Original Article**KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING ORAL HEALTH AMONG SECONDARY SCHOOL STUDENTS OF AZAD KASHMIR, PAKISTAN****Rashid Mehmood¹, Saeeda Rasheed¹, Mudassar Ijaz¹**¹Department of community medicine, AJK Medical College Muzaffarabad, Pakistan**Correspondence:** Rashid Mehmood, Email: rashidmehmood1993@gmail.com, Contact: +92-3135232606**Abstract**

Background: Dental caries is a major health issue experienced by 90% of school children and adults worldwide. Studies have shown that appropriate oral health education can help to cultivate healthy oral practices.

Objective: To determine knowledge, attitude and practices of the secondary school students of Azad Kashmir, regarding oral health

Methods: This cross sectional study was done from July 2013-February 2014. Data was collected by random sampling method using a pretested questionnaire.

Results: Knowledge level of about 95% students (47% male & 48% females) was satisfactory according to recorded response. About 88% students (43% male & 45% females) were well aware about fluoride. A percentage of 41.7% clean their teeth once a day, 32.3 % twice a day, 17.7 % three times a day and 8 % more than three times a day. 63% used brush and tooth paste, 37% used only brush as oral hygiene tool. Tooth paste + brush were most common tools of oral hygiene. Dental visits were low. Consumption of sweet food was frequent.

Conclusion: The oral health attitude and practice among the students in Azad Kashmir is still below the satisfactory level.

Keywords: Oral health education, kashmir, dental carries

Introduction

About 90% of school children worldwide and most adults have experienced caries, with the disease being most prevalent in Asian and Latin American countries. For an improvement in oral health status, environmental risk factors such as oral hygiene can play an important role in prevention of dental caries (1).

Strong knowledge of oral health demonstrates better oral care practice. The change to healthy attitude and practice can be occurred by given adequate information, motivation and practice of the measures to the subjects (2).

Similarly for those with more positive attitude towards oral health are influenced by better knowledge in taking care of their teeth. Studies have shown that appropriate oral health education can help to cultivate healthy oral health practice (3).

In order to create such health education, the assessment of knowledge, attitude and practice is essential (4).

The aim of this study was to assess the level of knowledge and attitude towards oral health among the secondary students in Azad Kashmir and to evaluate the practice of oral hygiene among the secondary school students. Secondary schools students were interviewed

using a pretested questionnaire (5).

Methodology

This was a cross-sectional study using simple convenient method conducted from July 2013 to February 2014 in Secondary schools of Azad Kashmir. The target population consists of secondary school students. The present KAP study enrolled 384 respondents representing target population. Total 1000 structured pretested questionnaires translated in local language (Urdu) were distributed. We received 384 completely filled feed-backs out of 1000. The study assessed knowledge, attitude and practice regarding oral health. Students of lower and higher grades were excluded from study. Participants were interviewed using a pretested questionnaire. Before it was used, the questionnaire was pretested in the pilot study. The questionnaire consisted of four parts comprising 19 questions and information collected through questionnaire included (1) General information on respondents including age, gender etc. (2) knowledge regarding oral hygiene (3) attitude and (4) practice regarding oral hygiene. Informed written consent was taken from all respondents prior to data collection. They were assured for maintaining their privileges and

anonymity. Data collected was analyzed statistically using SPSS-software (version 21). Original patient's data were filed and locked by principal author.

Results

A total of 1000 questionnaire were distributed among randomly selected secondary school students of Azad Kashmir. Only 400 questionnaires were returned and among them 16 were incompletely filled for more than 5 questions so they were discarded. 384 participants with mean age of 15 years (min 10-max 20 years) were analyzed. Among them n189 (49.2%) were males and n195 (50.8%) were females.

For knowledge of oral health, 96 to 99% students were well aware about causes of dental caries (consumption of too much sweet), meaning of dental plaque and its effect on dental health. About 97 % had the awareness of benefits of regular brushing. Question number 8, 9 and 10 were wrongly answered by 8-13% of students. Approximately 11% of the respondents did not know that soft drinks are harmful for teeth, whereas for fluoride, 12% did not know that it strengthens the teeth, 8% said that dental health has no relation with general health of body. There is no significant difference of knowledge level between male and female students. Details of the knowledge score is presented in Table 1.

