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Original Research

Knowledge, Awareness, and Practices of Complementary and Alternative Medicine for Oral Health Care – A Cross-Sectional Study among Dental Students in Ghaziabad, India

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ABSTRACT

Introduction: Complementary and alternative medicine (CAM) represents a group of diverse medical and health-care systems, practices, and products that are not considered to be part of conventional medicine. Biofeedback, acupuncture, herbal medication, massage, bio electromagnetic therapy, meditation, and music therapy are examples of CAM treatments. **Aim:** The purpose of the study is to assess the knowledge, awareness, and practices of Complementary and Alternative Medicine for oral health-care management among dental students in Ghaziabad, India. **Materials and methods:** A cross-sectional study was conducted among 150 dental students of final year and internship from a dental hospital in Ghaziabad, India. Data were gathered using a self-administered questionnaire and responses were marked with help of Likert scale. Data were analyzed by SPSS version 18.0 (SPSS Inc., Chicago, IL, USA) using statistical tests (descriptive, Pearson correlation, and independent t-test) at the significance level of $p = 0.05$. **Results:** Among the 150 study participants, 63% were females. Nearly, 12% of the students were not aware of the different categories of the Complementary and Alternative Medicine (CAM) and 8% of them were not aware of its implication in oral health-care management. **Conclusion:** The study findings concluded that majority of the students has awareness about CAM, yet they do not follow the use of the same for their patient's oral health-care management. Hence, knowledge of CAM should be included in the undergraduate curriculum of dental students.

Key words: Awareness; complementary and alternative medicine; dental students.

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INTRODUCTION

Oral health is a reflection of the physiological, social, and psychological factors that are essential to our quality of life. Peoples of all age groups and races of different geographic locations are affected by oral diseases which ranges from dental caries to oral cancer. According to WHO report 2003, 90% of the adult population is affected by periodontal disease and 60-90% of school children are affected by dental caries. [1]

Complementary and alternative medicine (CAM) represents a group of diverse medical and health-care systems, practices, and products that are not considered to be part of conventional medicine. Biofeedback, acupuncture, herbal medication, massage, bio electromagnetic therapy, meditation, and music therapy are examples of CAM treatments. These systems are often cheaper and are also considered as much safer than conventional medicines. [2] Herbs with medicinal properties which are used to treat diseases or for maintaining health or even used as ingredients in allopathic medicines are called herbal medicines. [3,4]Traditional Chinese Medicine (TCM) which is based on a holistic, natural approach and well established theoretical framework has an important place in Complementary and Alternative Medicine (CAM). It includes acupuncture, herbal therapy, Massage (tuina), and breathing and relaxation exercises. [1,5,6]

Even though, the use of traditional medicine in dentistry is common, and it has been used widely to treat dental problems since a long time, its awareness among dental students are uncertain. Hence our study aims to assess the knowledge, awareness, and practices of Complementary

and Alternative Medicine for oral health-care management among dental students.

OBJECTIVE

The purpose of the study is to assess the knowledge, awareness, and practices of Complementary and Alternative Medicine for oral health-care management among dental students in Ghaziabad, India.

MATERIALS AND METHODS

A cross-sectional study was conducted among 150 dental students of final year and internship from a dental hospital in Ghaziabad, India. Data were gathered using a self-administered questionnaire. Internal consistency of these sections of the questionnaire was calculated using Cronbach's alpha technique (0.88). The questionnaire consisted of 17 questions with Likert scale response options. For scoring this section of questionnaire, 5-point Likert scale (0 = strongly disagree, 1 = disagree, 2 = no opinion, 3 = agree, and 4 = strongly agree) was used. For negative questions, reverse scoring was done. After completion of the questionnaire, the obtained data were analyzed by SPSS version 18.0 (SPSS Inc., Chicago, IL, USA) using statistical tests (descriptive, Pearson correlation, and independent t-test) at the significance level of $p = 0.05$.

The ethical clearance for the study was obtained from the institution review board of the college and informed consent was taken from all the study participants prior to the study.

RESULTS

The present study comprises of 150 dental students including final year and interns and the frequencies of responses to the questionnaire are presented in Table 1. Among the total participants of the study, 63% were females. Nearly, 12% of the students were not aware of the different categories of the Complementary and Alternative Medicine (CAM)and 8% of them were not aware of its implication in oral health-care management.

The Pearson correlation test showed that the knowledge of the interns had a direct relationship with their attitude, perceived benefits, self-efficacy, and cues to action. However, knowledge had a reverse relationship with perceived barriers and perceived threat. The same test (Pearson correlation) also indicated that their attitude regarding use Complementary and Alternative Medicine had a direct relationship with perceived benefits, self-efficacy, and cues to action, but it had a reverse relationship with perceived barriers and perceived threat. Independent t-test showed that the mean scores of model variables in the two sexes had no significant difference ($p > 0.05$).

