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Factors of importance to maintaining regular dental care after a behavioural intervention for adults with dental fear: a qualitative study

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Abstract

Objective. Dental phobia is prevalent in the general population and can be successfully treated through cognitive behavioural therapy, which results in patients being able to cope with dental treatments. The aim of this study was to increase the understanding of factors of importance for maintaining regular dental care after completion of a cognitive behavioural therapy programme. ***Material and methods.*** A qualitative study design was used. Fourteen individuals who had successfully completed the programme and had thereafter been referred to a general dental practitioner were interviewed. An interview guide with open-ended questions was used. The interviews were tape-recorded and transcribed verbatim. The texts were analysed using descriptive and qualitative content analysis (Grounded Theory). ***Results.*** The manifest analysis identified four content areas: *experience of dental care, content of the behavioural therapy programme, perception of therapy* and *impact on quality of life.* The latent analysis identified *influence on quality of life, security, activity* and *barriers to dental care* as categories. Although all informants had successfully completed the dental fear treatment programme, only a few stated that they had an uncomplicated relation to dental care afterwards. Barriers to dental care were lack of money and fear. A sense of security was conclusive to coping with dental care, and a respectful approach on the part of the dental care personnel was essential to development of this sense. ***Conclusions.*** Confidence in one's own ability to cope with dental care and the right to guide the treatment were important. Thus the theme in the present study was *self-efficacy and respectful dental care personnel.*

Key Words: *Behavioural therapy, confidence, dental fear, finances, self-efficacy*

Introduction

Fear of dental treatment has been reported by 16–40% of the adult population in Western societies, and 3–5% of these can be classified as having dental phobia [1–3]. The prevalence of dental fear has remained unchanged for the last 40 years, and decreases with age [4]. Dental fear is the most important factor determining the pattern of an individual's dental care habits and avoidance, irregular dental care and missed and cancelled appointments are common [5]. Individuals suffering from extreme dental fear, including avoidance of dental care, are labeled in the literature as suffering from dental phobia, and are reported to have deteriorating oral health [6], low quality of life [7] and low self-esteem [8]. People with dental phobia are more likely to suffer from other phobias than the general population [9], and a high level of general fear has a great impact on both quality of life and the dental care situation [10].

Dental fear can be treated successfully. The dentist's ability to receive the patient empathically and to establish communication is significant in reducing dental fear [11,12]. Through cognitive behavioural therapy the patterns of the patient's thoughts and behaviour can be modified and transformed, even with only a few treatment sessions [13], and a lower level of dental fear can be maintained for ≥10 years [14]. In a meta-analysis of 38 studies, cognitive behavioural treatments showed best treatment results compared to other methods and, on average, 77% of the patients were attending dental care 4 years after completing a cognitive behavioural intervention [15].

In Sweden, legislation came into effect in 1999 giving patients with severe dental fear the right to

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subsidized treatment for their dental fear [16]. Psychologists and dentists cooperate in behavioural interventions for the patient. Approximately 3500 individuals in Sweden received subsidized treatment for dental fear in 2007 [17]. Criteria used to describe successful treatment are decreased self-reported estimation of the fear and increased ability to maintain regular dental care provided by a general dental practitioner. According to the legislation, an individual may only receive such a subsidy for therapy during one treatment period, irrespective of the effects of the therapy. Thus it is essential that the treatment be successful and that the individual should really be able to cope with dental care after therapy. The aim of this study was to increase the understanding of factors of importance for maintaining regular dental care for individuals who have completed the treatment for dental fear provided by a psychologist and a dentist in cooperation.

Material and methods

The Ethics Committee at the Faculty of Medicine, Uppsala University approved the study. Informed consent was obtained from all participants before the study began. With the aims of obtaining a deeper understanding and a rich and diverse description of the issue, a qualitative study design was used.

Study population

The study population consisted of individuals with serious dental fear who completed a cognitive behavioural therapy programme under a psychologist and a dentist working in cooperation. The standardized programme involved financial support and was offered to individuals according to certain rules: individuals had to show Dental Anxiety Scale (DAS) ratings ≥15 [18] and had, despite considerable needs, avoided dental care for a long period. Participating individuals had six to eight appointments with the psychologist, and were given information and opportunities for reflection concerning their knowledge of and attitudes towards dental treatment. Patients were gradually exposed *in vivo* to dental treatment instruments and *in vitro* to short film clips of dental procedures. The last steps of exposure were given *in vivo* at the dentist's office with an increasing degree of exposure. Patients were also instructed in relaxation techniques and strategies for increasing control. The treatment programme was given within the regular public dentistry service in Uppsala and was, at that time, not included as a part of a research programme.