Table 1: Frequency distribution of knowledge scores as correct and wrong answers

Question	Correct (n)	Correct (%)	Wrong (n)	Wrong (%)
Consuming too much sweet food causes tooth decay/dental caries.	379	98.7(M=49,F=49.7)	5	1.3(M=0.3,F=1.0)
Gum bleeding means inflamed gum.	370	96.4(M=48.7,F=47.7)	14	3.6(M=0.5,F=3.1)
Regular brushing of teeth can protect oneself from gum bleeding.	370	96.4(M=46.9,F=49.5)	14	3.6(M=2.3,F=1.3)
Dental plaque means soft debris on teeth.	375	97.7(M=47.4,F=50.3)	9	2.3(M=1.8,F=0.5)
Dental plaque can lead to dental caries.	374	97.4(M=46.9,F=50.5)	10	2.6(M=2.3,F=0.3)
Cariou or decayed teeth can affect teeth appearance.	375	97.7(M=47.7,F=50.0)	9	2.3(M=1.5,F=0.8)
Sweets affect the teeth adversely.	379	98.7(M=48.2,F=50.5)	5	1.3(M=1.0,F=0.3)
Fizzy drinks affect the teeth adversely.	342	89.1(M=43.5,F=45.6)	42	10.9(M=5.7,F=5.2)
Using fluoride strengthens the teeth.	339	88.3(M=43.8,F=44.5)	45	11.7(M=5.5,F=6.3)
General body health has a relationship to oral health and dental diseases.	353	91.9(M=44.2,F=47.7)	31	8.1(M=4.9,F=3.2)

Table 2 presents the attitude towards oral health according to gender. About 51.6%% (n=198) of the respondents (26% female; 25.5% male) reported that they would only visit the dentist when they have dental pain. About 3.1%(n=12) students(1.6% male and 1.6% female) regularly visited the dentist and 35% students(male 17.2% and female 18.2%) have never

visited the dentist in their life . There was no significant difference of the frequency of dental visit by gender ($p > 0.717$).

Table 2: Attitude of the respondents towards oral health.

Variable	Response	Total: n(%)	Male[n(%)]	Female[n(%)]	p value
Frequency of dental visits	Regularly (every 6-12 months)	12(3.1)	6(1.6)	6(1.6)	0.717
	Occasionally	36(9.4)	15(3.9)	21(5.5)	
	When I have dental pain	198(51.6)	100(16)	98(25.5)	
	Never	138(35.9)	68(17.7)	70(18.2)	
History of last dental visit	Less than 6 months ago	47(12.2)	19(4.9)	28(7.3)	0.539
	Last 6-12 months	28(7.3)	14(3.6)	14(3.6)	
	Last 1-5 years	58(15.1)	28(7.3)	30(7.8)	
	Greater than 5 years	113(29.4)	63(16.4)	50(13)	
	never visited a dentist	138(35.9)	68(17.7)	70(18.2)	

Table 3 shows the practices for oral health according to gender. About 12.2%% (n=47) of the respondents (4.9% male; 7.3% female) had their last visit to the dentist less than six months ago. There were 29.4% (13% female; 16.4% male) who last visited the dentist more than five years ago. There was no significant difference of the frequency of last dental visit between genders ($p > 0.539$). About 32.3% of the respondents reported brushing their teeth at least twice a day. Female students (15.1%) brush their teeth more than twice a day as compared to male students (9.9%). However, female students (29.2%) have a higher frequency (2-4 times a day) of consumption of sweet food daily compared to male students (9.9%).

Table 3: Practices of the respondents regarding oral health.

Variable	Response	Total: n (%)	Male [n (%)]	Female [n (%)]	p value
Frequency of tooth brushing	No brushing	4(1)	1(0.3)	3(0.8)	p=0.64
	Once a day	160(41.7)	83(21.6)	77(20.1)	
	Twice a day	124(32.3)	67(17.4)	57(14.8)	
	More than twice a day	96(25)	38(9.9)	58(15.1)	
Time spent for brushing	Less than 1 minute	26(6.8)	14(3.6)	12(3.1)	p=0.147
	1 minute	39(10.2)	23(6.0)	16(4.2)	
	2 minutes	98(25.5)	50(13.0)	48(12.5)	
	More than 2 minutes	221(57.6)	102(26.6)	119(31.0)	
Frequency of eating sweet food per day	Less than 1 time	90(23.4)	43(11.2)	47(12.2)	p=0.828
	2-4 times	227(59.1)	115(9.9)	112(29.2)	
	4-6 times	26(6.3)	11(2.9)	13(3.4)	
	More than 6 times	43(11.2)	20(5.2)	23(6)	
Frequency of taking soft drinks	1 time/ week	104(27.1)	67(17.4)	37(9.6)	p=0.240
	2 times / week	47(12.2)	26(6.8)	21(5.5)	
	3-5 times / week	45(11.7)	15(3.9)	30(7.8)	
	Everyday	188(49)	81(21.1)	107(27.9)	

