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A Pilot Study to Investigate the Dental Team's Awareness and Confidence in Advising Patients with Regards to Shisha Smoking

Abstract: Water pipe smoking ('shisha') is a form of tobacco which has become increasingly popular in the UK, despite its harmful effects. The dental team has a responsibility to be aware of trends in tobacco usage as we become more actively involved in offering smoking cessation advice to patients, an area of prevention highlighted by the National Institute for Health and Care Excellence (NICE) in their recommendations for oral health promotion in general dental practice. In this study, students and qualified members of the dental team completed a questionnaire to ascertain their level of knowledge about shisha smoking and its effects, as well as their confidence in advising patients. It was established that there is a lack of awareness and confidence amongst the dental team and an update in training is needed.

CPD/Clinical Relevance: Smoking cessation training must be reviewed and appropriately updated to include shisha smoking so that the dental team can be confident in correctly advising patients about the habit.

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Smoking cessation advice to patients is an area of prevention highlighted by the National Institute for Health and Care Excellence (NICE) in their recommendations for oral health promotion in general dental

practice.¹ Water pipe smoking (also known as 'shisha', 'hookah' and 'hubble bubble') is an aid to smoking tobacco with origins in Arabia and North Africa. The prevalence of shisha smoking is increasing worldwide and is becoming particularly popular amongst young adults in the UK from all backgrounds.² This growing trend has partly been attributed to the common misconception amongst consumers that toxic compounds are 'filtered' in water, thus making it safer than conventional smoking.³

The water pipe device (Figure 1) works by heating the tobacco by burning coal, wood or charcoal. The resultant smoke then passes through a bowl of water and into the rubber hose for inhalation through a mouthpiece.^{2,4} Despite

the misconception that the water filtering is protective, shisha smoking is thought to be more damaging than smoking cigarettes.

The World Health Organization published advisory notes on shisha smoking, which stated that '*...from all available research they could conclude that, smoking shisha for one hour involves inhaling 100–200 times the value of smoke inhaled from one cigarette; and therefore, contrary to popular belief, shisha smoking does pose a potential health risk to smokers and is not a safer alternative to conventional smoking*'.⁵ Shisha tobacco, like cigarettes, also contains nicotine, tar, carbon monoxide and heavy metals such as lead and arsenic.⁴

Although cigarette

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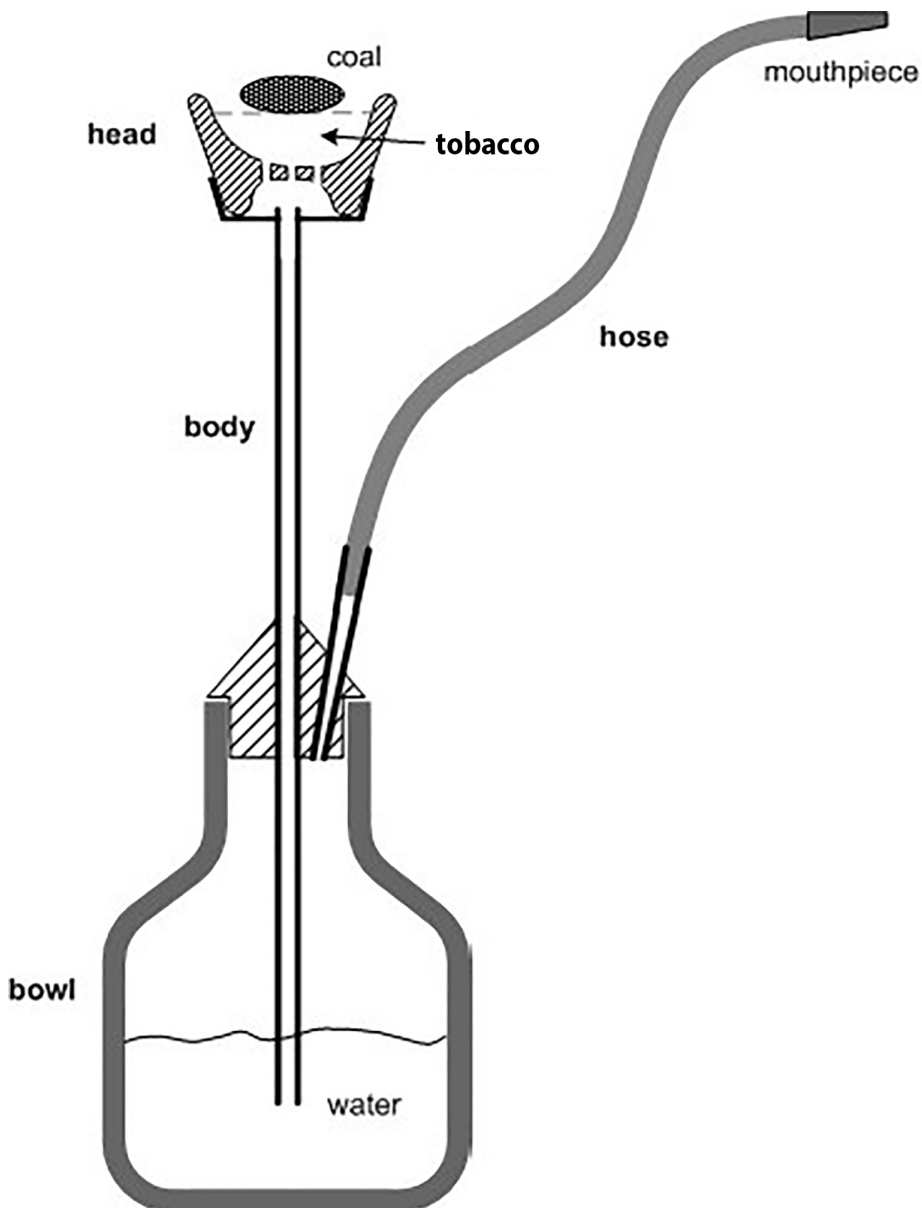


