DENTAL ANXIETY IN PATIENTS ATTENDING FOR TREATMENT BY A DENTAL HYGIENIST (STUDY 1)

Ellie Kani

Two studies (Study 1 and Study 2) have been undertaken to identify the characteristics of dentally anxious patients attending a primary dental care practice, using different measures. The purpose of this work is to help dental hygienists and therapists recognise dentally anxious patients and adapt their treatment to suit. Both studies are based on the outcome of an IADR poster presentation “Dental anxiety of patients attending for treatment by dental care professional” Boston, 2015.

Introduction

The mouth is a physiologically and psychologically a highly sensual area of the body. Dental treatment and the surrounding dental environment may elicit negative cognitions and behaviours among some patients, leading to anxiety and long term negative implications and avoidance for these individuals. To treat or prevent dental disease successfully we require the development of special communication skills and an ability to provide reassurance, personal care and comfort. Honing these skills will improve an anxious patient’s satisfaction with treatment as well as provide them with high quality dental care.

Aim

The aim of this study is to characterise the levels of dental anxiety in new and existing patients in relation to their attendance for treatment by a single dental hygienist in a primary dental care practice.

Setting

A survey of a consecutive series of 100 patients (50 new patients (NP) and 50 existing patients (EP)) took place in a primary dental care setting in London. The study was conducted between July 2014 and January 2015. The study was reviewed and approved by the Research Ethics Committee of Kings College university of London. The survey was confidential and the informed consent of each participant was obtained.

Subjects and methods

To assess the level of dental anxiety in new and existing patients two separate sets of questionnaires were used. The questions were based on demographics, self-reported oral health, dental attendance and dental fear. Patients were approached and questioned by a member of staff while waiting to be seen by the dental hygienist. All 100 participants then received their dental hygiene treatment from a single dental care professional.

For both groups of patients (new and existing) they were informed: “We hope that by finding out why people are anxious about coming to the dental surgery we will be able to improve our service.” Or, if the patient advised that they felt no anxiety about attending for treatment, they were told : “You might not be very anxious yourself but we plan to compare results with people who are dentally anxious.”

This work (Study 1) is based on the responses of the new and existing patients to the following questionnaires:

• Demographic information (gender, age)
• Self-reported dental attendance, visiting the dental hygienist (5 point Likert-like scale ranging from every “3-6 months” to “Never”)
• Self-reported dental attendance visiting the dentist (5 point Likert-like scale ranging from every “3-6 months” to “Never”)
• Self-reported Modified Dental Anxiety Scale, MDAS

The dental anxiety and avoidance of dental care was then assessed accordingly. The data was edited and analysed using SPSS (Statistical package for the social sciences, version 21).

Main outcome measures

The effects of dental anxiety described in this study use the theoretical model of participants with high dental anxiety levels evaluating less regular dental care or even avoidance of dental treatment.

The study, reviewed the most commonly used assessment instrument for dental anxiety and phobia known as the Modified Dental Anxiety Scale (MDAS).

MDAS is a modified version of Corah’s Dental Anxiety Scales. The MDAS is a five-item measure assessing anticipatory anxiety associated with an imminent dental appointment, fear of dental cleaning and drilling and fear of dental anaesthetic injection. The original DAS scale was modified by the addition of the dental injection item and the response format for each item was modified to comprise a five point response from “not anxious=1”, “slightly anxious=2”, “fairly anxious=3”, “very anxious=4” and “extremely anxious=5”. The total scores on the MDAS range from 5 to 25. Previous research has established a cut-off of 19 or higher as indicative of a phobic level of dental anxiety. The MDAS has good psychometric properties – correlating well with other self-reported measures of dental anxiety and demonstrating high levels of internal consistency. In addition, the inclusion of the MDAS in the most recent Adult Dental Health Survey (2009) means those population norms for the scales are now available. The scale has been recommended as a model of the assessment of dental anxiety in clinical settings. The scale was significantly correlated with avoidance of dental procedures in an internationally diverse sample.

Results

Fifty consecutive new patients visited the dental hygienist for the first time, and 50 existing patients, who had visited the dental hygienist for at least two or more visits, participated in the study. The participants’ demographics are shown in table 1. The mean age of new patients was 42 years (SD 12.6, range 17 to 80 years) and the mean age of existing patients was 54 years (SD 14.5, range 22-82 years).
In response to self-reported attendance, there was a difference in the two groups. Almost 14 percent of new patients only attended the dental surgery in an emergency and 7 percent of the patients had never been to dental hygienist before, whereas on average, 79 percent of existing patients regularly attended two or more visits to the dentist or hygienist in a year (Table 2).

