

## KNOWLEDGE, ATTITUDE & BEHAVIORS RELATED TO ORAL HEALTH AMONG STUDENTS & FACULTY OF AYUB MEDICAL COLLEGE, ABBOTTABAD, PAKISTAN

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### **ABSTRACT:**

#### **OBJECTIVES:**

*The aim of this study was to analyze the knowledge, attitude and practices of medical students and faculty related to oral health.*

#### **METHODOLOGY:**

*A cross-sectional study was conducted at Ayub Medical College, Abbottabad Pakistan comprising of medical students and their teaching faculty. The participants out of total 400 distributed data forms responded 330 questionnaires positively. Data analysis was performed using SPSS software version 25.0 (using descriptive analysis and Chi Square test). P value of less than 0.05 was statistically significant.*

#### **RESULTS:**

*The survey revealed that the high proportion (96.6%) of teachers knew about dental caries, which was significantly higher than students (p-value 0.031). High percentage of teachers had habit of brushing twice daily as compared to students (p=0.001).*

#### **CONCLUSION:**

*Within limitations of this survey, teaching faculty possessed better knowledge, attitude and behavior related to oral health as compared to medical students.*

**KEYWORDS:** Knowledge, Attitude, Behavior, Oral Health, Medical Students, Teaching Faculty

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#### **INTRODUCTION:**

Oral health can be defined as “a standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort or embarrassment and which contributes to general well-being”<sup>1</sup>. Attitude is basically the reflection of one’s beliefs, lifetime experiences, discernment of cultural norms and social interactions. It is also taken as an important component of behaviors related to health<sup>2</sup>. Globalization in current era has magnified changes in social development, giving rise to new oppugns in sector of generals and oral health. The prevention of oral diseases at primary and secondary level comprises of communal

education, oral hygiene practices i.e. brushing, flossing, topical fluoridation, regular dental visits and diet with low cariogenic potential<sup>3</sup>. Sound oral health is a key building block of sound general health. Compromised oral health leads to emasculation of social relations that culminates in stressed behaviors, mental depression and fiscal issues<sup>4</sup>. Studies have implicated that individuals with positive behavior regarding oral health are swayed by better know how in taking care of their dental tissues; sowing positive oral health practices<sup>5</sup>. Many of the oral health issues can be prevented and avoided via provision of oral health facts to the people. A handsome knowledge about oral hygiene is needed to achieve good oral behavior and habits<sup>6</sup>. Medical students as well as their teaching faculty ascertain that oral health is an integral constituent of general health of patients admitted in hospital. Ample of oral conditions are deeply related to systemic abnormalities. Health care professionals can be portrayed as a role model for their patients, mates, family members and society, provided that they themselves carry a sound knowledge and positive attitude towards oral health. Evaluation of baseline knowledge of health care professionals forms an important indicator for devising a successful oral health education program<sup>7,8</sup>. Studies aimed at comparing oral health behaviors among medical students, gender differences, cultural variations have been conducted<sup>9,10</sup>. Furthermore, oral health behaviors improve with advance in educational levels<sup>11</sup>. Studies conducted on medical students with main focus on comparing health attitudes from first to final year showed improved perception of oral health behavior and attitudes with advancing level of education i.e. from first to final year<sup>12,13</sup>. The improved oral health behaviors observed in medical students has been attributed to their advanced dental educational experience<sup>14</sup>. This study was conducted with assumption that health care professionals carry positive oral health attitudes amongst them so that they might be able to cultivate better oral hygiene practices in others. A local study under this subject was not found to be available in literature, therefore the main bourne of this study was to survey and compare the knowledge related to oral health attitudes and behaviors among students and teaching faculty of Ayub Medical College, Abbottabad, Pakistan keeping in view the variations of category (students/teaching faculty).

## METHODOLOGY:

A cross-sectional survey based on simple random sampling technique, constituting mainly a questionnaire was conducted after acquiring ethical approval at Ayub Medical College, Abbottabad over a period of 2 months (November-December 2019). The study included undergraduate students and teaching faculty; excluding the house officers, post graduate trainees and non-teaching staff. Informed assent was taken from all the participants before questionnaire distribution. A self-administered questionnaire with closed-ended questions was distributed among 400 students and teachers in total while 330 participants responded positively. The questionnaire consisted of two main parts; the first part consisted of demographic data such as age, gender, category etc. The second part comprised of 18 questions to estimate knowledge related to oral health attitudes and behaviors (tools used for oral hygiene, frequency of brushing per day, routine of brushing, use of fluoridated toothpaste, frequency of changing toothbrush, texture of brush, frequency of sugary snack consumption, type of sugary snack being consumed, routine after sugary snack consumption, use of dental floss, frequency of using dental floss, frequency of dental check-up, last dental check-up, visit to dentist without dental issue, dental caries, action done after coming across caries, root cause of caries, total number of decayed, missing or filled teeth, prevention of caries). The data obtained via survey was subjected to analysis using SPSS-software version 25.0. Descriptive statistics and Chi Square test was applied to assess knowledge, attitude and behavior related to oral health among the participants.  $P < 0.05$  was considered statistically significant.