Figure 1. A diagrammatic representation of the set-up of a water pipe. (WHO Study Group on Tobacco Product Regulation. Advisory note: water pipe tobacco smoking: health effects, research needs and recommended actions by regulators. Geneva: World Health Organization, 2005: p2).⁵

smoking is the most common type of tobacco smoking worldwide, shisha smoking is now on the increase, including in the UK.⁶ A systematic review found that shisha smoking was associated with respiratory diseases (COPD), low birth weight, lung cancer and cardiovascular disease, amongst others.⁷ The detrimental effects of the habit are not only on systemic health

but also on the orofacial region; it is known to promote periodontal bone loss,⁸ acute osteitis following extractions⁹ and oral cancer.⁷ Current data from a literature review concluded that both medical and dental professionals should be alerted to the potential dangers of the habit to help limit the consequences of the practice.⁶

Research has shown that dental teams have an increasingly positive attitude towards tobacco cessation and are becoming more actively involved;¹⁰ approximately 50% of dentists routinely ask about smoking behaviours during check-ups. A study by Lala *et al* found that dentists who perceive having more time available were more likely to engage in smoking cessation advice and direct patients towards appropriate support services.¹¹ However, there appears to be scarce research on the current level of knowledge regarding shisha smoking amongst the dental team. A PubMed literature search with the words 'shisha', 'waterpipe' and 'dental team' found only one paper.

Methodology

Following consultation with the Smoke-Free Birmingham team, a paper-based pilot questionnaire was devised and distributed amongst 10 students and staff to ensure that the questionnaire would give the most reliable data. The questionnaire was then modified according to the feedback.

The final questionnaire consisted of 11 questions, comprising closed questions, multiple choice questions (MCQs), and likert scales. A convenience sampling methodology was employed and the questionnaire was distributed amongst staff and second and third year dental students at the Birmingham Dental Hospital and School of Dentistry over a two-week period (Table 1). A covering letter explaining the purpose of the questionnaire was provided and verbal consent was obtained prior to filling out a questionnaire (Table 2). Ethical approval was not required for this study.

Results

Level of knowledge

Three multiple choice questions with only one correct option for each were included to test basic knowledge of shisha smoking;

Group	Number of Participants
Dental Students	111
Qualified Dentists	24
Qualified Nurses	40
Qualified Hygienists	8

Table 1. Number of questionnaire participants from each category.

1. Your role is: (Please tick the appropriate answer)	
A. Qualified dentist	<input type="checkbox"/>
B. Qualified dental nurse	<input type="checkbox"/>
C. Qualified hygienist/therapist	<input type="checkbox"/>
D. 2nd year dental student	<input type="checkbox"/>
E. 3rd year dental student	<input type="checkbox"/>
2. Have you received any smoking cessation training to date? (Circle the appropriate answer)	
Yes	No
3. If yes, to what extent did the training cover shisha smoking?	
A. Not mentioned	<input type="checkbox"/>
B. Briefly mentioned – but not fully explained	<input type="checkbox"/>
C. Fully explained with regards to health risks, demographics and what advice to give to patients	<input type="checkbox"/>
4. Which of the following do you think best describes shisha smoking?	
A. It involves smoking a small rolled cigarette which has been flavoured with fruit pulp	<input type="checkbox"/>
B. It is done through a water pipe with flavoured tobacco placed in the head	<input type="checkbox"/>
C. It is similar to a cigar which is held over a lit charcoal and a substance mixed with various flavourings	<input type="checkbox"/>
D. I do not know what shisha smoking is	<input type="checkbox"/>
5. Which ONE of the following statements do you believe to be TRUE?	
A. Shisha smoking is harmful, but is a safer alternative to cigarette smoking, as most chemicals are filtered out	<input type="checkbox"/>
B. Shisha smoking is as harmful as cigarette smoking, but does not contain nicotine	<input type="checkbox"/>
C. Shisha smoking effects are deemed to be more harmful than cigarette smoking	<input type="checkbox"/>

