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ORIGINAL ARTICLE

Knowledge, Attitude And Behavior Towards Preventive Dentistry Among Health Care Students In Dhule City

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ABSTRACT

BACKGROUND: Dental student's knowledge, attitude and behavior towards prevention are important, since they have exceptionally important roles in influencing their patient's ability to take care of their teeth. Thus, the study aimed to evaluate knowledge, attitude and behavior of health care professional students towards preventive dentistry in Dhule city.

MATERIAL AND METHODS:A cross-sectional study was conducted among undergraduate students of Dental, Medical, Pharmacy, Ayurvedic and Nursing faculty in Dhule city.A total of 299 students (93 dental students, 90 medical students, 54 ayurvedic students, 37 pharmacy students and 25 nursing students)were individually asked to complete apretested questionnaire. The questionnaire requested information on student's demographic and professional characteristics and their knowledge, attitude and behavior towards preventive dental care.Chi-square test was used to analyzethe data.

RESULTS: The knowledge regarding preventive dentistry was highest among dental students (83% having good knowledge) with Ayurvedic(BAMS) undergraduate students having least knowledge (59% showing poor knowledge). Attitude and behavior towards preventive dentistry was favorable among all health care professional students (66% showing good attitude and 60% showing favorable behavior).

CONCLUSION: The findings of this study have shown that the participants had conducive oral health behavior, sufficient knowledgeand positive attitude and had positive beliefs regarding dental treatment.

KEY WORDS: Oral health, Preventive dentistry, Health Professionals

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INTRODUCTION

Dental caries and periodontal diseases are the two biggest and most common threats to oral health (1). These dental problems are bacterial in origin, exacerbated by dietary sugars, incomplete plaque removal, less than optimal fluoride availability and inadequate oral hygiene procedure.

Dental diseases/problems can be prevented by taking proper care of teeth like properbrushing, flossing, cleaning of teeth (scaling), dietary habits and regular visit to dentist (1).
Dental diseases are not directly life threatening but have a detrimental effect on qualityof life, having an impact on normal social role, self-esteem, nutrition, communication andgeneral health and causing pain, discomfort and loss of function (2). Dental caries and periodontaldisease afflict humans of all ages and in all religions of the world and are disease of thecomplex interplay of social, behavioral, cultural, dietary and biological risk factors that areassociated with their initiation and progression (3). Regardless of the fact that caries is preventable,its prevalence is high and is still increasing in some developing countries, especially among children whereas periodontal problems affecting people of middle age and adults (4).

Dental disease prevention is one of the most important and affordable way to promote oral health, lower the inci-

dence and prevalence of disease. Health care professional haveresponsibility to promote positive attitude to serve the community.The relationship between knowledge, attitude and behavior towards health seems to be stronger among health care professionals when compared with general population (5).

Dentist and other health care professionals' knowledge of and attitude towards oral health care provides a framework since they are the person whoconvey evidence base knowledge of oral health and general health care and education to individuals, group, act asrole models for patients, friends, families and the community at large. They can influenceothers oral health related behavior (6). Hence there is a need to determine the status ofhealth care professionals own preventive oral health knowledge and behavior. With this all background this study was conducted with an aim to evaluate knowledge, attitude andbehavior of health care professional undergraduate students in Dhule city.

METHODOLOGY

The present study was a descriptive cross-sectionalsurvey, conducted to assess the knowledge, attitude andbehavior of health care students towards Preventive Dentistry, inDhule city. Permission was obtained from the ethical review board of ACPM Dental College, Dhule to conduct the study. Written consent was obtained from study subjects before thequestionnaire was distributed and written permission wasobtained from the respective authorities of individual institute toconduct the study on their students.

The study was performed among BAMS, B.Pharmacy, BDS, MBBS andNursing students (Volunteers), aged above 18 years in October 2014.A self-designed structured questionnaire in English language waspreparedbased on the objectives of the current study. The questionnaire was pilot tested for clearance and understanding among a group of 25 undergraduates from all faculties who were not included in the main study. The relevance of questions, response formats and wording was tested and accordingly, questionnaire was modified.

Questionnaire consisted of close ended questions related to: (a) Demographic details including name, age, gender, address and levelof education.(b) First section consisted of questions on knowledge of health carestudent towards preventive dentistry, it consisted of sixquestions.(c) Second section consisted of four questions based on theirattitude towards various preventive treatments in dentistry.(d) The third section consisted of five questions based on theirbehavior towards prevention of oral health.

The sample population consisted of total 299 individuals. (54 participants from B.S.NaikAyurved College, Nagao, Dhule, 37 participants from ARA College of Pharmacy, Nagao, Dhule, 93 participants from ACPM Dental College, Sakri road, Dhule, 90 participants from ACPM Medical College, Sakri Road, Dhule, 25 participants from ACPM Nursing College, Sakri Road, Dhule)

The study was conducted at various institutes to include theparticipants from various health care fields. The questionnairedistributed randomly to those who are relatively free and sufficienttime was given to read, understand and answer the questionnaire. Theparticipants were requested to answer the questions with interest andconcentration, so as to obtained valid results. The data obtained was analyzed by usingchi-square test.

