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## TREATMENT OF SEVERE DENTAL PHOBIA WITH SYSTEMATIC DESENSITIZATION: CASE STUDY

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### ABSTRACT

A recent dental health survey in the UK estimated that approximately 11 per cent of adults suffer from dental phobia. Patients with phobic anxiety tend to exhibit avoidance behaviour and this can have serious implications on quality of life. Avoiding dental treatment for long periods of time may lead to a number of dental complications including chronic pain, poor dental hygiene, tooth decay, periodontal disease, mouth sores and tooth sensitivity. The following case study illustrates that systematic desensitization, both *in vitro* and *in vivo*, is extremely effective in the treatment of a severely phobic lady in her early thirties. At the start of treatment, the patient was unable to contemplate booking an appointment even to have her teeth cleaned by the hygienist; after fifteen sessions, however, she was able to book an appointment, have her teeth cleaned and examined. Finally, she agreed to IV sedation in order to have root canal treatment and to remove an upper molar. At the six-month follow up, she reported that she had improved still further: she was able to use self-hypnosis to reduce her anxiety and felt that she could utilize her newly-acquired coping skills to have dental treatment in the future, with or without sedation.

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*Key words:* dental phobia, systematic desensitization, now deeper

### INTRODUCTION

Epidemiological studies (Magee et al., 1996; Kessler et al., 2012) have indicated that specific phobias, in general, are more common than other psychiatric disorders, and lifetime prevalence rates seem to be above the 10 per cent mark (Kessler et al., 2012). Further studies have documented a range of concomitant problems associated with specific phobias including physiological and psychological impairment, distress and depression (Wittchen et al., 1998; Becker et al., 2007). In addition, longitudinal epidemiological studies have suggested that specific phobias in general are developed early in life and often precipitate the onset of depression and substance abuse in adolescence and in early adulthood (Wittchen et al., 1998; Essau et al., 2000). There are a number treatment options available for specific phobias and these include systematic desensitization (Gelder & Marks, 1968; Kraft & Kraft, 2004), *in vivo* exposure (Barlow et al., 1969), flooding (Gelder et al., 1973), exposure combined with modelling (Öst, 1996; Götestam, 2002), cognitive behaviour therapy (CBT) (Mansell & Morris, 2003) and eye movement desensitization and reprocessing (EMDR) (De Jongh et al., 2002).

According to the DSM-5 classification (American Psychiatric Association, 2013), dental phobia, is a specific phobia, situational subtype. A recent Adult Dental Health Survey in the UK (Humphris et al., 2013) estimated that 11 per cent of people in this country suffer from this condition. Phobic individuals normally exhibit avoidance behaviour and this can have serious implications on psychological well-being (Kraft, 2013). In addition, avoiding dental treatment for a period of time may lead to dental pain, poor dental hygiene, and a range of dental complications including tooth decay, periodontal disease, mouth sores and tooth sensitivity (Klepac, 1975; Hmud and Walsh, 2009). This, in turn, can have a deleterious effect on social relationships and quality of life (Mehrstedt et al., 2004; Kani et al., 2015).

There are a number of triggers that set off a fear response in dental-phobic patients: some individuals are simply unable to visit the dentist, and the mere thought of entering the surgery and sitting in the waiting room causes a great deal of anxiety. For others, there are various triggers that cause additional anxiety: these include, the sound of the drill, smells, and dental surroundings (Oosterink-Wubbe et al., 2008). Often these triggers are associated with one or more traumatic incidents in childhood; indeed, De Jongh and colleagues (2003) reported that 87 per cent of patients with high levels of dental anxiety had had one or more traumatic incidents in the past, and many attributed their fear to these early events. In addition, it was revealed that 46 per cent of these patients also suffered from one or more symptoms of post-traumatic stress disorder (De Jongh et al., 2006).

