

EPIDEMIOLOGY

PROMOTING SMOKING CESSATION IN A GENERAL DENTAL PRACTICE IN ENGLAND - A PILOT STUDY

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ABSTRACT

The aims of the study were to promote smoking cessation in general dental practice, to compare information from patients on their smoking habits and knowledge of the adverse effects of smoking on oral health. There were 90 patients in the study that were divided into three groups; smokers, past smokers, and non-smokers. Their age ranged between 16-79 years. The results of the oral questionnaire showed 70% of smokers had reported that they had attempted to quit smoking and 63.3% of past smokers relapsed before they finally succeeded. Generally all three groups lacked knowledge of the adverse effects of smoking on oral health, however smokers had more knowledge compared to the other two groups regarding oral cancer and periodontal disease where 60% and 20% knew respectively of these adverse effects. Only 20% of smokers felt the dentist could play a role in helping them quit. In conclusion patients in the study lacked sufficient knowledge of the adverse effects of smoking on oral health, however more than half the smokers knew about oral cancer, and only one fifth of smokers felt the dentist could play a role in helping them quit.

Key words: smoking cessation, general dental practice, knowledge of adverse effects

INTRODUCTION

It has been well documented that smoking has an adverse influence on oral health. It is a primary risk factor for leukoplakia¹, delayed wound healing², oral cancer³ as well as for periodontitis⁴ Table 1 shows the adverse influence of tobacco smoking on oral healthy

A survey of tobacco assessment and intervention practices showed that while dentists are more likely than physicians and other health professionals to estimate their patients' tobacco use accurately, they were less likely to assess and intervene, less supportive of tobacco cessation, less likely to report having strong tobacco-cessation skills and knowledge, and more likely to perceive barriers to tobacco intervention^{6,7}.

Dentists do not seem to be maximizing their opportunities to advise their patients who use tobacco to quit, or they are not adequately communicating to

their patients the importance of quitting⁸. Although studies^{9,10} have shown that dentists believe in the importance of promoting cessation for their dental patients, few are actively doing this. National Surveys in the USA suggest that only between 30% and 50% of US dentists, along with 25% of hygienist, ask their patients about smoking^{11,12}. Less than one fourth of smokers reported that they had been advised by the dentist to quit⁸.

Smoking cessation is influenced by a number of factors¹³. There are large socio-economic differentials in smoking, which persist irrespective of age and sex¹⁴. There is no single reason why people stop smoking. Every smoker is different and in the final analysis, success depends on the individuals motivation. The dentist's success in helping smokers will depend on recognizing when the time is right. Some of the reasons people stop smoking are¹⁴.

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- A change in personal circumstances, (eg., new job, pregnancy, new baby)
- A personal health crisis
- A rise in price of cigarettes
- A death of a friend or relative from smoking-related illness
- A build-up of social pressure (eg. No Smoking Day)

There are five essential steps of smoking cessation advice that the dentist can use¹⁵. These steps referred to as the "5 As", are ask, advise, assess, assist, and arrange. It is important for the clinician to ask the patient whether he or she uses tobacco, advise him or her to quit, assess willingness to make a quit attempt, assist in making a quit attempt, and arrange for follow-up contacts to prevent relapse.

Dentists are capable of playing a role in advising and helping patients that are smokers to quit. They routinely examine the mouth and can assess the oral ill-effects caused by smoking and are therefore in a position to provide relevant information to the patient about the importance of smoking cessation. Therefore the aims of the pilot study were to promote smoking cessation for patients that are smokers attending general dental practice and find out whether they feel the dentist can play a role in helping them stop. To gather and compare information from smokers, past smokers, and non-smokers on their smoking habit and knowledge of the adverse effects of smoking on oral health.

MATERIALS AND METHOD

The pilot study was carried out in a general dental practice in Patricroft, Eccles in Manchester, U.K. The practice had a policy banning smoking by staff members and patients in the dental practice. The dentist performing the study had approximately 900 patients registered for dental treatment. The majority of patients were of lower socioeconomic classes¹⁶.

The dental practice promoted smoking cessation. This was done by providing information to patients through posters, a variety of leaflets and making a smoking file for patients to read in the waiting room. There was also support for patients that wanted to stop through contacting counselors from the Smoking Cessation Team, Manchester Health Promotion Specialists, Muncunian Community Health NHS Trust.