<table>
<thead>
<tr>
<th>50 New Patients</th>
<th>50 Existing Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td><strong>Number of participants/%</strong></td>
</tr>
<tr>
<td>Male</td>
<td>18 (36%)</td>
</tr>
<tr>
<td>Female</td>
<td>32 (64%)</td>
</tr>
</tbody>
</table>

Table 1 represents the demographics of participants

<table>
<thead>
<tr>
<th>Attendance schedules</th>
<th>3-6 months</th>
<th>6-12 months</th>
<th>2-5 years</th>
<th>Emergency only</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>New patients % of attendance</td>
<td>Dentist</td>
<td>4.5</td>
<td>61.4</td>
<td>20.5</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td>Hygienist</td>
<td>4.5</td>
<td>48.8</td>
<td>27.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Existing patients % of attendance</td>
<td>Dentist</td>
<td>12.5</td>
<td>87.5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Hygienist</td>
<td>27.5</td>
<td>70</td>
<td>2.5</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2 represents the percentage of dental attendances to dentist and dental hygienist among new and existing participants.

According to the result (Table 3), the total mean score on the MDAS was calculated: the new patients 12.76 (SD: 5.78) and existing patients 10.96 (SD: 3.71). A large proportion of the new participants (14.2 percent) scored 19 or above for dental phobia, being extremely anxious, in comparison to no respondents in the existing patients group scoring above the cut-off point.

In both groups, patients represented greater anxiety related to two major dental treatments: having a tooth drilled (NP 44 percent and EP 29 percent), having local anaesthetic (NP 36 percent and EP 20 percent). In both dental treatments pain and discomfort is inevitable. Pain related to these treatments is a subjective personal experience which cannot be measured accurately. Importantly, 24 percent of NP were extremely anxious, if they had to visit the dentist the following day which clearly explains more about anticipation and avoidance behaviour of the patients towards dental treatment. Feelings of shame and embarrassment of their teeth would lead to anxiety and reinforced avoidance. They often avoid dental care thereby compounding the problem and increasing the likelihood that subsequent dental visits will be for emergency reasons. In contrast none of the existing patients were anxious about attending the dental surgery the next day.

<table>
<thead>
<tr>
<th>Modified Dental Anxiety Scale</th>
<th>Proportion of individuals reporting being extremely anxious about the item (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If you went to your Dentist for treatment tomorrow, how would you feel?</td>
<td>New patients</td>
</tr>
<tr>
<td>2. If you were sitting in the waiting room (waiting for treatment), how would you feel?</td>
<td>12 (24%)</td>
</tr>
<tr>
<td>3. If you were about to have a tooth drilled, how would you feel?</td>
<td>22 (44%)</td>
</tr>
<tr>
<td>4. If you were about to have your teeth scaled and polished, how would you feel?</td>
<td>8 (16%)</td>
</tr>
<tr>
<td>5. If you were about to have a local anaesthetic injection in your gum, above an upper back tooth, how would you feel?</td>
<td>18 (36%)</td>
</tr>
<tr>
<td>Total Mean (SD)</td>
<td>12.76 (SD:5.78)</td>
</tr>
</tbody>
</table>

Table 3: Responses to the Modified Dental Anxiety Scale by New and Existing patients.
Dental anxiety is still a barrier to many patients. In contrast, the existing patients’ attendance behaviours were clearly emergency. Five years while, on average, 13 percent would only attend in a dental percent of the new participants would seek dental help every two to have led to avoidance behaviour. In this study, on average, over 24 findings, the anxiety in the dental setting may be linked to pain from has helped to identify the patient’s behaviour. According to MDAS effective use of MDAS and dental history attendance via questionnaire to prevent negative anticipations, thoughts or beliefs. 13, 14 Therefore motivating these patients throughout the dental anxiety reduction journey and a good partnership with a dental hygienist can instigate behavioural changes and result in an increased dental attendance. 2 The experience of pain with repetition and anticipation could be an example of negative behaviour reinforcement. 9, 10 Encouraging and increasing desire in patients to take control of their treatment and care is a great tool to provoke positive reinforcement towards better oral health and prevention of dental diseases.

Conclusions

This small study confirms the findings of previous studies 89 that phobic behaviour leads to irregular dental attendance habits and for some patients, only attending for emergency dental treatments, will result in deterioration of their dental health. Attendance for maintenance of oral health and preventative treatment has a potentially therapeutic effect in terms of reducing dental anxiety. Mechanisms for such an effect include systematic desensitisation through repeated exposure to the feared object or situation 13, 14 to prevent negative anticipations, thoughts or beliefs. 13

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ABOUT THE AUTHOR:

Ellie qualified as dental hygienist in June 2005 from Kings College University. She has worked in various areas: general practice, holistic practice, periodontal practice, practice consulting, hospital, teaching and research.

Ellie also has an BSc (Hons) in analytical chemistry from University of London. She is currently doing research in Guy’s, King’s and St Thomas’s Dental institute on dental public health. Her goal is to achieve better oral health and prevention in oral diseases.

CORRESPONDENCE:

ek.oralhealth@gmail.com

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