The use of systematic desensitization has been reported as being extremely helpful in the treatment of dental phobia and needle phobia (Krop et al., 1976; Gow, 2006; Coldwell et al., 2007), but, surprisingly, very few case studies have reported its efficacy specifically in the treatment of dental phobia. Systematic desensitization is a technique which helps patients gradually to gain more control of their fears. Marks (1987) reported a number of cases of phobic anxiety and reported that repeated exposure to a feared situation in a safe environment led to a reduction of fear. Using a graded hierarchy of potentially anxiety-provoking stimuli, the therapist gradually introduces the patient to comparatively easy scenarios, and gradually increases the severity step by step. This is particularly helpful in hypnosis because the patient experiences the feared stimulus while in a state of relaxation, and, as these situations are rehearsed, the patient unconsciously pairs the potentially fearful stimulus with relaxation. The efficacy of the treatment programme is enhanced with in vivo desensitization (Wolpe, 1958; Kraft and Kraft, 2010).

## TREATMENT MODEL

The following treatment model is an example of how systematic desensitization can be used in the treatment of phobic anxiety: specifically, this treatment paradigm incorporates the use of in vitro and in vivo desensitization, as well as the use of self-hypnosis.

### SESSION 1

History taking; short-, mid- and long-term goals; agreeing on a 'Selective Units of Disturbance Scale'/'Desensitization Hierarchy' (SUDS) (Wolpe, 1990); discussing in vivo exposure work (in this case this involves getting closer to going to the dentist); desensitization in hypnosis working on Scenario 1.

## SESSION 2

More history taking and psychotherapeutic support; teaching self-hypnosis and working towards Scenario 2; assigning the regular use of self-hypnosis to work through the hierarchy of potentially anxiety-provoking scenarios; use of the 'now deepener'.<sup>1</sup>

## SESSIONS 3–15

Psychotherapeutic support and ego strengthening; working through desensitization hierarchy step by step, and at the patient's pace so that (s)he is able to achieve the final stage in relaxed conditions; gradually getting the patient to walk closer towards the feared stimulus in vivo (in dental phobia this means walking closer to the dental surgery and being able to sit in the dentist's chair, booking an appointment and having teeth cleaned).

## CASE STUDY

Eileen was an intelligent and highly driven professional lady in her early thirties with a deeply-entrenched dental phobia. In the first session, she sat down to explained that, although she had a supportive husband, and that she was confident in all other areas of her life, she was terrified of the thought of going to the dentist, so much so that she could not even bring herself to walk down the same road as the surgery. Immediately, as she sat down, she began to cry. The author asked her about the origin of her phobia, and Eileen focussed her attention on an experience, aged 10. She described the dentist as someone who was cruel and unkind. She asked whether her mother could come into the surgery but the dentist unkindly told her that this was not possible. The patient described, in great detail, the appearance of her tormenter – in particular, his big hands. During the treatment, she asked him again whether her mother could come in and join her and he, again, said that she couldn't. She described the whole procedure as being painful with, 'lots of things in her small mouth'. Eileen also pointed out that, since then, she had never enjoyed going to the dentist's and that, from time to time, her gums had become so sore that she regularly needed to take antibiotics – specifically, metronidazole – to clear up the infection. Indeed, her husband had noticed the severity of this avoidance behaviour.

After the initial interview, the author spent some time talking to Eileen about the hypnosis. This was an important part of the therapy as it was necessary to point out to her that, unlike her experience with the dentist as a child, she would be in control of the procedure. We then decided that we would use systematic desensitization to help her gradually to be able to have dental treatment; in addition, the author said that he would find a suitable dentist who was used to working with anxious patients. We agreed on this combined approach and, although we did not put a time frame in place for the therapy, we had clearly set out the treatment aims.