TABLE 1: Questionnaire answered by dental students

QUESTIONS	STRONGLY AGREE (%)	AGREE (%)	NO OPINION (%)	DISAGREE (%)	STRONGLY DISAGREE (%)
Should the use of CAM be asked about during a regular history taking?	44 (29.33%)	59 (39.34)	0 (0%)	39 (26%)	8 (5.33%)
Encouraging the patients using CAM in conjugation with conventional medicine	11 (7.34%)	33 (22%)	19 (12.66%)	71 (47.33%)	16 (10.67%)
Importance of CAM practices available to dental patients	18 (12%)	31 (20.67%)	23 (15.33%)	66 (44%)	12 (8%)
Patient should inform/consult their doctors about their use of CAM	16 (10.67%)	27 (18%)	15 (10%)	71 (47.33%)	21 (14%)
Advice by dentists for their patients about commonly used CAM methods	22 (14.66%)	37 (24.66%)	7 (4.66%)	61 (40.69%)	23 (15.33%)
Discouraging CAM therapies which are not tested in a scientific manner	5 (3.33%)	11 (7.33%)	98 (65.33%)	28 (18.68%)	8 (5.33%)
Spiritual or religious beliefs influence your attitude towards CAM	3 (2%)	14 (9.33%)	101 (67.34%)	26 (17.33%)	6 (4%)
Ayurveda is a popular method in India	17 (11.33%)	82 (54.67%)	4 (2.67%)	45 (30%)	2 (1.33%)
Use of herbal medicines personally	5 (3.33%)	33 (22%)	56 (37.33%)	48 (32%)	8 (5.33%)
Herbal based mouth rinses reduces gingival inflammation	4 (2.67%)	15 (10%)	93 (62%)	31 (20.67%)	7 (4.66%)
Use of acupuncture as an analgesic and anesthetic to treat facial pain, post-operative pain and temporomandibular dysfunction syndrome	2 (1.33%)	11 (7.33%)	114 (76%)	14 (9.34%)	9 (6%)
Use of chiropractic speciality practice in dentistry	0 (0%)	0 (0%)	22 (14.66%)	124 (82.67%)	4 (2.67%)
Use of Reiki and aroma therapies to create an environment that is more soothing and relaxing	0 (0%)	0 (0%)	4 (2.67%)	123 (82%)	23 (15.33%)
Use relaxation techniques may contribute to controlling pain?	2 (1.33%)	4 (2.67%)	121 (80.67%)	15 (10%)	8 (5.33%)

Use of biofeedback to treat tension headaches, bruxism and anxiety	0 (0%)	2 (1.33%)	128 (85.34%)	15 (10%)	5 (3.33%)
Use of hypnosis dentistry for anxious patients	0 (0%)	0 (0%)	126 (84%)	22 (14.66%)	2 (1.34%)
Necessity of formal training or mandatory CAM course dental undergraduate curriculum	121 (80.67%)	11 (7.33%)	7 (4.66%)	9 (6%)	2 (1.34%)

DISCUSSION

The results of the present suggests that the CAM knowledge among dental student is appreciable and it also recommends inclusion of CAMin dental education. In India, there is a high degree of reliance and cultural acceptability of Ayurveda medicine in favor of traditional systems of medicine. 15.33% of students in our study agreed that relaxation techniques increase well-being and thus may contribute to controlling pain, while majority of the students agreed that Ayurveda is a popular method. Participants exhibited appreciable knowledge, interest, and attitudes toward CAM. This may suggest that they are not well equipped with knowledge of the efficacy and safety of CAM, and hence they are afraid to advise and encourage their patients who suggest the use of CAM. Nevertheless, most students agree that patients should inform doctors about CAM use and that it should be inquired about during history taking. A previous study by Yildirim Y et al reported that nursing students have a more positive attitude than medical students'. The results showed that student's attitudes are in line with their interests and limited knowledge. [7]

The majority of the students in our study agreed that having knowledge of CAM is important for their professional careers although the study by Yeo AS et alshowed that the participants were reluctant to incorporate the CAM courses into their medical curriculum. [8] To promote the learning of CAM, high-quality content that is easier to learn should be incorporated into dental courses, and this was in agreement with the study byGaster et al. [9] Student learning could be enhanced by a combination of lectures and direct shadowing. Many professionals use traditional medicine as self-care because there is a wide misconception that "natural" means "safe." Use of CAM, without any scientific knowledge, by patients may confuse their treating doctors, which may affect diagnostic and treatment decisions resulting in misleading or unknown treatment outcomes. Beneficial effects associated with CAM, if any, should also not be ignored without scientific evaluation. The generalization of the study is a limitation because of the smaller sample size. Another major limitation was the involvement of only final year students and interns of the dentistry, whereas future research is warranted on a large scale with detailed knowledge of CAM and its depth in practical implications in day-to-day dental practice.

CONCLUSION

The study findings concluded that majority of the students has awareness about CAM, yet they do not follow the use of the same for their patient's oral health-care management. This initiates the necessity of imposing the knowledge of CAM in the undergraduate curriculum for the dental students so that it should be implemented in their practice in future.

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