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

Khairnar MR¹, Dodamani AS², Karibasappa GN³, Naik RG⁴, Deshmukh MA⁵

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 a pretested 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 analyze the 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 knowledge and positive attitude and had positive beliefs regarding dental treatment.

KEY WORDS: Oral health, Preventive dentistry, Health Professionals

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 proper brushing, 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 quality of life, having an impact on normal social role, self-esteem, nutrition, communication and general health and causing pain, discomfort and loss of function (2). Dental caries and periodontal disease afflict humans of all ages and in all religions of the world and are disease of the complex interplay of social, behavioral, cultural, dietary and biological risk factors that are associated 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-
Knowledge, attitude and behaviour towards preventive dentistry among health care students in Dhule city

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 people who convey evidence base knowledge of oral health and general health care and education to individuals, group, act as role models for patients, friends, families and the community at large. They can influence others oral health related behavior (6). Hence there is a need to determine the status of health care professionals own preventive oral health knowledge and behavior.

With this all background this study was conducted with an aim to evaluate knowledge, attitude and behavior of health care professional undergraduate students in Dhule city.

METHODOLOGY

The present study was a descriptive cross-sectional survey, conducted to assess the knowledge, attitude and behavior of health care students towards Preventive Dentistry, in Dhule 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 the questionnaire was distributed and written permission was obtained from the respective authorities of individual institute to conduct the study on their students.

The study was performed among BAMS, B.Pharmacy, BDS, MBBS and Nursing students (Volunteers), aged above 18 years in October 2014. A self-designed structured questionnaire in English language was prepared based 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 level of education. (b) First section consisted of questions on knowledge of health care student towards preventative dentistry, it consisted of six questions. (c) Second section consisted of four questions based on their attitude towards various preventive treatments in dentistry. (d) The third section consisted of five questions based on their behavior towards prevention of oral health.

The sample population consisted of total 299 individuals. (54 participants from B.S.Naik Ayurved 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 the participants from various health care fields. The questionnaire was distributed randomly to those who are relatively free and sufficient time was given to read, understand and answer the questionnaire. The participants were requested to answer the questions with interest and concentration, so as to obtain valid results. The data obtained was analyzed by using chi-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 had good knowledge. 16 (64%) nursing students had fair knowledge about preventive dentistry, followed by 20 (54%) pharmacy students, after that 40 (44%) MBBS students, 24 (26%) BDS students.

### Table 1: Age-wise distribution of the study participants

<table>
<thead>
<tr>
<th>Groups</th>
<th>Number</th>
<th>Age</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical (MBBS)</td>
<td>90</td>
<td>20.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Dental (BDS)</td>
<td>93</td>
<td>20.9</td>
<td>1.7</td>
</tr>
<tr>
<td>Ayurvedic (BAMS)</td>
<td>54</td>
<td>19.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Pharmacy (B. Pharm)</td>
<td>37</td>
<td>19.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Nursing</td>
<td>25</td>
<td>20.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>299</td>
<td>20.3</td>
<td>1.8</td>
</tr>
</tbody>
</table>

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

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and 14 (36%) BAMS students had fair knowledge about preventive dentistry. 32 (59%) BAMS students showed poor knowledge about preventive dental care followed by 12 (32%) pharmacy students and 6 (24%) nursing students having poor knowledge (p<0.001).

Based on distribution, Table 3 shows attitude towards preventive 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 were having fair attitude towards preventive dental care, followed by 6 (11.1%) BAMS students, 6 (6.7%) MBBS students and 1 (1.1%) BDS student having poor attitude. Overall 197 (66%) out of 299 were having good attitude towards preventive dental care (p<0.001).

Based on study distribution, Table no. 4 shows behavior towards 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 and 43 (48%) MBBS students were having good behavior towards preventive 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 showed high knowledge regarding preventive dentistry in Dental student. This is in accordance with the study conducted by Nilchian et al. in 2014 where dental students of Azad University of Khorasgan and University of Isfahan Medical Sciences had sufficient and acceptable level of knowledge about the effect of sugar, sealant, and fluoridated water on tooth caries and caries prevention (7).

The high level of knowledge and attitude towards preventive dentistry seen in BDS students which is 83% while the poor attitude regarding preventive dentistry was seen in Nursing students. Attitudes are influenced by beliefs and values, personal needs and behavior (8). Accordingly, Dental student at-
Knowledge, attitude and behavior towards preventive dentistry among health care students in Dhule city

While there was an appreciably high level of good knowledge of preventive dental care amongst dental students, this does not seem to be an equally appreciable impact on their oral health behavior with almost half of them practicing recommended self-care measures. 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 (9). On the other side, students of pharmacy and Ayurvedic College were having poor knowledge about preventive dentistry still having good behavior towards preventive dental care and following preventive measures. Overall regardless of their knowledge, 179 (60%) out of 299 students 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.

REFERENCES

9. Nirmala S, Quadhara M, Veluru M. Oral...

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

<table>
<thead>
<tr>
<th>Behavior Level</th>
<th>BAMS</th>
<th>BDS</th>
<th>MBBS</th>
<th>Nursing</th>
<th>Pharmacy</th>
<th>Total</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>No.</td>
<td>41</td>
<td>51</td>
<td>43</td>
<td>14</td>
<td>30</td>
<td>179</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>76%</td>
<td>55%</td>
<td>48%</td>
<td>56%</td>
<td>81%</td>
<td>60%</td>
</tr>
<tr>
<td>Fair</td>
<td>No.</td>
<td>9</td>
<td>38</td>
<td>44</td>
<td>9</td>
<td>6</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>17%</td>
<td>41%</td>
<td>49%</td>
<td>36%</td>
<td>16%</td>
<td>36%</td>
</tr>
<tr>
<td>Poor</td>
<td>No.</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>7%</td>
<td>4%</td>
<td>3%</td>
<td>8%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>No.</td>
<td>54</td>
<td>93</td>
<td>90</td>
<td>25</td>
<td>37</td>
<td>299</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
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 know