Dental Anxiety, Communication and the Dental Team: Responses to Fearful Patients

Ruth Freeman, PhD, and Gerry Humphris, PhD, MClinPsychol CPsychol

ABSTRACT Dental anxiety often persists through lack of good communication skills. Dental health professionals (DPHs) can use the treatment alliance to prevent dental anxiety from developing. DPHs should assist dentally anxious patients by encouraging them to express their fears early on. The DHP is advised to acknowledge patients’ emotions, spend two to three minutes to learn about specific patient-centered issues and modify the treatment procedures accordingly. We also caution about the ineffectiveness of sedation for treating dental anxiety.

The term dental anxiety was originally coined by Coriat, who stated that dental anxiety was anticipatory, a fear of the unknown with experiences of past treatments repeated rather than remembered. In the intervening 80-year period, dental anxiety has become a major focus of dental research, and clinically, as a psychological construct, it has a clear definition and a variety of management approaches. There is some debate about the difference between dental anxiety and dental phobia. Although there is overlap with dental phobia, often considered an extreme of dental anxiety, there are distinct features of phobia (for example, avoidance) that separate phobic individuals from those who experience dental anxiety.

In the following paragraphs, we will describe the association between our understanding of dental anxiety etiology for both adults and children and the treatment strategies that are routinely used for both in dental practice. The rationale for this approach is drawn from Smith and Freeman’s qualitative exploration of adult and child patients, which demonstrated the intergenerational connection between adult and child dental anxiety.

The etiology of adult dental anxiety has been described as a direct consequence of fearful and/or unpleasant dental treatment experiences in childhood and/or adolescence. While this work pointed to the primacy of the frightening incident(s), it was acknowledged that other factors such as, for example, “vicarious learning through significant others and the media, and … factors such as inheritance and personality traits” also played an important role in dental anxiety etiology. The means of treating dentally anxious adult patients followed this formulation. Therefore, dental health professionals (DHPs) provided behavioral management techniques and/
or pharmacological techniques to help the fearful patient accept dental care. Despite research that acknowledged nondental aspects of dental fear and called for a more holistic appreciation of dental anxiety, there appeared to be an absence of communication strategies to understand the patients’ perceptions of their fears and thereby reduce their dental anxiety.11

An equivalence with regard to child dental anxiety etiology and adherence to symptomatic treatment management existed. A review of management of child dental anxiety therefore suggested that there was a focus on conscious sedation and dental general anesthesia. This work, however, did not provide strong evidence for reducing child dental anxiety and suggested that the research suffered significant bias.12 Dentally anxious children who received general anesthesia found it frightening and unpleasant, “being scared/worried and experiencing discomfort from the IV cannula.”13 Relief that the dental problem had been resolved and attention received from the mother were regarded as the possible positive aspects in a procedure that parents and dental professionals wished to avoid. A five-year follow-up of children treated with dental general anesthesia found some evidence of return to routine dental care but there was no evidence that the child’s dental fear had been resolved. This was a disappointing conclusion and indicated that researchers and DHPs had, as they did with adults, concentrated on symptom removal and had misinterpreted the psychological pathways giving rise to child dental anxiety.14 Support for this proposition is found in a detailed study of fearful children. This work showed that children’s dental anxiety was not simply a result of dental treatment experience but a consequence of factors related to the child’s fears of separation, harm and helplessness. The child’s anxiety connected to the actual experience of dental treatment fed these internal dangers. Of central importance in this formulation was not the invasiveness of the dental treatment intervention, per se, but how it was interpreted by the child in accordance with their degree of psychological development together with their fears of separation, harm and helplessness. Such formulations as the above are instructive for DHPs if they are to form a treatment alliance and manage the child who presents with dental anxiety.15 Therefore, attempts to reduce the invasiveness of dental treatments for children with caries may or may not have the wished-for advantages in reducing anxiety for children with dental fear.16

