

**Integrative Tobacco Cessation: Practices and Perspectives among Health Care Professional Students – A Cross Sectional Study**

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**Abstract**

**Background:** Health professionals are not only responsible for primary health care but also need to provide health education regarding tobacco cessation to combat the menace of tobacco epidemic. Hence, the curriculum, awareness & perception of health professional students regarding tobacco cessation are assessed.

**Methodology:** A descriptive, cross sectional, questionnaire study was conducted to include clinical students from medical, dental & Ayurveda streams from Tumkur city, Karnataka. Pre tested questions regarding their training, awareness and to check their attitude towards tobacco cessation were included with dichotomous response options.

**Result:** A total of 219 students participated in the study with mean age  $21.79 \pm 1.53$  years. Medical & dental students (100%) were more aware about tobacco & its adverse effects compared to Ayurveda students, where only few of them had a formal training. Many were willing to undergo the training in all the streams but

mentioned lack of time, fear of losing patients if advised, low motivation from patients as major barriers in tobacco cessation.

**Conclusion:** The effective integration of the course, curriculum & training of all the health professional students regarding integrative tobacco cessation is required to combat the curse of tobacco & assist its users to quit the habit.

**Keywords:** Counseling, Integrative therapy, Smoking, Tobacco cessation, Health care professionals

**Introduction**

Tobacco use is one of the major preventable causes of disease and is the second major cause of death globally.<sup>1</sup> In India, tobacco related death accounts for 9,00,000 every year. About 35% of all adults aged 15 years and above are users of tobacco according to Global Adult Tobacco Survey (2009-10).<sup>2</sup> In spite of the increasing awareness regarding the health hazards associated with tobacco consumption, a large number of people still consume tobacco due to addiction to the tobacco products.<sup>3</sup>

One of the strategies to reduce the tobacco related diseases/death is to promote the participation of health professionals in tobacco preventive and cessation health programs. But, literature has shown in some countries the prevalence of smoking is more in health professionals than general populations.<sup>1,4</sup> Tobacco cessation approaches include pharmacotherapy, structured behavioral intervention, self-help resources, quit lines, and complementary and alternative medicine (CAM) approaches.<sup>5</sup> While governmental policies of taxation and prohibition of advertising have shown limited effect, an alternative cost-effective approach to tobacco cessation can be counseling.<sup>6</sup>

Counseling by physicians has shown to increase patients to quit smoking.<sup>1,7</sup> Dental health workers have an important role in assessment, detection & education of the patient and public as they examine oral cavity and treat oral cancer. In recent years organized dentistry has embraced tobacco cessation as a component of dental practice, in addition dental literature has featured articles on 5A's (Ask, Advice, Assess, Assist, Arrange).<sup>4</sup> Education about ill effects of tobacco are given to AYUSH students in their curriculum and they are a part of CAM in integrative tobacco cessation.<sup>2</sup> Hence, training of tobacco cessation approaches is essential for health professionals (Medical, Dental & Ayurveda).

Despite the involvement of health professionals in tobacco control, MCI / DCI have not included specific training program regarding tobacco cessation in the curriculum for the students during their course. But in 2018, DCI made mandatory to establish TCC in every dental college & provided operational guidelines for the same in 2019.<sup>8</sup> But in many colleges it is still in its inception stage. Hence, the objectives of the present study are to assess health care students (Medical, Dental & Ayurveda) practices and perspectives relating to education regarding tobacco

cessation & to assess their perceived need for training in tobacco cessation.

### Methodology

A descriptive, cross sectional, questionnaire study was conducted to include clinical students comprising the future health professionals (3<sup>rd</sup> year, 4<sup>th</sup> year, House surgeons and Post graduates) from medical, dental and Ayurveda teaching institution of Tumkur city, Karnataka. A prior permission from the respective colleges and ethical clearance from institutional ethical review board (IEC78/2019) was obtained. Students who were present on the day of interview & who voluntarily participate in the study were included.

An anonymous, structured, close ended questionnaire was used to collect data on the attitudes and curriculum training regarding tobacco control and cessation. The questionnaire consisted demographic details like age, gender, course, year of studying and smoking status; four questions regarding their training, seven questions regarding their awareness and twelve questions to check their attitude towards tobacco cessation were included with dichotomous response options.

After validating the questionnaire, the students were approached during their regular class hours. The study was explained and questionnaire was distributed among the students. The filled questionnaires were collected on the same day & subjected for statistical analysis using SPSS 19. Descriptive statistics with chi-square test were applied where p-value 0.05 is considered as statistically significant.

