

# Assessment Of Knowledge, Attitude, Self Reported Practice And It's Association With Sociodemographic Factors Among College Students Of District Mansehra , Pakistan

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## Abstract

**Background.** Oral health is an utmost component of one's general health and over all well-being. Many systemic diseases have oral manifestations . Oral diseases are common occurrence across the world wide and required community based prevention to improve oral health at community level. Knowledge , attitude and practice (KAP) survey is an important for the evaluation and detection of needs before launching community based oral health promotion programs.

**Objective:** to assess oral health knowledge , attitude, self – reported practices and it's association with sociodemographic factors among college students of college students of district Mansehra , Pakistan .

**Study Design :** A Cross Sectional Study.

**Place and Duration of study.** Department of Community Dentistry Bacha Khan College of Dentistry Mardan from jan 2020 to dec 2020

**Methodology :** It was a cross sectional study conducted on 203 college students in district Mansehra. Data was collected by using a modified structure questionnaire and analyzed using SPSS software.

**Result:** Oral health knowledge of the participants about specific oral diseases was not satisfactory , but overall oral health knowledge was good . Regular dental check-up was uncommon( only 37.93%) . Most of the participants(191/203) were reported to brush their teeth with toothpaste 145 (71.43%),Miswak 43(21.18%) .Female students have more knowledge than male students( P= 0.0001 which is statistically significant) .

**Conclusion:** Oral health knowledge about oral diseases not satisfactory and most of the students didn't know about proper brushing method and oral hygiene aid , there by requiring awareness campaigns , seminars and oral health programs to improve oral hygiene and health.

**Keywords:** Oral health knowledge, college students ,attitude and practice, sociodemographic factors.

## Introduction

Oral health is multifaceted, encompassing the ability to speak, smile, smell, taste, touch, chew, swallow, and convey emotions through facial expressions confidently and without pain, discomfort, or disease of the craniofacial complex (head, face, and oral cavity).<sup>1</sup> It is integral to general health and well-being, irrespective of age. Oral health is defined as being free from chronic mouth and facial pain, oral and throat cancer, infections, sores, periodontal disease, tooth decay,

tooth loss, and other conditions that hinder an individual's ability to bite, chew, smile, speak, and maintain psychosocial well-being.<sup>2</sup> Good oral health is essential for overall health, quality of life, and well-being.<sup>3</sup> The close relationship between oral health and systemic health has been well-documented. Many systemic diseases present with oral manifestations; for instance, approximately 95% of individuals with diabetes also suffer from periodontal disease.<sup>3</sup> Additionally, periodontal diseases are associated with cardiovascular diseases, as oral bacteria can enter the bloodstream, leading to arterial hardening and increasing the risk of stroke or heart attack.<sup>4</sup> Studies also highlight the impact of oral infections on systemic diseases such as hypertension, adverse pregnancy outcomes, diabetes, Alzheimer's disease, and arthritis.<sup>4</sup> According to the WHO Global Oral Health Status Report (2022), oral and dental diseases affect approximately 3.5 billion people worldwide, with 3 out of 4 individuals living in middle-income countries.<sup>5</sup> Among these conditions, dental caries and periodontal diseases are the most prevalent, contributing significantly to tooth loss in adults.<sup>5</sup> Treating and managing oral diseases is expensive and often exceeds the budgetary constraints of healthcare systems in developing and underdeveloped countries.<sup>6</sup> Therefore, the WHO and FDI emphasize community-based preventive programs to mitigate oral health issues.<sup>7</sup> Oral health education forms the cornerstone of these preventive programs and is considered a cost-effective strategy for promoting oral health. Before launching such programs, it is essential to assess the population's knowledge and attitudes regarding oral health. Knowledge serves as a critical measure of an individual's understanding of the causes, symptoms, and preventive measures for specific oral diseases such as gingivitis, caries, and periodontitis. Evidence suggests that individuals with adequate knowledge about oral diseases are more likely to practice proper oral hygiene and maintain good oral health, while those with limited knowledge have poorer oral health outcomes and are more susceptible to oral diseases.<sup>8,9</sup> Unfortunately, oral health knowledge is generally low among populations, posing challenges for healthcare professionals in diagnosing, treating, and preventing oral and dental diseases effectively. Mansehra, a major city in Khyber Pakhtunkhwa, Pakistan, provides a unique opportunity to study the oral health challenges faced by a multiethnic population with diverse socioeconomic and educational backgrounds. To date, there is no data available on the oral health knowledge, attitudes, and practices of college students in Mansehra. This study aims to assess the oral health knowledge, attitudes, and practices of college students in relation to sociodemographic factors. The ultimate objective is to provide insights to healthcare authorities to design and implement oral health education programs to promote better oral health in the region.