For every patient, the smoking history was recorded in their file by the dentist at their dental visit. Smokers were asked if they wanted to quit and all smokers were given leaflets to encourage them to stop with advice on products and services available by the dentist.

The oral questionnaire included questions about the adverse effects of smoking on oral health, patients' attitudes towards smoking and their smoking history. Smokers were asked also about their opinion of whether they felt the dentist had a role in giving them smoking cessation advice.

Results of this study in a more simplified version with advice past smokers had given to smokers on how to quit were put in the smoking file where patients interested in this could read it.

RESULTS

There were 30 patients in each of the smokers, past smokers and non-smokers group giving a total of 90 patients. There were equal numbers of males and females in the non-smokers group and marginally more females in the smokers and past smokers groups (Table 2).

The age range for smokers was 16-68 years, for past smokers 18-79 years and for non smokers 18-61 years (Table 2). Almost half of the smokers (43.3%) smoked for over 20 years. Just over half the smokers (53.3%) smoked between 11 to 20 cigarettes per day (Table 3).

Reasons why smokers failed to quit smoking

70% of smokers had reported that they had attempted to give-up smoking in the past but were unsuccessful. Reasons they failed were due to stress, craving and weakness to resist cigarettes and peer pressure to go back to smoking.

Past smokers history of how long ago they quit and their attempts to quit before success

As for the past smoker group 60% of the group quit smoking over 5 years ago (Table 4). 63.3% relapsed before they finally succeeded. Reasons past smokers went back to smoking were due to social and peer pressure. Stress, craving, and temptation were other reasons and for some women they went back to smoking after their baby was born. Others went back to smoking after they found nicotine replacement therapy did not work for them.

TABLE 1: A SYNOPSIS OF THE ADVERSE INFLUENCE OF TOBACCO SMOKING ON ORAL HEALTH⁵

- There is a dose response relationship between tobacco use and oral cancer.
- Leukoplakia occurs six times more frequently in smokers than in non-smokers.
- Smoking causes cellular changes within the oral epithelium, which most commonly presents clinically as smoker's keratosis.
- Smokers are 2.5 to 6 times more likely to develop periodontal disease than non-smokers. These odds may be even higher in younger people.
- There is evidence of a direct correlation between the number of cigarettes smoked and the risk of developing periodontitis.
- Reduced gingival redness and oedema in smokers (due to the vasoconstrictive effects of nicotine) may mask underlying attachment loss.
- The gingivae in smokers may be fibrotic with thickened rolled margins.
- Acute necrotizing ulcerative gingivitis occurs predominately in smokers.
- Sinusitis occurs 75% more frequently in smokers than in non-smokers.
- Taste and olfactory senses are dulled in smokers.
- Tooth staining is more common in smokers.
- Smokers are predisposed to halitosis.
- Wound healing is delayed in smokers-dry socket occur more commonly in smokers.
- Osseointegrated implants are significantly more likely to fail in smokers.
- The outcome of most forms of periodontal therapy, including root planning, flap surgery, guided tissue regeneration and local antimicrobial therapy, is less favorable in smokers than in non-smoking control groups.

TABLE 2: GENDER AND AGE RANGE OF EACH GROUP

Dental patients	Males (%)		Females (%)		Total	Age range in years
Smokers	13	(43.3)	17	(56.7)	30	16-68
Past smokers	14	(46.7)	16	(53.3)	30	18-79
Non-smokers	15	(50)	15	(50)	30	18-61

TABLE 3: YEARS SMOKERS SMOKED AND NUMBER OF CIGARETTES SMOKED PER DAY

Years pt smoked	Number of pts (%)		Cigarettes /day	Number of pts (%)	
1-5	1	(3.3)	1-10	8	(26.7)
6-10	6	(20)			
11-20	10	(33.3)	11-20	16	(53.3)
More than 20	13	(43.3)	More than 20	6	(20)
Total	30	(100)	Total	30	(100)

TABLE 4: NUMBER OF YEARS PAST SMOKER QUIT SMOKING

Years	Number	(%)
Less than 1 year ago	7	(23.3)
1 to 5 years ago	5	(16.7)
More than five years ago	18	(60)
Total	30	(100)

TABLE 5: SPECIFIC KNOWLEDGE OF THE ORAL ADVERSE EFFECTS OF SMOKING

Effects of smoking	Smokers (%)		Past smokers(%)		Non-smokers(%)	
Oral cancer	18	(60)	5	(16.7)	13	(43.3)
Periodontal disease	6	(20)	4	(13.3)	1	(3.3)
Staining of teeth	11	(36.7)	6	(20)	14	(46.7)
Halitosis	9	(30)	4	(13.3)	11	(36.7)
Other	3	(10)	1	(3.3)	0	(0)

