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Research Article

**A CROSS SECTIONAL DESCRIPTIVE STUDY OF SELF
PERCEIVED DENTAL HEALTH ATTITUDES AND
BEHAVIORS AMONG STUDENTS OF DIFFERENT YEARS AT
AYUB MEDICAL COLLEGE, ABBOTTABAD**¹*Dr.Asifa Zubair, ²Dr.Nabbiya Noor, ³Dr.Sadia Saeed¹House Officer, Department of Dentistry, Ayub Medical College, Abbottabad, ²House Officer, Department of Dentistry, Ayub Medical College, Abbottabad, ³House Officer, Department of Dentistry, Ayub Medical College, Abbottabad, *drasifazubair@gmail.com**Article Received:** November 2020 **Accepted:** December 2020 **Published:** January 2021**Abstract:**

Background: Oral health is an indigenous aspect of general body health and an asset of value for any human individual. As medical students are going to be future professionals they need to understand the importance of oral health so that they can direct it to their patients. Although there are various studies regarding oral health attitude, knowledge and behavior among dental school students, this study is unique and first of its kind as it is carried out on medical students and reflect their comprehension about the importance of oral health issues, their preclusion and their contribution to the betterment of oral/dental health of their patients.

Material And Methods: A simple random, 19-item, close ended questionnaire based on cross sectional descriptive study was carried out among medical students of Ayub medical college, Abbottabad. 250 questionnaires were distributed among participants out of which 220 responded positively. The data obtained was analyzed statistically via using SPSS software version 25 .0 (using Kruskal Wallis and student t test). P-value < 0.05 was considered to be statistically significant.

Results: The project revealed that with increasing level of education, the knowledge, attitude and behavior related to oral health also increased. Statistically significant results ($p < 0.001$) were found for brushing routine, use of dental floss, knowledge about dental caries and number of decayed/missing/filled teeth. The comparison of preclinical & clinical students disclosed that clinical students carry better knowledge, attitude and behavior concerning their dental health than preclinical students.

Conclusion: Within limitations of this study, with increasing level of education and clinical students have better understanding of knowledge, attitude and behavior towards their oral health as compared to preclinical students.

Key Words: Oral health, knowledge, attitude, behavior, preclinical students, clinical students

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INTRODUCTION:

The main subject by WHO for the World's Health day for 1998 was, "Oral health for healthy life". [1] Oral health can be outlined as "standard of health of oral and other affiliated structures, which empowers a subject to eat, vocalize and socialize without active disease, distress or abashment and which plays a vital role to general well-being". [2] Attitude "integrally mirror their peculiar know-hows and skills, social perceptiveness, domestic beliefs and other life events and have a cogent impact on oral health behavior". [3] Habits "image their practice of conforming the multiple methods of oral hygiene in routine daily life (e.g. Brushing habits, Flossing, frequency of changing brush etc). Awareness will show how considerable they are conscious of their oral health today. Surveys have concluded that there is a relationship between enhanced know-how and better oral well-being. [4] For prevention of oral diseases oral hygiene plays a marked contributing factor. Considering the level of education of students at university, the notion of oral/dental well-being, its significance & run over are presumed to be effortlessly concluded and applicable by them, regardless of their field and domain. [5] It is a common observation from multiple researches conducted that students belonging to the field of dentistry have applauding attitude and behavior in respect of oral health⁶ and marked contrast in dental health attitude and behavior subsist among other study disciplines, cultures and countries. [7,8]

Foundation of keeping one's oral health to an optimum degree is based on awareness and well-grounded knowledge. It is quite apparent that dental professionals have outclass knowledge and comprehension regarding prevention of oral diseases by maintenance of befitting oral hygiene. So, dental students at undergraduate level who are in perpetual phase of learning should have a preferable concept concerning oral hygiene methods. The behavior & attitude of dental students towards oral health is of very much importance because these subjects are the coming oral health providers. [9] The oral diseases profile has been altered remarkably in last five decades, due to affect of fluoride, the modification of conventional diet to sugar rich diet and ubiquitous use of tobacco and alcohol.¹⁰ The fourth most costly disease to treat universally are the oral diseases.¹¹ Howbeit, periodontal diseases and dental caries if befittingly prevented or treated early, are extremely vulnerable, with low economic outlays and pertinent health accretion.¹² The cardinal and derivative means of preclusion; mainly proper training & innovation of habits regarding oral hygiene, namely cleansing of tooth twice a day, routine use of dental floss,