Discussion

Only two questions on effect of fizzy drinks and fluoride on dental health (Table 2; Questions 8 and 9) were answered correctly by less than 90% of participants. Question about relation of oral and body health was answered correctly by 92% of students (Table 2; Question 10). Rest of questions (1-9) regarding knowledge of oral hygiene were answered correctly by about 97% of students. The lack of knowledge in the dental health could reflect the dental health education, which is most likely was limited to certain level of understanding. There was no significant difference of the knowledge level between genders. This may be because both genders are equally educated. However a study in India reported that reported that boys had better knowledge than girls (6).

Majority (51.2%) of the students only visited their dentist when they had dental pain. Approximately (3.1%) of the

students had regular dental visit every 6 to 12 months. This could be due to lack of school oral health programs. The frequency of dental visit remains very low as compared to half (50%) of the 1351 second-year secondary school students in Canada used dental services once in every six months (7).

This may be due to the lack of awareness regarding visiting dentists among these students that caused the frequency of visit low. Low dental visits may probably be due to low awareness of importance of oral health, thus affects the student's health seeking behaviour (8).

This study also showed that 15% of the students did visit their dentists in the last 1-5 years, which is much lower than 95-96% reported in Finland (9).

Family and friends seems to play a minor role in advising a dental visit. The main reason that hampered a dental visit was fear of the dental needle. Early oral education in children had a positive influence on dental anxiety, improving the long term dental follow-up (10-11).

A study in California among the pre-school children showed that parents played a major role in influencing their children's oral health and access to care. These findings could be explained by the fact that the respondents in this study are teenagers who try to achieve independence and establish their own identity without family and friends interference. The role of dentists in promoting and disseminating the knowledge of oral disease prevention is essential. However, with the limited number of dentists serving the patients, the amount of time dentists can spend with each of the patient is compromised. Therefore, the role of educating oral health should not totally on dentists alone. Delay in seeking dental care could be attributed to other factors like lack of economic resources and accessibility of dental services (12).

The study showed that 32.3% of the students brushed their teeth at least twice a day. There were 25% of the students who brushed their teeth more than twice per day. Girls were found to brush their teeth more frequently, and spent longer time during tooth brushing as compared to boys, supported by other studies (13-18).

Tooth brush and tooth paste were the most commonly used oral hygiene aids, as that reported elsewhere (19). Female students had more sugar intake than the male students from the consumption of sweet food and soft drinks. Studies had shown that girls usually have greater preference for sweet foods while boys will opt for higher fat and salt content fast-foods and snacks (20).

Other than sweets, carbonated drinks was reported to be the most favourable among the respondents where majority claimed they drink carbonated drinks and 49% have at least once per day. The availability of the sweet food, snacks and carbonated drinks within and outside the compound of the school had facilitated the purchasing of the items among the students. Students seem to be more attracted by the taste and appearance of the food than its nutritional value. Since there was no

dental records of the school students, this study was not able to compare the students' knowledge, attitude and practice of oral knowledge with their oral health status. No such type of study was done before in Azad Kashmir and Pakistan so no data was available to compare with this study.

Conclusion

In conclusion, the oral health attitude and practice among the students in Azad Kashmir is still below the satisfactory level. The findings of this study suggest that awareness on the importance of oral health needs to be enhanced among the secondary school students in Azad Kashmir. There is a need to decrease dependency on oral health personnel, and encourage students to take responsibility for their own oral health. The schools may serve as the best platform for promotion of oral health care among teenagers. The oral health education programs should be intensified to promote oral healthcare a lifelong practice. The incorporation of oral health education activities into the school's curriculum should be done, but more efforts in the form of educational materials, health promotion activities need to be carried out. Undoubtedly, the support from the parents and teachers in various ways is essential. The school health policies should be revised with the introduction of healthy eating behaviour that limits sweet foods and drinks in the school premises. Healthy foods must be made available in the school canteens, while the canteens should be prohibited from selling food and drinks that contain very high sugar levels. Although parents play a role of influence the eating behaviour of their children, a more effective idea would be empowering the children to make healthy food choices.

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