International Journal of Community Medicine and Public Health
Balasundaram R et al. Int J Community Med Public Health. 2024 Nov;11(11):4335-4340
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20243294

Original Research Article

Assessing the knowledge, preparedness and perceived barriers among dental clinicians and academicians regarding tobacco cessation counselling in Chennai city- a cross-sectional study

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Received: 22 August 2024
Accepted: 06 October 2024

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ABSTRACT

Background: Every year, tobacco usage causes three million deaths worldwide. Specialized counselling enhances the rate of cessation by an additional 4-7% when compared to standard counselling. Nowadays, the evaluation of oral health includes tobacco cessation. The goal of the study was to evaluate the knowledge, readiness, and perceived barriers of Chennai's dentistry practitioners with reference to tobacco cessation counselling.
Methods: Over the course of three months, from March to May 2024, an across-sectional questionnaire survey was carried out among dental professionals in Chennai city, comprising researchers (group 1), practitioners (group 2), and academicians and practitioners combined (group 3). A semi-open, coded, structured, self-administered questionnaire was mailed to them, and it was analysed.
Results: It appears from the study's findings that nearly every group felt that they could assist patients in quitting smoking. All of the perceived barriers to our study have been overcome after counselling, 75.9% of academicians and practitioners combined experts received good comments from patients and 70.9% of academicians felt that the patient's chances of quitting had increased. On the other hand, 42.9% of academicians and practitioners combined professionals thought they didn't have enough time to provide patients advice.
Conclusions: Compared to academicians and clinicians in other groups, dental professionals in academicians and practitioners combined group possess superior knowledge and actively engage with patient cessation. This is evident from the results of our study. Thus, at the community and institutional levels, there is an urgent need to raise awareness and provide academicians and physicians with training.

Keywords: Academicians, Clinicians, Knowledge, Perceived barriers, Tobacco cessation

INTRODUCTION

Every year, tobacco usage causes three million deaths worldwide. Worldwide, there are at least 367 million users of smokeless tobacco (SLT) and 1.1 billion adult smokers. Tobacco usage claims the lives of almost 1.2 million people annually in Southeast Asia. If immediate action is not taken, the number of deaths would increase to above 8 million by 2030.[1] When used exactly as intended, tobacco is the only consumer product that is legally available that can cause death.[2]

With 276 million tobacco users overall and over 200 million users of smokeless tobacco (SLT), India is the

world's second-largest consumer of tobacco products. The prevalence of tobacco usage, which affects all socioeconomic and ethnic groups and is widespread in both urban and rural areas of India, has made the country's situation worse. In India, 42.4% of males, 14.2% of women, and 28.6% (266.8 million) of adults now use tobacco, according to the Global Adult Tobacco Survey 2 2016-17. Oral cancer is on the rise in Tamil Nadu, where 38% of people smoke tobacco every day and 39% use SLT.[1,2]

One avoidable cause of death and morbidity is tobacco control. Tobacco users must get assistance in quitting, and changing their behaviour and raising understanding of the problems associated with tobacco use is a crucial first step in reducing risks.[3] Expert-tailored counselling raises the quit rate by an additional 4-7% in comparison to standard care. While 67.07% of dentists believed it was their duty to help patients stop smoking, 77% of dentists claimed they did not have the time to offer tobacco cessation assistance, according to Amit et al concluded that effective planning for the execution of tobacco cessation by authorities at regular intervals is important to attain the objective of a "tobacco free society".[4]

Just 30% of people worldwide currently have access to quality services for quitting smoking. Just 4% of smoke quitting attempts are successful without help. The likelihood that a tobacco user will successfully stop can be doubled with the help of proven cessation drugs and expert support. Nowadays, the evaluation of oral health includes tobacco cessation. Hence, using the current health-care systems is one way that dental health professionals can utilize when giving quick guidance during normal consultations or contacts. Dentists have an opportunity to provide and provide tailored counselling to tobacco users when they visit for basic or specialized treatment. As such, brief counselling is a crucial part of tobacco cessation programmes since it might inspire people to quit who might not otherwise seek out support for quitting.[2]

In order to evaluate dentists' perceived hurdles to tobacco cessation counselling and their level of preparedness for it, the current study was conducted among them in Chennai.

METHODS

Study design and material

Over the course of three months, from March to May 2024, a cross-sectional questionnaire survey including dental professionals from Chennai city, including clinicians and academicians, was carried out.

The ethical approval was obtained from the Institutional Ethical Committee of Adhiparsakthi Dental College and Hospital Melmaruvathur reference number: IEC/ECR/1742/APDCH-PHD-04/TN2024.

Study population

The study comprised of dental practitioners who expressed interest in participating in the study. Dentists who were not willing and unavailable during that time of data collection were excluded from the study.

