

Assessment of oral health attitude & behaviour among dental student of Bhopal Madhya Pradesh: a comparative study

Riya Agrawal *

4th Year Peoples Dental Academy Bhopal M.P

*Corresponding author E-mail: Agrawalriya455@gmail.com

Abstract

Introduction: Attitudes & behavior towards their own oral health affect their oral health habits and also have a possible influence for the improvement of the oral health of their patients and society.

Aim: To evaluate oral health attitude & behavior among a group of dental students of one of the dental colleges of M.P. & to compare a difference in oral health.

Material & Method: A descriptive cross study was carried out between 200 dental students of people dental academy Bhopal M.P. India. Subjects were divided into 2 groups, i.e. group 1 pre-clinical group (first & second year) group 2 clinical group (third & fourth year). A self-administered questionnaire consisting of 13 questions on attitudes and practice towards oral health care.

Results: In the present study, 130 students were from preclinical group, and 70 students were from clinical group. Most of the students brush their teeth once daily for 2 min following roll technique of brushing before breakfast using only toothpaste as a cleaning aid. All students from clinical years routinely examined their oral cavity while most of the students visited the dentist only when required. Majority of students considered oral health as important as general health and believed that oral health affects the general health. Students were also aware of the harmful effects of tobacco while only few of them were indulged in them.

Conclusion: With increasing years of the study, some aspects of dental student's oral health attitude and behavior improved but this improvement was limited. Thus, the students should be motivated to become an example of oral health in the society, for which few steps to motivate them toward better oral health are proposed.

Keywords: Oral Health Behavior; Dental Attitudes; Dental Students

1. Introduction

Dental education, have an important role in improving oral hygiene of dental students. In general dental students have been found to have a positive attitude towards oral health (ChestnutIG1998 p 26). Attitudes are acquired by social interaction, not learned from the textbooks (BertolamiCN2001 p 65). Dental students to improve their own oral health care could be of great value because the students will transfer the same knowledge and behavior patterns to their patients, family & friends [(CortesFJ2002 p 66), (TseveenjavB2002 p 6)].

Previous studies have shown dentists to be lacking in self-motivation to practice basic preventive oral hygiene habits (KawamuraM2002 p 44). Therefore, Imparting knowledge related to dental health and the prevention of oral diseases is very important during the future dentists' training period (BrusokaiteJ2003 p 5). Studies have shown that attitude and behavior of dental students vary in accordance with the year of studies (preclinical and clinical years) as well as cultures and countries of origin (KawamuraM2004 p 3).

Thus, the purpose of this study was to evaluate self-reported oral health attitude, and behavior among a group of dental students and to compare differences in oral health attitudes between years of study and gender.

2. Material & method

A total of 200 students were included from people dental academy Bhopal M.P. India. Subjects in the study were divided into two groups based on their professional years:

- 1) Preclinical group
- 2) Clinical group.

Categorization according to their gender was also done. Informed consent was obtained from each student before the questionnaire was distributed and the students who were not willing to be a part of this study were excluded. The survey was done using a self-administered structured questionnaire written in English. This 13 questionnaire contained information on their attitudes toward dental care and oral health practice and was personally distributed.

Data collected was subjected to statistical analysis. Chi-square test was applied to compare the data collected between students from preclinical and clinical years and also between males and females. A $P < 0.05$ was considered to be statistically significant.

3. Results

The present study comprised 200 students from different professional years. Of these 130 were from preclinical years and

70 were from clinical years. Of 200 subjects, 120 were males and 80 were females.

Most of the students brush their teeth once daily and the difference between the frequency of brushing in students from preclinical and clinical years was not significant. The difference between the brushing frequency in males (30%) and females (70%) was significant. Maximum number of students brushed their teeth before breakfast, and there was no significant difference between brushing time between students from preclinical and clinical years whereas a significant difference was observed between males and females with regard to brushing time. With regard to duration of brushing a significant difference was observed in preclinical and clinical students and males and females. Majority of subjects in the present study brush their teeth for approximately 2 min (TABLE 1.)

Most of the students brushed their teeth using roll technique of brushing and a significant difference was observed in males and females and preclinical and clinical students. Majority of students use toothpaste as an aid for cleaning teeth and a significant difference was observed in males and females with regard to aid used for cleaning teeth (TABLE 1).