The informants in this study were chosen from a group that had successfully taking part in the programme during the years 2003–06. During these years, 120 individuals completed the programme. The mean DAS rating before treatment was 18 (range 15–20), compared to a post-treatment mean of 8 (range 4–14). The mean number of appointments with the psychologist during the programme was 6.1 and with the dentist 5.9. After finishing the programme the patients were referred to a general dental practitioner to complete their necessary dental treatment and for recalls for regular dental check-ups in the future. The informants were selected strategically in order to obtain the greatest possible variation in the data [19]. The aim of the selection process was to acquire subjects of varying ages and degrees of experience, and of both sexes. Fourteen individuals were interviewed for this study. The inclusion criteria for participation were: completion of the cognitive behaviour therapy programme; referral to a general dental practitioner after therapy; therapy completed 2–4 years before the study was performed; and DAS after completed therapy <15.

Interviews

The interviews were performed by a dentist (M. M. H.) experienced in treating patients with dental fear but who was not involved in the treatment of the informants in this study. The first two interviews were guided by another dentist (P. G.) experienced in qualitative research. An interview guide was used, structured in two sections: the first part asked about background data concerning dental care habits before and after therapy; and the second part contained open-ended questions about individual perceptions. The questions were structured in terms of both content and order and were open-ended in order to allow the respondents' own choice of words and to enable follow-up questions from the interviewer. The focus was on the informants' own descriptions of their thoughts, feelings, readiness for treatment and actions. Suitable places and times for the interviews were chosen by the informants. The interviews were conducted in offices or cafés. The duration of the interviews was 20 min to 1 h and they were all tape-recorded and transcribed verbatim by a trained secretary who was otherwise not associated with the study. The interviews were performed in Swedish and transcribed in Swedish. A professional translator translated the quotations used in this paper from Swedish into English.

Analysis

Background data were analysed using descriptive analysis. Other data were analysed using manifest and latent qualitative content analysis. The manifest analysis identified four content areas: *experience of dental care, content of the behavioural therapy*

programme, perception of therapy and *impact on quality of life.* Each interview text, or *unit of analysis,* was divided according to these areas. The text was subsequently dissected into *meaning units* (a group of words or statements with the same core meaning). One author (P. G.) continued the analysis by further condensing the meaning units to form codes, which can be described as labels for the meaning units with the aim of disclosing new and different aspects. The codes were then sorted into *sub-categories* (threads of meanings), and clustered into *categories.* The categories in this study were identified as *influence on quality of life*, *security*, *activity* and *barriers to dental care.* An answer to the question "What?" may be found under the heading "Categories" [20].

With the purpose of reaching consensus about categories and subcategories and how they were compiled using the codes, all authors analysed the transcribed interviews in several sessions. Data and codes were compared with each other and codes describing one perspective were used for exploring another area of codes. Codes and subcategories were revised to some extent during this process. In addition, a *theme* emerged which revealed the patients' opinions and conceptions. Finding a theme is a way of linking together the underlying meanings into categories, or of finding a common strand through condensed meaning units, codes and categories—a latent analysis. The answer to the question "How?" is provided in the theme. The theme of the present study was *Self-efficacy and respectful dental care personnel.* All categories and the theme were grounded in the data by selection of explorative text quotations.

Quality aspects of the method. The concept *saturation* originates from the tradition of Grounded Theory [21] and means that continued data collection no longer adds any further relevant information, and so collection can be discontinued. The research group concluded after 14 interviews that much of the collected data were similar and that continued collection was unlikely to add any information. The study was considered to be saturated.

The term *trustworthiness* is commonly used as a generic term to describe the quality of a qualitative study, and consists of credibility, dependability and transferability [22]. To achieve credibility, or to determine how well the data address the intended focus, we collected data from informants who had experienced serious dental fear and who had completed a well-defined programme of behavioural therapy. Dependability, or the extent to which the data change over time and may alter the researcher's judgments, was addressed by using the same interview guide for all interviews and trying to conduct the interviews uniformly, without excluding the option of comparing data and introducing follow-up questions when this might help to narrow the focus of the research. Transferability, or the extent to which research findings can be extrapolated to a different context, was achieved by clearly describing the research process and context so that the reader can follow the process and decide whether the findings are transferable to other contexts or whether the data might be open to alternative interpretations [23]. Quotations from all informants are presented in this paper. In Figure 1 the sampling, analysis and quality assurance procedures are summarized.