Sample size estimation

The sample size was estimated by using G power software 3.1.9.4 from a previous article and was estimated as 250 samples. A 95% confidence interval was used to calculate the population's hypothesis percentage frequency outcome factor. A convenience sample method was used in the study for data collection.

Pilot study

A structured, semi-open, coded, self-administered questionnaire was created by the experts. A panel of experts, comprising public health dentists, evaluated the questionnaire's face validity and content validity. A pilot study with ten dentists evaluated the reliability of the questionnaire. The findings demonstrated that the test-retest reliability coefficient was $r>0.70$ and that the Cronbach's alpha was satisfactory.

Data collection

The questionnaire was distributed to 200 dentists, comprising private practitioners, dentists employed by dental colleges, and dentists who combine academic and clinical roles. In the current study, a survey was conducted to gather information on (a) demographics, such as name, age, gender, and level of education; (b) knowledge about quitting smoking; (c) readiness and actions taken to quit smoking; (d) patients counselled and their success rate. This aligns with the approach taken by Ain and colleagues in their investigation. The questionnaire was sent and handed by hand to the dentists, and it was picked up after two days.

Statistical analysis

The gathered data were input into Microsoft Excel. With the use of the Statistical Package for Social Sciences (SPSS) 20.0, descriptive and inferential statistics were computed for qualitative data. To examine the relationship between comparison groups, the chi-square test was used, and a p value of less than 0.05 was deemed statistically significant.

RESULTS

A week later, 200 out of 250 dentist professionals who received the questionnaire replied, representing a 72.5% response rate. Table 1 lists the dental practitioners' demographic information. The study's conclusions imply that nearly every group felt they had a responsibility to assist patients in quitting smoking. Academicians who

were all in agreement said that smoke cessation counselling need to be included in the curriculum. Compared to professionals in group 2, who feel they are knowledgeable about tobacco cessation therapy, most professionals in groups 1 and 2 (54.1%) and 50% (50%) feel otherwise. 93 percent of clinicians knew about the many kinds, ingredients, and consequences of tobacco use, compared to 83.3% of academicians and 87% of both groups. Regarding knowledge, however, there was no statistically significant difference found between the groups (Table 2).

Dental professionals' readiness for action when it comes to quitting smoking reveals that 48.5% of academicians have completed tobacco cessation training, compared to 32.5% of clinicians and both (27.7%), which is extremely low. Additionally, 7.4% of academicians and clinicians combined (group 3) recommend nicotine replacement therapy (NRT). Dentists in group 3 (around 85.3%) solely recommend nicotine replacement therapy to patients who wish to stop smoking, compared to 79.1% and 55.8% in group 1 and group 2. In contrast to group 2 dental professionals (27.9%), both group 1 (50%) and group 3 (51.8%) dental professionals send their patients to a psychiatrist for therapy. The p value found was statistically significant. Table 3 shows a statistically significant difference (p=0.03) between the groups when it came to the check on patients' follow-up visits who were recruited for cessation.

Table 1: Represents the demographic details of the study using descriptive statistics.

Demographic profile	N (%)
Age (years)	
20-25	41
25-30	48
30-35	62
Above 35	48
Gender	
Male	138
Female	62
Educational qualification	
BDS	90
MDS	117
Type of practice	
Clinicians	100
Academicians	40
Both	60

Table 2: Association between the knowledge based on dental professionals on tobacco cessation.

Questions	Academicians (group 1) (n=40), N (%)	Clinicians (group 2) (n=100), N (%)	Both (group 3) (n=60), N (%)	P value
Q1. Do you think that you have a role in helping patients in tobacco cessation?	40 (100)	99 (99)	58 (98)	0.417
Q2. Do you think that you lack knowledge about tobacco cessation counselling?	22 (54.1)	37 (37.2)	30 (50)	0.243
Q3. Do you know about 5A's of tobacco cessation counseling?	23 (58.3)	74 (74.4)	38 (62.9)	0.257
Q4. Do you think tobacco cessation counselling should be a part of curriculum	40 (100)	83 (83.7)	54 (90.7)	0.16
Q5. Are you familiar with types, constituents and effects of tobacco consumption	33 (83.3)	93 (93.0)	52 (87.0)	0.35

Chi-square test *p value less than or equal to 0.05 is considered as statistically significant difference

Table 3: Represents association between the preparedness based on dental professionals on tobacco cessation.

