International Journal of Dental Hygiene

Official Journal of the International Federation of Dental Hygienists

ORIGINAL ARTICLE

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The invisible work with tobacco cessation – strategies among dental hygienists

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Abstract: *Objective:* This study elucidates dental hygienists' experiences of work with tobacco cessation among patients who smoke or use snuff. *Methods:* Data were obtained and categorized by interviewing 12 dental hygienists, who worked actively with tobacco cessation interventions. Qualitative content analysis was used for analysis. *Results:* The latent content was formulated into the core category 'the invisible oral health promotion work'. The informants thought that they had a responsibility to work with tobacco cessation. They perceived the financial system in which they perform the activity as frustrating, because tobacco cessation has no treatment code in the dental care insurance. This was one of several reasons why they had to integrate it in other treatment procedures. The results identified three categories: 'balance in the meeting', 'possibilities and hindrance' and 'procedures'. In the narratives, both positive and negative aspects were displayed. *Conclusions:* The financial conditions for tobacco cessation interventions need to be reformed and the activity has to be given a higher priority in the organization of dental care. Practical training in performing tobacco cessation interventions is important during the dental hygiene education; otherwise, tobacco cessation interventions will remain invisible in oral health promotion in the future.

Key words: dental hygienists; smokeless tobacco; smoking; strategies; tobacco cessation interventions

Introduction

Although tobacco use has declined in many developed countries during recent decades, tobacco cessation interventions are among the most important activities for improving general health as well as oral health worldwide (1). Personnel in general health care and dentistry, therefore, have an important role in assisting patients to quit smoking or using snuff (2). The large proportion of people who visit the dental care service regularly make the dental care setting a unique opportunity to provide tobacco cessation interventions (3, 4). In Sweden, for example, approximately 85% of the population visit a dental hygienist or dentist over a period of 24 months (5). Tobacco cessation interventions are considered to be important, but are not so frequently performed in the clinical dental care setting (6, 7). Dalia *et al.* (8) reported that almost all dental hygienists (89%) and periodontists (99%) asked the patients about their smoking habits, approximately 60% of these discussed methods of giving up tobacco and <30% recommended patients nicotine replacement therapies (NRT). Tobacco cessation interventions were reported to be performed

Dates:
Accepted 21 August 2011

To cite this article:
Int J Dent Hygiene **10**, 2012; 54–60
DOI: 10.1111/j.1601-5037.2011.00530.x
Andersson P, Westergren A, Johannsen A. The invisible work with tobacco cessation – strategies among dental hygienists.

by a few dental hygienists (23%) and dentists (11%) in Canada (9). Similar results have been shown by Helgason *et al.* (10) in Sweden. Insufficient training and skills, lack of time, organizational barriers and patient factors have been reported to limit the ability of dental personnel to work with tobacco cessation (8, 11). Hence, the barriers ought to be overcome if tobacco cessation intervention is to be given a higher priority in the clinical dental care setting.

Adverse effects of smoking may lead to changes in the mucous membrane, destruction of periodontal tissues, loss of dental implants and impaired healing after periodontal treatment (12–15). In subjects using snuff, side effects in the form of gingival recessions have been reported (16, 17). Important tasks among dental hygienists are working with prevention and promotion of oral health, motivating people to lifestyle changes and performing treatment procedures for dental diseases (18). Dental hygienists are, therefore, in an excellent position to provide tobacco cessation interventions. However, because of barriers that may limit tobacco cessation interventions, knowledge is valuable about strategies and methods used by dental hygienists who have experience of performing interventions in this area. Thus, we decided to elucidate dental hygienists' experiences of working with tobacco cessation among patients who smoke or use snuff.

Methods

To capture the dental hygienists' experiences, an inductive, qualitative approach with an interview-based procedure was chosen. Data were transcribed and then analysed using content analysis (19).

Sample

The study population consisted of dental hygienists in central and southern Sweden who actively worked with tobacco cessation. Eight dental hygienists were recruited from an earlier questionnaire study about this subject. Furthermore, four dental hygienists, who actively performed tobacco cessation interventions, were asked to participate. In total, the sample consisted of 12 dental hygienists, all of whom were women (Table 1).

Oral and written information was given to the informants about the aim of the study, confidentiality, that participation was voluntary and that they could withdraw from the study at any time. They also received information that the interviews would be tape-recorded, encoded and kept separate from the identifying list. Informed consent was obtained from all informants before the start of the study. The study was approved by the local Ethics Committee in Kristianstad (ER2008.11).

