

Assessment of the Knowledge, Attitude and Current Practices towards Smoking Cessation among Clinical Dental Students of Universiti Teknologi MARA

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Abstract

This study assessed the knowledge, attitude and current practices towards smoking cessation among Universiti Teknologi MARA's clinical dental students. A twenty-nine item questionnaires were distributed to all the clinical dental students in Dental Centre of Universiti Teknologi MARA. The questionnaires include personal data of each clinical year student, knowledge of students in providing smoking cessation advice, attitude of students towards smoking cessation, and current practices among students in smoking cessation activity. Data obtained was carried out by statistical analysis of descriptive and Chi Square tests. p value less than 0.05 were considered statistically significant for this study. The significances of the overall respondents in knowledge of the clinical students in smoking cessation shown 90.1% had read some information regarding smoking cessation ($p=0.001$), and 65.8% had attend lecture, course and training on smoking cessation ($p<0.001$). In addition, the significant study of the overall respondents in students' current practices in providing smoking cessation advice were 89.5% discuss smoking with patients having poor subjective health ($p=0.001$). On this basis, active involvement of clinical dental students is needed in the effective smoking cessation advice and intervention strategies for the patients.

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Introduction

The use of tobacco products, especially cigarettes, represents the leading cause of preventable illness and premature deaths in the developed world. Tobacco kills nearly 6 million people and causes billions of dollars of economic damage worldwide each year¹. More than 5 million of those deaths are the result of direct tobacco use while more than 600,000 are the result of non-smokers being exposed to second-hand smoke. If current trends continue, tobacco-related deaths will increase to more than 8 million

per year by 2030², Smoking is now increasing rapidly throughout the developing world and is one of the biggest threats to current and future world health. The number of smokers in the world, estimated at 1.3 billion today, is expected to rise to 1.7 billion by 2025 if the global prevalence of tobacco use remains unchanged². Malaysia has a high prevalence of smokers especially among the males and adolescents. The national prevalence of smoking among adults aged 15 years and above was reported to be approximately 22.8% (4,991,458) with a prevalence of 43.0% (4.85 million) in men and 1.4% (143,566) in women³. Current statistics indicate that it will not be possible to reduce tobacco related-deaths, unless tobacco users are encouraged to quit.

The implementation of the WHO Framework Convention on Tobacco Control (WHO FCTC) that was launched by World Health Organization (WHO) is to combat and curb the

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pandemic of smoking around the world. WHO FCTC suggests MPOWER (Monitor tobacco used and prevention policies, Protect people from tobacco smoke, Offer help to quit tobacco, Warn about the danger of tobacco, Enforce ban on tobacco advertising, promotion and sponsorship, Raise taxes on tobacco) activities are the main elements and activities to achieve the stipulated objectives on tobacco control. Many smokers realize the hazards of smoking and the benefits of cessation, but quitting is made difficult as it requires strong willpower and motivation since all tobacco products contain addictive nicotine. Outside of individual strengths, various countries have proven that healthcare professionals can play an active role in helping smokers to break free of their tobacco addiction. Therefore, the Ministry of Health Malaysia has timely produced a Clinical Practice Guideline to provide the latest and updated treatment protocols to assist health care providers in managing tobacco use and dependence in various settings, including hospitals, clinics or pharmacies⁴.

Since smoking is an activity carried out in the oral cavity, dental professional should be well positioned to identify, intervene with tobacco users and ultimately, they should lead on smoking cessation programmes^{5,6,7}. In addition, evidence has shown that smoking cessation advice provided by dentists is more effective than others. These studies show that the consensus from dental professionals they themselves should be actively involved in smoking cessation^{8,9}.

A study showed that the dental school has been shown to be a promising platform for education of dental professionals on tobacco control and cessation techniques¹⁰. Similarly, to increase intervention effectiveness, educators need to expand both the didactic knowledge and clinical competencies to help their unmotivated patients to quit smoking¹¹. Likewise, as in another study conducted by Aza & Razak found that about 70% of dentists in Selangor and Kuala Lumpur, Malaysia considered their role in smoking cessation is important¹². Another study also revealed that 98.8% of the dentists agreed that they have a role in smoking cessation counselling in Kelantan¹³. Hence, promoting smoking cessation should therefore be a major priority for dental professionals in clinical settings.