Results

Four of the subjects interviewed in the study were men and 10 were women. All were aged 34–59 years, and all reported that their dental fear had begun in childhood. Nearly 80% could describe a specific incident that had triggered the fear. Only one informant indicated that a parent had dental fear, and two reported that their children had dental fear. The main route of access to the therapy was referral from a dentist or family physician. Of the 14 subjects, six had regular full dental care after completion of therapy, three had occasional or emergency appointments and five had relapsed into avoidance. The descriptive data are summarized in Table I.

Content analysis

Four content areas were identified in the interviews: *experience of dental care, content of the behavioural therapy programme, perception of therapy* and *impact on quality of life.* Figure 2 shows how codes, subcategories and categories were organized and ultimately linked together in a theme.

The informants stated that prior to the programme they had experienced dentists as unresponsive, grumpy and hard-handed. They felt that treatment always had to be carried out on the dentist's terms, and that dentists had no patience with difficult patients: "*The dentist lost his temper because I was afraid since there was nothing to be afraid of. He was annoyed that everything took longer when I was prolonging the treatment by being a scaredy cat, and being so darned stupid.*" All informants expressed the feeling of not having control and experiencing the situation as abusive: "*You start acting like a child again, you feel like a five-year-old and like the dentist is a giant, and is authoritarian, and then the whole situation somehow gets out of control*" and "*Somebody was hovering over me, I felt hemmed in and had no control.*" Many informants described mistakes made by the dentists ("*slipped with the drill*" or "*failed to pull a tooth*") or dentists who used physical strength during treatment ("*slapped me in the face*" or "*held me roughly*"). The answers to

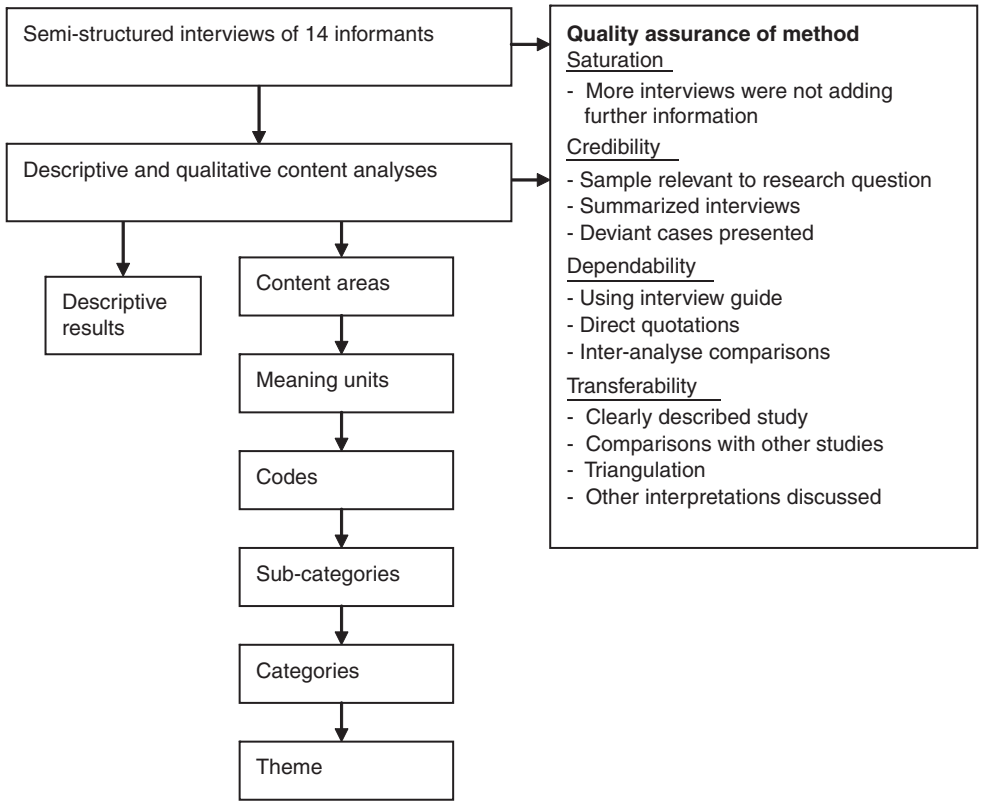

Figure 1. A summary of the sampling, analysis and quality assurance procedures used in the study.