In the hypnosis, Eileen described her special place which consisted of her spending time at the family home. The author invited her to watch a television programme of herself, aged 10, going to the dentist; however, it was pointed out to her that, at all times, she would be in control of the process and that she could use the remote control to stop the film at any time. At this point, she was given time to describe the process, and she did so in great detail. At all times during this procedure, the author reinforced the fact that she was only watching a programme of this experience and that she was safe at her parents' house; and yet, Eileen did abreact to these unpleasant scenes. The abreaction was utilized as follows:

*I notice that, in the safety of your special place, and while looking at this television programme, that you are experiencing some discomfort ... and that is perfectly natural... I wasn't perhaps expecting that... but, nevertheless, it is a healthy way of releasing emotion... but we all know that we can learn from these experiences... and, no doubt, you will have benefits from this release immediately, in a few moments or over the next few hours or days.*

At this point, the author asked Eileen to press the stop button and to return experiencing the comfort of her special place. She then continued to visualize the scenario in dissociation: throughout the procedure, Eileen was given suggestions that the television programme would provide her with insights into how to resolve her phobic anxiety.

In the next part of the session, the author suggested to her that she imagine a perfect dentist – someone who was kind and considerate – and asked her how he might have acted differently and how this might have affected the scenario. She said that her mother should have been allowed into the surgery and that this would have both affected his behaviour and reduced her anxiety; in addition, the process should have been done when she was ready, and at her pace. The author explained that, in fact, a good dentist takes his lead from his patients and should continuously ask for feedback. Eileen was then given the opportunity to watch the programme again. On this occasion, she had control over the pace of the treatment using the remote control. She also visualized her mother being present and observing a marked change in the dentist's behaviour.

When Eileen came for her second session, the author pointed out that he had found a highly qualified and experienced dentist that she could ring when she was ready to go on to the next stage. I gave Eileen the name of a really good dentist in London – someone recommended by the British Society of Medical and Dental Hypnosis (BSMDH) in Scotland. I told her that she should contact him when she was ready to arrange an appointment. I also thought that it would be a good idea to have a look at the British Society of Clinical and Academic Hypnosis (BSCAH) website and to ring the dentist up to tell him that she would be arranging an appointment at some point in the near future. We discussed the importance of the task in relation to the desensitization process. She commented that she felt that there was a part of her that was rational and that another part was fighting against this. She wanted to know whether this was normal or not. I re-assured her that I had come across this before. At this point, we devised a graded hierarchy of anxiety provoking stimuli, as follows:

1. Walking to the dentist's and picking up some mouth wash
2. Meeting the dentist
3. Ringing up for an appointment
4. Going to the dentist for a check up
5. Sitting in the dentist's chair
6. Having her teeth cleaned
7. Having an injection
8. Undergoing an operation

In the hypnosis, I took her to her special place which was again at the family home. We looked at Scenario 1, and she visualised walking to the dentist with her husband, Anthony. We

then went onto the second task, which consisted of going to talk to the dentist. Again, this was all done while holding Anthony's hand. The author then asked her to imagine ten dentists in front of her and she was given the opportunity to pick the best dentist for her. She commented that he or she would have to be the kindest one. I asked her to choose the kindest dentist out of the ones in front of her – indeed, it was important that she felt that she had control over her choice of dentist. However, she became distressed about this task because she said that she couldn't see his face. After a brief moment of reflection, I gave her some ego strengthening and told her that there was one dentist in front of her who was kind and that she knew who it was. At this point, she said goodbye to the other dentists and they walked off into the distance. She then sat down with the dentist and had a conversation with him. She found this difficult although she was able to do it. After the disengagement, she pointed out that her rational brain was getting more and more frustrated about the fact that she was finding this task so hard. Thus, the end of the session required a great deal of ego strengthening and reassurance.

At the beginning of the third session, Eileen was again quite stressed when talking about going to the dentist's, although she said that she felt that she was in a better place than before. This was an extremely productive session which focused on providing Eileen with coping strategies to reduce her anxiety. After the induction and deepener, I asked her to watch a television screen; next, she was encouraged to imagine watching someone who was confident with dentists and to watch him or her undergo successful treatment. She chose her husband, Anthony, for this job. She watched the programme and I reiterated that she could turn the television set off at any time. Having watched the programme again in black and white, she sat in a cinema and watched a film of her husband going to the dentists and then being successfully treated. She drifted up to the control booth and then watched the programme again rewinding the tape when appropriate. I then allowed her to watch herself in the film as she sat in the control booth. I said that she could stop the tape at any time and, at this point, she said that she was only able to watch herself having her teeth cleaned.