However, communication interventions to reduce fears of the unknown have been demonstrated to reduce child anxiety and encourage treatment.17 A mapping of systematic reviews in children’s dentistry, moreover, has produced few straightforward answers to community organization of services and calls have been made for high-quality research studies to improve our knowledge.18

Thus, alternative, more patient-centered approaches are necessary for both adults and children. For adults, there is a need for “realistic dentistry”19 as applied in the medical service sector, to promote effective communication between patient and clinician and patient-centered clinical decision-making. Such patient-centered approaches as the use of internet cognitive behavioral therapy intervention to assist dentally anxious children are a promising and alternative intervention.20 A recent example has already tested the feasibility and acceptability of such an intervention.21 Therefore, the need to place communication in the center of management strategies for dentally anxious adults and children is apparent.

Communication

Advantages of adopting patient-centered approaches22 include improved patient satisfaction with treatment, adherence to preventive recommendations, lowered litigation, reduced work-related stress and improved health outcomes. Communication is vital for patient-centered approaches. Communication is the means by which the DHP forges the treatment alliance with the patient and permits the DHP to understand the felt needs and the difficulties dentally anxious patients experience. We propose, therefore, that communication is the fulcrum of the treatment alliance, and it is through communication that DHPs understand patient fears, assist patients to cope and develop a treatment plan appropriate to the patient’s psychological and dental treatment needs. Thus, we postulate that many problems dental patients experience when interacting with DHPs “arise from issues of (poor) communication.”23

Evidence From Child Patients’ Dentistry

Studies in pediatric settings have shown that communication between the DPH and the child as well as between the parent and child critically influence the child’s anxiety level during dental procedures. Within pediatric dentistry are examples where communication between DHPs and the child patient is recognized as essential. In an early systematic review of the influence of dental staff behavior on the
young child to reduce child dental anxiety and disruptive behavior, it was found that engagement by the dentist with the child was important.24 There has been some interest in observing children’s reactions to dental treatment, for example, Versluis and colleagues25 showed that pain behavior was more visible in children on receipt of a local anesthetic injection in comparison to the Wand, a device to reduce injection pain experience, and Carson and Freeman showed that effective communication in the preparation of children undergoing dental general anesthesia reduced child anxiety.26 However, in these studies,25,26 the focus on the dentists’ verbal and nonverbal behavior was absent.

More in-depth work examining the communications within the DPH-child dyad has pointed to some interesting findings. For instance, the use of reassurance by DHPs, usually regarded as useful, was shown to have inconsistent effects within the treatment alliance. A major empirical observational study in the preschool nursery setting to improve child acceptance of fluoride varnish application concluded that the use of reassurance by extended duty dental nurses (EDDNs) to comfort preschool (aged 2 to 5) children (n = 270) and their anxious-related behavior was not successful.27 The effect was opposite of that expected — children provided with reassurance were less likely to accept the fluoride varnish application. Careful frame-by-frame analysis of video recording of the fluoride varnish intervention gave rise to a custom-made video-coding scheme (SABICS), which was developed focusing on 25 defined behaviors.28 These behaviors included information giving, reassurance, praise and permission seeking. Hence, the advantage of this coded analysis system is that it recorded event behaviors in real time, taking account of the time point within the interaction, rather than accepting reassurance reduced the nurses’ worries rather than the anxiety of the child. It may be suggested that the EDDNs misread the nonverbal communications, due to their own anxieties, and intervened too early. The communication behaviors that were found to discriminate (p < .01) in receiving a fluoride application were praise, instruction, information-giving and paying a compliment.