## METHODOLOGY

The study was performed under the principles outline in the Helsinki declaration of 2013 College student of fsc part 1 and part 2 of district Mansehra were approached and contacted and aims and objectives of the study were explained. Written informed consent was obtained from all the participants. A total of **203** participants (Male :132 , Female : 71) having mean age of 17 were included in the study. Those who were absent or physically challenged were excluded from the study. After obtaining informed consent a self administered close ended structured questionnaire was provided to the participants. The questionnaire was designed by the research team . The questionnaire included 31 questions divided into 4 sections (demographic , knowledge, attitude and practice).

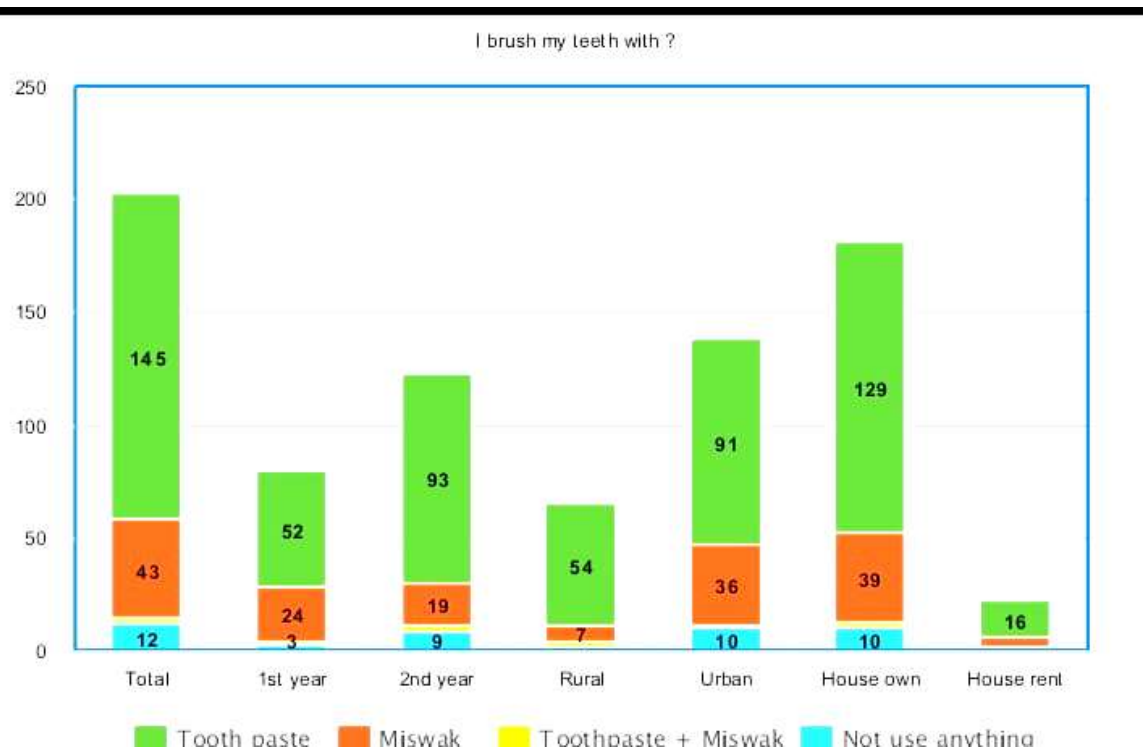
**Data analysis procedure:** Completed questionnaire were coded , compiled and entered Excel (Microsoft) and exported to statistical package of social sciences version 23.0 (SPSS) for analysis. Descriptive statistic included computation of percentages used to calculate the frequencies of oral health knowledge, attitude and practices.