### Result

A total of 219 students participated in the study with mean age  $21.79 \pm 1.53$  years. (Table 1) Response regarding training about tobacco control in the curriculum was assessed by four questions. 100% of clinical students from medical & dental courses mentioned they were taught

about dangers of smoking & to record the tobacco history compared to Ayurveda students (57%). More than 50% of the students in all the three courses said that they didn't have a formal training for the same. All Medical & Dental students had learnt the support of education material in smoking cessation than Ayurveda students (54%). These differences were statistically highly significant. (Table 2)

For the questions regarding awareness to tobacco cessation, majority of medical (99%) & dental (100%) students said they heard about NRT compared to Ayurveda (43%). Whereas hardly dental (8%) & Ayurveda (22%) students knew about the role of antidepressants in cessation compared to Medicals (92%). 100% of dental students mentioned they are not aware of any organizations helping nicotine dependents patients in spite of having a separate cell in the institute. 44% of Ayurveda students mentioned they weren't aware of 5A's, whereas 100% of dental students weren't aware of CAM strategies & quit line numbers compared to medical & Ayurveda students which was statistically highly significant. (Table 3)

Responses for the perception regarding their role in tobacco cessation have revealed that 100% of medical & dental students agreed whereas 20% of Ayurveda students didn't. But when the question was asked whether they advise all the patients to quit smoking the percentage was more in medical students compared to dental & Ayurveda students. More than 23% in medical, 42% in dental & 31% in ayurvedic believed that their advice to patients isn't beneficial in quitting the tobacco habit. 16% of medical students agreed that they have a habit of smoking & none have attempted for quitting. More than 60% students from three streams mentioned they have not attended any tobacco cessation workshop & willing to assist the patients in tobacco cessation process. But, 94% of medical, 90% of dental & 67% of Ayurveda students

think that if they ask patient regarding tobacco usage, they might not turn up again as majority of them believes they don't have time to advice, no motivation from patients if advised, lack of knowledge. Hence, majority of students from all the three streams showed their willingness to undergo training & mentioned there is a need for integrative tobacco counseling center to help the patients to quit the habit.

## Discussion

Irrespective of the streams, health professionals have an important role in fight against tobacco but several surveys & 18% of medical, 5% of Ayurveda students in the present study have shown that tobacco use is prevalent among students of health professions making a compromising situation as future treatment providers.<sup>1,4,9</sup>

Training/curriculum on smoking and tobacco use: 100% of medical & dental students reported they were taught about the dangers of smoking similar to Anastasia B et al<sup>1</sup> but in contrast to Adheel Khan et al.<sup>10</sup> They also mentioned that they had learnt about the importance of recording patients' tobacco use history as a part of general history, similar to that of GHPSS Slovakia results<sup>11</sup> & Anastasia B et al<sup>1</sup> but in contrast to Ayurveda students.

In the present study, medical & Ayurveda students received formal training in smoking cessation for patients similar to studies by Boopathirajan R<sup>2</sup> & Adeel Khan et al<sup>10</sup> compared to dental students. According to peer reviewed studies<sup>5</sup> in international settings, education materials are necessary to focus on effective & efficient strategies to reduce the prevalence of tobacco use. Nearly all medical & dental students were taught about the importance of providing educational materials on smoking to patients in the present study which was in contrast to Adeel Khan et al.<sup>10</sup> Ayurveda students training in all the four areas were less compared to medical & dental

students. This difference may be due to the difference in curriculum among the different streams.

More than three-fourths of medical & dental students have heard of using nicotine replacement therapies in tobacco cessation programs in the present study similar to Lam et al<sup>12</sup> Among the three disciplines, Dental & ayurvedic students were less aware of using antidepressants (such as bupropion or zyban). There was a disparity among the students from three streams in other aspects as awareness regarding helping organizations, 5A's, CAM strategies, quit line numbers in tobacco cessation programs. These differences in awareness about tobacco control measures between Ayurveda, medical & dental health professional students may be due to the difference in the syllabus being followed by the different disciplines of health care.

