



ISSN Print: 2394-7489  
ISSN Online: 2394-7497  
IJADS 2019; 5(2): 37-44  
© 2019 IJADS  
www.oraljournal.com  
Received: 15-02-2019  
Accepted: 17-03-2019

**John Smith J**  
Post Graduate student,  
Department of Public Health  
Dentistry, Coorg Institute of  
Dental Sciences, Virajpet,  
Karnataka, India

**Jithesh Jain**  
Professor and Head of  
Department, Department of  
Public Health Dentistry, Coorg  
Institute of Dental Sciences,  
Virajpet, Karnataka, India

**Ananda SR**  
Professor, Department of Public  
Health Dentistry, Coorg  
Institute of Dental Sciences,  
Virajpet, Karnataka, India

**Bhakti Jaduram Sadhu**  
Senior Lecturer, Department of  
Public Health Dentistry, Coorg  
Institute of Dental Sciences,  
Virajpet, Karnataka, India

#### Correspondence

**John Smith J**  
Post Graduate student,  
Department of Public Health  
Dentistry, Coorg Institute of  
Dental Sciences, Virajpet,  
Karnataka, India

## Attitude and practices towards dental diseases among Ayurveda, homeopathy and naturopathy interns, post graduates and faculty

**John Smith J, Jithesh Jain, Ananda SR and Bhakti Jaduram Sadhu**

### Abstract

**Aim:** To assess the attitude and practices of Ayurveda, Homeopathy and Naturopathy interns, postgraduates and faculty towards dental diseases.

**Materials and methods:** A Total of 307 subjects participated in the study, out of which 106, 101 and 100 participants were from Ayurveda, Homeopathy and Naturopathy respectively. Data was collected through a survey proforma which included personal information, 6 questions for assessing attitude and 6 questions to assess the practices on CAM towards dental diseases.

**Results:** Responses to all the attitude based questions were found to be statistically significant between the study groups. The attitude of Ayurvedic and Homeopathic interns towards CAM in dental diseases was more positive than the others. Responses to all the open ended practice based questions were different among the study groups.

**Conclusion:** Incorporation of CAM methods in dental curriculum can improve the knowledge and dentists can also advise their patients to follow CAM treatment modalities.

**Keywords:** Complementary and Alternative Medicine, oral diseases, dentists, dental curriculum

### 1. Introduction

Complementary and alternative medicine (CAM) is a diverse collection of approaches that are not considered to be a part of the care usually provided by medical doctors and other healthcare professionals used to prevent or treat diseases. CAM is found to be increasing in public popularity and it is gaining credibility within biomedical health research. Many aspects of CAM have their past rooted in the cultures and beliefs of the respective societies<sup>[1]</sup>.

Oral diseases are a major health problem worldwide. Dental caries and periodontal diseases are the most important global oral health problems. Conditions like oral and pharyngeal cancers and oral tissue lesions are also of significant concern. Oral health is related to the general well-being and the quality of life that extends beyond the functions of the craniofacial complex<sup>[2]</sup>.

Ayurveda, Homeopathy and Naturopathy are the most commonly practised CAM therapies and are found to have lot of impact in the field of medicine. The use of traditional medicine in dentistry is common, and it has been used widely to treat dental problems since a long time. Ayurveda which is about the "Tridosha theory of disease" is being used commonly in prevention and treatment of oral diseases. The doshas or humors are: vata (wind), pitta (gall), and kapha (mucus) and when all these three doshas are in perfect balance and harmony, a person is said to be healthy<sup>[3]</sup>.

Previous studies states that all kinds of chewing sticks described in ancient Ayurveda texts have medicinal and anti-cariogenic properties and the practice of oil pulling (Kaval, Gandush) was found to cure about 30 systemic diseases. Some fruits like bilberry and hawthorn berry stabilize collagen and strengthen the gum tissue<sup>[4]</sup>.

Homeopathy is another system of CAM that is based on the principle of 'like cures like' and can be used in both low and ultra-molecular dilution. Dentists use homeopathic medicines in everyday practise as an adjunct to conventional treatment. These medicines are used for a range of treatments, from relatively mild acute conditions to complex chronic pathologies<sup>[5]</sup>

Naturopathy, which is one of the CAM therapies, is a system of healing science which stimulates the body's inherent power to regain health with the help of five great elements of nature (Pancha Mahabhootas) - Earth, Water, Air, Fire and Ether.