## RESULTS:

A total of 330 questionnaires were responded positively among which 271 were students and 59 were teachers. A comparison based on category (students/teaching faculty) showed statistical significance ( $P < 0.05$ ). Table 1 shows the summary of statistical analysis applied on different aspects of questionnaire taking in consideration the teaching faculty and students. Tables 2-4 show the difference exhibited by teachers and students while taking in view different variables. Figure 1 shows the frequency of toothbrush used by participants per day while Figure 2 connotes the percentage of different oral

hygiene tools used by participants for purpose of maintaining oral hygiene.

**Table 1: Summary of Statistical Analysis**

Questions	Category	Category
Tool for oral hygiene	Chi-Square test df Sig	3.183 1 0.074
Frequency of brushing per day	Chi-Square test df Sig	17.158 3 0.001**
Routine of using brush	Chi-Square test df Sig	17.679 3 0.001**
Use of fluoridated toothpaste	Chi-Square test df Sig	8.345 3 0.039*
Frequency of changing brush	Chi-Square test df Sig	6.911 3 0.075
Texture of toothbrush	Chi-Square test df Sig	4.089 3 0.252
Frequency of sugary snack consumption	Chi-Square test df Sig	1.180 4 0.881
Type of snack between meals	Chi-Square test df Sig	10.901 4 0.028*
What do you do after taking sugary snack	Chi-Square test df Sig	10.849 3 0.013*
Use of dental floss?	Chi-Square test df Sig	43.818 1 0.000**
If yes, how often?	Chi-Square test df Sig	43.440 3 0.000**
Frequency of dental check up	Chi-Square test df Sig	7.479 3 0.058
Last oral and dental check up	Chi-Square test df Sig	15.311 3 0.002**
Visit to dentist without any issue	Chi-Square test df Sig	4.136 1 0.042
Dental caries	Chi-Square test df Sig	4.655 1 0.031*
Action after coming across caries	Chi-Square test df Sig	1.819 2 0.403
Root cause of caries	Chi-Square test df Sig	2.967 1 0.085
Total number of DMF teeth	Chi-Square test df Sig	18.587 3 0.000**
Prevention of caries	Chi-Square test df Sig	5.655 2 0.059

**Table 2: Association of Knowledge Regarding Oral Health with Category**

Variables	Students	Teachers	P-Value
Knowledge of dental caries	235 (86.7%)	57 (96.6%)	0.031*
Incidence of 1-4 decayed, missing or filled teeth	96 (35.4%)	35 (59.3%)	0.000**

**Table 3: Association of Attitude Regarding Oral Health with Category**

Variables	Students	Teachers	P-Value
Brushing morning after breakfast and night before bed	74 (27.3%)	31 (52.5%)	0.001*
History of dental check-up within last 6 months	63 (23.2%)	22 (37.3%)	0.002**
Visit to dentist without a dental issue	29 (10.7%)	12 (20.3%)	0.042*

**Table 4: Association of Behaviors Regarding Oral Hygiene with Category**

Variables	Students	Teachers	P-Value
Frequency of using fluoridated toothpaste	131 (51.3%)	19 (32.2%)	0.039*
Frequency of carbohydrate consumption between meals	56 (20.7%)	18 (30.5%)	0.028*
Nothing done after sugary snack consumption	125 (46.1%)	20 (33.9%)	0.013*
Use of dental floss	64 (23.6%)	40 (67.8%)	0.000**
Frequency of using dental floss once daily	28 (10.3%)	12 (20.3%)	0.000**