Next, having returned her to her special place, which consisted of being back at the family home with her husband, I asked her to imagine being in an armchair and watching a programme of her sitting in the dentist's chair. Her anxiety level was at 5/10 on a scale in which 10/10 denotes extreme anxiety and 0/10 no anxiety whatsoever. I reiterated that she could stop the programme at any time and then asked her to increase her anxiety level to 5.5/10. She did so. I then said that, 'Just as you can increase your anxiety levels at will, so you can reduce them'. Using progressive muscle relaxation (Jacobson, 1938), she was able progressively to reduce her levels of anxiety to 2/10. I then followed this with ego strengthening and suggestions that this good work would have positive effects both unconsciously and consciously over a period of time, that her anxiety would reduce and that her confidence would build.

When Eileen came for her fourth session, she commented that she had made some significant progress during the week, and, the fact that she had been able to visualize sitting in the dentist's chair was a 'minor miracle'. I asked her what she wanted to do today. She said that she would like to continue with the progress of getting desensitized to her fear, and we decided to focus on getting her teeth cleaned, rinsing her mouth and the 'tickling sensations' (Lang, 2012) of the brush on her gums.

After a simple magnetic induction and staircase deepener, I took her to her special place which she described simply as 'home'. From there, I asked her to imagine filling a glass with special water – the water consisted of a liquid full of energy and confidence. I then asked her to drink as much of this drink as she could before focusing on the television screen. Here, in front of her, she watched a programme which consisted of Anthony going to the dentist's and having his teeth cleaned successfully and then leaving at the end. She watched the programme twice, first in colour and then in black and white. Next, I asked her whether she would be able to watch a short film with her taking the leading role. She said that this would be possible, and then watched the programme.

In the second part of the hypnotherapy session, I asked her to imagine sitting in a cinema. Again, using a double dissociation technique, she visualized watching herself watching herself on the screen. However, I first asked her to watch Anthony get his teeth cleaned in the film, and then asked her to watch herself watching herself on the cinema screen. When the dentist began to clean her teeth at the back, she became a little distressed. I stopped the visualization, gave her some ego strengthening, and then asked whether she wanted to continue; she confirmed that she did. So, I asked her to imagine the rest of the treatment without describing it to me. I felt here that the process of describing the operation to me had its benefits but, at this point, she just wanted to finish the procedure. I concluded with some more ego strengthening which focused on her abilities to have dental treatment in the near future.

At the beginning of the fifth session, Eileen was very distressed and this session turned out to be a psychotherapy session. Eileen mentioned that she had had another flare up and her gums had got very swollen. She also stressed about the fact that she knew that there was an inevitability about having dental surgery and this made her feel very anxious. Indeed, she felt that she had made some progress with me but she had now lost some control, and I pointed out to her that this was like the time she lost control at the age of 10. She said that her husband had to telephone up for an appointment with the dentist; however, he was not free until next Tuesday. She felt that she really wanted to talk to him about the possibility of sedation and a realistic time plan. And, in order to provide her with more control of the situation, we came up with the following plan:

1. To ring her GP for an emergency appointment and to explain the specific situation.
2. To do hot salt water mouth washes four times a day
3. To ask her GP for antibiotics to clear up the infection

During the week, Eileen telephoned me to say that she eventually got some antibiotics to clear up the infection in her mouth. When she sat down at the beginning of Session 6, she smiled and said to me that she had had an eventful week. She said that Anthony went with her to see the specialist dentist. She allowed him to examine her mouth and they both decided that, when it comes to the operation, she should have an intravenous injection (IV) before the procedure. She was a bit unsure about this and felt that she needed to ask him some more questions before making the final decision. She said that she had transferred her worries regarding going to the dentist to feelings of anticipation about having an injection. We practised reducing her anxiety with the 'now deepener' and I taught her how to do this. We also practised visualizing having a small injection, and, after each occasion, I returned her to her special place.