Apart from these Pancha mahabhootas, naturopathy also advocates the practice of drugless therapies like dietary supplements, massage, Electrotherapy, Physiotherapy, Acupuncture and Acupressure, Magneto-therapy etc.

In general, naturopathic dentistry looks for nontoxic, non-metal solutions to improve the oral health and promote good oral hygiene. Clove oil (eugenol) is used as a sedative for toothaches and Myrrh, Rose, Frankincense and Lavender are useful for gingivitis and periodontal infections [6].

The role that Ayurveda, homeopathic and naturopathic practitioners can play in improving oral health of the population depends on their own knowledge about oral disease and their effect on general health, their attitude toward dentistry, and their routine practice to maintain oral health.

Till date, there are only limited studies available to find the practices and attitude level of Ayurveda, homeopathy and naturopathy practitioners on oral health.

**Methodology**

Complementary and Alternative Medicine (CAM) practices like Ayurveda, Homeopathy and Naturopathy are found more in Karnataka. Most of the Institutions with Ayurveda, Homeopathy and Naturopathy sciences are located here. Many of these CAM practitioners treat oral diseases and their attitude is different from other general practitioners. The present study is a descriptive cross-sectional study with self-administered questionnaire.

Participants recruited in the study were the interns, post graduates and the faculty from the institutions of Ayurveda, Homeopathy and Naturopathy Medicine in Karnataka. The institutions included in the study were affiliated to the Rajiv Gandhi University of Health Sciences, Bangalore.

Two colleges from each branch were selected randomly for the study. A total of 307 subjects participated in the study out of which 106, 101 and 100 participants were from Ayurveda, Homeopathy and Naturopathy Medicine respectively. The study subjects included the interns, post graduates and faculty. All the interns, post graduates and faculty who were willing to participate were included in the study.

Ethical clearance was obtained from the Institutional Review Board of Coorg Institute of Dental Sciences, Virajpet and permission was taken from the respected institutions prior to the study. Written Informed consent was taken from all the study subjects.

A pilot study was conducted among these professionals to check for the validity and reliability of the questionnaire. Data was collected through a survey proforma which consists of three parts:

- First part consists of personal information like age, sex

and qualification.

- Second part consists of questionnaire which consists of 6 closed end questions for assessing the attitude on CAM. For scoring this section of questionnaire, 5-point Likert scale) was used.
- (0 = strongly disagree, 1 =disagree, 2 = neither, 3 = agree, and 4 = strongly agree.
- Third part of the questionnaire consists of 6 questions out of which there are 2 closed end questions and 4 open end questions to assess the practices on CAM towards dental diseases. Each of those two closed end questions has a binary response, “yes” or “no” and was scored as 1 or 0 respectively.

**Statistical analysis**

Data was collected, coded and fed in the SPSS (IBM version 23) for the analysis. Descriptive an inferential statistics were calculated. Descriptive statistics included frequency distribution and percentage. Inferential statistics included chi-square test used to compare the categorical data.

**Results**

A total of 307 subjects participated in the study out of which 106 participants were from Ayurveda, 101 participants from Homeopathy and 100 participants from Naturopathy. Table 1 shows the total number of interns and postgraduates from Ayurveda, Homeopathy and Naturopathy. The mean age of Ayurveda graduates was 27.53; Homeopathy 26.86 and Naturopathy 25.37. Table 4 shows distribution of study subjects based on gender among study groups.

**Table 1:** Distribution of study subjects based on qualification among study groups

Qualification	Groups		
	Ayurveda (%)	Homeopathy (%)	Naturopathy (%)
Interns	66 (62.3%)	69 (68.3%)	54 (54%)
Postgraduates	12 (11.3%)	11 (10.9%)	18 (18%)
Faculty	28 (26.4%)	21 (20.8%)	28 (28%)
Total	106	101	100

**Table 2:** Distribution of study subjects based on gender among study groups

Gender	Groups		
	Ayurveda	Homeopathy	Naturopathy
Male	28	36	42
Female	78	65	58
Total	106	101	100