Procedure

The interviews were conducted by two of the authors (P.A., A.J.) between March and September 2009. Calibration of the interview technique was carried out before the start of the data collection. The first two interviews were conducted and were thereafter discussed to decide upon the thematic areas that should be in focus for the following interviews. These two interviews were followed by ten others, the last three of which were undertaken to validate that no additional content was generated. All 12 interviews were included in the analysis. The interviews took place in the dental hygienists' workplace or at home in a quiet room and lasted 30–60 min. The data were recorded and subsequently transcribed verbatim.

Table 1. **Characteristics of the dental hygienists (*n* = 12)**

	n
Age groups (year)	
20–29	1
30–39	2
40–49	3
50–59	4
≥60	2
Years of practice as dental hygienists (year)	
0–9	2
10–19	6
20–29	4
Dental care organization	
Public dental care	7
Private dental practice	1
Own practice	1
Specialist practice	3
Working time (%)	
100–80	10
79–50	2

The semi-structured interviews focused on the informants' thoughts, experiences and current practice relating to tobacco cessation. The interviews began with introductory questions to facilitate a profound conversation about the dental hygienists' work with tobacco cessation activities. They were asked about (i) different strategies in their work with tobacco cessation in adult and adolescent patients who smoke and use snuff, and how they experienced the work, (ii) support and follow-up, (iii) how the others in the dental team perceived their work with tobacco cessation, (iv) the costs of tobacco cessation and (v) their knowledge about tobacco cessation. During the interviews, the informants were encouraged to elaborate and to provide more detailed information through questions such as: How do you mean? What else can you tell me? How would you describe that?

Data analysis

The content analysis included both manifest and latent content with interpretation of the text material with depth and level of abstraction. The manifest content was identified by visible and obvious components, and the latent content was supposed to clarify the deeper underlying meaning of the text. All three authors read the text several times to comprehend what the informants expressed and to gain an overall understanding of the data. Upon the preliminary analysis of the text, a distinct pattern emerged. The first thoughts and reflections

were recorded in the margins of the text and discussed between the authors. Keeping the aim of the study in mind, 'meaning units' were identified by organizing statements with the same content into different groups (19). The meaning units were checked and critically analysed on the basis of their manifest and latent context. For the manifest analysis, comparisons were made regarding similarities and dissimilarities to obtain a deeper understanding of the underlying text. Thereafter, the meaning units were condensed (shortened), while preserving the core. To enable sorting of the material, subcategories were created and linked together into three main categories expressing the manifest content. For example, a statement like 'It is very difficult to find out what changes a person's behaviour and habits' led to the subcategory 'Relation to the patient', which became a part of the category 'Balance in the meeting'. The statement 'It is important to keep up to date with tobacco cessation interventions' led to the subcategory 'Having knowledge' as a part of the category 'Possibilities and hindrance'. Finally, an underlying meaning that expresses the latent context was formulated into a core category. All three authors collaborated throughout the analytical process.

Results

'The invisible oral health promotion work' expressed the latent content of the text and was formulated as the core category upon analysis of the data. The informants were aware of the importance of assisting their patients to quit using tobacco and seemed to have an attitude that was characterized by a holistic health promotion approach. They also focused on ethical issues, such as autonomy and doing good. Several patterns of their experience of working with the patients were identified. These experiences fell into the three categories 'balance in the meeting', 'possibilities and hindrance' and 'procedures' (Table 2). In the narratives, both positive and negative aspects were displayed.

The invisible oral health promotion work

The informants thought that they had a responsibility to work with tobacco cessation, but had to integrate it during the patients' regular visits. Nevertheless, they perceived the financial system in which they perform this activity as frustrating, because the patients pay considerably less for tobacco cessation in health care compared with dental care. Tobacco cessation has no treatment code in the dental care insurance and therefore the informants felt the payment difficult to manage. Thus, the informants had their own solution. They thought that it was natural to relate the deleterious effects of tobacco to oral health and integrated tobacco cessation interventions in treatment procedures performed in patients with oral diseases. These patients routinely required repeated visits, and informants thought it was easy to perform tobacco cessation interventions and give support. The informants could also follow up the patients by the routine annual visits without extra costs:

I weave it into my treatment. When I treat my patient I involve it from the beginning and continue until the end of the treatment and also in the supportive treatments. (Dental Hygienist, DH 13)

Balance in the meeting

The informants said that essential characteristics in the work with tobacco cessation were being open-minded and finding a balance in one's approach. They had no uniform concept for working with this task, and each patient was met and treated differently. Some of the informants felt that tobacco cessation was a sensitive subject for many of their patients who used tobacco. Thus, performing this task depended on the patient's willingness to participate.