the question about the worst part of the treatment differed. The smell, sound, drill and pain were common answers, but several informants described that the whole situation and the feeling of not knowing what was going to happen and having no possibility of influencing the situation were the main problems: "*I had no confidence. Although I was grown up I felt like a kid when I sat down in the dentist's chair... you feel so vulnerable.*"

All informants had long been avoiders of dental care before the therapy. Most of them had only received emergency dental treatment: "*When I was twelve I had general anaesthesia for the first time so they could do my fillings. I didn't go to the dentist a single time after that until I was 32.*" One woman taking analgesics said: "*I had roots in my mouth so I used my own tools to remove the things that hurt; I took painkillers constantly.*" Some informants had had brief periods of regular dental care when they found a good dentist: "*For a few years I went to a good dentist, and that was absolutely fine. Then she left, a new dentist came in, and I stopped going.*"

After the therapy most of the informants described their encounters with dental staff in positive terms. The dental staffs take time, inform and are responsive: "*I guess the dentist had set aside a certain amount of time, but she never gave me the feeling her time was limited. No, she seemed to have all the time in the world for me. And that gave me a sense of security.*" But some informants talked about dentists who rush and have not acquired knowledge about the patient's history: "*Then you ended up at your regular dentist again, and bang, it was straight to the treatment. They had obviously not read my records.*"

The informants described the content and their perception of the therapy differently. All informants experienced the dental staff as important in the process of getting rid of the fear: "*I saw the dentist's nurse the first few times, and when she showed me that anaesthesia doesn't have to be painful, the worst of my fear disappeared*" and "*I gained tremendous confidence in the dentist, they were really good at their jobs, so I could cope.*" However, their views concerning the benefits of the talks with the psychologist diverged greatly. Some informants considered the sessions with the psychologist crucial to the success of the programme: "*The psychologist explained things, showed films, talked and drew pictures. He went through it all, from every possible angle, and did a really good job*". Others were of the opinion that the time spent with the psychologist was pointless and that success depended entirely on the dentist's way of treating them: "*I don't really like psychologists. What did they want me to see one of them for?*" The informants spoke of different tools they learned to use during the cognitive behavioural therapy: breathing/relaxation, knowledge and their ability to be in control of the treatment: "*The relaxation exercises give you time to breathe... if you're afraid,*

Table I. The informants' sex, age, onset and cause of fear, family history, access route to therapy and patterns of dental care after therapy.

No. of women/men	10/4 (71%/29%)
Age (years)	Mean 48.1 (range 34–59)
Age of men (years)	Mean 49.3 (range 38–59)
Age of women (years)	Mean 47.6 (range 34–57)
Onset and cause of fear (%)	
Specific event as a child	79
"Always been afraid"	21
Family history (%)	
Parent with dental fear	7
Children with dental fear	14
Wife with dental fear	7
No relatives with dental fear	79
Access route to therapy (one non-respondent) (%)	
Referral from general dental care	31
Referral from GP	23
Took personal initiative	31
Relative took the initiative	15
Dental care attendance after therapy (%)	
Regular full dental care	43
At first regularly but avoidance today	29
Only occasional or emergency appointments	21
Never attended dental care again after the programme	7

you forget to breathe", "*I really learned a lot about what they do and about what all the stuff is for*" and "*I have the right to decide about my dental care. I can tell them what I want.*"

Categories

The categories in this study were identified as *influence on quality of life*, *security*, *activity* and *barriers to dental care* (Figure 2).