**Table 3:** Distribution of Responses to attitude based questions on CAM among study groups

Questions	Groups			Chi square	p value	
	Naturopathy	Ayurveda	Homeopathy			
Q1	Strongly disagree	2(2.0)	0	6(5.9)	36.000	.000 HS
	Disagree	2(2.0)	0	4(4.0)		
	Neither	5(5.0)	1(0.9)	2(2.0)		
	Agree	53(53.0)	81(76.4)	78(77.2)		
	Strongly agree	38(38.0)	24(22.6)	11(10.9)		
Q2	Strongly disagree	5(5.0)	0	1(1.0)	32.657	.000 HS
	Disagree	12(12.0)	9(8.5)	4(4.0)		
	Neither	10(10.0)	6(5.7)	8(7.9)		
	Agree	39(39.0)	76(71.7)	81(80.2)		
	Strongly agree	34(34.0)	15(14.2)	7(6.9)		
Q3	Strongly disagree	2(2.0)	4(3.8)	3(3.0)	66.922	.000 HS
	Disagree	8(8.0)	16(15.1)	4(4.0)		

	Neither	14(14.0)	39(36.8)	2(2.0)	30.304	.000 HS
	Agree	59(59.0)	40(37.7)	83(82.2)		
	Strongly agree	17(17.0)	7(6.6)	9(8.9)		
	Strongly disagree	5(5.0)	18(17.0)	2(2.0)		
	Disagree	9(9.0)	7(6.6)	4(4.0)		
Q4	Neither	3(3.0)	4(3.8)	4(4.0)	17.718	.023 S
	Agree	48(48.0)	46(43.4)	71(70.3)		
	Strongly agree	35(35.0)	31(29.2)	20(19.8)		
	Strongly disagree	5(5.0)	6(5.7)	4(4.0)		
Q5	Disagree	12(12.0)	14(13.2)	10(9.9)	37.586	.000 HS
	Neither	10(10.0)	12(11.3)	14(13.9)		
	Agree	39(39.0)	61(57.5)	55(54.5)		
	Strongly agree	34(34.0)	13(12.3)	18(17.8)		
	Strongly disagree	3(3.0)	6(5.7)	2(2.0)		
Q6	Disagree	9(9.0)	2(1.9)	8(7.9)	14.912	.005 S
	Neither	4(4.0)	6(5.7)	11(10.9)		
	Agree	41(41.0)	68(64.2)	68(67.3)		
	Strongly agree	43(43.0)	24(22.6)	12(11.9)		

**Table 4:** Distribution of Responses to practice based questions on CAM among study groups

Questions	Answers	Groups			Chi square	p value
		Naturopathy	Ayurveda	Homeopathy		
Q7	Yes	76(76.0)	101(95.3)	100(99.0)	34.866	.000 HS
	No	24(24.0)	5(4.7)	1(1.0)		
Q8	Yes	99(99.0)	104(98.1)	101(100)	1.904	.386 NS
	No	1(1.0)	2(1.9)	0		

**Table 5A:** Comparison of Responses to attitude based questions among Ayurveda graduates based on qualification

Questions		Interns (%)	Postgraduates and faculty (%)	Chi square value	p value
Q1	Strongly disagree	0(0.0)	0(0.0)	.617	.735 NS
	Disagree	0(0.0)	0(0.0)		
	Neither	1(1.5)	0(0.0)		
	Agree	50(75.8)	31(77.5)		
	Strongly agree	15(22.7)	9(22.5)		
Q2	Strongly disagree	0(0.0)	0(0.0)	9.017	.029 S
	Disagree	4(6.1)	5(12.5)		
	Neither	2(3.0)	4(10.0)		
	Agree	54(81.8)	22(55.0)		
	Strongly agree	6(9.1)	9(22.5)		
Q3	Strongly disagree	3(4.5)	1(2.5)	8.962	.062 NS
	Disagree	11(16.7)	5(12.5)		
	Neither	30(45.5)	9(22.5)		
	Agree	19(28.8)	21(52.5)		
	Strongly agree	3(4.5)	4(10.0)		
Q4	Strongly disagree	15(22.7)	3(7.5)	7.937	.094 NS
	Disagree	5(7.6)	2(5.0)		
	Neither	2(3.0)	2(5.0)		
	Agree	30(45.5)	16(40.0)		
	Strongly agree	14(21.2)	17(42.5)		
Q5	Strongly disagree	5(7.6)	1(2.5)	2.794	.593 NS
	Disagree	10(15.2)	4(10.0)		
	Neither	6(9.1)	6(15.0)		
	Agree	38(57.6)	23(57.5)		
	Strongly agree	7(10.6)	6(15.0)		
Q6	Strongly disagree	3(4.5)	3(7.5)	14.912	.005 S
	Disagree	2(3.0)	0(0.0)		
	Neither	1(1.5)	5(12.5)		
	Agree	50(75.8)	18(45.0)		
	Strongly agree	10(15.2)	14(35.0)		