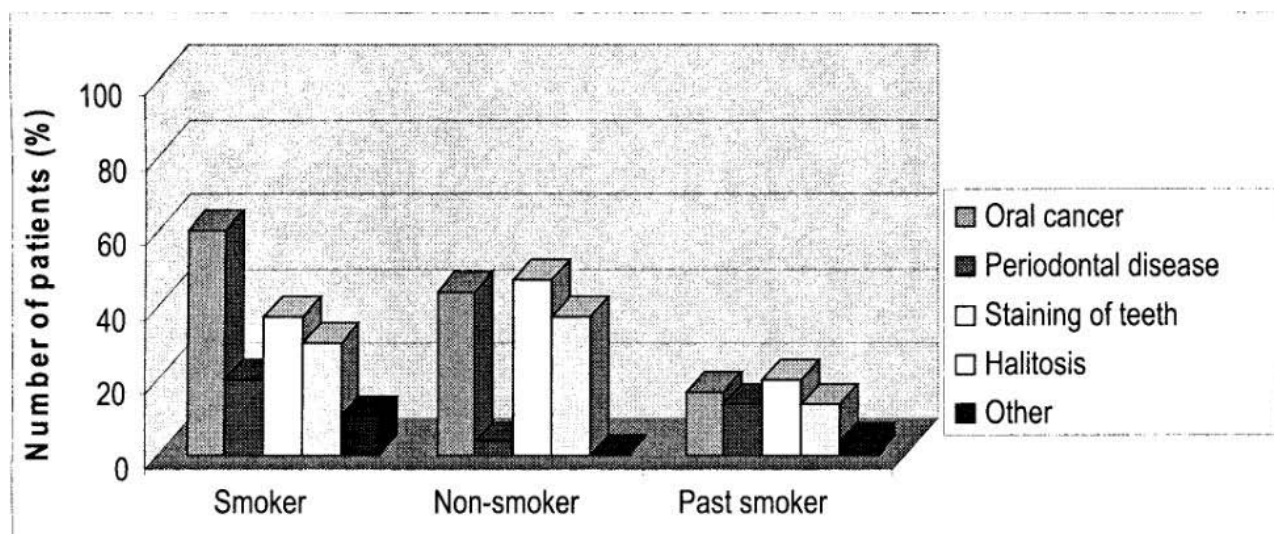


Fig. 1. Knowledge of patients of the adverse effects of smoking

Reasons why past smokers quit

Why past smokers quit smoking was due to health reasons such as heart disease, lung disease or becoming pregnant. Other reasons were due to the cost or due to finding smoking an anti-social habit. Other reasons were promising a family member or themselves to quit, or a family member having lung disease making them feel at risk.

Reasons why non-smokers never became smokers

When asking the non-smokers why they did not become smokers, they mainly said it was because they felt it was bad for their health and they did not like the

smell of smokers. Some said they felt sick, dizzy or did not like the taste of smoking. Others said they came from families that were strictly against smoking as well as having friends that did not smoke and felt it was a stupid habit. Others said their parents smoked and that put them off smoking or they had a relative that died from a smoking related illness. Athletic nonsmokers wanted to stay fit and healthy and therefore did not smoke.

Adverse affects of smoking

Comparison between the three groups on adverse effects. Non smokers were the group that had the

greatest number of patients (70%) that answered that they had some knowledge (21/30) to this question. This was followed by 63.3% of smokers (19/30), whereas in past smokers (13/30) almost half of the group (43.3%) had knowledge of the adverse effects of smoking. Table 5 and Fig 1 shows the specific knowledge patients had of the oral adverse affects of smoking.

Oral cancer

60 % of smokers, knew that smoking may cause oral cancer compared to 43.3 % of non smokers whereas the group that had the least knowledge was the past smokers which were only 16.7 %. (Table 5).

Periodontal disease

Only 20 % of smokers knew that smoking may cause periodontal disease which were only slightly more than past smokers that were 13.3 %. The least knowledge was of non smokers where only 3.3 % stated they knew (Table 5).

Staining of teeth

46.7 % of non-smokers knew that smoking may cause staining of teeth followed by 36.7 % of smokers and 20% of past smokers (Table 5).