Questions	Academicians (group 1) (n=40), N (%)	Clinicians (group 2) (n=100), N (%)	Both (group 3) (n=60), N (%)	P value
Q6. Have you taken any additional training pertaining to tobacco cessation?	18 (45.8)	99 (32.5)	58(27.7)	0.146
Q7. Do you assist the patient in tobacco cessation process, if they are willing to do so?	38 (95.8)	88 (88.3)	54(90.7)	0.410
Q8. Are you willing to undergo training of tobacco cessation counselling?	28 (70.8)	77 (76.7)	45 (75.9)	0.772
Q9. Do you practice cessation counselling of patients with tobacco usage?	28 (70.8)	74 (74.4)	33 (55.5)	0.104

Continued.

Questions	Academicians (group 1) (n=40), N (%)	Clinicians (group 2) (n=100), N (%)	Both (group 3) (n=60), N (%)	P value
Q10. What steps do you take for tobacco cessation	Warn: 7 (16.6) Advice: 30 (75) NRT'S: 0 Other pharmacological agents and other behavioral therapies: 3 (8.3)	Warn: 30 (30.2) Advice: 60 (60.4) NRT'S: 5 (4.6) Other pharmacological agents and other behavioral therapies: 5 (4.6)	Warn: 13 (22.2) Advice: 35 (59.2) NRT'S: 4 (7.4) Other pharmacological agents and other behavioral therapie 6 (11.1)	0.266
Q11. Do you recommend the use of nicotine substitute products to patients who want to quit?	32 (79.1)	56 (55.8)	50 (83.3)	0.363
Q12. Have you ever thought of referring the patient with heavy dependence to psychiatrist for counselling?	20 (50)	28 (27.9)	31 (51.8)	0.036
Q13. Do you advice routine screening for oral cancer in patients with tobacco usage?	32 (79.1)	74 (74.4)	47 (77.7)	0.857
Q14. What steps/source of information you use to check progress of patients with quitting?	Follow-up visit: 34 (85.4) Phone call: 0 E-mail/WhatsApp: 0. None: 6 (14.5)	Follow-up visit: 60 (60.4) Phone call: 0 E-mail/WhatsApp: 0 None: 39 (39.5)	Follow-up visit: 48 (79.6) Phone call: 1 (1.8%) E-mail/WhatsApp: 0. None: 11 (18.5)	0.029
Q15. Do you counsel and speak with family about supporting the patient in trying to quit?	32 (79.1)	63 (62.7)	41 (68.5)	0.215

Chi-square test, **p value less than or equal to 0.05 is considered as statistically significant difference NRT: Nicotine replacement therapy

Table 4: Represents association between the perceived barriers based on dental professionals on tobacco cessation.

Questions	Academicians (group 1) (n=40), N (%)	Clinicians (group 2) (n=100), N (%)	Both (group 3) (n=60), N (%)	P value
Q16. Do you feel chances of quitting tobacco have increased after you advised patient to quit the habit?	32 (79.1)	65 (65.1)	41 (68.5)	0.293
Q17. Did you get any positive feedback from the patients after counselling?	28 (70.8)	60 (60.4)	45 (75.9)	0.250
Q18. Do you think that if you ask patients about the use of tobacco it might damage dentist patient relationship or patient might not turnup again?	3 (8.3)	5 (4.6)	13 (22.2)	0.017
Q19. Do you routinely stress on your patients about habit history pertaining to tobacco usage?	33 (83.3)	67 (67.4)	50 (83.3)	0.101
Q20. Do you use any form of tobacco yourself?	2 (4.1)	25 (25.5)	5 (9.2)	0.003
Q21. Do you think that you don't get time to advice for tobacco cessation and discuss benefits with patients?	15 (37.5)	32 (32.5)	25 (42.5)	0.596
Q22. Have you done tobacco cessation counseling in any of your patients? If yes, how many patients have you counseled and what was the success rate?	33 (83.3)	60 (60.4)	43 (72.2)	0.49

Chi-square test, *p value less than or equal to 0.05 is considered as statistically significant difference

According to earlier research, the relationship between dentists and patients, routine emphasis on past tobacco use, and patient counselling time are the main obstacles to effective tobacco cessation. About 22.2% of group 3 professionals believe that asking patients about tobacco use could have an adverse effect on the dentist-patient

connection and possibly cause the patient to stop coming in. After giving them advice to quit, 79.1% of academics think their patients' chances of quitting increased; 75.9% of group 3 professionals said their patients gave them positive feedback; and 32.5% of clinicians think they don't have enough time to counsel patients. 25.5% of clinicians smoke, which is statistically significant when compared to professionals in groups 1 and 3 (Table 4).

DISCUSSION

According to the current study, 98% of group 3, 99% of physicians, and 100% of academicians believed that they can assist patients in quitting smoking. This closely aligns with the findings of the Ain et al study and previous studies where 67.07% of dentists acknowledged their role in assisting patients in quitting smoking.[5-8] Although the majority of academicians and clinicians in the survey believed they lacked expertise regarding tobacco cessation counselling, only 50% of them believed they did. The majority of physicians were aware of the five essential components of tobacco cessation counselling, and all academicians believe that tobacco education has to be included in curricula. According to the study, dentists were knowledgeable about tobacco cessation, but successful implementation of this knowledge requires appropriate training.

