2
	several time a month	12	11.1
	once a week	6	5.6
	several time a week	28	25.9
	every day	20	18.5
	several time a day	18	16.7

Table 6:

Habits		Frequency	Percent
Sweet/ candy	Never	14	13.0
	several time a month	20	18.5
	once a week	6	5.6
	several time a week	18	16.7

Habits		Frequency	Percent
Sweet/ candy	Never	14	13.0
	several time a month	20	18.5
	every day	36	33.3
	several time a day	14	13.0
Milk with sugar	Never	36	33.3
	several times a month	4	3.7
	once a week	8	7.4
	several time a week	12	11.1
	every day	44	40.7
	several time a day	4	3.7
	Never	18	16.7
Tea with sugar	Several	2	1.9
	every day	44	40.7
	several time a day	44	40.7
Coffee with sugar	Never	82	75.9
	several time a month	10	9.3
	several time a week	4	3.7
	every day a	6	5.6
	several time a day	6	5.6
Betel nut	Never	56	51.9
	Seldom	6	5.6
	several time a month	28	25.9
	once a week	12	11.1
	every time	6	5.6
	Never	56	51.9

DISCUSSION

Evaluation of oral health, which includes evaluation of oral hygiene knowledge, attitude, and practise, is crucial for organising the community-based programme that is essential for boosting the health system. In this study total 108 individuals were studied to assess the knowledge and practice among school children regarding oral hygienic status, and the mean age of patients was 13.46±2.47 years, minimum 10 years and maximum 15 years. Comparable to this, in Ali Razabad, Lahore, Jabeen C et al¹ did a research to evaluate oral hygiene knowledge, attitude, and practice among school children aging 12 to 14 years. On other hand Farsi NJ et al¹³ conducted the study on senior students and reported mean age was 22.4 ± 1.7 years.

In this study most of the children 61.1% were resident of rural areas and 35.2% were resident of urban areas. Among contrast, Shehzad S. et al¹⁴ did a research to assess the knowledge, attitudes, and practices of oral hygiene in 10-15-year-old school students of both genders in rural regions of Peshawar. They found that although dental illnesses are less common in urban areas, they are more common in rural areas. Literature from the past has shown a relationship between cultural differences and oral problems. Low levels of education, poor oral hygiene awareness, a high cariogenic diet, few dental appointments, and low economic and emotional consequences all contribute to poor general health promotion. Negative attitudes and practices can encourage toothaches and other dental problems.^{14,15}

In this study according to teeth health status, most of the children 31.5% had good teeth health status, among 20.4% children teeth health status was excellent and in 18.5% it was good, while remaining was seen with poor and very poor teeth health status. In this study as per gums health status, most of the children observed with excellent, very good and good gums health status, while 20.4% had average gums status and among 16 children out of all, had poor and very poor gums health status. Utilization of dental services (frequent dental exams, oral health promotion, and professionally implemented preventative measures) and self-care

behaviors are the cornerstones of excellent oral health practice (good oral hygiene, restriction of sugar intake, and application of fluoride products).^{16,17}

In this study the uses of the fruits, biscuits, lemonade and coca cola, sugar, tea and chew gum was found to be frequent while use of the honey was very lower. Similar findings were made by Mishra A. et al¹⁸ in their research, which showed that youngsters consumed more sugar on a daily basis from cakes, creams, sweets, and candies than from fruits. Two factors may be used to explain this rise in the consumption of carbohydrates: first, they are readily available to the general public in the form of processed food, and children are drawn to them by their appealing look and marketing.^{18,19} The parents' jobs might be another factor in their excessive consumption of packaged foods and sugary drinks. Kids who have both parents employed, rely mostly on prepared foods since they are quick and simple to prepare. Children fill up on sweets and other sugary foods when they aren't eating during their free time.^{18,20}

In this study betel nut use was high but it was not found habitual. However, According to a cross-sectional survey conducted in Taiwan, 50% of primary school children in indigenous areas have chewing tobacco, including 30.1% who chew habitually²¹. Similar results were reported in Karachi, Pakistan²², 74% of elementary school students experienced Bethelkid daily and 35% chewed Bethelkid. According to another study conducted in the Northern Mariana Islands, 63.4% of the normal chewing tobacco consumption of high school students was consumed²³. Many of the school children surveyed were diagnosed with oral leukoplakia, a precancerous lesion caused by chronic chewing tobacco. The overall knowledge test of elementary school students did not show statistical significance in our study. There are several reasons why you can explain the result. First of all, we need to improve the design of our educational programs to attract elementary school students. Second, the 30-minute education program was too short. This is the first time most students have heard of the health disadvantages of chewing betel deposits.²⁴⁻²⁵

CONCLUSION

Mostly children were observed with good teeth and gums health and knowledge was also found to be satisfactory, while oral hygienic practice was found to be unsatisfactory and consumption of biscuits, lemonade and coca cola, sugar, tea and chew gum was found to be very high, which will be harmful in future. Unfortunately, there most of the children were un-aware regarding possible effects of biscuits, lemonade and coca cola, sugar, tea and chew gum on their teeth and gums health. Routine awareness programs should be conducted on monthly basis on children, teachers including parents. In these awareness programs diary instruction should also be instructed.

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