Influence on quality of life. Influence on quality of life was described in both negative and positive terms, leading to the subcategories *the negative influence of fear* and *positive effects from overcoming the fear.* Negative effects of the fear included a sense of shame as a result of the condition of one's teeth: "*It's really too bad if you can't laugh when you spend your time with young people... they laugh all the time*" and "*...afraid to open my mouth and ashamed of how it looked in there.*"

Shame about not being able to cope with dentist's appointments was described by the informants. For example: "*It was terribly embarrassing, and not in keeping with what I was like otherwise*" and "*I felt a sense of obligation to the dentist, because she had given me this opportunity*" (the informant had relapsed and become an avoider again). The fear also had negative impacts on the informants' self-confidence: "*My ex-boyfriend was the one who realized that when I got called for a dental appointment I didn't react like a regular person.*"

Positive effects from overcoming the fear included improved self-esteem: "*I learned more about myself, about my own fear and what I could do about it*" and "*... my self-confidence was boosted... now I can manage other difficult things too.*" A sense of happiness and of feeling beautiful was expressed as follows: "*...when I had an appointment with her (the dental hygienist), well, she used a mirror when she brushed my teeth, and so I could watch her work and see how good she was really making my teeth look, and that made it, well, it was like getting your legs waxed... it made you look pretty.*" Others described overcoming the fear like a dream come true: "*Well, my fear, it has really vanished completely. And that surprised me, I must say. I didn't think it could happen*" and "*Because after they filled my first tooth, I was kind of on cloud nine, I just couldn't believe I'd done it.*"

Security. Security was described as a significant success factor for managing dental care. The subcategories in this area were identified as knowledge, respect and frightening stories. The informants' lack of knowledge about dental care increased their frightening impressions of the unknown: "*I feel insecure, it's because of all the things I don't know. I don't know how they do things at a dentist's office.*" The knowledge of the dental personnel about dental fear also impacted on the patients, as described by one informant: "*as a layperson you have no way of knowing if a dentist is good or not, but she's good at making me feel secure, and that is at least equally important.*" Knowledge about dental fear in general and about each specific individual's fear is important if the patients are to achieve security: "*the people there understood me and took me seriously*" and "*I appreciate the fact that the dental care staff know I'm afraid, so I don't have to talk to them about it.*"

Respectful treatment was an essential aspect of producing security. In fact, a respectful attitude was more important than successful results: "*the dentist always does his best for me, even if he doesn't always succeed.*" The informants also described a feeling of being treated with kindness as significant: "*I felt like it was all happening on my terms*" and "*for some odd reason the dentist never gave me the feeling her time was limited. No, she seemed to have all the time in the world for me.*" The informants appreciated the fact that their relationship to the dentist was that of an adult speaking to another adult rather than a child to a parent: "*In the*

Theme: ***Self-efficacy and respectful dental care personnel***		
Codes	**Subcategories**	**Categories**
- Ashamed of bad teeth - Ashamed of not visiting the dentist - Negative self image	Negative influence by fear	Influence on quality of life
- Increased self-esteem - Feel beautiful - A dream came true	Positive effects	
- Facts about treatments - Dental staff's knowledge about dental fear in general - Dental staff's knowledge about my dental fear/history	Knowledge	Security
- Approach of the dental staff - Relationship between patient and staff	Respectful treatment by the dental staff	
- Other people tell about bad experiences - Dental staff tells about consequences	Frightening stories	
- Own responsibility	Motivational power	Activity
- Desire initiatives from dental staff - Do not know how I want it	Initiatives	
- Breathing and relaxation - On my terms - Controlling techniques	Using dental fear tools	
- Fear never disappeared - Fear coming back - Binding to certain dentist	Fear	Barriers for dental care
- Missing money	Economy	
- Do not have time - Dental staff have done wrong	Other obstacles	

Figure 2. The organization of codes, sub-categories, categories and theme identified in the analysis.

past I was in the hands of a superpower and had no right to a voice. That's not how I feel any more" and "*there was no talking down to me… we were two adults speaking to each other.*" Several informants stated that their fear had previously been influenced by frightening stories told by friends and parents: "*You don't listen to people who have had good experiences, only to people who have had bad ones*". Irrelevant or false information from the dental staff had also produced insecurity and weakened confidence: "*You won't have a tooth left in your mouth by the time you're forty… They were always threatening me.*"

Activity. Activity describes what sort of actions the programme inspired the informants to undertake. Sub-categories were motivational power, initiatives and using dental fear tools. Motivational power was described as taking one's own responsibility: "*You have to have made up your mind that you really want help… that's the first decision you have to make*" and "*I've learned what demands I can make on my part and what the dentist expects from me.*"

Establishing and maintaining contact with a new dentist after the programme was a challenge that had to be accepted. Some of the respondents wanted the dental service to be the active party. They wanted to be contacted by the dental staff by telephone: "*It's harder to say no to a personal call than to just ignore an appointment that arrives in the mail.*" Some of the informants were ambivalent, saying: "*I'm not sure if I want the dentist to call me. I have mixed feelings, you know…*" and "*…what happens is, the more time that passes, the less inclined you feel to go.*"