**Table 5B:** Comparison of Responses to practice based questions among Ayurveda graduates based on qualification

Questions		Interns (%)	Postgraduates and faculty (%)	Chi square value	p value
Q7	Yes	61(92.4)	40(100.0)	3.180	.075 NS
	No	5(7.6)	0(0.0)		
Q8	Yes	65(98.5)	39(97.5)	.130	.718 NS
	No	1(1.5)	1(2.5)		
Q9	Ayurvedic line of treatment	32(48.5)	19(47.5)	26.256	.000 HS
	Examine the oral cavity	6(9.1)	13(32.5)		
	Oil pulling	0(0.0)	4(10.0)		
	Advise clove	0(0.0)	1(2.5)		
	Refer to a dentist	28(42.4)	3(7.5)		
Q10	Ayurvedic line of treatment	24(36.4)	15(37.5)	46.171	.000 HS
	Herbal mouthwash / Mouth gargling	5(7.6)	17(42.5)		
	Identify the cause and treat	11(16.7)	0(0.0)		
	Oil pulling	0(0.0)	7(17.5)		
	Refer to a dentist	26(39.4)	1(2.5)		
Q11	Local application of powder and internal medicine	31(47.0)	25(62.5)	5.755	.218 NS
	Mouth gargling with medicated kashayas	5(7.6)	5(12.5)		
	Investigation	9(13.6)	5(12.5)		
	Mouthwash	1(1.5)	0(0.0)		
	Refer to a dentist	20(30.3)	5(12.5)		
Q12	Ayurvedic medicines	23(34.8)	5(12.5)	7.344	.025 S
	Drainage of pus and medication	14(21.2)	8(20.0)		
	Refer to a dentist	29(43.9)	27(67.5)		

**Table 6A:** Comparison of Responses to attitude based questions among Homeopathy graduates based on qualification

Questions		Interns (%)	Postgraduates and faculty (%)	Chi square value	p value
Q1	Strongly disagree	4(5.8)	2(6.3)	15.107	.004 S
	Disagree	3(4.3)	1(3.1)		
	Neither	2(2.9)	0(0.0)		
	Agree	58(84.1)	20(62.5)		
	Strongly agree	2(2.9)	9(28.1)		
Q2	Strongly disagree	0(0.0)	1(3.1)	23.697	.000 HS
	Disagree	0(0.0)	4(12.5)		
	Neither	5(7.2)	3(9.4)		
	Agree	63(91.3)	18(56.3)		
	Strongly agree	1(1.4)	6(18.8)		
Q3	Strongly disagree	1(1.4)	2(6.3)	8.400	.078 NS
	Disagree	3(4.3)	1(3.1)		
	Neither	2(2.9)	0		
	Agree	60(87.0)	23(71.9)		
	Strongly agree	3(4.3)	6(18.8)		
Q4	Strongly disagree	0(0.0)	2(6.3)	5.187	.269 NS
	Disagree	0(0.0)	2(6.3)		
	Neither	3(4.3)	1(3.1)		
	Agree	50(72.5)	21(65.6)		
	Strongly agree	14(20.3)	6(18.8)		
Q5	Strongly disagree	1(1.4)	3(9.4)	15.639	.004 S
	Disagree	8(11.6)	2(6.3)		
	Neither	7(10.1)	7(21.9)		
	Agree	45(65.2)	10(31.3)		
	Strongly agree	8(11.6)	10(31.3)		
Q6	Strongly disagree	0(0.0)	2(6.3)	15.510	.004 S
	Disagree	7(10.1)	1(3.1)		
	Neither	6(8.7)	5(15.6)		
	Agree	52(75.4)	16(50.0)		
	Strongly agree	4(5.8)	8(25.0)		