RESULT

Table 1 shows age-wise distribution of study groups with mean age of 20.3 ($p < 0.05$).

Criteria for differentiating into good, fair and poor were decided by totaling the response codes for each segment. For knowledge, the total of the response codes was kept at 6 for good, between 7-9 for fair and 10 onwards for poor. For attitude, good = 3, fair = between 4-6 and poor = 7 onwards. For behavior, good = 5, fair = 6-8 and poor = 9 onwards. Based on the response rate of each subject for each question, the response rates were totaled and then differentiated into various levels.

Based on study distribution, Table 2 shows the level of knowledge towards preventive dentistry among different study groups i.e. students of BAMS, BDS, MBBS, Nursing and pharmacy. As shown in Table 2, 61 (66%) BDS students had good knowledge about preventive dentistry followed by 26 (29%) MBBS students, 8 (15%) BAMS students and lastly 5(14%)pharmacy students and 3(12%) nursing students hadgood knowledge. 16 (64%) nursing students had fair knowledgeabout preventive dentistry, followed by 20 (54%) pharmacystudents, after that 40(44%) MBBS students, 24 (26%) BDS students

Table 1: Age-wise distribution of the study participants

Groups	Number	Age		p value
		Mean	S.D.	
Medical (MBBS)	90	20.1	2.3	
Dental (BDS)	93	20.9	1.7	
Ayurvedic (BAMS)	54	19.6	1.4	P < 0.05, S
Pharmacy (B. Pharm)	37	19.7	1.4	
Nursing	25	20.9	1.1	
Total	299	20.3	1.8	

ANOVA F = 6.56 S.D. - Standard Deviation; S - Significant

Table 2: Level of knowledge on Preventive Dental Care in different study groups

Knowledge Level		Group					Total	p value
		BAMS	BDS	MBBS	Nursing	Pharmacy		
Good	No.	8	61	26	3	5	103	
	%	15%	66%	29%	12%	14%	34%	
Fair	No.	14	24	40	16	20	114	
	%	26%	26%	44%	64%	54%	38%	P<0.00
Poor	No.	32	8	24	6	12	82	
	%	59%	9%	27%	24%	32%	27%	
Total	No.	54	93	90	25	37	299	
	%	100%	100%	100%	100%	100%	100%	

and 14 (36%) BAMS students had fair-knowledge about preventive dentistry. 32 (59%) BAMS students showed poor knowledge about preventive dental care followed by12 (32%) pharmacy students and 6 (24%) nursingstudents having poor knowledge ($p < 0.001$).

Based on distribution, Table 3 shows attitude towardspreventive dentistry among different study groups. 77 (83%) BDS students were having good attitude followed by 16 (64%)nursing students, 53 (59%) MBBS students and 31(57%) BAMS students.17 (46%) pharmacy students werehaving fair attitude towards preventive dental case, followed by31 (34%)MBBS students, 17 (32%) BAMS studentsand lastly followed by 6 (24%) nursing students and 16 (16%)BDS students were having fair attitudes towards preventive dentistry. 3(12%) nursing students were having poor attitude preventive dentistry care, followed by 6 (11.1%) BAMS students, 6 (6.7%) MBBS students and 1(1.1%) BDS student having poorattitude. Overall 197(66%) out of 299 were having good attitudetowards preventive dental care ($p < 0.001$).

Based on study distribution, Table no. 4shows behaviortowards preventive dental care among different study groups.30(81%) pharmacy students were having good behavior, followed by 41(76%)BAMS students, 14(56%) nursing students and lastly followed by 51(55%) BDS students and43(48%) MBBS students were having good behavior towardspreventive dental care ($p < 0.001$).

DISCUSSION

The results of the study showed that health care professional students are generally aware about preventive measures for oral diseases, with dental students showing highly positive knowledge and attitude but lacking behavior.

The present study showshigh knowledge regarding preventive dentistry in Dental student.This is in accordance with the study conducted by Nilchian et al. in 2014 where dental students ofAzad University of Khorasgan and University of IsfahanMedical Sciences had sufficient and acceptablelevel of knowledge about the effect of sugar, sealant,and fluoridated water on tooth caries and caries prevention (7).

