Dental Fear and Anxiety in Pediatric Patients

Practical Strategies to Help Children Cope

Caroline Campbell
Editor

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ISBN 978-3-319-48727-4 ISBN 978-3-319-48729-8 (eBook)
DOI 10.1007/978-3-319-48729-8

Library of Congress Control Number: 2017930688

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Foreword

I remember the conversation I had 2 years ago with Carrie Campbell. She wanted to know how you progressed from having an idea about a book to actually publishing it. How do you choose the chapter authors, what happens if they let you down and you don't meet deadlines, what happens etc., etc. Comparable anxieties for a first-time book editor to that of the many children who are anxious about dental treatment!

I know I suggested to Carrie that she pick chapter editors who were friends as well as colleagues as they were very unlikely to let her down. Clearly, they haven't.

Over the last 2 years, Carrie has successfully used her own cognitive strategy "I can and I will" to produce a book that is packed full of practical advice and good sense for managing anxious children and adolescents. It is clear that a lot of the preparative work before they attend and at the first attendance lay the foundations for the correct approaches and management techniques.

I wish such a book had been around when I was a student. Many practitioners and paediatric specialists will benefit from reading this text for years to come. I also think it will be of help to the parents of anxious children.

I consider myself privileged to have some part to play in either the undergraduate or postgraduate education of many of her team, be it at Newcastle upon Tyne or Glasgow.

Richard Welbury
Professor of Paediatric Dentistry,
University of Central Lancashire,
Preston, UK

Preface

Treating children and adolescents with dental fear and anxiety (DFA) and phobia can be challenging. Upon obtaining my B.D.S. and prior to learning many of the techniques discussed in this book, I remember feeling frustrated when not able to help patients with DFA take control of the situation they found themselves in and feel better about dentistry. I was therefore delighted when I was recently asked to share what I have subsequently learned as a clinician over the past 20 years by writing and editing this book. Once given the appropriate knowledge and skills, practitioners can use these in discussion with the child, to identify the correct strategy to help children and adolescents with DFA cope with dentistry.

Colleagues from around the UK all with a special interest in child and adolescent DFA, with research experience, have kindly written chapters for this book. The chapters cover understanding DFA with the importance of preparation for both the child and parent. A child-centred, research-based approach to DFA assessment, including consideration of how patients cope and how to introduce assessment and the treatment option discussion to both the child and parent whilst ensuring the child, is central to this. A number of chapters follow which discuss in detail practical strategies for helping patients cope with dentistry, from non-pharmacological behaviour management techniques and coping strategies including relaxation and hypnosis to psychological–cognitive behavioural therapy. All of these techniques can and do complement pharmacological strategies which are already well taught at undergraduate level. A chapter on anaesthetist-led IV propofol complements these.

The final chapter discusses the way forward for patients with DFA with focus on listening to the child to ensure their voice is heard.

I hope learning more about DFA and how to implement these practical strategies enables you to help paediatric patients with DFA and phobia and also gives you, like me, improved job satisfaction.

Glasgow, UK — Caroline Campbell

Acknowledgements

I would like to thank all the patients and parents who kindly agreed to have their stories published, with a special thanks to Alysha, Emma, Leo, Stephanie, Megan, Ross and Jessica for also allowing their photos to be taken.

Thank you to the photography department at Glasgow Dental Hospital and School and Gartnavel Hospital in Glasgow for their help.

To the authors of each chapter who kindly agreed to contribute to this book and give this project their time and effort, thank you, as these projects always take more time than you think.

Thank you to Richard Welbury for agreeing to proof read this work and his words of wisdom.

Finally, I would like to thank my daughter Rachel and my husband Aidan for graciously allowing me all the many weekends and evenings absence from family life to complete this project.

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Part I

Background and Assessment

Background and Prevalence of Dental Fear and Anxiety

1

Annie G. Morgan and Jenny Porritt

1.1 Introduction

We have all experienced anxiety and fear at some point in our lives; however, we sometimes still find it difficult to understand other people's fears if these are different to our own. This can be a challenge for dental professionals who treat anxious children and who may struggle to understand their patient's fear reactions. It is, however, incredibly important that members of the dental team have a clear understanding of *why* children experience dental anxiety, and the impact this type of anxiety may have on their patient's thoughts, feelings and behaviours. This will enable dental professionals to develop empathy with their patients. Understanding the patient's perspective is an important first step in developing patient-centred treatment plans. Therefore, this chapter aims to promote understanding of the different types of anxiety and fear responses which can be experienced by children, the prevalence of childhood dental anxiety and the factors which may play an important role in the development and maintenance of children's dental anxiety.