More recently, our research in the East of Scotland concentrated on the dynamics of mother-child interaction with the DHP. This was of importance because it is through the parent that the treatment alliance with the child is made.31 The triadic processes of communication are complex to investigate but are necessary because parents are encouraged to accompany their children into the dental office when receiving treatment. Therefore, to understand further the observations detected in the video recordings during fluoride varnish application appointments with the parent present, a new coding scheme based upon SABICS was prepared and tested.32 This new video-coding scheme, known as the PaeD-TrICS was necessary to include the behaviors and the interactions between parent and child and parent and DHP.33 PaeD-TrICS has an additional 17 behaviorally defined codes, which include dentally engaging talk, tell-show-do talk and distraction using toys. Early results are indicative of key interactions between the child and DHP where the parent has a key role in the development of the treatment alliance between their child and DHP and thus assists their child to accept dental treatment. The findings from this observational work in dental practice support our suggestion that the parent, if not too anxious, acts as a central figure in the treatment alliance between the child and the DHP. Moreover, this work provides evidence for the “case for the mother in the surgery” to enable children to accept the dental treatment that is offered by the DHP.34

Evidence From Adult Patients’ Dentistry

In a recent survey of Finnish people (n = 5,086) attending the dentist, it was found that those who were somewhat fearful of attending the dentist “felt more often that there was a deficit in communication with the dentist.”35
Our own work has concentrated on two areas: methods to assess dental anxiety and assessments of emotional talk within the dental setting. We have developed two inventories that are easy to score, interpret and use in the dental clinic by DHPs and dental educators. These simple self-report tools are the Modified Dental Anxiety Scale (MDAS) (translated into 24 international languages, see st-andrews.ac.uk/dentalanxiety) and the Modified Child Dental Anxiety Scale-faces (MCDASf) for use with children as young as age 5. These inventories have their roots in the popular Corah’s Dental Anxiety Scale. Both MDAS and MCDASf have simpler answering schemes that are more accessible for patients. In addition, they have more comprehensive item sets to attribute ratings of dental anxiety to specific treatment elements.

It is appreciated that patients may have difficulty in expressing their dental anxiety and that this can be shown in various ways. Therefore, we have worked on the issue of behavioral coding of emotional expression within dental treatment sessions. We have progressed studies that have identified dentists’ responses to explicit (e.g., crying) or nonexplicit (e.g., repeating words) emotions using an internationally recognized coding system named the Verona (VR) CoDES. Frequently, the patient provides emotional hints — known as cues in the VR CoDES system — that may be explicit or nonexplicit and tend to be more common than overt emotional expressions. Emotional expressions are defined as concerns in the VR CoDES system.

We have developed a special version of the VR-CoDES for application in the dental setting. This new version of the VR-CoDES was used to assess the emotional cues and concerns when using the MDAS at the start of the consultation. The MDAS acted as a means by which the patient could present a record of their dental anxiety to their DHP and provide an opportunity for the DHP to respond. The hypothesis being proposed is that the DHP’s appropriate response potentially would have a positive and long-lasting effect on patient dental anxiety. This research is summarized in a paper by Hally et al. Hally videoed the patient handing the completed MDAS to the dentist. Of interest was the strong effect on patient dental anxiety when the dentist acknowledged the dental anxiety stated on the MDAS written form during the first few minutes of the appointment. This was in stark contrast to those occasions when the MDAS form and the patient’s attempts to discuss their fears were ignored by the dentist. Interestingly, the evidence of the strong effect (Cohen’s d = 0.76) of the dentist’s acknowledgement of patient dental anxiety was confirmed in the three-month follow-up MDAS score, which showed an average reduction in dental anxiety of seven units of this scale that has an effective range of 20 units. The adoption of Jacobson and Traux’s reliable change index (RCI) confirms that this was a clinically significant change.