Although most dentists had a role in smoking cessation counselling, there was insufficient training in their practices, according to Ibrahim and Norkhafizah's study.[7] Similar to this, just 5.4% of dental professionals had completed additional tobacco cessation-related training, according to Vinod et al study, which assessed the function of oral physicians as tobacco cessation counsellors.[6] The current study's results are consistent with the previous study, showing that 32.5% of clinicians, 45.8% of academicians, and 27.7% of group 3 dental professionals have completed additional tobacco cessation training. Additionally, 76.8% of clinicians, 75.9% of group 3, and 70.8% of academicians were willing to receive tobacco cessation training.

55.5% of dentists in group 3, 70.8% of academicians, and 74.4% of clinicians in the prior survey gave a positive response when asked about assisting patients in breaking their habits. This shows that these experts are substantially influencing tobacco cessation while also carrying out their moral and professional obligations. In Vinod et al study compared the methods used by the three groups to stop smoking.[6] 30.2% of clinicians responded positively to warnings, whereas 75% of academicians counselled patients to stop smoking, 7.4% of group 3 professionals used NRTs, and 11.1% of group 3 professionals used other pharmaceuticals and behavioural therapies. These findings are consistent with the findings of the previous study. These results indicate that patient education and counselling for smoking cessation require further attention.

Dental professionals usually notice changes in the oral cavity first. According to the current survey, 77.7% of group 3, 74.4% of clinicians, and 79.1% of academics advised routine oral cancer screening to their patients because early identification can significantly lower the disease's mortality and morbidity. In our research, 27.9% of physicians thought about sending patients to psychiatrists for counselling when compared to the other groups; this figure is statistically significant ($p<0.05$), as was discovered in the earlier study.[9] Moreover, 79.1% of academicians acknowledge that quitting smoking calls for a multidisciplinary approach and advise patients to seek out support from friends, family, and relatives. It was statistically significant that 60.4% of clinicians, 79.6% of group 3, and 85.4% of academicians in our survey were keeping track of their patients' follow-up. This shows that in order to enhance the rate at which patients quit, additional methods, including emails, texts, phone calls, and WhatsApp messaging, should be introduced for the same reason.

In past studies, dental professionals most commonly reported that training deficiencies, resource scarcity, and dentists' fear of patients not coming back were the biggest challenges.[10,11] A number of the perceived obstacles have been addressed by our study: following counselling, patients provided 75.9% of group 3 professionals with positive feedback; following advice to stop smoking, 70.9% of academicians felt that the patient's chances of quitting had increased; however, 8.3% of academicians thought that patients might not show up. When compared to other groups, it was discovered that 25.5% of doctors used tobacco, which was statistically significant; moreover, 42.9% of group 3 professionals said they did not have enough time to counsel patients, which is in line with the findings of the previous study.[9,12-15]

According to Singla et al, dental professionals need to expand their knowledge and toolkit to include counselling tactics for quitting smoking in addition to their usual precautionary and therapy modalities.[15] To help dental professionals reduce tobacco use and stop the threat of oral cancer, it is recommended that tobacco cessation training be offered at all institutions and universities and that tobacco education be included in undergraduate curricula.

Since the study only included dentists from Chennai City, its findings cannot be broadly applied, and more research in this area is needed.

CONCLUSION

Our study found that, in comparison to other academics and clinicians, dental professionals in group 3 possess superior expertise and actively assist patients in quitting. Therefore, it is imperative that academics and physicians at the community and institutional levels receive sensitive training. Academicians can overcome the obstacles

encountered during cessation counselling by participating in tobacco cessation modules, CDE programmes, workshops, and other initiatives offered by their individual institutions and universities. At the clinical level, the government ought to mandate that private practitioners complete a certificate programme in tobacco cessation, a WHO report on the Global Tobacco Epidemic, offer help to quit tobacco use 2019: the MPOWER package, every clinic and hospital ought to have a tobacco cessation cell and counsellor on staff.[3] This will not only aid patients with their issues but also prevent diseases like mouth cancer, which will increase their practice's income.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee reference number: IEC/ECR/1742/APDCH-PHD-04/TN2024

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Cite this article as: Balasundaram R, Sundaram SAS, Sivakumar K, Kumar R, Subramanian K. Assessing the knowledge, preparedness and perceived barriers among dental clinicians and academicians regarding tobacco cessation counselling in Chennai city- a cross-sectional study. Int J Community Med Public Health 2024;11:4335-40.