One factor of importance in relation to success after the behavioural intervention was being able to utilize dental fear tools. The informants talked about breathing and relaxation: "*…yes, breathing is*

important, as the dental care staff have reminded me... and that was exactly what happened in the beginning, suddenly I forgot to breathe, stopped breathing... but the dental nurse would catch me, saying 'you're not breathing, try to breathe now'" and "*When you're afraid, you forget to breathe.*"

Another tool described by the informants was the right to have control over their treatment, on their own terms: "*You actually have the right to tell them if they do something wrong or if they're not doing what you want,*" and "*but now I feel like here I come and I'm here to have some work done, is the dentist capable of providing that service or not?*" The informants also described controlling techniques as tools: "*When I say stop, they have to stop, no matter what they're in the middle of.*" The method that involves counting to control the length of a step, such as drilling, is a good example of a controlling technique. One informant found the practical training more significant to success than films and theoretical teaching.

Barriers to dental care. Barriers to dental care were described by several informants. Fear and financial constraints were the most commonly mentioned barriers. Another was lack of time. Some informants stated that their fear had never disappeared during the therapy: "*The fear will never really leave me*", while others said that the fear had disappeared but had also come back: "*the monster has somehow gone on growing*" and "*it's very easy to slip back if you don't stay in touch afterwards.*" In addition, quite a few informants said they were able to keep their fear under control as long as they were being treated by the dentist in the programme, but that it resurfaced when they were supposed to have an appointment with a new dentist: "*it drained away... I would have felt secure if I had been able to go on seeing the same dentist*" and "*I felt calm with the dentists in the programme... once it was finished and I was supposed to go back to a different dentist, my resistance returned.*"

Another barrier described by the informants was shortage of money. Although a few did not mention finances at all in the interviews, several said that the expenses associated with dental care were their main reason or at least as important as their fear as an explanation for not going to the dentist: "*To start with, my not going back was all about money, because the treatment was going fine*" and "*it's mainly a matter of money. There is the expense, and then there's the fear.*" Lack of time was mentioned by some informants: "*I don't really have time to go to the dentist*", while another informant admitted that the time argument was really just an excuse for not going to the dentist: "*If the dentist phoned now, I think I'd find a way of not having time or something.*" One other reason given for not getting dental care was the informant's perception that the dental care staff did not behave as they should have: "*They didn't understand me*" or "*I don't think I should have to pay, since it's not my fault that I'm afraid.*"

Discussion

In this study, 14 individuals with a history of dental fear were given the opportunity to convey their experiences of dental care, their opinions about the cognitive behavioural therapy programme they completed and their ability to maintain regular dental care after completion of the programme. Although they all successfully completed the dental fear programme, only a few of the informants described their subsequent relationship with the dental care services as uncomplicated. A sense of security proved to be conclusive in coping with dental care. Knowledge about dental treatment and a respectful approach on the part of the dental care staff were essential to development of this sense of security. Confidence in one's own ability to take control of the dental care situation and the feeling that one had the right to be in charge during the treatment were also important. Thus the theme of the present study was *Self-efficacy and respectful dental care personnel.*

Self-efficacy is an assessment of one's ability to perform in a certain way in order to attain a certain goal and it affects people's thought patterns and responses to failures [24]. Studies have shown that self-efficacy is not correlated with the prevalence of dental fear [25,26]. The correlation between self-efficacy and avoidance of dental care is unclear. Skaret et al. [25] found no correlation when self-efficacy was measured on a general self-efficacy scale, while Bernsen et al. [26] found that coping strategies related to self-efficacy predicted avoidance of dental care when a specific questionnaire for dental coping strategies was used. In this study, self-efficacy was a consistent theme when the informants described both failures and success.

The descriptions by the informants of their dental care situations before completing the dental fear programme were similar to those given in previous studies [7,10]. Experiences of traumatic dental care, powerlessness and unsupportive dentists were common reasons for the onset of dental fear, and perceived unpleasant behaviour on the part of the dentist played a significant role. The consequences of dental fear in relation to overall quality of life as described in this study were also in agreement with other studies: dental fear leads to embarrassment, shame and poor self-esteem [8]. Avoidance is a general finding in studies of dental fear, and in our study it was one of the inclusion criteria for taking part in the dental fear programme. The positive effects of successful therapy, expressed by the informants as "*a dream*

come true" and "*I feel beautiful*", have previously been described by Berggren and Carlsson as a result of dental fear therapy [27]. However, we also found that individuals who did not manage to pursue regular dental care after the programme had further negative experiences after the programme and developed new reasons for feeling ashamed.