A significant difference was seen in males and females with respect to the duration of toothbrush replacement. Most of the students use tongue cleaner for cleaning tongue, and no significant difference was seen between males and females and students from preclinical and clinical years with regard to tongue cleaning aid. Use of back side of brush was other popular method of tongue cleaning among the students (TABLE 1).

All the clinical students routinely examine their oral cavity as compared to 60% of preclinical students and the difference was significant. With respect to a previous visit to the dentist no significant difference was observed between males and females and between preclinical and clinical year students. As compared to 70% of males who visit the dentist only when some problem arises, 55% of females visited the dentist every 6 months and this difference between males and females with regard to frequency to visit dentist was significant (Table 2).

A significant difference was found between males and females with respect to adverse oral habit (smoking, tobacco chewing) as 90% of males and 100% of females did not have any adverse oral habit (smoking, tobacco chewing). A significant difference was observed between males and females and clinical and preclinical students with respect to problem of bleeding gums. A significant difference was found between students from preclinical and clinical years with respect to importance of tongue cleaning as 80.9% of students from preclinical years and 86.6% of students from clinical years thought that tongue cleaning was important. No significant difference was observed between males and females with respect to importance of tongue cleaning as 95% of females and 85% of males thought that tongue cleaning was important (TABLE 2).

4. Discussion

Baseline information on oral health, associated with adequate preventive procedures, is fundamental to promote self-preventive behavior (Al-Omari QD & Hamasha AA 2005 p 6). An important task of oral health professionals is to instill in their patients the correct oral habits to prevent oral diseases (Asadoorian J 2006 p 40). For educating and motivating general public, it is of great importance that the future dental surgeons should themselves be particularly conscious, educated, and motivated of the pathological effects of poor oral hygiene.

In the present study, 13 questions were asked to assess the, attitude and oral health practices followed by the subjects. There is enough evidence to consider twice a day as the recommended frequency of tooth-brushing to maximize the effect of using fluoridated toothpaste (Sofola OO & Jeboda SO 2006 p 10). In the present study, the reported frequency of brushing at least once daily was similar to be reported by (Barrieshi-Nusair K 2006 p

23), (Dumitrescu AL 2007 p 5), Dental Dental students. Although, there was no significant difference in the tooth brushing frequency in the preclinical and the clinical students, the number of the students who brush their teeth twice daily was slightly more in preclinical years as compared to clinical years. Thus, indicating the fact that even with the increased level of knowledge, there was no improvement in the oral health attitude and behavior among the students. This was in contrast to the findings of a study by (Khami MR 2007 p 11) which showed that the percentage of students claiming to brush their teeth twice daily or more often was 4 times higher among clinical students than among preclinical students.

Majority of students in our study brush their teeth for 2 min and that too before breakfast using only toothpaste as a cleaning aid.

Brushing methods, including Bass, Stillman's, Fones, Charters, horizontal, vertical, scrub, etc., have been taught since decades, with Bass and Roll method most commonly recommended (Bhat SS & Sargod SS 2007 p 1). In our study, majority of students brush their teeth following roll method followed by horizontal brushing of teeth. In the present study, majority of students replaces their brush after every 6 months. In our study, majority of students both from clinical and preclinical years thought that tongue cleaning has an important role in developing better oral health.

In our study, both the male and female students were observed to provide an insight of oral self-care habits in the two genders. Few studies stated that females presented better attitude and behavior scores compared to the male students (Dagli RJ 2008 p 50).

All the students from clinical years routinely examined their oral cavity in comparison to 60% of preclinical students (Sharda AJ & Shetty S 2008 p 6). Approximately, 60% of students have visited dentist previously (Peker I & Alkurt MT 2009 p 1). This proportion was much higher in our study as compared to that in the study by (Kumar S et al p 8) where only 32% of the students have visited the dentist before. Majority of students in our study visit dentist only when problems arise.

In our study, majority of students did not have any adverse oral habits (smoking, tobacco chewing) while 15% of clinical students had adverse oral habits as compared to 5% among the preclinical students. More adverse oral habits and more negligence in following preventive measures may be because of increased demand for studies, or peer pressure as the students just entering the colleges are not influenced by tobacco use (Neeraja Ret al 2011 p 5). In their study reported that transition from preclinical to clinical years may lead to stress in many students (Davidovic Bet al 2012 p 59). In their study stated that increased academic stress also allures many students to take up smoking as a means of coping with the burden..