1.2 What Are Dental Anxiety, Dental Fear and Dental Phobia?

It is important to recognise that fear and anxiety are states that, in an evolutionary context, promote survival [1]. A variety of cognitive, neurobiological, emotional and behavioural reactions are triggered when we are faced with a dangerous situation, and these responses enable us to protect ourselves [2]. For example, our attention becomes focused on the danger, and our body prepares itself to 'fight' or 'flight' (e.g. the

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C. Campbell (ed.), *Dental Fear and Anxiety in Pediatric Patients*,
DOI 10.1007/978-3-319-48729-8_1

hormone adrenaline is released to increase strength and stamina, the heart beats faster to pump blood to the main muscle groups and the body starts to sweat to keep itself cool). While these 'survival responses' are incredibly adaptive in situations where there is real danger (e.g. an individual is being attacked by someone), in situations where there is no real threat, these instinctual fear reactions are not helpful and can feel very unpleasant. In these cases, fear-induced physiological reactions can actually start to increase distress. For example, children may start to become more anxious because they don't understand what is happening to their body. Therefore, the first thing that dental practitioners can do to support their anxious patients is to explain the fight-flight fear response and normalise their feelings of anxiety.

While the terms anxiety and fear are often used interchangeably within the literature, fear has been described as the reaction to *immediate* danger and anxiety and the reaction to *potential* danger [3]. Fear responses are associated with a surge of autonomic nervous system arousal and defensive actions [4]. It has been suggested that anxiety is a far more complicated mood state and is characterised by a state of helplessness, a perceived inability to predict or control upcoming situations and a state of readiness to counteract possible future threats [5]. Anxiety responses include worry, hypervigilance, cognitive distortions, arousal of the autonomic nervous system and avoidant behaviours [6]. In the dental context, dental fear would describe a reaction to a stimuli which is perceived as threatening (e.g. dental drill), and dental anxiety would be described as the state of apprehension (e.g. thoughts that something dreadful was going to happen) which occurs prior to the dental visit/treatment [7]. In clinical situations, it would be challenging to discriminate between dental anxiety and fear. Moreover, children are likely to experience different combinations of anxiety and fear responses. Therefore, the term 'dental fear and anxiety' (DFA) has been used to describe negative feelings associated with the dental setting [7].

The experience of DFA can be conceptualised as existing on a continuum, with low DFA experience at one end and high DFA experience at the other end [8]. On this continuum, dental phobia describes a severe form of DFA and is characterised by the presence of excessive DFA for at least 6 months, dental care being actively avoided or endured only with intense DFA, out-of-proportion DFA to the actual danger posed by the dental situation and clinically significant distress or functional impairment [4].

1.3 Implications of Childhood Dental Anxiety

Childhood DFA may have a wide variety of implications for children, families, dental professionals and dental care services more generally.

1.3.1 Impacts on the Child and Their Family

DFA can have negative implications for children's oral health. There is certainly emerging evidence for the negative impact of dental anxiety on the oral

health-related quality of life of children, and studies have shown that children with DFA have worse oral health status than their peers (e.g. more untreated carious lesions) [9–12]. Untreated caries can lead to pain and infection, and therefore it is unsurprising that children with DFA also report more frequent tooth pain [13, 14]. Because children with DFA often avoid dental treatment by the time the decay has progressed to the extent that children present with pain, often the only treatment option appropriate is a tooth extraction. This may also partly explain why children with DFA also have an increased number of missing teeth [12].

It is also important to recognise that a proportion of children with DFA may present with behavioural management problems (e.g. the 'fight' response) which can disrupt the provision of dental treatment and negatively impact on the dental treatment the child receives [7, 15]. There is indeed evidence that children with a history of behaviour management problems experience different treatment experiences. For example, children who have behaviour management problems are twice as likely to have dental caries at 5 years old, than children without behaviour management problems [16], are less likely to have dental radiographs taken and are more likely to have restorative treatment completed without local anaesthetic [17].

The anxiety experienced by children is not only distressing for the child, but it can also be a potentially stressful and upsetting experience for parents and carers. Firstly, it can be a challenge for parents to try and convince their child with DFA to visit the dentist [18]. Additionally, to witness a child becoming upset and fearful when in the dental clinic can be incredibly distressing for parents.