## RESULTS

A total of **203** subjects consented to participate in this study response rate was 100% .The study participants included Fsc-1 and Fsc -2 students of both genders. Sociodemographic characteristics of all the participants are summarized in table 1.0 .Distribution of study population on the basis of knowledge about oral health is presented in table 1.1 . It was observed that most of the students have adequate knowledge about oral health. And majority ( **89.70%** ) of the students think that **smoking** is bad for oral health. And ( **93.10%** ) students think that **naswaris** harmful to oral health( table 1.2). However their knowledge about oral diseases is not satisfactory. Regarding attitude only ( **37.93%** ) students do routinely check-up . Most of the students are afraid to going to the dentist. And ( **36.95%** ) students think that dentist only care about treatment not prevention. Response of students regarding oral health practice indicate that majority ( **93.11%** ) students brush their teeth regularly(table 1.3), Of these ( **59.61%** ) brush once a daily , ( **22.17%** ) twice daily and ( **10.3%** ) after every meal. ( **61.08%** ) changed their brush after every three months.( **71.34%** ) used toothpaste , ( **21.18%** ) used Miswak , while ( **1.48%** ) used toothpaste and Miswak . Female students have more knowledge than male (  $P= 0.0001$  ) which is statistically significant ,  $P<0.005$ . 1<sup>ST</sup> year have more knowledge than 2<sup>nd</sup> year (  $P= 0.028$  ) .Rural have more knowledge than urban (  $P=0.48$  ).Students having rented houses are more knowledgeable than those having owned houses

(P=0.002). Routine dental checkup is overall seen deficient, there is no significant difference in 1<sup>st</sup> year and 2<sup>nd</sup> year (P=0.2480), house owned and rented as well ( 0.668).

**Figure 01: Brushing Aid (Graph 1.1)**



**Figure 02: Brushing Frequency**

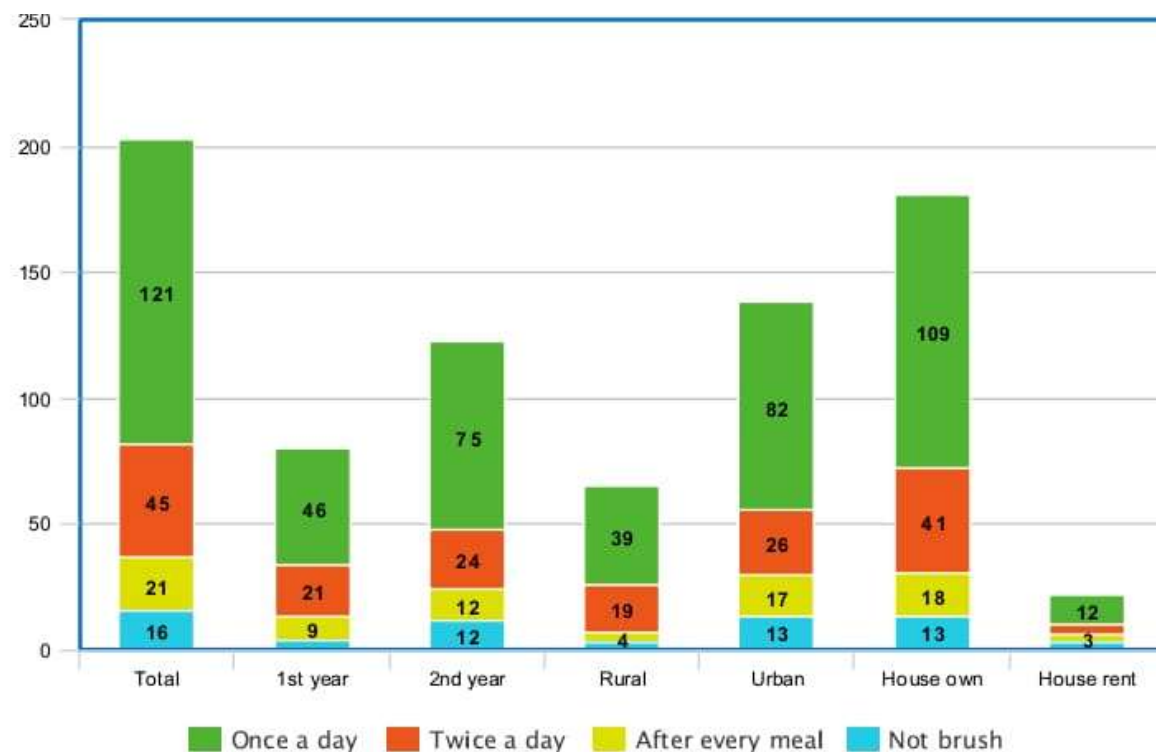


Table 1: Sociodemographic Factors of Participants

Variable	Category	Frequency	Percentage
<b>Gender</b>	Male	132	65%
	Female	71	35%
<b>Education</b>	First Year	80	39.40%
	Second Year	123	60.60%
<b>Geographic Area</b>	Rural	65	32%
	Urban	138	68%
<b>House</b>	Own	181	89%
	Rent	22	11%
<b>Family Status</b>	Middle Class	171	84.24%
	Upper Class	22	10.84%
	Lower Class	10	4.92%
<b>Parent Education</b>	Uneducated	33	16.26%
	Primary	3	1.50%
	Middle	25	12.30%
	Secondary	58	28.60%
	Higher Secondary	49	24.14%
	Higher Education	35	17.24%