topically applied fluoride, paying routine and timely visits to dental clinic for checkup, & the maintenance of balanced, nutritious diet with low-cariogenic potential, are of less specialized complication and impeccably attainable if comprehended in agendas that are constructed & molded to the fact of services of local health care, syndicating subjective, professional and community deeds. [13,14] Studies conducted on medical students with main focus on comparing health attitudes from first to final year showed improved perception of oral health demeanors and attitudes with advancing educational level from first to final year. [15,16] The improved oral health demeanors observed in medical students has been attributed to their advanced dental education experience.¹⁷ The aim of this study conducted at a professional college among medical and dental students was that the health professionals carry better attitude towards their oral hygiene so that they instill them to their patients, family and friends. No local study under this subject was carried out and found in literature so main focus of this research project was to compare the knowledge, attitude and behavior of oral hygiene among different years of medical students of Ayub medical college Abbottabad Pakistan.

MATERIAL AND METHODS:

This descriptive cross-sectional survey was carried out among undergraduate medical students of Ayub medical college, Abbottabad over a period of 02 months (Nov-Dec 2019). A 19 item, researcher devised, closed ended questionnaire was brought in use to collect data from participants. Before field administration, the study questionnaire was pre-tested for validation. This study is approved from ethical committee of Ayub medical college and an informed assent was obtained from participants before distribution of questionnaires. A total of 250 Performa's was distributed among student and faculty out of which 220 responded positively. Questionnaire constituted following sections;

1. Demographic data consisting of age, gender, year of study, field of study, category and specialty.
2. Questions regarding their dental health knowledge such as knowledge of dental caries, incidence of decayed/missing/filled teeth in oral cavity, use of dental floss, tool for oral hygiene, texture of toothbrush.
3. Oral health attitude which includes visit to dentist without dental issue, last dental checkup, routine of brushing they follow, frequency of changing toothbrush.

4. Oral health behaviors such as how often they use dental floss, frequency of brushing, consumption of sugary snacks between meals, what they do after consumption of sugary snack, use of fluoridated toothpaste.

All the data was coded and was analyzed statistically by using SPSS software version 25.the variation of

scores of knowledge, behavior and attitude from 1st to final year students was analyzed by using Kruskal Wallis-One Way Anova test and student test was used for comparison between preclinical and clinical students. Statistical significance was considered to be at p-value of less than 0.05.

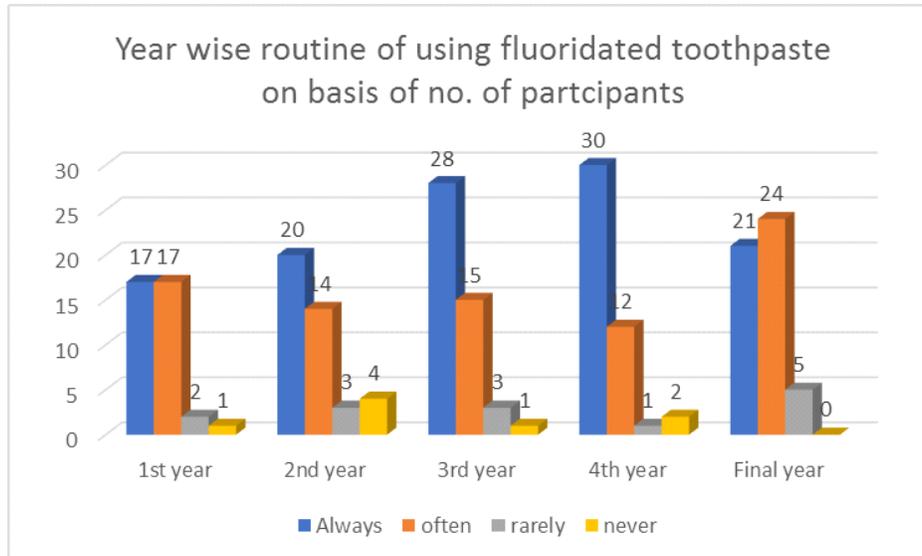
RESULTS:

Table 1: Comparison of Year of Study in Each Item by Kruskal Wallis Anova Test

Items	1 st year	2 nd year	3 rd year	4 th year	Final year	Total	P value
Use of toothbrush as hygiene tool	33 (89.2)	38 (92.7)	44 (93.6)	45 (100)	47 (94.0)	207(94.09)	0.219
Brushing twice daily	13 (35.1)	21 (51.2)	23 (48.9)	17 (37.8)	26 (52.0)	100(45.4)	0.005**
Brushing Morning after meal & night before bed	10 (27)	10 (24.4)	10 (21.3)	8 (17.8)	12 (24.0)	50(22.7)	0.000**
Routine use of fluoridated toothpaste	17 (45.9)	20 (48.8)	28 (59.6)	30 (66.7)	21 (42.0)	116(52.7)	0.037*
Change of brush once in 3 months	12 (32.4)	20 (48.8)	20 (42.6)	19 (42.2)	24 (48.0)	95(43.1)	0.408
Use of soft toothbrush	15 (40.5)	15 (36.6)	10 (21.3)	17 (37.8)	20 (40.0)	77(35)	0.280
Rare between meal snack consumption	17 (45.9)	11 (26.8)	9 (19.1)	17 (37.8)	18 (36.0)	72(32.7)	0.572
Consumption of refined sugars	3 (8.10)	5 (12.2)	16 (34.0)	11 (24.4)	8 (16.0)	43(19.5)	0.177
Use of brush after snack consumption	4 (10.8)	3 (7.30)	3 (6.40)	2 (4.40)	2 (4.00)	14(6)	0.355
Use of dental floss	9 (24.3)	11 (26.8)	8 (17.0)	14 (31.1)	8 (16.0)	50(22.7)	0.000**
Once daily use of dental floss	6 (16.2)	3 (7.30)	5 (10.6)	3 (6.70)	6 (12.0)	23(10.4)	0.000**
Routine checkup after every 6 months	5 (13.5)	11 (26.8)	5 (10.6)	3 (6.70)	3 (6.00)	27(12.2)	0.149*
Last check up within 6 months	7 (18.9)	9 (22.0)	8 (17.0)	6 (13.3)	12 (24.0)	42(19)	0.005**
Visit to dentist without dental issue	6 (16.2)	4 (9.80)	7 (14.9)	4 (8.00)	4 (8.00)	25(11.36)	0.433
Knowledge about dental caries	21 (56.8)	35 (85.4)	40 (85.1)	41 (91.1)	48 (96.0)	185(84)	0.000**
Treat caries as soon as possible	20 (54.1)	17 (41.5)	23 (48.9)	25 (55.6)	34 (68.0)	119(54.09)	0.647
Sugar is root cause of caries	26 (70.3)	31 (75.6)	39 (83.0)	33 (73.3)	35 (75.0)	164(74.5)	0.167
No decayed/missed/filled tooth	26 (70.3)	18 (43.9)	31 (66.0)	26 (57.8)	29 (58.0)	130(59.09)	0.000**
Prevent caries by hygiene measures	29 (78.4)	34 (82.9)	38 (80.9)	40 (88.0)	44 (88.0)	191(86.8)	0.096

TABLE 2: Comparison of KAB Between Preclinical and Clinical Students

ITEMS	Preclinical (%)	Clinical (%)	P-value
Use of toothbrush	1.09	1.04	0.005**
Snacks between meals	2.72	2.51	0.002**
Frequency of dental checkup	2.88	2.87	0.001**
Knowledge of dental caries	1.28	1.09	0.000**
Bacteria as a cause of caries	1.81	1.72	0.002**
Smoking as a cause of caries	1.87	1.94	0.001**