The main limitation of the present study is that the study pertained to a single dental college in India. Although proper care was taken that students were not influenced by responses from their friends, there could have been biased responses in few cases. This article also proposes few steps to motivate the students toward better oral health.

Few recommendations for motivating dental students are:

- Emphasis must be laid on preventive health education right from their preclinical courses. More stress should be laid on clinical considerations while imparting them knowledge about normal structure of tissues during their preclinical courses
- Regular quizzes on oral health should be conducted in colleges to test their knowledge and also for imparting them knowledge. Regular competition between students regarding better oral health should be conducted in colleges, and the one with better oral hygiene should be awarded.
- Dental students, on a turn basis, should serve as a model for educating the general public, when they are posted for camps. This could motivate them to change their attitude.

Table 1: Responses to Various Questions in Relation to Various Oral Hygiene Practices among the Study Population According to Gender and Course of Study.

QUESTIONS	RESPONSES	MALE (%)	FEMALE (%)	CHI-SQUARE	P	PRE-CLINICAL (%)	CLINICAL (%)	CHI-SQUARE	P
Brushing frequency	Once	30	70	28.36	0.0	45	65	2.7	0.09
	Twice	50	20			40	35		
	Thrice	20	10			15	0		
Brushing timing	Before breakfast	45	75	4.7	0.02	55	65	0.8	0.36
	After breakfast	30	25			5	3		
	Any other time	25	0			40	32		
Brushing duration	<1min	2	16	7.01	0.008	5	20	8.4	0.003
	2 min	40	50			50	45		
	3 min	32	34			25	35		
	More than 3 min	26	0			20	0		
Brushing technique	Horizontal	20	43	4.7	0.02	25	40	5.17	0.02
	Vertical	30	5			20	18		
	Roll	50	52			55	42		
Aids for cleaning teeth	Tooth paste	68	65	7.10	0.007	66	70	0.67	0.4
	Tooth power	4	0			10	0		
	Toothpaste + mouthwash	20	5			20	28		
	Floss + toothpaste	8	30			4	2		
Tooth brush replacement	Every 3 months	85	80	8.64	0.003	86	80	2.19	0.13
	Every 6 months	5	20			12	20		
	Once a year	10	0			2	0		
Tongue cleaning aids	Tongue cleaner	50	45	0.008	0.9	55	48	0.003	0.95
	Backside of toothbrush	40	35			45	40		
	No specific aids	10	20			0	12		

Table 2: Responses to Various Questions Related to Attitude of the Study Population towards Oral Health According to Gender and Course of Study.

QUESTIONS	RESPONSES	MALE %	FEMALE %	CHI-SQUARE	P	PRE-CLINICAL %	CLINICAL %	CHI-SQUARE	P
Routine examination of oral cavity	Yes	70	75	0.62	0.42	60	100	50	0.00
	No	30	25			40	0		
Have you ever visited dentist	Yes	58	68	2.14	0.14	62	62	0	1
	No	42	32			38	38		
Frequency of dental visit	Every 6 month	20	55	24.3	0.000	30	40	3.43	0.06
	Annually	10	5			10	30		
	Only when problem arise s	70	40			60	30		
Any adverse oral habit	Yes	10	0	10.5	0.001	5	15	5.55	0.01
	No	90	100			95	85		
Does your gum bleed	Yes	30	15	6.4	0.01	28	15	5.00	0.02
	No	70	85			72	85		
Do you think tongue cleaning is important	Yes	85	95	5.55	0.01	86	96	6.10	0.01
	No	15	5			14	4		

5. Conclusion

In this study, the attitude and behavior toward proper practicing of oral health measures and regular visit to dentist need to be improved, but this improvement was limited. In conclusion, there is a lack of motivation among dental students to practice basic preventive oral health habit. Thus, students should be provided with better comprehensive dental education with early exposure to dental health and prevention.

Acknowledgement

We sincerely thank to my parents, friends and my faculty, Department Of Public Health Dentistry, who supported during the study.

Conflict of interest

No conflict of interest involved so ever.

Source of finding

Nil.