**Table 6B:** Comparison of Responses to Practice based questions among Homeopathy graduates based on qualification

Questions		Interns (%)	Postgraduates and faculty (%)	Chi square value	P value
Q7	Yes	68(98.6)	32(100.0)	.468	.494 NS
	No	1(1.4)	0(0.0)		
Q8	Yes	69(100.0)	32(100.0)	0	0 NS
	No	0(0.0)	0(0.0)		
Q9	Give homeopathic medicine for symptomatic relief	22(31.9)	16(50.0)	7.739	.102 NS
	Examination of oral cavity and give homeopathy medicines	28(40.6)	14(43.8)		
	Identify the cause and treat	12(17.4)	1(3.1)		
	Constitutional remedy	5(7.2)	0(0.0)		
	Refer to a dentist	2(2.9)	1(3.1)		
Q10	Homeopathy treatment	20(29.0)	9(28.1)	2.340	.673 NS
	Refer to a dentist	7(10.1)	3(9.4)		
	Oral hygiene maintenance	26(37.7)	11(34.4)		
	Identify the cause and general treatment	13(18.8)	9(28.1)		
	Prescribe mouthwash	3(4.3)	0(0.0)		
Q11	Homeopathic medicines	32(46.4)	19(59.4)	4.094	.393 NS
	Refer to a dentist	4(5.8)	3(9.4)		
	Send for investigation	15(21.7)	7(21.9)		
	Homeopathic ointment	5(7.2)	1(3.1)		
	Symptomatic treatment	13(18.8)	2(6.3)		
Q12	Drainage of pus and homeopathy medicines	21(30.4)	6(18.8)	10.689	.014 S
	Homeopathic medicines	32(46.4)	12(37.5)		
	Refer to a dentist	16(23.2)	10(31.3)		
	Individual based holistic approach	0(0.0)	4(12.5)		

**Table 7A:** Comparison of Responses to attitude based questions among Naturopathy graduates based on qualification

Questions		Interns (%)	Postgraduates and faculty (%)	Chi square value	p value
Q1	Strongly disagree	1(1.9)	1(2.2)	8.285	.082 NS
	Disagree	2(3.7)	0(0.0)		
	Neither	5(9.3)	0(0.0)		
	Agree	30(55.6)	23(50.0)		
	Strongly agree	16(29.6)	22(47.8)		
Q2	Strongly disagree	6(11.1)	1(2.2)	6.291	.178 NS
	Disagree	7(13.0)	9(19.6)		
	Neither	1(1.9)	0(0.0)		
	Agree	28(51.9)	30(65.2)		
	Strongly agree	12(22.2)	6(13.0)		
Q3	Strongly disagree	2(3.7)	0(0.0)	14.726	.005 S
	Disagree	7(13.0)	1(2.2)		
	Neither	9(16.7)	5(10.9)		
	Agree	23(42.6)	36(78.3)		
	Strongly agree	13(24.1)	4(8.7)		
Q4	Strongly disagree	5(9.3)	0(0.0)	13.481	.009 S
	Disagree	8(14.8)	1(2.2)		
	Neither	0(0.0)	3(6.5)		
	Agree	22(40.7)	26(56.5)		
	Strongly agree	19(35.2)	16(34.8)		
Q5	Strongly disagree	5(9.3)	0(0.0)	9.044	.060 NS
	Disagree	9(16.7)	3(6.5)		
	Neither	3(5.6)	7(15.2)		
	Agree	20(37.0)	19(41.3)		
	Strongly agree	17(31.5)	17(37.0)		
Q6	Strongly disagree	3(5.6)	0(0.0)	12.488	.014 S
	Disagree	9(16.7)	0(0.0)		
	Neither	1(1.9)	3(6.5)		
	Agree	20(37.0)	21(45.7)		
	Strongly agree	21(38.9)	22(47.8)		

**Table 7B:** Comparison of Responses to practice based questions among Naturopathy graduates based on qualification

	Questions	Interns (%)	Postgraduates and faculty (%)	Chi square value	p value
Q7	Yes	44(81.5)	32(69.6)	1.934	.164
	No	10(18.5)	14(30.4)		NS
Q8	Yes	53(98.1)	46(100.0)	.860	.354
	No	1(1.9)	0(0.0)		NS
Q9	Examination and give medicine	9(16.7)	10(21.7)	5.103	.277 NS
	Acupuncture	1(1.9)	0(0.0)		
	Ice massage	7(13.0)	8(17.4)		
	Clove chewing	26(48.1)	25(54.3)		
	Refer to a dentist	11(20.4)	3(6.5)		
Q10	Oil pulling	12(22.2)	9(19.6)	13.475	.036 S
	Mouthwash	2(3.7)	8(17.4)		
	Mint chewing / elachi chewing	10(18.5)	13(28.3)		
	Salt water gargling	14(25.9)	12(26.1)		
	Identify the cause and treat	2(3.7)	2(4.3)		
	Fruit diet /raw diet	5(9.3)	0(0.0)		
	Refer to a dentist	9(16.7)	2(4.3)		
Q11	Butter/curd application	4(7.4)	8(17.4)	10.052	.074 NS
	Honey and turmeric application	22(40.7)	21(45.7)		
	Salt water gargling	12(22.2)	14(30.4)		
	Identify the cause and treat	1(1.9)	0(0.0)		
	Refer to a dentist	14(25.9)	3(6.5)		
	Raw diet	1(1.9)	0(0.0)		
Q12	Salt water gargling	5(9.3)	14(30.4)	7.240	.027 S
	Fasting / diet modification	12(22.2)	8(17.4)		
	Refer to a dentist	37(68.5)	24(52.2)		

## Discussion

The present study is a descriptive cross-sectional questionnaire survey with a total of 307 participants. The number of females was more when compared to the number of males in all three study groups.