1.3.2 Challenges for the Dental Team

Treating patients with DFA may cause a variety of difficulties and challenges for dental professionals. Treating patients who have high levels of anxiety can be time-consuming and stressful [19]. Dentists may also be hesitant to deliver dental treatment to the DFA patient due to concern they may make the child's DFA worse or as a result of not knowing how to manage their DFA effectively [20]. There are also financial implications of treating children with DFA. For example, dental treatment of dental-anxious children may be more time-consuming, and missed and cancelled appointments will also have a financial impact on dental practices [21]. Children with high levels of DFA are often therefore referred to secondary care services [22]. This can result in anxious children having to wait longer periods of time for treatment, and this also increases the demand placed on specialist services.

1.4 Prevalence of Dental Anxiety

The prevalence of childhood DFA was examined in a review undertaken by Klingberg and Broberg [7]. They examined the literature published between 1982 and 2006 and revealed the prevalence of DFA varied from 6 to 19 %, and they reported a mean prevalence of 10 %. Children in the study populations were aged

between 4 and 18 years, and studies were carried out in developed countries, with the majority from North America and Northern Europe. Only four included studies were published within the last 15 years [23–26], and the majority of the included studies were cross-sectional (n = 12). Additionally, the reporting individual (e.g. parent or child) used to identify DFA varied across the studies. When only children's self-reports were used, the mean prevalence ranged from 12 to 17 %.

It is important to recognise the challenges of comparing studies which use different DFA measures. Although individual measures have been shown to be relatively stable in the same population, Locker and co-authors [27] identified only moderate agreement between different measures for prevalence rates. One explanation is the use of different cut-off points to identify DFA. A further explanation is that different measures operationalise the construct of childhood DFA differently [27].

In 2013, the Child Dental Health Survey for England, Wales and Northern Ireland included a standard version of the Modified Dental Anxiety Scale (MDAS) [28, 29]. The MDAS comprises five items to measure anxiety in relation to a dental visit (e.g. having dental treatment tomorrow, sitting in the waiting room), dental treatment (e.g. tooth drilled, scale and polish) and a local anaesthetic injection. High levels of DFA (MDAS total score ≥ 19) were identified in 14 and 10 % of young people aged 12 and 15 years, respectively, while over half of the participants (62 and 54 % of young people aged 12 and 15 years) were identified with moderate levels of DFA (MDAS total score = 10–18) [29]. While the MDAS measure was developed for adults (and therefore threshold values for use with children have not been established), routine collection of this data will allow for changes in dental anxiety prevalence to be examined over time.

1.5 Development of Dental Anxiety

Fears and anxieties form part of normal child development, and generally developmental fears and anxieties are transitory [30]. However, for some children, dental fears and anxieties do not resolve and become persistent and problematic. There are a variety of different mechanisms which have been proposed to explain the development of DFA in children; however, there is a general consensus that the aetiology of childhood DFA is multifactorial [31]. Exogenous sources of DFA are *external contributory factors* which include direct learning experiences (e.g. traumatic experience) and indirect learning experiences (e.g. vicarious learning) [32]. Endogenous sources of DFA are *internal contributory factors* which make individuals susceptible to the development of dental anxiety [32]. A variety of exogenous and endogenous factors which may contribute to the aetiology of DFA in children will be discussed.

1.5.1 Exogenous Factors

Rachman [33] proposed a mechanism for fear acquisition based on three learning pathways and hypothesised that anxiety could develop as a result of direct

conditioning, indirectly through vicarious learning (modelling) or via exposure to threatening information. It is the direct conditioning pathway that has been more strongly implicated in DFA development, with less evidence to support the roles of the indirect pathways [11]. Each of these pathways will be described in turn.

1.5.1.1 Direct Conditioning Pathway

The first pathway proposed by Rachman [33] suggests that anxiety can develop as a result of negative/difficult experiences. Difficult dental encounters can be divided into four categories: pain or feelings of helplessness, issues with the behaviour or personality of the dental professional, serious treatment failures or clinical errors and feelings of embarrassment [35]. Negative dental experiences can contribute to the development of DFA through the processes of classical conditioning [36]. This describes the process whereby a neutral stimulus (e.g. the dentist) becomes associated with a negative experience such as pain. Pain would naturally produce a fear response, and therefore a painful dental procedure would be viewed as an 'unconditioned stimulus', and the fear produced, an 'unconditioned response'. What happens as a consequence of classical conditioning is that the dentist becomes associated with this painful experience. The dentist therefore becomes a 'conditioned stimulus' which can elicit a conditioned (learnt) fear response [33]. The interaction between the patient and dentist is therefore incredibly important; if the interaction involves any negative stimuli which would naturally result in fear (e.g. loss of control, pain, shame, embarrassment, criticism), then an association between visiting the dentist and being exposed to these negative stimuli could be formed (see Fig. 1.1).