The relation to the patient

A good relationship with the patient was said to be important, but often took time to build up. The informants perceived that a trustful relationship and respect between themselves and the patient were key factors. They needed to be flexible and not force anyone to quit using tobacco. The first meeting was focused on instigating the patient to think about tobacco. They thought that by 'sowing a seed', a long-term effect could result:

The cessation must be seen in the long term. Planting a thought is very worthwhile. (DH 8)

Furthermore, the informants said that it was significant to interpret where in the process of quitting smoking or using snuff the patient was. Thus, the meeting with the patient who used tobacco was characterized by a balance aiming at not interfering with the good relationship with the patient. The informants experienced that many of their patients who used tobacco, especially the smokers, had a guilty conscience and

Table 2. **Dental hygienists' experience of their work with tobacco cessation**

Core category	The invisible oral health promotion work		
Categories	Balance in the meeting	Possibilities and hindrance	Procedures
Subcategories	Relation to the patient	Attitudes among the patients	Using MI
	Using strategies	Motivation	Aware of NRT
		Having knowledge	Having a network
		The organization	Using the patient

MI, motivational interviewing; NRT, nicotine replacement therapies.

were ashamed of their tobacco use. They also perceived it as unacceptable to smoke from the environmental point of view, i.e. with respect for others:

Many have a bad conscience because they smoke or use snuff and others think it is a sensitive topic. Therefore it is important to handle them in a correct manner. (DH 10)

Using strategies

Every patient was met differently according to his or her condition, but sometimes they found it difficult to find the patient's inner motivation. The informants said that they were rather straightforward in their conversation with the patient. They also gave patients the opportunity to express their own thoughts about their tobacco use and motivation to quit. To give time to prepare the patient to quit using tobacco was another important factor in the encounter. The patient needed to find a benefit from changing behaviour, and it was a challenge to be shrewd to motivate the patient:

Everyone is different and most of them need to be prepared when they have decided to give up tobacco, and some of the patients need longer time to be prepared and to be motivated. (DH 12)

I have my own strategies, I talk to the patients and motivate them every time we meet, it is important that smoking cessation is based on their own decision and inner motivation. (DH 13)

The informants used different strategies with patients who smoke and those who use snuff. They said that those who smoked were easier to manage because they had more reasons to quit. The patients often perceived it as stressful to smoke and were tired of their addiction:

Patients who use snuff have more difficulty in changing their habits than smokers. In reality it is much more difficult because the public opinion is that snuff is okay. (DH 9)

Some of the informants also said that it was more difficult with the younger generation than the adults, because they often said that they will quit later. Possible negative effects do not occur until the future, and they think they are immortal. The young were sometimes a little shy and reluctant to talk about their tobacco use:

Because young people may be a little shy and are reluctant to open up, it can be difficult to communicate with them. (DH 2)

Others of the informants felt, however, that it was interesting working with young people because they could discuss tobacco from other aspects than with the adults, such as in relation to film and sport:

Today they smoke in many more films compared to a number of years ago, and it is things like that you can discuss with the young people. (DH 3)

A rigorous attitude was used by some of the informants as a strategy in the work with tobacco cessation. They felt frustrated when the patients did not quit smoking, especially those who had a severe stage of periodontitis and in patients with dental implants. This attitude was expressed by using power in the patient encounter.

When the informants had a patient who did not want to talk about his/her tobacco use, or failed to succeed in quitting, they tried to find new tobacco cessation strategies when the patient came to the next recall period.

Possibilities and hindrance

Attitudes among the patients

Most informants said that the patient's attitudes towards talking about tobacco cessation varied. Some did not want to talk about it, whereas others expressed a willingness to reduce or stop the tobacco use:

Some of them do not want to stop smoking at this moment, but when they come to the next recall they are more interested and motivated. I ask them if they need some help, but often they first want to try by themselves. (DH 6)

In the interviews, it emerged that the informants had the experience that the patients acknowledged an association between smoking and coronary heart diseases, but not between smoking and oral health. Thus, the informants stated that it is important to optimize the beneficial effect of smoke cessation for the patients regarding both general health and oral health:

Many patients know about the association between smoking and heart disease but are not aware of the association between smoking and oral health, as if the mouth did not belong to the body. (DH 7)