Table 2: Knowledge Regarding Oral Health

Question	Response	Frequency	Percentage
<b>Do you have knowledge about oral health?</b>	Yes	177	87.20%
	No	26	12.80%
<b>Is there any relationship between oral and general health?</b>	Yes	176	86.70%
	No	27	13.30%
<b>Does oral health affect social life?</b>	Correct	69	33.99%
	Wrong	134	66.01%
<b>Do fizzy drinks affect teeth adversely?</b>	Yes	143	70.44%
	No	60	29.56%

Table 3: Attitudes Towards Oral Health

Question	Response	Frequency	Percentage
<b>Are you smoking?</b>	Yes	21	10.34%
	No	182	89.66%
<b>Do you use naswar?</b>	Yes	14	6.44%
	No	189	93.56%
<b>Is scaling harmful to gums?</b>	Yes	81	38.06%
	No	36	16.92%
	Don't Know	86	40.37%
<b>Does brushing twice a day improve hygiene?</b>	Yes	166	77.92%
	No	21	9.86%
	Don't Know	16	7.52%

Table 4: Practices Related to Oral Health

Question	Response	Frequency	Percentage
<b>Frequency of brushing teeth</b>	Once a day	121	56.54%
	Twice a day	45	21.03%
	After every meal	21	9.81%
	Do not brush	16	7.48%
<b>When do you change your toothbrush?</b>	Every 3 months	124	57.94%
	Every 6 months	34	15.89%
	When bristles are lost	45	21.03%
<b>What do you use to brush?</b>	Toothpaste	145	67.13%
	Miswak	43	19.91%
	Both	3	1.39%
	Do not use anything	12	5.57%
<b>Do you do routine dental checkups?</b>	Yes	73	33.80%

## DISCUSSION

The Knowledge, Attitude, and Practice (KAP) survey has been an essential tool in public health and policy research for decades. It has been extensively utilized in oral health policy and program planning worldwide. In Pakistan, numerous KAP surveys on oral health have been conducted in various cities, focusing on hospital patients and school-going children.<sup>11, 12, 13, 14</sup> However, the majority of these studies have overlooked college students. To the best of our knowledge, this study is the first of its kind in the Hazara Division, specifically in Mansehra, to assess the oral health knowledge, attitudes, and practices of college students from both genders and diverse socioeconomic and residential backgrounds. This cross-sectional study was conducted to evaluate oral health knowledge, attitudes, and practices among college students in district Mansehra. The selected participants included individuals from both urban and rural communities, representing varied family structures and socioeconomic backgrounds. The findings revealed that while participants generally had good knowledge of oral health, they lacked awareness about specific dental issues, such as periodontitis (gum bleeding). These results are consistent with a similar study conducted in Peshawar.<sup>15</sup> Since knowledge forms the foundation for changes in attitudes and practices, it is recommended that oral health promotion programs prioritize enhancing public knowledge about common dental problems, such as caries and periodontitis, along with preventive measures. The current study also highlights a significant gap between knowledge and attitudes toward seeking dental care. A majority of participants reported fear of visiting the dentist, which is a critical barrier to accessing dental care. Dental fear and anxiety are widespread issues in both children and adults globally, including in Pakistan.<sup>16, 17, 18</sup> This fear is also prevalent among medical and dental students, with female students exhibiting higher anxiety levels than males.<sup>19</sup> In many countries, dental fear and anxiety are partly attributed to financial constraints and negative past experiences with dental procedures. This underscores the need for thorough psychological counseling of patients prior to initiating dental treatment.<sup>20</sup> The study also found that dental pain remains the primary reason for seeking dental care.<sup>21</sup> These findings emphasize the need for targeted oral health education programs and interventions addressing dental anxiety and promoting preventive care to improve oral health outcomes in the region.

## CONCLUSION

The study showed that knowledge about specific dental diseases and the role of dentist is not satisfactory. Although the study participants demonstrate some level of knowledge regarding oral health, their practices of oral hygiene scored

low. Therefore, it is necessary to conduct the oral hygiene awareness program and community preventive programs that translate to good oral hygiene practices

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### **Authors Contribution**

Concept & Design of Study: Muhammad Naeem<sup>1</sup>

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Final Approval of version: All Mentioned Above.

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