In view of the lack of assessments in the knowledge, attitude and current practices

towards smoking cessation among clinical dental students, this study has the aim to assess the aspects of the dental students regarding smoking cessation. Therefore, to prepare the next generation of dental professionals, this research may propose a paradigm shift from the existing undergraduate tobacco curriculum to a more comprehensive and integrated tobacco use cessation training modules.

Materials and methods

A cross-sectional questionnaire study was carried out based on a self-administered questionnaire survey¹². The target population comprised of all clinical dental students in UiTM, Sungai Buloh campus which comprised of 152 students from all year 3, year 4, and year 5. Ethical approval was obtained from the ethical committee of Universiti Teknologi MARA, Selangor, Malaysia. The questionnaires were distributed in the lecture hall and collected on the same day to maximise the response rate.

The structured questionnaire which is written in English was developed to assess student's knowledge, attitude, and current practice in providing smoking cessation advice (SCA)¹². The questionnaire included four sections; A) Personal data of each student; B) Knowledge of students in providing SCA; C) Attitude of students towards smoking cessation; and D) Current practices among students in providing SCA. The responses of section B, D and E are measured using a 2-point scale of 'yes' and 'no' whereas for section C, a 3-point scale of 'agree', 'uncertain' and 'disagree' was used. The decision to use a two or three point rather than a 5-point Likert scale was to minimise the dispersion of results.

Statistical analysis

Statistical analysis was conducted on the obtained data using descriptive and Chi Square, using Statistical Package for Social Sciences (SPSS) version 21.0 program (Chicago, IL, USA). p value less than 0.05 were considered statistically significant for this study.

Results

Socio-demographic characteristics of clinical dental students

One hundred percent of the response rate from 152 of the clinical dental students was recorded in this study. The distribution of

respondents by gender and smoking status are shown in Table 1. Overall, 122 (80.3%) of the respondents were female and 143 (94.1%) of them have never smoked.

Items	Respondents (N=152)	
	Number (N)	Percentages (%)
1. Gender: Male Female	30 122	19.7 80.3
2. Smoking: Never Once smoked but stopped Currently smoking	143 6 3	94.1 3.9 2.0
3. Year of Study: Year 3 Year 4 Year 5	51 51 50	33.6 33.6 32.9

Table 1. Socio-demographic characteristics of clinical dental students.

Knowledge of clinical dental students in smoking cessation

Table 2 shows knowledge of the clinical students of year 5 compared to year 3 and year 4 in smoking cessation. The 90.1% respondents with knowledge by reading some information regarding smoking cessation demonstrated in helping the smoking cessation ($p=0.001$). In addition, 65.8% shown they attended lecture, course and training on smoking cessation during the clinical year; However, only 49.3% have assisted their patients in smoking cessation ($p<0.001$), and 42.8% were involved in smoking cessation activity ($p<0.001$).

Percentage of respondents in agreement	Overall (%)	Year of study (%)			X ² P value
		Year 3	Year 4	Year 5	
Attend lecture, course and training on smoking cessation	65.8	17.6	88.2	92.0	0.000
Read some information regarding smoking cessation	90.1	78.4	92.2	100.0	0.001
Involve in smoking cessation activity	42.8	3.9	37.3	88.8	0.000
Assist patient in smoking cessation	49.3	5.9	43.1	100.0	0.000
Patients do expect their clinicians to enquire on their tobacco usage	72.4	78.4	78.4	72.0	0.446

Table 2. Clinical dental students' knowledge in smoking cessation.

Attitude of clinical dental students towards supporting smoking cessation

Dental students' belief and perception towards supporting smoking cessation among their patients was shown in Table 3. In this study, 90.8% of the overall respondents consisted of 91.6% of non-smokers and 66.7% of currently smoker believed that dentists should provide smoking cessation advise when patients have oral health complaints other than merely

providing oral care significantly ($p<0.001$). In addition, 66.4% of the overall respondents consisted of 60.0% of non-smokers and 66.7% of currently smoker believed that counselling patients about smoking is profitable to their dental practice in smoking cessation.