Eileen looked significantly more relaxed and confident when she arrived for her seventh session, and this she put down to the fact that she had practised the now deepener regularly and had, perhaps for the first time, talked to her husband about her dental phobia. I asked her what she would like to do today. She said that she would like to look at the next stages of treatment – that is to say, ringing up for an appointment, going to the dentist, sitting in the dentist's chair and then having the injection. She felt that this would be enough for today. She said that being asked to look at the television screen made her feel worse because she had to look at herself having the operation, and so, we agreed that she should visualize being in the dentist's chair and having an injection.

I gave her the opportunity to practise the now deepener on her own after the magnetic field induction. Eileen then imagined a path which represented an appropriate and effective way forward for her problem; and, indeed, she was given the opportunity to walk down the path at her own pace. At the end of the path, Eileen gave me an ideomotor signal and this was followed by a great deal of ego strengthening. The next stage of the treatment consisted of using the now deepener, practising ringing up for an appointment and reducing her anxiety to 2/10. She then practised walking to the dentist, waiting in the waiting room and then sitting in the dentist's chair. We did this together and she said that her anxiety level was at level 6. Using the now deepener still further, we practised reducing her anxiety over several trials. Again, she managed to reduce her anxiety to 2/10 or 3/10. Finally, we practised having an injection which I described as 'like giving blood'. We did this twice and she was able to cope with the needle in her arm first for five seconds and, then, for seven seconds. I completed the hypnotherapy with a recapitulation of the path metaphor. On this occasion, however, I asked her to experience the sensations of being recovered.

Eileen was clearly distressed during most of Session 8. Her father-in-law had just suffered from a stroke and this had had a deleterious effect on the family dynamics. For the most part, this session focused on helping her come to terms with this event, although some time was spent desensitizing her to having an injection at the dentist's.

Over the next two appointments, Sessions 9 and 10, Eileen resisted telephoning the dentist for an appointment. In Session 9, Eileen pointed out that she felt as if there were a conflict inside of her body. She went further to say that she felt as if there were two Eileens – one which represented her 'rational side', and the other, her 'irrational side'. We addressed this conflict, in Session 9, using a variation of the clenched fist anchor (Stein, 1963; Stanton, 1988). She was encouraged to clench both fists; however, one fist represented her 'rational side' and the other her 'irrational side'. I asked her to make her 'rational side' much stronger and to clench her fist on that side, while the other became more relaxed. I then asked her to have a conversation with her rational and irrational side. This caused an abreaction. She began to weep when she talked about her at the age of 10. Although she was distressed, and it was certainly not intentional to cause this upset, this approach, nevertheless, helped her to gain a considerable amount of insight into the origins of her phobic anxiety. I then asked her to practise going to the dentist and having the work done in three stages as follows:

1. Going to the dentist and sitting in the waiting room
2. Experiencing having the work done including the sedation
3. Going home and feeling pleased with herself

In Session 10, we practised these scenarios again and again, reducing her anxiety from 8/10 to 3/10.

During the ensuing week, I received a text message to say that she had finally booked an appointment with the dentist. Clearly, from her body language, she was much more confident generally in Session 11. She described the process of going to the dentist as being 'like climbing a mountain' – that is to say, a task which seemed to be insurmountable. She then said that she tried to put things into perspective to tell herself that it was only an hour of her life. She described this one hour as being 'like a box'. In the hypnotherapy, I utilized these metaphors. I asked her to visualize the mountain getting smaller and smaller and moving into the distance. I asked her to put it in the box safely. I then used a red balloon visualization, an approach adapted from Walch (1976): she was asked to put all her anxiety into this balloon and to watch it float into the distance. Next, we tackled going to the dentist and having the work done. We did this several times and she got her anxiety level down to 2. I asked her to act as if she were confident and relaxed and she said that she would try. I asked her to imagine her confident and rational self to get stronger inside of her. She didn't manage it the first time and she laughed; however, she managed it the second time. This was the first time in the hypnotherapy that she hadn't abreacted.