In the present study, 48% from naturopathy, 43.4% from Ayurveda and 70.3% from homeopathy agreed; and 35% from naturopathy, 29.2% from Ayurveda and 19.8% from homeopathy strongly agreed that dentists should be able to advise their patients about common CAM methods. The results are in accordance with the results of the study conducted by Ila M. harris *et al.* [9] among pharmacy students at Minnesota, wherein 94% of faculty members and 88% of the students agreed that health professionals should be able to advise their patients about common CAM methods which is in accordance to the present study.

In the present study, 39%, 61% and 55% of the participants belonging to naturopathy, ayurveda and homeopathy respectively agreed CAM to be added in dental curricula. Ila M. harris *et al.* [9] in their study among pharmacy students at Minnesota showed the positive attitude of the faculty members and students (84% and 83% respectively) towards necessity of CAM in pharmacy curriculum which is in accordance with the present study.

In the present study, 76% naturopathy graduates, 95.3% ayurveda graduates and 99% homeopathy graduates responded that they examine the oral cavity. Results are in accordance with a study conducted by Rajmohan *et al.* [3] among Sidda and Ayurveda practitioners at Chennai, in which 31.4% performed oral health examination for all patients, 24.5% performed oral examination only if the patient presented with the problem. This reveals the importance CAM practitioners give for the oral diseases. These practitioners along with the dentists can help in the treatment and prevention of oral diseases. Results are in contrast to a study conducted by Kulkarni *et al.* [15] at Davangere, wherein only 16.7% of Ayurveda and 5.3% of homeopathy practitioners routinely examined oral mucosa. Results are also

in contrast to another study conducted by Yadav rao *et al.* [18] at Vikarabad among RMPs, Ayurveda and Homeopathy practitioners, in which only 18% of the practitioners routinely examined oral mucosa, which shows less importance given to oral examination by CAM practitioners.

In the present study, 99% naturopathy graduates, 98.1% ayurveda graduates and all the homeopathy graduates (100%) responded that they inform the patients about tobacco related diseases. Results are in accordance with the study conducted by Rajmohan *et al.* [3] among Sidda and Ayurveda practitioners at Chennai, in which 92.2% of the CAM practitioners stated that they inform the patients about tobacco related diseases.

In response to the practice based question on management of toothache in the present study, Ayurveda graduates responded that they follow Ayurvedic line of treatment, 41.6% of the Homeopathy graduates responded that they will give homeopathy medicines, 51% of the Naturopathy graduates responded as clove chewing and 19% naturopathy graduates preferred ice massage as other treatment options. All the three study groups had their own method for treating toothache according to their curriculum.

Ayurveda graduates stated that they prescribe herbal mouthwash and Ayurvedic line of treatment for treating malodour whereas homeopathy graduates preferred homeopathic treatment. Naturopathy graduates preferred the use of salt water gargling followed by mint/elaiichi chewing.

For the treatment of oral mucosal lesions, 52.8 % Ayurveda graduates preferred the use of topical Ayurvedic powder and internal medicine. 50.5% Homeopathy graduates stated that they give homeopathy medicines mostly. Honey and turmeric application was used as a treatment option by 43% of the naturopathy graduates and Salt water gargling (26%) and butter/curd application (12%) were other options.

In the present study, 52.8% Ayurveda and 61% Naturopathy graduates preferred referring the patients with dental abscess to a dentist. 26.4% of the Ayurveda graduates mentioned Ayurvedic medicines for treatment and 20.8% responded that

they will drain the pus and give medications; 20% and 19% of the naturopathy graduates mentioned fasting and salt water gargling respectively as treatment; 43.6% Homeopathy graduates responded that homeopathic medicines can be used for the treatment of dental abscess while 26.7% responded as drainage of pus.