6. During an average session of shisha smoking, a smoker can inhale smoke equivalent to:				
A. Less than 1 cigarette				
B. Up to 10 cigarettes				
C. Between 20–50 cigarettes				
D. Between 100–200 cigarettes				
7. On a scale of 1 to 5, how confident would you feel advising a patient with regards to shisha smoking, or answering their queries about it? (1 = not at all confident, 5 = very confident)				
1	2	3	4	5
8. How often do you ask patients specifically if they smoke shisha when gathering information about tobacco use? (if you are not involved in this aspect of patient care, please move on to question 9)				
A. When I feel it is the appropriate patient				
B. I ask every patient				
C. I ask about 'tobacco products' in general, but do not specifically mention shisha				
9. Are you aware of, or have you come across a media campaign by the NHS to raise awareness about, shisha?				
Yes		No		
10. Do you feel you would benefit from receiving more information about shisha smoking and how to advise patients correctly?				
Yes		No		
11. If yes, which format do you think would best suit you?				
A. Lecture				
B. Leaflet				
C. Video/DVD				
D. Other, please specify				

Table 2. Shisha Smoking Questionnaire.

what shisha is, how safe it is and how many cigarettes would equal an average shisha smoking session.

Participants were asked which statement best describes shisha smoking (Figure 2).

Participants were asked which statement they believed to be true when comparing shisha smoking to cigarette smoking (Figure 3).

Confidence in advising patients about shisha (Figure 4).

Discussion

Figure 2 indicates that most participants were aware of what shisha smoking entailed, however, 22% either got the answer incorrect or did not know. Looking further, the data collected showed

that a greater proportion of staff (29%) were not aware of what shisha involved compared to students (17%). This is not surprising as students fit into the typical age group associated with shisha smoking and are more likely to have encountered it in social circles. The increased prevalence of shisha smoking amongst adolescents may be linked to the social aspect of shisha smoking in an increasing café culture and

Ability to identify what shisha smoking is

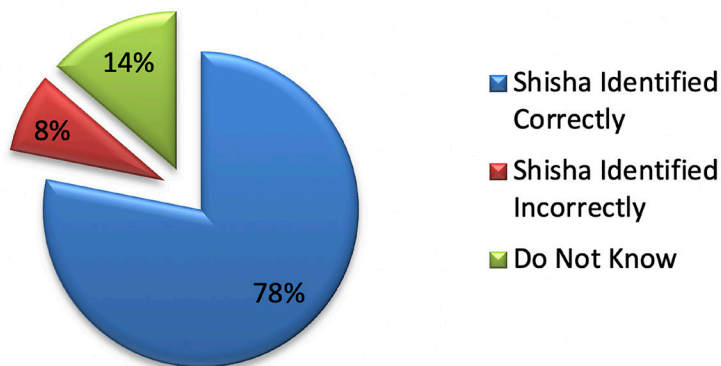


Figure 2. A pie chart to show whether participants were able to identify what shisha smoking entails.

Comparing harmfulness of shisha smoking to cigarette smoking

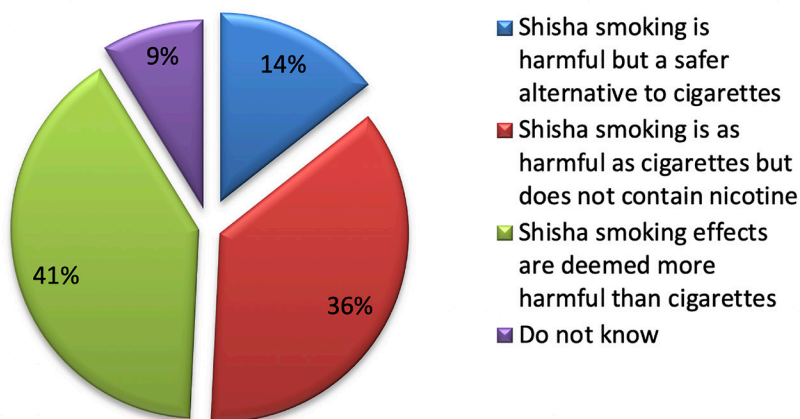


Figure 3. A pie chart to show how participants responded to statements comparing shisha smoking to cigarette smoking.