% of respondents in agreement	Overall (%)	Smoking Status				X ² p-value
		Non-smoker		Current smoker		
		Agree (%)	Disagree (%)	Agree (%)	Disagree (%)	
1) Dentists have an important role as smoking counselors	90.8	90.2	0.7	100.0	0.0	0.914
2) Optimistic about own ability to help patient quit smoking effectively	44.1	44.1	1.4	33.3	0.0	0.986
3) Should motivate a quit attempt and encourage patient to quit smoking	93.4	93.7	2.1	100.0	0.0	0.671
4) Should provide smoking cessation advise (SCA) when patient have oral health complaints	90.8	91.6	0.7	66.7	33.3	0.000
5) Other than providing oral, care dentists should also be interested in their patients' general health	96.1	95.8	0.0	100.0	0.0	0.822
6) Counseling patient about smoking is profitable to dental practice	66.4	60.0	3.5	66.7	33.3	0.029

Table 3. Clinical dental students' belief and perception towards supporting smoking cessation.

% of respondents in agreement	Overall (%)	Year of Study (%)			X ² p-value
		Year 3	Year 4	Year 5	
1) Routinely record patients' smoking status during history taking	61.2	49.0	62.7	72.0	0.046
2) Routinely enquire patients' smoking status even though no symptoms shown	84.9	88.2	84.3	82.0	0.701
3) Explain to patients regarding the health risk due to smoking and its detrimental effects to health	86.2	74.5	96.2	94.0	0.009
4) Only discuss smoking with patients having poor subjective health	89.5	76.5	94.1	98.0	0.001
5) Repeatedly make counseling attempts if patients continue to smoke	72.4	68.6	78.4	70.0	0.462

Table 4. Clinical dental students' current practices in providing smoking cessation advice.

Current practices in providing smoking cessation advice (SCA)

Table 4 shown a positive trend of current practices among dental students in providing SCA. 89.5% of overall respondents only discussed smoking with patients who have poor subjective health ($p=0.001$). In addition, 86.2% did explain to their patients regarding the health risk due to smoking and its detrimental effects to health ($p=0.009$). There is also a significant observation by 61.2% of overall respondents in routinely record patients' smoking status during history taking ($p=0.046$). Besides that, 94.0% of year 5 students showed significantly higher ($p<0.05$) compared to about 74.5% of year 3 students in regards of explaining to their patients regarding the health risk due to smoking and its detrimental effects to health. Moreover, there is

also a significantly increase being observed with 94.0% of year 5 students ($p < 0.05$) compared to 74.5% of year 3 students in regards of the health risk due to smoking and its detrimental effects to health.

Discussion

The total response rate of the dental clinical students in this present study was 100%. The response rate has a similarity of the 99% obtained in a study carried out among incoming dental students of School of Dental Medicine, Cleveland, United States¹⁴. It was also observed in a recent study carried out among dental students of MAHSA University, Malaysia with 93.9%¹⁵. Out of 152 respondents, 80.3% of female students outnumbered the male students in this study, consistent with a larger number of females entering dental schools in Malaysia.

In this present study, about 94.1% respondents had never smoked. This higher percentage can be attributed to the fact that they should set a good example to the community by refraining from smoking. It also coincides with their responsibility to educate patients in smoking cessation. This is also reflected in the study of Stacey et al., who stated that dentists generally believed that it was part of their responsibility to help patients in smoking cessation¹⁶. This finding also concurs with the study done by Joan et al. that dental educators felt they had a duty to provide education on smoking cessation advice¹⁷. In addition, a study done to evaluate tobacco use cessation showed that professional support is important besides pharmacological interventions¹⁸.