Most smokers report desire to quit, but hardly 2-3% quit successfully as 72% of quit attempts don't use treatment based approaches.<sup>13</sup> In the present study, 100% of the medical & dental students agreed that it is their role in helping patients to quit smoking. This finding was in accordance with the previous studies.<sup>6,14,15</sup> Around 70% of the respondents thought that their advice to the patients regarding quitting of tobacco use would not be beneficial, while 30% of the respondents believed it to be useful. This shows an overall confusion regarding the effectiveness of doctor's advice. This finding was similar to the studies done by Tasneem S A et al<sup>6</sup> & Wyne et al.<sup>16</sup>

In the present study, around 100% of the medical, dental & 65% of Ayurveda students agreed that they do not get time to discuss about the benefits of quitting the use of tobacco with their patients. This was similar to a study conducted by George B et al,<sup>17</sup> Uti OG<sup>18</sup> & in contrary to a study conducted by Prakash P et al.<sup>19</sup> Majority of them believed that they lack the knowledge about NRT & tobacco cessation counseling similar to Shah S,<sup>3</sup>Tasneem S et al<sup>6</sup> & Shwetha S et al.<sup>7</sup> Around 90% respondents from

three streams believed that they might lose their patients if they ask and counsel them about the use of tobacco & 70% considered lack of patient's motivation as a barrier in providing smoking cessation counseling. This was in contrary to a study conducted by Bhat et al<sup>14</sup> & Ibrahim et al.<sup>20</sup> Hence, it was evident that lack of time and knowledge; fear of losing patient turn-over and a feeling of doubt about the efficacy of their advice; patients motivation are the most common barriers in tobacco cessation counseling among the health professionals. These findings were in accordance with the previous studies.<sup>6,17, 21</sup>

Health professionals have an important role to play in the fight against tobacco. At Individual level, they educate; at community level, support anti-smoking policies; and, at societal level, they influence national/global tobacco control efforts. For prolonged tobacco cessation, combined strategies are promising. Integrated clinics provide cessation and relapse prevention services by training health professionals for combined medical, behavioral and CAM options. Majority of the respondents from all the three disciplines in the present study were willing to undergo training for tobacco cessation counseling similar to . [6] & also mentioned there is a need for integrative tobacco counseling center to help the patients to quit the habit.

### Conclusion

Medical, Dental & Ayurveda courses though educate their respective students in tobacco & its adverse effects, there was no formal tobacco cessation training in the curriculum for all the three streams. Hence, the students had their own perceptions & barriers to not to train the tobacco patients to quit the habit. Though the training centers were made mandatory in dental colleges, training regarding the same in medical/behavioral method is still in its inception stage. This indicates the effective integration of the course,

curriculum & urgent need to train all the health professional students to combat the curse of tobacco & assist its users to quit the habit.

### Recommendation

By assessing their practices and perspectives regarding education on tobacco control and their role/willingness in tobacco cessation, it is recommended to formulate policies to include tobacco cessation training in the curriculum or launch such clinics to assist patients in all health streams.

There is a need for the development of a specific curriculum to teach students on how to assist smokers to quit and how to counsel non-smoking adolescents so as to prevent them from starting to smoke.

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## Legends Tables

Table 1: Age & Gender distribution of study subjects according to the course

Course	Gender		Age		Total
	Male	Females	Mean	Std. Deviation	
Medical	54 (61.36)	34 (38.63)	22.45	1.63	88
Dental	21 (42)	29 (58)	22.38	1.53	50
Ayurvedic	58 (72.5)	23 (28.39)	20.55	1.45	81
Total	133	86			219

Table 2: Responses for training regarding tobacco control in the curriculum

Parameter	Response	Course			Statistics
		Medical	Dental	Ayurvedic	
Taught about dangers of smoking	Yes	88 100.0%	50 100.0%	69 85.2%	$\chi^2 = 21.63$ $p < 0.001$ HS
	No	0 .0%	0 .0%	12 14.8%	
Learnt to record tobacco history	Yes	88 100.0%	50 100.0%	46 56.8%	$\chi^2 = 70.97$ $p < 0.001$ HS
	No	0 .0%	0 .0%	35 43.2%	
Got formal training in smoking cessation approaches	Yes	35 39.8%	0 0.0%	36 44.4%	$\chi^2 = 41.82$ $p < 0.001$ HS
	No	53 60.2%	50 100.0%	45 55.6%	
Learnt that education material support smoking cessation	Yes	87 98.9%	50 100%	37 45.7%	$\chi^2 = 89.83$ $p < 0.001$ HS
	No	1 1.1%	0 0.0%	44 54.3%	