**DISCUSSION:**

Imparting the patients about the correct information or knowledge regarding oral health attitude and habits, and compounding their adherence for prevention of oral ailments are pivotally accountable of health care providers. As the students of medicine & dentistry are the future health professionals, they must embrace the veracious and precise dental health attitude and behavior during their academic years of school for guiding their patients in a proper manner. [15] Regarding the professional year of study, we assume that it incontestable affect the pendent variable, alternatively stated that as the medical students passes through various years of study, they have better oral hygiene attitude and behavior. This is in compliance with a study conducted by Polychronopoulou *et al* in which statistically suggestive differences were found with increasing level of education. [18]

When the brushing routine and frequency is considered it is noted that a parallel relation between course of study and brushing frequency is found. as the year of study is progressed the brushing frequency is increased with a significance value of

($p < 0.000$) this is in conformity with the research project conducted by Nusair *et al* among Jordanian students. [17]

In our present research 25% participants visit to dentist without dental issue and 42% students paid last visit to dentist within 6 months which is in contrast with other studies carried out in countries like China (64%), Korea (65%), Turkey (46.5%), Hong Kong (67%) and Japan (56%). [19]

Frequency of changing toothbrush $p = 0.40$ is found with progressing year of course which conflicts the study by Didar *et al* at university of Sulaimani while use of mouth-rinsed & dental floss as hygiene aids ($p = 0.000$) is in accordance with the same study where $p < 0.001$ is found. So in compliance with several surveys carried out result of this study confirms that oral health behavior and knowledge improve with advancing academic year of study. [20]

The comparison of KAB study between clinical and pre-clinical students unveiled that knowledge, attitude & behavior of clinical students is altitudinous than that of students of preclinical level. This is due

to increased interaction of clinical students with their patients during their clinical years. Additionally, as the students pass through higher level of education they become more cognizant of their overall well-being and pay more attention towards the problems related with oral health so they try to attain better oral health aptitude and behavior. This is in accordance with the research carried out previously by Turkey, Lithuania and India by [15,21,23] respectively where they narrated that oral hygiene is better in clinical students than in preclinical students.

Clinical students use 64.7% of toothbrush with hard bristles which is much greater than a study by Dumitrescu et al while 26.25% preclinical students used dental floss as interdental aid and 36.5% of clinical students use it while by Dumitrescu et al survey 20% of preclinical students uses dental floss which is less than this study and 46% of clinical students uses floss which is greater than results of this study carried out. [22]

CONCLUSION:

As far in the limitation of this study, we reach to the conclusion that:

- With the increasing level of education that is from first year of study to final and in students who have more clinical orientation have better knowledge, attitude and behavior towards their oral health than preclinical students and students with less level of education.
- Educational programs and curriculum should be reinforced to include more knowledge regarding oral health in medical students so that they adapt it and then further direct it to their patients.

LIMITATIONS:

- As it is carried out only in one medical college we cannot assume that it is implicated on all medical institutions and students
- This study was based on questionnaire and no clinical examination was carried out. so this solely depends upon the response given by students themselves.

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Conflicts of interest:

The authors declare that there are no conflicts of interest.

REFERENCES:

1. Oral Health: ICMR Bulletin, Volume 24, April 1994 ICMR, New Delhi Khan F, Ayub A, Kibria Z. Knowledge, attitude and practice about Oral health among General Population of Peshawar. JDUHS. 2013, 7(3):117-221
2. Chawla R, Telang RA, Krishnan DA. Self-reported oral health attitude and behavior among Malaysian dental students. IJDSIR. Sep-Oct 2019, 2(5):322-331.
3. Mangla M, Sharma P, Srivastava N, Raza M, Nafees N, Negi A. Oral Health Awareness Among Different Professionals. IJAR. 2017, 5(7): 1529-1541 <http://dx.doi.org/10.21474/IJAR01/4867>
4. Al-Batayneh OB, Owais AI, Khader YS. Oral Health Knowledge and Practices among Diverse University Students with Access to Free Dental Care: A Cross-Sectional Study. 2014, 4:135-142 <http://dx.doi.org/10.4236/ojst.2014.43021>
5. MEHMOOD B, JAHANGIR F, KALEEM M. FAISAL MR, SIDDIQA F. A Survey on Oral Health Behavior and Attitude among Dental, Physiotherapy and Pharmacy Students. PODJ. 2017, 37(3):455-458
6. Komabayashi T, Kawamura M, Kim KJ, Wright FA, Declerck D, Goiás Mdo C, et al: The hierarchical cluster analysis of oral health attitudes and behaviour using the Hiroshima University--Dental Behavioural Inventory (HU-DBI) among final year dental students in 17 countries. Int Dent J. 2006; 56(5): 310-16.
7. Kumar Tadakamadla S, Kriplani D, Shah V, Tadakamadla J, Tibdewal H, Duraiswamy P, Kulkarni S: Oral health attitudes and behaviour as predisposing factor for dental caries experience among health professional and other professional college students of India. Oral Health Prev Dent. 2010; 8(2): 195-202.
8. Hosing A, Hiremath AM, Vadavadagi V, Bansal A, Kahar A. Oral Hygiene Practices in Dental Students. Journal Of Oral Health and Community Dentistry. January 2016; 10(1):31-34
9. Petersen PE. The World Oral Health Report 2003: continuous improvement of oral health in the 21st century - the approach of the WHO Global Oral Health Programme. Community Dent Oral Epidemiol. 2003;31:3-23.
10. Petersen PE, Kwan S. Evaluation of community-based oral health promotion and oral disease prevention--WHO recommendations for

- improved evidence in public health practice. *Community Dent Health*. 2004;21(4 Suppl):319-29.
11. Dias AM, Dias AR, Veiga N, Saraiva RC, Dias IM. Oral health attitudes and behaviours among Portuguese dental students. *Atención Primaria*. 2016, 48(Espec Cong 1):218-223.
 12. Order of Dentists. National Health Plan 2011-2016: Oral Health Strategy in Portugal: A concept of transversality that is urgently needed to implement. Port: DGS; 2010.
 13. DGS. National study on the prevalence of oral diseases: National Program for the promotion of Oral Health. Lisbon: Ministry of Health, DGS; 2008.
 14. Yildiz S, Dogan B. Self-reported dental health attitudes & behavior of dental students in Turkey. *Eur J Dent*. 2011, 5:253-259
 15. Rashid MS, Ali I, Khan ZR, Bashir S, Haider SM, Haider N, Aslam MA, Bashir AH. Attitude towards own oral health & hygiene. A survey of Medical & Dental students of Karachi Pakistan. *JPDA*. 2018, 25(2): 53-58
 16. Nusair KB, Alumari Q, Said K. Dental Health attitudes & behaviors among Dental students on Jordan. *Community Dental Health*. 2016, 23: 147-151
 17. Polychronopoulou A, Kawamura M, Athanasouli T. Oral self-care behavior among dental school students in Greece. *J Oral Sci*. 2002;44:73-8.
 18. Neeraja R, Kayalvizhi G, Sangeetha P. Oral Health Attitude And Behavior among a Group Of Dental Students in Bangalore, India. *Eur J Dent*. 2011 Apr;5(2):163-167
 19. Kawamura M, Spadafora A, Kim KJ, Komabayashi T. Comparison of United States and Korean dental hygiene students using Hiroshima University-Dental Behavioral Inventory (HU-DBI). *Int Dent J* 2002;52:156-162
 20. Pacauskiene, I. M., Smailiene, D., Siudikienė, J., Savanevskyte, J. & Nedzelskien, I. Self-reported oral health behavior and attitudes of dental and technology students in Lithuania. *Stomatologija* 16(2), 65–71 (2014). 27. 23. Ahamed, S. et al. Evaluation of the oral health knowledge, attitude and behavior of the preclinical and clinical dental students. *J. Int. Oral. Heal.* 7(11), 65–70 (2015).
 21. Dumitrescu AL, Kawamura M, Sasahara H. An assessment of oral self-care among Romanian dental students using the Hiroshima University--Dental Behavioural Inventory. *Oral health & preventive dentistry*. 2007 Apr 1;5(2).
 22. Ahamed, S. et al. Evaluation of the oral health knowledge, attitude and behavior of the preclinical and clinical dental students. *J. Int. Oral. Heal.* 7(11), 65–70 (2015).