Only one of the informants had not been to a dental care clinic at all after the programme. Translating this result into a quantitative measure would indicate a success rate of 93% in relation to an outcome of attending a dental care clinic at least once after completion of the dental fear programme. Only six of the 14 informants, however, reported that they had regular dental care appointments 2–4 years after completion of the programme. Another four had regular care for some time but then relapsed into avoidance. When the rate of success in relation to treatment of dental fear is calculated, a common outcome in quantitative studies is at least one post-treatment dental appointment. In a meta-analysis of 38 studies of dental fear treatment with behavioural methods, the mean long-term attendance (>4 years after treatment) was 77% [15]. Hakeberg et al. [14] reported that 92% of individuals who had attended behavioural therapy stated 10 years after the completed programme that they had regular dental care. Our study shows that a qualitative approach gives a deeper understanding of people's ability to maintain dental care after completing a dental fear programme. Finances were given most frequently as the reason for not attending dental care regularly. This finding is in line with other studies showing that dental fear is more common among people with low socioeconomic status [7,28]. Another frequently given reason for not attending dental care was that one's fear was either still present or had returned, and several individuals describe having coped very well with their dental care when they were treated by the dentist in the programme, but that they did not have confidence in other dentists afterwards. Attachment to a certain dentist is a risk associated with the ability to maintain regular dental care.

One might ask whether we selected the right individuals to interview in our study. Did we choose individuals who had been successful in relation to the treatment programme? The distribution of women and men was not equal but is in line with the reported prevalence of dental fear concerning sex [1]. In 2007, more than twice as many women than men received subsidized dental fear treatment in Sweden [17]. The mean age of the informants in this study was 48 years, making them older than the 'average' dental fear patient [1]. Assessment of effects of the therapy was made by registering post-treatment DAS rating, as described by Berggren and Carlsson [18].

All informants stated that they felt the dental care personnel in the programme had played a positive role, while their opinions about the role of the psychologist varied. All those who said that they had appreciated the psychologist also managed successfully to maintain regular dental care after the programme, indicating that this appreciation was also relevant to positive results. However, some of the informants who were of the opinion that the contributions of the psychologist were not essential to successful treatment also managed to maintain regular dental care afterwards. A majority of the informants (9/14) were unable to clearly describe the content of the dental fear programme. It is common that people with dental fear only have a vague idea of what their fear involves, and have difficulties in describing their experience in words [29]. The ability to provide a specific description of the nature of one's fear may be important to success. Thus increasing participants' understanding of the rationale of the dental fear programme might have improved the treatment results. Perhaps participants in behavioural therapy ought to receive written, individual summaries of the practical goals they have attained and what they have learned in the programme. It is important that the patient acknowledges that the dental fear programme is only a beginning and that he or she must continue to carry out exposure to the phobic situations in order to maintain the effects of treatment, as in the case of one-session treatment for specific phobias, as outlined by Öst [30]. This exposure includes frequent visits to the dental office as well as exposure to thoughts and feelings about dental care. It is unclear to what extent this has been a clear part of the rationale.

Several of the informants stated that after they had been through the programme they experienced improved behaviour in the dentists they had met. One explanation could be that the dentists responded to the informants' greater confidence and their ability to guide the treatment to their satisfaction. The informants had learned to be more active during treatment, using the controlling techniques that had been introduced during the programme. The dental care personnel did not have to be perfect, but it was essential to success that the informants were convinced that the personnel were willing to do their very best. For these patients, fear is never far away, and the ability to keep it at bay is highly tenuous. Since this is a qualitative approach, the study design does not allow conclusions about the general efficacy of the treatment programme given within the regular public dentistry service in Uppsala. However, the fact that so many of the informants still did not manage to attend regular dental care after the follow-up period leads us to conclude that improvements in methods used in the care of patients with dental fear are needed. Unfortunately, the frequently mentioned statement that finances were the most important reason for not

attending dental care implies a clear limitation of the opportunities for the dental care personnel to impact on improved attendance.

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