Motivation

The informants said that they need motivation to work with tobacco cessation. Some of them sometimes found it rather difficult to provide advice on tobacco cessation because they have to be positive and engaged to motivate the patient every time. They also had negative feelings when they did not succeed in motivating the patient:

Sometimes you are disappointed when you fail to motivate the patient. (DH 2)

Having knowledge

Lack of knowledge, especially regarding snuff, and lack of confidence were mentioned by almost all of the informants, despite the fact that many of them had participated in courses after their graduation from the dental hygienist education. Courses they had taken part in included patient motivation, creating individual treatment plans for the different steps in tobacco cessation, support and follow-up activities as well as nicotine replacement therapy. The informants pointed out that it was significant to include tobacco cessation in the dental hygienist education:

I have gaps in my knowledge about the effect of snuff in general. (DH 2)

I think both the theoretical as well as the practical knowledge should be included in the dental hygienist education. (DH 7)

The organization

The informants said that it is important that the organization of the clinic supports the work with tobacco cessation, and especially that the manager has a positive attitude. The other dental team members also needed to understand that this work is compulsory in patients who use tobacco. Some of the informants had taken their own initiative to work with tobacco cessation, because of their success in the outcome of the treatment. Several of them also said that they felt lonely working with this task in the clinic and wanted more support from the manager and the others in the dental team:

The manager of the organization had the opinion that tobacco cessation is not a part of the task of dental care. (DH 2)

I work with tobacco cessation on my own initiative but I feel lonely in the role. (DH 11)

I feel no support or encouragement from the manager in my work with tobacco cessation, and I have to fight to do it. (DH 12)

Procedures

The informants used different procedures to assist the patients to quit tobacco use. Some of them emphasized the need to provide leaflets about available tobacco cessation counselling services and how to find them. The informants often took the opportunity to include tobacco cessation in the information about and treatment of dental diseases, and sometime established a plan for the intervention. Some recommended or referred the patient to a professional organization for special advice, especially when they felt that they could not assist the patient because of the severe nicotine dependence:

When I give information about caries and periodontitis I also add brief information about tobacco, how it influences oral health and that I can provide help to stop smoking. I first check the present situation, that is, if the patient is prepared. If so, I use motivational interviewing and include a plan for this activity and how many times we should meet during the tobacco abstinence and afterwards for support. (DH 11)

Some specific patients I recommend to the 'stop smoking line'. (DH 13)

Using motivational interviewing

To find out whether the patients wanted to stop with the tobacco use and to meet the patient's inner motivation, the informants often used the motivational interviewing (MI) method. The purpose of the MI was to change the patients' behaviour, and the informants promoted the patients' own control of the situation:

It is important to use motivational interviewing to handle the situation. We need to practise this and it takes several years to learn. (DH 9)

Being aware of nicotine replacements

Several informants mentioned that NRT was individually chosen for each patient. They pointed out that they needed to be more aware of the effect of different adjunctive interventions to achieve success with tobacco cessation. Some of the informants recommended the patients to ask the pharmacists because they knew that they commonly have good knowledge about the different NRTs and how to use them:

I usually recommend NRT, but there are always some who do not want to use it although it is important to be prepared for the tobacco abstinence. (DH 12)

I have no golden standard when I recommend NRT, it is more dependent on what the patient can cope with. (DH 7)

Having a network

Exchanging knowledge and communicating with others who provide tobacco cessation interventions seemed to be one way to encourage and enhance the informants' own counselling skills. Collaborating with colleagues was, therefore, pointed out as valuable:

When we meet there are a lot of people from the health care services and I think this is great, because medical and dental care are often separated into two different parts. It is great to meet them and to get their viewpoint. (DH 5)

My opinion is that it is rather tough to work with tobacco cessation. I have a network together with nurses and we meet twice a year. We discuss how to support specific patients, new NRTs, and if there are new courses. (DH 6)

Using the patient as a tool

Many of the informants used the patient as a tool to motivate giving up tobacco, especially if the patient used snuff, as changes in the mucosa might occur. The purpose of this action was to show the negative effect in the oral mucosa:

In patients who use snuff I often lift the lip to show the changes in the mucosa. (DH 12)

Discussion

The informants stated that tobacco cessation interventions are important in oral health promotion. This task needs to be more visible and confirmed in the dental care, and therefore, the financial reimbursement regarding this activity should be taken into consideration. All the informants emphasized this

barrier, which was also confirmed by dentists in Australia ten years ago (20). The organization and the other team members did not always emphasize tobacco cessation activities as important. Tobacco counselling in dentistry is not a legitimate task and needs to be promoted more by the management in the dental care organization (21). Despite these circumstances, the informants were engaged and motivated to support their patients to stop using tobacco.