The present study has also compared between the qualifications with interns as one group and the postgraduates and faculty in another group. The attitude of Ayurvedic and Homeopathic interns towards CAM in dental diseases was more positive when compared to the postgraduates and faculty and also the practices were almost similar between the qualifications in both the study groups. Among naturopathy graduates, all including the interns, postgraduates and faculty had positive attitude towards CAM in dental diseases.

According to a review by Torwane *et al.* [2] about role of Ayurveda in management of oral health, *Shalyatantra* and *Shalakyatantra* (one of the branches of Ayurveda) states that 65 varieties of oral diseases can arise in seven anatomic locations - 8 on the lips, 15 on the alveolar margin, 8 in connection with the teeth, 5 on the tongue, 9 on the palate, 17 in the oropharynx and 3 in a generalized form. For the treatment of these diseases, Ayurveda advocates procedures such as oral cleansing, extractions, excisions, flap surgeries etc. In the present study, two practitioners of *Shalyatantra* and *Shalakyatantra* branch responded that they drain dental abscesses and extract teeth at their clinics. According to a review by Sumit Bhateja *et al.* [20] on Complementary & Alternative therapy in Dentistry - Homeopathy, *Chamomilla* 200C is given one hour prior to surgery every 15 minutes for toothache. For treatment of dental abscesses, *Belladonna* 30C is given every 30 mins and when it is swollen and accompanied by numbness, *Myristica* 6X is given for every hour. For management of halitosis, mixture of *Carbo veg* 30C and *Merc sol* 30C is given twice daily. For oral mucosal lesions, *Borax* 30C is given three times daily (oral Candidiasis) *Borax* 4x twice daily and *Sulphur* 30 twice daily for 15 days (Oral Lichen planus). According to a review by Yatish Kumar Sanadhya *et al.* on naturopathy system – a complementary and alternative aid in dentistry, Lavender is used for the treatment of mouth abscesses and it works well when applied directly on the area of concern and Clove oil (eugenol) is used as a sedative for toothaches. There are treatment methods for most of the dental diseases among CAM and most of these treatment methods are already a part of their curriculum.

Complementary and Alternative medicine is now gaining significance in its treatment methods to treat oral diseases. But still some of the methods are not advised by healthcare professionals because of the lack of scientific evidence. And also there is no communication between the CAM practitioners and dentists which leads to poor knowledge about CAM treatment methods. CAM practitioners on the other hand advised 58.8% their patients to use fluoridated toothpaste as a part of oral hygiene maintenance according to a study conducted by M. Rajmohan *et al.* 2012 [3] among Siddha and Ayurveda practitioners at Chennai.

Most of the dentists are cautious in using CAM treatment modalities as they are not aware of it. According to a study conducted by Brar BS *et al.* (2012) [12], only few dentists (42%) used CAM therapies in their practice and also it was limited to topical application for oral diseases like oral malodour, periodontal disease and toothache. According to a study conducted by Ujwala *et al.* [16] at Dhule, Maharashtra 12% of the dental students were not aware of CAM's

implication in oral health care management while majority of them were aware of CAM but did not follow the use of CAM for patient management.

CAM can be introduced in dental curriculum to increase dental professionals' knowledge about CAM and incorporate its treatment methods in dental practice. A Study conducted by Michael L. Spector *et al.* (2012) [13] among the US dental schools' academic dean reported that 45.5% of the dental schools had CAM as a part of their predoctoral curricula. But CAM is not a part of the curriculum in most of the dental schools across the globe.

For a CAM therapy to be effective in management of dental diseases, further studies have to be conducted to prove the efficiency of its treatment methods as CAM is found to be good alternatives to synthetic chemicals and has less side effects compared to the conventional methods according to a review by Torwane *et al.* [2] Incorporating CAM in dental curricula can increase the knowledge among the dentists thereby helping them to advise CAM methods for the treatment of dental diseases.

### Conclusion

The present study shows positive attitude and practices of the CAM practitioners towards dental diseases. Even though there are treatment options available in CAM for treating dental diseases, it lacks scientific evidence. And also there is no communication between the CAM practitioners and dentists which leads to poor knowledge about CAM treatment methods. Therefore incorporation of CAM methods in dental curriculum can improve the knowledge and also further studies have to be conducted to prove the efficiency of CAM methods so that even dentists can advise their patients to follow CAM treatment modalities as they are considered to be safe when compared to the conventional allopathic medicine.