\*=Statistically significant, \*\*=Highly significant

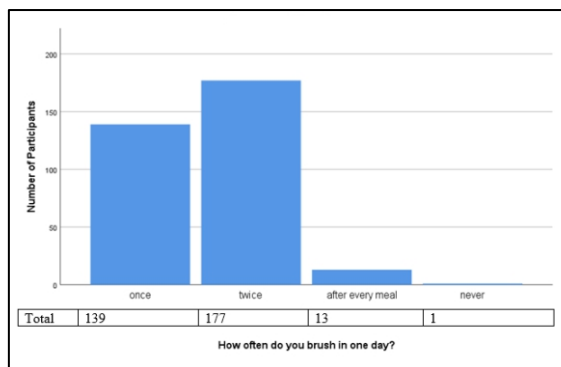


Figure 1: Frequency of Using Toothbrush Per Day

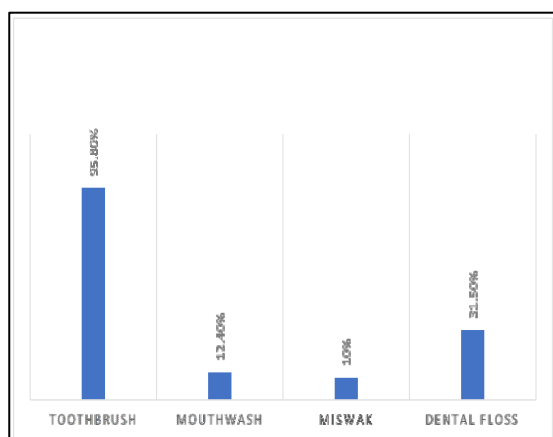


Figure 2: Percentage of Participants in Terms of Tools Used for Oral Hygiene

## DISCUSSION:

Medical students are future health care professionals, so they are supposed to adopt proper general as well as oral health attitudes during their academic years, though these attitudes are incorporated in one's figure at an early age. This was the first study of its type in Khyber Pakhtunkhwa, Pakistan; taking in consideration the attitudes, knowledge and behaviors regarding oral health among medical students and their teaching faculty. Females constituted the majority of respondents (52.1%) in this study; similar findings were reported by Dawani et al in 2013<sup>15</sup>. Toothbrush was used as an oral hygiene tool by 95.8% of the participants while 12.4% used mouthwash and 10% used miswak as an adjunctive tool, which was almost in accordance with a study conducted in Saudi Arabia where 95.40% of the participants preferred using toothpaste as an oral hygiene tool<sup>16</sup>. Table 4 showed that higher percentage of teachers (30.5%) consumed refined

carbohydrates in between their meals in contrast to students whose high proportion (20.7%) consumed fruits in between meals as opposed to results of study conducted by Oogarah P<sup>17</sup>. This might be the reason for high caries incidence among teachers (59.3%), even though high proportion of teachers had habit of rinsing mouth with water after sugary snack consumption. This might be because of the reason that water alone is not enough to provide protection against dental caries. According to Table 3, the percentage of participants who brushed their teeth twice daily was 53.6% which was much lower than that (74%) of a study conducted at a dental university of Iraq<sup>18</sup>. 27.3% of students and 52.5% of teachers followed the routine of brushing morning after breakfast and night before bed, indicating that brushing habit shifted to more appropriate routine with advancement in educational level as seen in reports given by Okeigbemen and Ohre<sup>19</sup>. Highly significant differences were seen in previous studies regarding regular change of toothbrush with advancing educational level but no as such significant difference was seen in this study between students and teaching faculty<sup>18</sup>. As per Table 3, 25.8% of the participants had their last dental visit with in last 6 months, which was significantly lower than Jordanian students (84%)<sup>20</sup>. Table 4 shows the proportion of participants using dental floss on regular basis was 31.5% while 68.5% of them did not use the floss at all which was in accordance with study conducted by Peker and Alkurt<sup>21</sup>. As showed by Table 2, significantly high proportion of students was caries free owing to their habit of less consumption of refined carbohydrates between their meals. Healthy intake is of pivotal importance not only to general health but also for oral health. Table 2 connotes that high percentage of teachers (96.6%) knew about dental caries, which was significantly higher than that of students indicating that they exhibit significantly high degree of knowledge, reflecting their interest in maintaining good esthetics; similar findings have been reported by other studies<sup>22,23</sup>. 87.3% of the partakers did not pay a visit to dentist without a dental issue, which was much higher than a study conducted in Karachi, Pakistan<sup>15</sup>. This might be due to lack of knowledge about oral health among participants. No significant difference was seen between categories (teachers and students) regarding knowledge of methods to be adopted for prevention of caries.

**CONCLUSION:**

We have reached to the conclusion that teachers had more sound knowledge and attitude towards the subject as compared to students. Educational programs related to oral health must be devised for medical students in order to enhance their knowledge, attitude and behavior related to oral health.

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