The dental hygienists experienced that knowledge about tobacco and its negative effects on general health were common among their patients, while there was a lack of awareness regarding the relation between tobacco use and oral health. In communication with patients, dental staff needs to focus even more on tobacco damage in the mouth, to highlight the relationship. Assisting patients to stop using tobacco also gives a health-economic effect (22), and therefore, dentistry should have a higher priority to work with this topic.

Different factors are required to contribute to changes of behaviour. Bandura (23) states that it requires different core determinants such as knowledge, perceived self-efficacy, outcome expectations and health goals. In a recent study by Jönsson *et al.* (24), cognitive behavioural strategies including MI were used with beneficial results, when treating patients with periodontal disease. To create inner motivation and change the patients' behaviour regarding tobacco use, MI was also used by all the dental hygienists in communication with the patient in the present study. Becoming competent and comfortable in the MI method may take a long time, as also was mentioned by some of the informants.

Our results showed that the informants had different experiences in working with young people compared with adults. Some of the informants found it stimulating to talk to the young from their perspective, whereas others perceived it as difficult to communicate with them. This is also confirmed by Hedman *et al.* (25), reporting that young people are more questioning, which made it more difficult to motivate them. To be more successful when communicating with young people about tobacco prevention and other lifestyle changes requires more directed strategies with credibility and confidence in the messages (26).

The informants knew about the importance of tobacco cessation in patients with periodontitis and patients with dental implants, but felt sometimes uncertain regarding practical training in how to achieve tobacco cessation. An important aspect of tobacco cessation that was expressed was also recommending, being aware of different NRT and assisting the patients during tobacco cessation. Therefore, it is important to give this topic priority in the dental hygienist education, and also after graduation (27, 28). Our study also pointed out that knowledge from colleagues and from network focusing on tobacco cessation is valuable. Other benefits of having networks are being stimulated and exchanging experiences.

The informants emphasized that they had a responsibility to provide tobacco cessation interventions among their patients, but respect for the patients' wishes had a higher priority, which was expressed in the main category 'balance in the meeting'. Tensions in providing the activity sometimes arose in some of them, because they did not want to disturb the good relationship. This imbalance reflects an ethical dilemma with a tension between the dental hygienist's wish to provide successful oral health care work and the need to respect the patient's autonomy. The conflict may result in the use of power instead of open-minded communication at the expense of a good relationship with the patient. The patients' decisions need to be respected according to the principle of autonomy (29), even if a good treatment outcome is not always achieved.

Strengths in our study are that the informants were employed within various organizations and came from different geographical areas in Sweden. Many of them had performed tobacco cessation interventions for several years, had experience of tobacco cessation activities with individuals as well as groups, and of collaborating in networks. By using content analysis, both the manifest and latent content, i.e. the underlying meaning, of the dental hygienists' work with tobacco cessation could be illuminated (19). The two authors who performed the interviews have many years of experience from the field as dental hygienists. However, the risk of preconceptions considering the interviewers' knowledge and experience of dental hygienists' work with tobacco cessation interventions cannot be eliminated. To strengthen the trustworthiness and to avoid obscurities, calibration was performed and two pilot interviews were conducted and discussed. Furthermore, all three authors collaborated in the analytical process to optimize the plausibility. To judge the credibility of our findings, representative quotations from the transcribed text have been shown in the results. The selection of 12 informants was meant to ensure a variety of different experiences in the work with tobacco cessation interventions. The sample size was decided when no new information of further importance was added from the last interviews. The informants were thoroughly informed about the purpose of the study, and their expressions were considered trustworthy and reasonable.

The conclusion of this study is that tobacco cessation interventions need to be given a higher priority in the organization of dental care. Furthermore, it is important that dental hygienists have practical training to perform interventions in patients using tobacco. The organizational and financial prerequisites for tobacco cessation interventions must be reformed; otherwise, this activity will remain invisible in oral health promotion in the future. However, to achieve a deeper knowledge within this field, future studies should focus on patients using tobacco and their attitude to quitting smoking or using snuff and to tobacco cessation interventions based on cognitive behavioural strategies.

Acknowledgements

The study has been supported by the Swedish National Institute of Public Health. The second author (AW) was supported by the Swedish Research Council and the Skåne County Council's Research and Development Foundation. The study

was conducted in collaboration with the Clinical Assessment Research and Education (PRO-CARE) group, Kristianstad University.

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