Clinical Significant Change

We believe that the use of MDAS to reduce dental anxiety and forge the treatment alliance has wide applicability across general and specialist dental practice. The administration of MDAS is easily achievable when all new patients complete the MDAS in the waiting room and give it directly to the dentist, especially for patients who are dentally anxious (scoring 19 or above on the MDAS). The physical provision of the MDAS questionnaire to the patient at the receptionist desk would seem to be important, as opposed to mailing it out beforehand. This process of the patient completing the questionnaire immediately prior to entering the dental office appears important to gain the psychological effect of the DHP paying special attention to the recently completed form. The table lists the recommended steps to introducing this procedure into regular practice that we estimate on average would take about a minute to implement. Note that Step 6 instructs the DHP to invite the patient to state some other concerns that they might have. The word “some” is deliberate and enables a near twofold increase in concern elicitation in comparison to the use of the word “any.” This simple choice of words was confirmed in a sophisticated cluster randomized controlled trial designed by a linguistically trained sociologist in general practices in California and the Midwest. We would encourage replication and extension of this “intervention.” Other examples of what can be included in the communication style of DHPs can be given. For brevity sake, we focus simply on the use of reassurance that is often advocated, but its practice is far from straightforward. The DHPs should be very careful when using the phrase “do

<table>
<thead>
<tr>
<th>Step</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Receptionist gives clear instruction to the patient to complete the MDAS form in the waiting room and personally hand it to the dentist.</td>
</tr>
<tr>
<td>2</td>
<td>Dentist thanks the patient for the MDAS form.</td>
</tr>
<tr>
<td>3</td>
<td>Dentist looks specifically at the replies completed by the patient on the MDAS form.</td>
</tr>
<tr>
<td>4</td>
<td>Dentist comments on the total score (range: minimum of 5 to maximum of 25).</td>
</tr>
<tr>
<td>5</td>
<td>Dentist asks the patient about individual scores on the five items that appear high.</td>
</tr>
<tr>
<td>6</td>
<td>Dentist checks with the patient to see if they have some* other concerns.</td>
</tr>
</tbody>
</table>

*Do not use the term “any concerns.”

...
upon entering the dental office, and this
a young person is made to feel welcome
office also requires careful consideration.
above, however, the ambiance of the dental
patient is a key process, as has been argued
DHP with both the younger and older
Additional Factors
enabling treatment to be conducted.
personnel being accepting of patients'
fears and relaxation. In addition, dental
fear was due to their dentist holding
found that patients' reduction of dental
following successful treatment.44 They
interaction between the “actors” within
Future Recommendations
require urgent focus. The first is the
interaction between the “actors” within
the dental office. Dentists may want to
occasionally record their interactions
and share this information with their
patients, with their permission, as an
educational tool and record. The analysis
of these records would provide exemplary
opportunity to study interaction in great
detail and draw out recommendations
and guidelines for dentists. This approach
has been recognized in general medical
practice.46 This compilation would assist
both the dental team and their patients,
taking into account the procedure
being conducted and the background
of the patient and dentist to develop
evidence-based recommendations
and guidelines for dentists and to
improve the standard of care.

The second urgent domain for
attention and resources is enhanced
training of the dental team in
communication skills. Past surveys
have shown a limited involvement by
dental schools to invest properly in
active practical training to coach and
progress trainees in the improvement and
sustainability of good communication
practice within the dental office.47 With
the emphasis on prevention of major
oral diseases, this aspect is now timely. In
the United Kingdom, a scoping review
reported in 2017 the need for integration
of learning communication skills within
the conventional five-year training
programs.48 It was noted specifically
that students tended not to appreciate
the importance of the dentist-patient
relationship, especially with difficult
consultations and for patients who
are dentally anxious. In our opinion,
similar review and change is needed
in the United States as well. There is a
disconnect between what is learned in
the classroom about communications
and what is modeled in the clinic.

Conclusion
There is now compelling evidence to
show that the course of a patient's dental
anxiety experience is based upon the
emotional interaction of the dental team
with the patient. That is not to say that
other factors such as vulnerability within
the patient and past traumatic experiences
do not play a significant part. Our thesis
is that to understand and be able to
intervene in the trajectory of dental
anxiety within patients, a much more
sophisticated approach to analyzing the
qualities of the communication between
the patient and dental team member
needs to be cataloged. The technology
of this approach is within reach and
requires the support of the profession,
researchers and health communication
specialists to harvest the fundamental
relationships of personal qualities, dental
settings and context, patient emotional
expression and clinician responses.