The high level ofknowledge and attitude towards preventive dentistry seen in BDS studentswhich is 83% while the poorattitude regarding preventive dentistry was seen in Nursing student. Attitudes are influencedby beliefs and values, personal needs and behavior (8). Accordingly, Dental student at-

Table No. 3: Level of attitude towards Preventive Dental Care in different study groups

Attitude Level		Group					Total	p value
		BAMS	BDS	MBBS	Nursing	Pharmacy		
Good	No.	31	77	53	16	20	197	
	%	57%	83%	59%	64%	54%	66%	
Fair	No.	17	15	31	6	17	86	
	%	32%	16%	34%	24%	46%	29%	P<0.001
Poor	No.	6	1	6	3	0	16	
	%	11.1%	1.1%	6.7%	12.0%	0.0%	5.4%	
Total	No.	54	93	90	25	37	299	
	%	100%	100%	100%	100%	100%	100%	

Table No. 4: Level of behavior towards Preventive Dental Care in different study groups

Behavior Level		Group					Total	p value
		BAMS	BDS	MBBS	Nursing	Pharmacy		
Good	No.	41	51	43	14	30	179	
	%	76%	55%	48%	56%	81%	60%	
Fair	No.	9	38	44	9	6	106	
	%	17%	41%	49%	36%	16%	36%	
Poor	No.	4	4	3	2	1	14	p < 0.001
	%	7%	4%	3%	8%	3%	5%	
Total	No.	54	93	90	25	37	299	
	%	100%	100%	100%	100%	100%	100%	

titudemay vary according to their background and professional factors. Oral health and preventive knowledge and attitude was high among the dental students as studying dentistry would predispose dental students to receive dental health related information routinely and thus aid in adopting positive attitudes and oral health behavior. While rest of the other healthcare students showed fair to poor knowledge of preventive oral health care as oral health education is hardly a part of theircurriculum. This is similar to the study conducted by Nirmala et al. (9).The poor attitude bynursing student may be due to the fact that their unawareness of knowledge of total healthcare, poor oral hygiene habits, etc. In the present study, these variations were significant only with respect to profession. Behavioral level towards preventive health dentistry was satisfactory in all the healthcare professional students (60%). Pharmacy students showed highest positive behavior towards preventive practices (81%) which are in contrast to the study conducted by Rajiah et al which showed that pharmacy students had positive attitude toward oral health despite having poor knowledge and mediocre practice principles regarding oral health (10).

While there was an appreciably high level ofgood knowledge of preventive dental care amongst dental students, this does not seem to be an equally appreciableimpact on their oral health behavior with almost half of them practicing recommended self-caremeasures. This result is in accordance with the study conducted in Nigeria on dental students who showed good knowledge of preventive dentistry, but lacked appreciable behavior of the same (5). On the other side, students ofpharmacy and Ayurvedic College were having poor knowledgeabout preventive dentistry still having good behavior towards preventive dental care and following preventive measures. Overall regardless of their knowledge, 179(60%) out of 299students were having good behavior towards preventive dentistry.

Oral health promotion seeks to improve and protect health through various complementary strategies. Positive attitude towards health promotion and preventive dentistry among health science students are to all intents and purposes highly desirable. According to the results of the present study, attitudes of the dental students towards preventive dentistry are influenced by their background characteristics as well as self-perceived competency in giving preventive care. Hence there is a need to include a syllabus on oral health in every health care professional curriculum.

CONCLUSION

In order to create more positive attitudes for future care professionals, there should be an early and sufficient exposure to preventive aspect of oral health in every healthcare professional curricula. The findings of this study have shown that the participants had conducive oral health behavior, sufficient knowledge, positive attitude and had positive beliefs regarding dental treatment.

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Questionnaire
Knowledge

1. Do you think dental diseases are preventable?
   1) Yes 2) No 3) Don't know

2. Do you know that pit and fissure sealants help in prevention of dental caries?
   1) Agree 2) Disagree 3) Neutral

3. Do you know that fluoride in toothpaste helps in preventing dental caries?
   1) Agree 2) Disagree 3) Neutral

4. Do you know that proper method & frequency of tooth brushing plays an important role in maintaining good oral hygiene?
   1) Yes 2) No 3) Don't know

5. Do you know that mal-alignment of teeth can cause periodontal disease?
   1) Yes 2) No 3) Don't know

6. Do you think consumption of aerated soft drinks causes erosion of teeth?
   1) Yes 2) No 3) Don't know

ATTITUDE

7. Does prevention of dental caries help in saving financial implications?
   1) Yes 2) No 3) Don't know

8. Do you think cleaning of teeth causes loosening of teeth?
   1) Yes 2) No 3) Don't know

9. Do you think diet counseling is necessary in prevention of dental diseases?
   1) Yes 2) No 3) Don't know

10. Which is the challenging aspect in implementing preventive dental care?
    1) Lack of motivation or education 2) Social factors 3) Inadequate work force
    4) Lack of political will 5) All of the above

BEHAVIOR

11. How many times in a day do you brush your teeth?
    1) Once 2) Twice 3) Thrice

12. Do you avoid consuming snacks in between meals?
    1) Yes 2) No

13. Do you practice preventive measures such as flossing, use of mouthwash, etc.?
    1) Yes 2) No

14. Do you believe that oral health can be achieved by adhering to self-care practices or measures?
    1) Agree 2) Disagree

15. Do you believe that preventive dental care is beneficial & essential?
    1) Yes 2) No 3) Don't kno