### Reference

1. Babar MG, Syed SH, Naing CM, Hamzah NHB Perceptions and self-use of Complementary and Alternative Medicine (CAM) among Malaysian dental students. *European Journal of Integrative Medicine* 2012; 4:63-69.
2. Torwane NA, Hongal S, Goel P, Chandrashekar BR. Role of Ayurveda in management of oral health. *Pharmacognosy Reviews*. 2014; 8(15):16-21.
3. Rajmohan M, Madankumar PD, Shivakumar M, Uma KS. Awareness on oral health among ayurvedha and siddha practitioners in Chennai, Tamilnadu – A questionnaire study. *Medical Journal of Islamic World Academy of Sciences* 2012; 20(2):43-48.
4. Sangeetha KM, Srinivasa Sagar B, Rashmi G. Chour, Rohan Talathi. *Ayurveda and Dentistry. J of Ayurveda and Hol Med (JAHM)*. 2015; 3(1):23-25.
5. Eames S, Darby P. Homeopathy and its ethical use in dentistry. *British Dental Journal*. 2011; 210:299-301.
6. Sanadhya YK, Sudhanshu S, Jain RS, Sharma N. Naturopathy system – a complementary and alternative aid in dentistry – a review. *Journal of Evolution of Medical and Dental Sciences*. 2013; 2(37):7077-7083.
7. Mitzdorf U, Beck K, Horton-Hausknecht J, Weidenhammer W, Kindermann A, Takács M *et al.* Why do patients seek treatment in hospitals of complementary medicine? *The Journal of alternative and complementary Medicine*. 1999; 5(5):463-73.
8. Raphael KG, Klausner JJ, Nayak S, Marbach JJ. Complementary and alternative therapy use by patients

- with myofascial temporomandibular disorders. *Journal of orofacial pain*, 2003, 17(1).
9. Harris IM, Kingston RL, Rodriguez R, Choudary V. Attitudes towards complementary and alternative medicine among pharmacy faculty and students. *American journal of pharmaceutical education*. 2006; 70(6):129.
  10. Patterson C, Arthur H. A complementary alternative medicine questionnaire for young adults. *Integrative medicine insights*. 2009; 4:IMI-S2281.
  11. Sharda AJ, Shetty S. A comparative study of oral health knowledge, attitude and behaviour of non-medical, para-medical and medical students in Udaipur city, Rajasthan. India. *Int J Dent Hygiene*. 2010; 8:101-109.
  12. Brar BS, Norman RG, Dasanayake AP. Involvement of Ayurvedic practitioners in oral health care in the United States. *The Journal of the American Dental Association*. 2012; 143(10):1120-6.
  13. Spector ML, Kummet CM, Holmes DC. Complementary and alternative medicine in predoctoral dental curricula: an exploratory survey of US dental schools. *Journal of dental education*. 2013; 77(12):1610-5.
  14. Kummet CM, Spector ML, Dawson DV, Fischer M, Holmes DC, Warren J *et al*. Patterns of complementary and alternative medicine (CAM) use among dental patients. *Journal of public health dentistry*. 2015; 75(2):109-17.
  15. Kulkarni RS, Arun PD, Rai R, Kanth VS, Sargaiyan V, Kandasamy S. Awareness and practice concerning oral cancer among Ayurveda and Homeopathy practitioners in Davangere District: A speciality-wise analysis. *J Nat Sci. Biol Med*. 2015; 6:116 9.
  16. Newadkar UR, Chaudhari L, Khalekar YK. Knowledge, awareness, and practices of complementary and alternative medicine for oral health-care management among dental students. *International journal of yoga*. 2017; 10(1):44.
  17. Suganya M, Vikneshan M, Swathy U. Usage of complementary and alternative medicine: A survey among Indian dental professionals. *Complementary therapies in clinical practice*. 2017; 26:26-9.
  18. Yadav Rao K, Parthasarathi Reddy P, Anjum MS, Monica M, Abbas I, Srikanth P. Rural Health Practitioners responsibility and their Knowledge, Attitude towards Oral Cancer in Vikarabad District, Telangana, India. *Int J Oral Health Med Res*. 2017; 4(2):15-18.
  19. Emery R, Eaves ER, Howerter A, Nichter M, Floden L, Gordon JS *et al*. Implementation of tobacco cessation brief intervention in complementary and alternative medicine practice: qualitative evaluation *BMC Complementary and Alternative Medicine*. 2017; 17:331.
  20. Bhateja S, Arora G, Mahna R. Complementary & alternative therapy in dentistry: "homeopathy"- A *Annals and Essences of Dentistry*. 2013; 5(3):36-40.