Table 3: Responses for awareness regarding tobacco cessation

Parameter	Response	Course			Statistics
		Medical	Dental	Ayurvedic	
Heard about NRT in tobacco cessation programs	Yes	87 98.9%	50 100.0%	35 43.2%	$\chi^2 = 95.21$ $p < 0.001$ HS
	No	1 1.1%	0 .0%	46 56.8%	
Antidepressants in tobacco cessation programs	Yes	81 92.0%	4 8.0%	22 27.2%	$\chi^2 = 114.35$ $p < 0.001$ HS
	No	7 8.0%	46 32.0%	59 72.8%	
Know about organizations helping nicotine dependent patients to quit	Yes	37 42.0%	0 0.0%	39 48.1%	$\chi^2 = 35.12$ $p < 0.001$ HS
	No	51 58.0%	50 100.0%	42 51.9%	

Have a separate cell in the institute for counseling tobacco dependent patients	Yes	83 94.3%	50 100%	31 38.3%	$\chi^2 = 123.43$ $p < 0.001$ HS
	No	5 5.7%	0 0.0%	50 61.7%	
Know about 5As	Yes	81 92.0%	50 100%	37 45.7%	$\chi^2 = 70.42$ $p < 0.001$ HS
	No	7 8.0%	0 0.0%	44 54.3%	
Know Complimentary and Alternative Medicine (CAM) strategies	Yes	30 34.1%	0 0.0%	35 43.2%	$\chi^2 = 29.02$ $p < 0.001$ HS
	No	58 65.9%	50 100.0%	46 56.8%	
Know the quit line numbers	Yes	43 48.9%	0 0.0%	25 30.9%	$\chi^2 = 35.56$ $p < 0.001$ HS
	No	45 51.1%	50 100.0%	56 69.1%	

Table 4: Responses for perception regarding role in tobacco cessation

Parameter	Response	Course			Statistics
		Medical	Dental	Ayurvedic	
I have a role in helping patients in smoking cessation	Yes	88 100.0%	50 100.0%	65 80.2%	$\chi^2 = 29.40$ $p < 0.001$ HS
	No	0 .0%	0 .0%	16 19.8%	
I advice all patients to quit smoking	Yes	88 100.0%	50 100.0%	35 43.2%	$\chi^2 = 99.20$ $p < 0.001$ HS
	No	0 .0%	0 .0%	46 56.8%	
Will your advice would be beneficial to patients in quitting the use of tobacco	Yes	20 22.7%	21 42.0%	25 30.9%	$\chi^2 = 5.65$ $p = 0.059$ NS
	No	68 77.3%	29 58.0%	56 69.1%	
Do u smoke	Yes	16 18.2%	0 0.0%	4 4.9%	$\chi^2 = 15.42$ $p < 0.001$ HS
	No	72 81.8%	50 100.0%	77 95.1%	

Attended any tobacco cessation workshop	Yes	9 10.2%	04 8.0%	33 40.7%	$\chi^2 = 30.27$ $p < 0.001$ HS
	No	79 89.8%	46 92.0%	48 59.3%	
Assist the patients in tobacco cessation process	Yes	87 98.9%	0 0.0%	51 63.0%	$\chi^2 = 133.71$ $p < 0.001$ HS
	No	1 1.1%	50 100.0%	30 37.0%	
I think if I ask patients about the use of tobacco, patient might not turn up again	Yes	83 94.3%	45 90.0%	54 66.7%	$\chi^2 = 25.16$ $p < 0.001$ HS
	No	5 5.7%	5 10.0%	27 33.3%	
No time to advice	Yes	88 100.0%	50 100.0%	53 65.4%	$\chi^2 = 54.69$ $p < 0.001$ HS
	No	0 0.0%	0 0.0%	28 34.6%	
No motivation from patients if advised	Yes	61 69.3%	35 70.0%	48 59.3%	$\chi^2 = 2.41$ $p = 0.29$ NS
	No	27 30.7%	15 30.0%	33 40.7%	
Lack of Knowledge	Yes	79 89.8%	50 100%	52 64.2%	$\chi^2 = 34.84$ $p < 0.001$ HS
	No	9 10.2%	0 0.0%	29 35.8%	
Willing to undergo training	Yes	77 87.5%	50 100%	66 81.5%	$\chi^2 = 10.18$ $p = 0.006$ S
	No	11 12.5%	0 0.0%	15 18.5%	
Need for integrative tobacco counseling center to help patients to quit the habit	Yes	69 78.4%	37 74.0%	56 69.1%	$\chi^2 = 123.43$ $p = 0.390$ NS
	No	19 21.6%	13 26.0%	25 30.9%	