Halitosis

36.7% of non-smokers knew that smoking may cause halitosis, followed by 30 % of smokers and 13.3 % of past smokers (Table 5).

Reasons smokers may consider to quit

After telling the smokers the adverse effects smoking may have they were asked again whether this would make them consider to quit smoking; 50% of them said it would. The rest of the patients said they felt they did have some reasons to quit such as financial reasons, for their children and for their career. Five smokers (16.7%) felt that there was no reason to make them want to quit.

Whether smokers felt the dentist could help them quit

On asking the patients if the dentist could be of any help to encourage and support them to quit smoking, 66.7% of patients said no, 20% said yes and 13.3% said they did not know.

DISCUSSION

The pilot study was carried out in general dental practice that caters for patients that are mostly from

lower socioeconomic classes IV and V¹⁶. This is a situation where smokers are socially disadvantaged and need support and encouragement to help them quit.

The sample size of the pilot study was small yet it was approximately 10% of the population of patients treated by the dentist. The information collected about smoking and information given by the dentist and discussion with the patient took on average 10-15 minutes which the dentist felt was a reasonable amount of time spent. If any of the patients wanted more information they were given a number that they could phone the dentist on. This did not cause any extra burden for the dentist, however if the dentist was pressured for time then the dental hygienist, dental assistant or support staff could also be involved in place of the dentist to provide this information".

Findings from our study revealed that firstly, only 20% of smokers felt that the dentist could play a role in helping them quit smoking. That was a negative response but most smokers believe that they had to do it on their own. In addition they felt that they were very nervous in the dental practice and that they needed a more relaxed atmosphere to receive information. For these types of patients alternative ways could be found as they could be sent the information to their homes or if they wanted to be telephoned at a convenient time for the information this could be arranged. Dentists should not be discouraged by such patients and they should provide information in case the smokers may change their mind in the future. Smokers' interest or lack of interest to receive smoking cessation advice should be written in the patient's notes.

In this study all smokers were given leaflets that provided smoking cessation advice. For those that said yes to the dentist having a role, the dentist tried the five A's (ask, advice, assess, assist and arrange) as these patients were more open minded to receive information from the dentist. These patients were in the process of considering or contemplating stopping smoking'. Even for general medical practitioners only about 5% of smokers stopped smoking for at least one year after they were given brief medical advice to stop smoking¹⁸. Therefore it may be unrealistic to expect a huge number of smokers that are dental patients to quit after being given smoking advice from the dentist

Secondly, most of the smokers had smoked for over 10 years and that made them feel that it was a difficult habit to break as well as most of them smoked between 11-20 cigarettes a day. A large number in the group (70%) had attempted to quit in the past, however they

relapsed. This is quite common in smokers wanting to quit'. More than half (63.3%) of past smokers also had periods when they had relapsed and therefore they could also be at risk from relapsing again in the future. It is important that the dentist is aware of this and therefore in each dental appointment asks them if they are still not smoking and praise them if they are not. If they have gone back to smoking then the dentist could ask them for recommitment and the relapse used as a learning exercise'. Some of these patients may need extra help and should be referred to a specialist cessation service.

Thirdly, on giving them information of the adverse effects of smoking to oral health, 50% said that this would make them consider to quit smoking. However, the main reasons they gave to quit were due to general health and not oral health. Some wanted to be more healthy and fit while others have smoking related health problems and felt they would be healthier if they quit. Financial reasons, for their children and for their career were other reasons they gave. The majority of smokers (83.3%) had their own reasons to quit. There were some smokers that were keen to quit in the future but for the present, they felt the time was not right for them. This could be written in their dental notes and the topic brought up in their future appointments. If a patient is interested in quitting a follow-up is very important. Studies indicate that successful quit rates are more than twice as high when follow-up contact is routinely made with interested patients".

Finally, all three groups lacked knowledge of the adverse effects smoking has on oral health. However, smokers knew more about oral cancer and periodontal disease than the other two groups. Therefore for some patients they had provision of information. The smokers were followed by non-smokers in their knowledge about oral cancer. Non smokers knew more about staining of teeth and bad breath than smokers and past smokers. With the limitations of this pilot study the recommendation is for all dentists to spend more time informing patients on the adverse effects of smoking on oral health and helping smokers quit by using the "5 As" (ask, advise, assess, assist and arrange). Leaflets for the patients and posters could be bought from the Health Education Authority at reasonable prices and the dentist's local health promotion service could give valuable advice on what they have to offer in England.

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