In view of 98% respondents with status of not current smokers, only 44% were optimistic about their ability in helping patients to quit smoking. This was also reflected in the result of a study done in Oxford, United Kingdom in which less than half of the dentists were optimistic about their effectiveness in advising patients to stop smoking¹⁹. This finding is not surprising given that respondents' involvement was rather limited in assisting patients to stop smoking and lacking in any smoking interventions. In comparison, a study carried out among dentists in Kelantan, although 82.1% did offer smoking cessation counselling; only about 18% were involved to a considerable extent²⁰. Similarly, in a study among Australian dentists clearly

emphasized the importance of training skill in smoking cessation as to increase the confidence of future dentists in providing smoking cessation advice¹².

This survey of clinical dental students at UiTM Dental Centre, Malaysia, shown year 5 dental clinical students have good knowledge by attending lecture, course and training and reading information regarding smoking cessation. They also had shown their positive attitude by involving in the activity and assisting patients in smoking cessation. This concurs with a local study done among dentists in Kuala Lumpur and Selangor, Malaysia, in which about 70% of the respondents considered their role in smoking cessation are important¹². John et al., also reflected a study done in Oxford, United Kingdom whereby 88.6% of dentists perceived that they should encourage smokers to stop the detrimental habit²². This is strongly suggested by Fiore et al. that a clinician only need three minutes or less of his time for a brief tobacco cessation intervention²³.

In the present study, one of the possible reasons why respondents doubted their effectiveness in helping patient to quit smoking is most probably due to inadequate counselling training as only 65.8% of the respondents indicated they attended lecture, course or training in smoking cessation⁸. Similarly, 86.1% of the most common barrier was cited by dentists in a local study is the lack of information between dentistry and smoking cessation and over half of them reported an interest in receiving free training¹². This concurs with the study done among dental hygienists in which it was stressed that future oral health care personnel need to be better educated to encourage people to implement healthy lifestyles rather than to treat teeth²⁴. In another research conducted in Indiana University School of Dentistry, 83% of students reported the mentoring session by expert faculty members has helped in boosting their confidence levels and skill when delivering the cessation messages to patients, while 86% of students recommended this educational approach for future students²⁵. Apart from providing oral care, about 90.8% respondents agreed that dentists should provide smoking cessation advice when patient have oral health complaints, and 66.4% believe that patient counselling about smoking is profitable to dental practice. The study conducted by Rikard-Bell et al. demonstrated 72.4%

patients do expect their clinicians to enquire on their tobacco usage is consistent with the 73% response from patients who expected dentists to be interested in their smoking status²¹.

In addition, 89.5% of the respondents only discuss smoking with patients having poor subjective health, and 86.2% of the respondents did explain to their patients regarding the health risk due to smoking. During the history taking, only 61.2% of patients' smoking status had routinely recorded. This could be due to the dental students' busy clinical schedule. In contrast, only half of all clinical dental students felt adequately prepared to provide advice to their patients in Cardiff University School of Dentistry²⁶. Similar studies also revealed that dental students felt adequately trained in providing the smoking cessation advice^{27,28}. The findings suggest that the present tobacco cessation training was insufficient to develop skills among these students. On this basis, there is a critical need to further improve the tobacco cessation in oral health curriculum to incorporate a more effective module that includes both enhanced simulated and actual clinical experiences²⁹. This is to facilitate dental students' active involvement in providing effective smoking cessation advice and intervention strategies.

Most studies that provided baseline data on smoking cessation clearly suggested that increase of advice sessions is associated with increase in abstinence rates, which is consistent with the present study that shows 72.4% respondents repeatedly make counselling attempts if patients continue to smoke³⁰. It is also recommended by the updated clinical practice guideline, treating tobacco use and tobacco dependence that since its dependence on chronic condition³¹, it warrants repeated treatment until long-term or permanent abstinence is achieved. It was also concluded that there is a strong dose-response relationship between the intensity of tobacco dependence counselling and its effectiveness³².

Conclusions

In conclusion, the study findings provide an interesting insight into the dental students' knowledge, positive attitude and practices towards their role in smoking cessation. The current curriculum in dental schools need to

incorporate not just didactic instructions on the oral health impact of tobacco use, but also practical training in smoking cessation activities, so that the next generation of dentists would graduate with confidence and competent in assessing and treating tobacco use.

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Declaration of Interest

All authors declare that there was no conflict interest in this study.

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