References

- [1] (Chestnut IG 1998), the influence of toothbrushing frequency and post-brushing rinsing on caries experience in a caries clinical trial. *Community Dent Oral Epidemiol.* 26, 406-11. www.ncbi.nlm.nih.gov/pubmed/98705402. (Bertolami CN 2001) Rationalizing the dental curriculum in light of current disease prevalence and patient demand for treatment: Form vs. content. *J Dent Educ.* 65, 725-35. www.ncbi.nlm.nih.gov/pubmed/115182443.
- [2] (Cortes FJ 2002), the evolution of dental health in dental students at the University of Barcelona. *J Dent Educ.* 66, 1203-1208. www.ncbi.nlm.nih.gov/pubmed/124492154. (Tseveenjav B2002), Preventive practice of Mongolian dental students. *Eur. J. Dent. Educ.* 6, 74-8. www.ncbi.nlm.nih.gov/pubmed/119756695.
- [3] (Kawamura M 2002), Oral self-care behavior among dental school students in Greece. *J Oral Sci.* 44, 73-8. www.ncbi.nlm.nih.gov/pubmed/161942486. (Brusokaite J2003), Evaluation of dental health of dental students at Kaunas University of Medicine. *Stomatologija, Baltic Dent Maxillofac. J.* 5, 133-136. www.intjdc.org/./pdf7.
- [4] (Kawamura M 2004), Differences in self-reported oral health behavior between dental students and dental technology/dental hygiene students in Jordan. *Journal of oral science* 46(3), 191-8 www.ncbi.nlm.nih.gov/pubmed/155087538.
- [5] (Al-Omari QD & Hamasha AA 2005), Gender-specific oral health attitudes and behavior among dental students in Jordan. *J Contemp. Dent. Pract.* 6, 107-14. www.ncbi.nlm.nih.gov/pubmed/157190829.
- [6] (Asadoorian J2006) Position paper on tooth brushing. *Can. J. Dent. Hyg.* 40, 232-48. www.cdha.ca/pdfs/profession/resourc...10.
- [7] (Sofola OO & Jeboda SO 2006), Perceived sources of stress in Nigerian dental students. *Eur J Dent Educ* 10, 20-3. www.ncbi.nlm.nih.gov/pubmed/2609154911.
- [8] (Barrieshi-Nusair K 2006), Dental health attitudes and behaviour among dental students in Jordan. *Community Dent Health* 23, 147-51. www.ncbi.nlm.nih.gov/pubmed/1699556212.
- [9] (Dumitrescu AL 2007), an assessment of oral self-care among Romanian dental students using the Hiroshima University – Dental Behavioural Inventory. *Oral Health Prev. Dent.* 5, 95-100. www.ncbi.nlm.nih.gov/pubmed/17722434.
- [10] (Khami MR2007) Oral health behaviour and its determinants amongst Iranian dental students. *Eur. J. Dent. Educ.* 11, 42-7. www.ncbi.nlm.nih.gov/pubmed/1722739514.
- [11] (Bhat SS & Sargod SS 2007), Oral health knowledge and behavior of clinical medical, dental and paramedical students in Mangalore. *J Oral Health Community Dent.* 1, 46-8. 15.
- [12] (Dagli RJ2008) Self-reported dental health attitude and behavior of dental students in India. *J. Oral Sci.* 50, 267-72. www.ncbi.nlm.nih.gov/pubmed/1881846116.
- [13] (Sharda AJ & Shetty S 2008), A comparative study of oral health knowledge, attitude and behaviour of first and final year dental students of Udaipur city, Rajasthan, India. *Int. J. Dent. Hyg.* 6, 347-53. www.ncbi.nlm.nih.gov/pubmed/1913818617.
- [14] (Peker I & Alkurt MT 2009), Oral health attitudes and behavior among a group of Turkish dental students. *European Journal of Dentistry* 3(1), 24-31. www.sciencedirect.com/science/artic...18.
- [15] (Kumar S, Motwani K, Dak N, Balasubramanyam G, Duraiswamy P & Kulkarni S 2010), Dental health behaviour in relation to caries status among medical and dental undergraduate students of Udaipur district, India. *Int J Dent Hyg.* 8, 86-94. onlinelibrary.wiley.com/./abstract. 19.
- [16] (Neeraja R, Kayalvizhi G & Sangeetha P 2011), Oral health attitudes and behavior among a group of dental students in Bangalore. *India. Eur J Dent* 5, 163-7. www.ncbi.nlm.nih.gov/pubmed/2149438320.
- [17] (Davidovic B, Jankovic S, Ivanovic D & Grujicic I 2012), Oral health assessment among dental students. *Serbian Dent J.* 59, 14-4. www.doiserbia.nb.rs/ft.aspx%3Fid%3D.