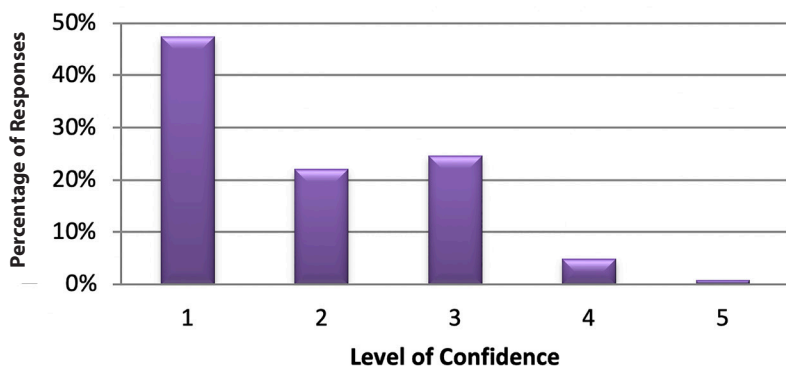


Figure 4. A bar graph showing the self-reported confidence of participants when advising a patient about shisha (1 = Not at all confident, 5 = Very confident).

the growth in social media.²

Figure 3 shows that less than half of the participants thought that shisha smoking effects are deemed more harmful than cigarettes; on the other hand, 36% believed that the habit was as harmful as cigarettes but considered that it did not contain nicotine. In that regard, just one puff of shisha exposes a smoker to the same amount of smoke inhalation as a single cigarette; as shisha sessions last for longer periods of time, shisha smokers are exposed to greater levels of toxic smoke. Contrary to common belief, shisha does in fact contain nicotine at levels high enough to cause addiction.⁹ In addition to this, 14% of participants believed shisha smoking to be safer compared to cigarette smoking, which may be considered worrying as this is a common misconception which the general public have and which therefore needs to be tackled. Another study, which looked at water pipe smoking in university students, revealed that 38% of students had tried shisha. Users were unaware of any associated health risks and did not know of any public health messages with regards to shisha smoking.^{12,2}

The questionnaire also gave participants the chance to report how confident they would feel advising patients about shisha smoking (Figure 4), on a scale of 1 to 5; 1 being not at all confident and 5 being very confident. Responses from second year students were not included in the analysis, as they do not currently treat patients. The dental team should ideally feel confident about advising and educating patients about various health topics, in particular those associated with smoking cessation. However, Figure 4 indicates that almost half of the participants had absolutely no confidence in offering advice about shisha smoking; and less than 1% felt very confident. Despite the fact that 94% of this group reported to having had received smoking cessation training, 74% of the trained participants felt that shisha smoking was not fully explained, and this could explain why there was a lack of confidence amongst the group.

Finally, the questionnaire attempted to ascertain if participants felt that they would benefit from receiving more information regarding shisha smoking and its effects. Results showed that the overwhelming majority of participants (99.5%) believed that they would benefit by receiving more information about shisha smoking. This was regardless of their current level of knowledge, training or self-reported confidence about the habit; only one participant felt that he/she did not need more information. The most popular format chosen by participants was a leaflet of some kind, as this is something all members of the team could access easily and read in their own time. Aside from this format, a small number of participants also requested having information put on the university's virtual learning environment, so that it could be accessed by staff and students when they needed to remind themselves about the advice they should be giving patients about shisha smoking. In the literature, there appears to be limited evidence regarding smoking cessation interventions specific to shisha use.² *Delivering better oral health: an evidence-based toolkit for prevention* discourages smoking and the use of shisha pipes and advises users of shisha, who wish to stop, to be referred to the same stop smoking services as other users of tobacco.¹³

Conclusion

There appears to be a gap in the knowledge of the dental team, whether they are trained in smoking cessation or not, in regard to shisha smoking and its harmfulness. In addition, there is a clear lack of confidence amongst the team when asked how they would feel advising patients, and a very obvious need for more to be done to improve this. Overall, there is a need for more information to increase awareness of shisha smoking amongst the dental team, to ensure that dental professionals feel confident in offering the correct advice to patients; and this needs to be in a format which is easily accessible for the team. In the UK, the 'making every contact count' initiative encourages healthcare providers who come into

contact with a patient to take advantage of such situations by advising patients on how to make positive improvements to their health and wellbeing. Dental team members are well placed to deliver initiatives, such as shisha cessation advice, due to high attendance rates.^{11,2} It is hoped that this article will help educate the dental team with regards to shisha smoking.

Compliance with Ethical Standards

Conflict of Interest: The authors declare that they have no conflict of interest.
Informed Consent: Informed consent was obtained from all individual participants included in the article.

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CPD ANSWERS May 2019

- | | |
|------|-------|
| 1. D | 6. C |
| 2. D | 7. A |
| 3. B | 8. D |
| 4. D | 9. C |
| 5. D | 10. C |