At the next appointment, Session 12, we focused on consolidating the progress which had been made in the last session. And in Session 13, Eileen wanted to come to terms with some other problems she had had at work. It was interesting that she revealed that, during a work function at an adventure park, she had been the only employee who had completed all the horrific climbing and hanging tasks. We utilized this information in the ego strengthening exercise at the end of the session. She also repeated the mantra, 'I can do this' at various points during the session. During the discussion, Eileen talked about the fact that the dental surgery was looming and that this was affecting her stress levels; fortunately, she had a work event the night before the dental appointment, and she felt that this was important in that it would take her mind off the next day.

During the week, I got a text message to say that the whole event had been a major success. We spent the beginning of her fourteenth session talking about the actual event. She had a successful evening the night before in which she had won at the boat racing. The next day, she was understandably apprehensive, and yet she felt that she went into 'automatic pilot'. She had a minor attack of panic in the toilets at the dentists, but she managed to deal with it using relaxation techniques, the now deepener and positive suggestions, including the 'I can do this' mantra.

In the fifteenth session, which turned out to be her last, we practised going through the sedation process, having a check up, extractions and root canal and her anxiety levels varied from 0/10 to 3/10. Afterwards, we agreed that we should think about going to the dentist's strategically. Eileen said that she now had the skills to be able to book dental appointments on her own as well as have the necessary treatment. She felt that, at present, she still required sedation but that, using her newly acquired skills, she could work towards being able to have dental work with a simple local injection. And, further, at the sixth month follow up, Eileen confirmed that she felt completely in control with regard to going to the dentist and said that she no longer required additional assistance.



## COMMENT

This case study illustrates that the combination of systematic desensitization with hypnosis is a highly effective treatment for dental phobia. The patient, who was unable to think about the possibility of going to visit the dentist's, made a remarkable recovery and this was maintained at the follow up. The treatment also gave her the skills to be able to ring up the dentist for future appointments, and to reduce her anxiety using self hypnosis.

During the course of treatment, the author spent a great deal of time talking to dentists who use hypnosis in their practices – specifically clinicians registered with The British Society of Medical and Dental Hypnosis (BSMDH) in Scotland and the British Society of Clinical and Academic Hypnosis (BSCAH). What became apparent was that all of the dentists seemed to be working with anxious patients, some of whom were phobic. They all stressed that it was important for the dentist himself to treat the patients and reduce their anxiety *in situ*. Indeed, the common consensus – an opinion with which I am in total agreement – was that a dentist is only doing his job properly if he is able to put the patient at ease, build rapport and reduce anxiety before treatment. In short, dealing with dental anxiety is as much part of the job as surgical procedures. However, it is important to note that these opinions come from highly experienced dentists who have been using hypnosis in dentistry for many years. It was also clear that, with few exceptions, these experienced dentists used hypnosis informally throughout the dental appointment and that the care began in the waiting room and continued throughout the dental procedure. From the discussions, it seemed that it was rapport that was the most important factor in the successful treatment of these individuals, and that, in addition, positive expectation had a beneficial effect on treatment gains. Thus, the more dentists are able to develop their hypnosis skills – both formally and informally – the better chance we will have in successfully treating anxious patients.

However, it is important to take into consideration the fact that some patients are so phobic that they are unable to visit the dentist, and in these cases, it is important to go to a therapist in order systematically to reduce anxiety and to develop the skills and coping strategies to deal with the problem. It is, then, recommended to find a dentist who is trained in hypnosis and is used to treating anxious patients. This case study is an example of a lady whose dental phobia was so severe that she was unable to even pick up the telephone to book an appointment. It illustrates the benefit of treating the phobic anxiety and preparing the patient for all the stages of treatment. Furthermore, it has also shown that a combined approach – which utilizes psychodynamic principles, systematic desensitization, hypnosis, comfort talk and coping strategies – is highly effective in the treatment of dental phobia.

## NOTE

1. This simple technique involves the therapist saying the word 'now' very softly and with a breathy tone (see Kraft, 2016). The word should be said slowly and should last for approximately four to five seconds. The repetition of this word immediately facilitates a deepening effect on relaxation. The patient can then utilize this sound, like a mantra, whenever tension levels are high.

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