The process of stimulus generalisation can also occur. This describes situations where children become fearful of additional stimuli which they associate with the original conditioned stimulus [34]. For example, in addition to their fear of the dentist, the patient may start to develop a fear of other objects/situations which they associate with the dentist such as the dental chair or the smell of the dental clinic. As evidence to support the conditioning pathway, many adults with DFA are able to recall a traumatic dental experience [35], and indeed children with DFA do recount more negative dental visits than children without DFA [11]. It should be noted that while reports of past trauma are indeed subjective, it is the *perception* of having suffered a traumatic or negative dental experience that has been identified as most important in the conditioning pathway for DFA [11, 37]. Therefore, it is important that all efforts are made to ensure dental interactions are viewed positively by children in order to reduce the likelihood that DFA will develop.

Not all children who have had a negative dental experience, however, go on to develop DFA. Davey's [38] latent inhibition hypothesis proposes that people who have a series of painless appointments before they experience a traumatic event are less likely to develop DFA than people who experience a traumatic dental experience early in their lives. There is some support for the protective effect of positive previous dental experiences. For example, children with DFA report suffering painful dental experiences earlier in life, and children with low DFA levels have been found to have had more dental visits before any curative dental treatment than those with high DFA [11, 39].

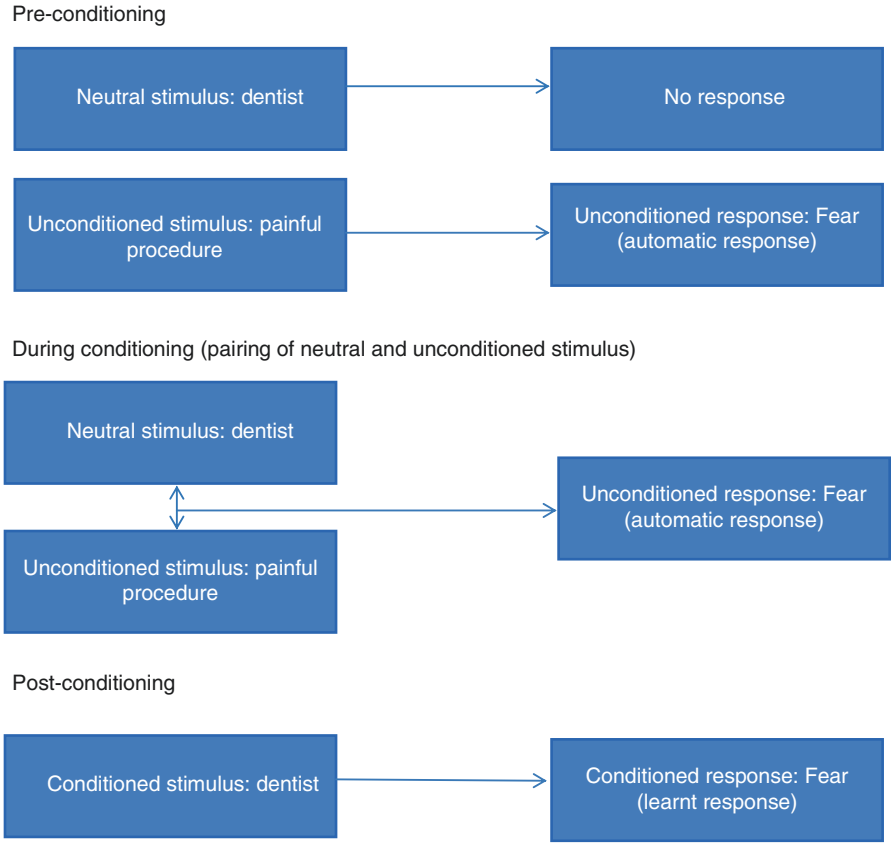

Fig. 1.1 The development of dental anxiety through classical conditioning

1.5.1.2 Vicarious (Modelling) Pathway

As many people with DFA are unable to recall a traumatic dental encounter, classic conditioning alone cannot give a complete account of DFA development [33, 36]. The second pathway proposed by Rachman [33] is based on social learning theory [40] and proposes that anxiety can develop as a result of the child observing the anxious behaviour of another person and imitating this behaviour (modelling). Generally, mothers, as principal caregivers, are considered the most likely candidate from whom DFA in children is learnt from [41]. Maternal DFA is associated with DFA in young children, and it is proposed that fear transference through observation is responsible for the development of the child's fear in these situations [33, 41]. A systematic review and meta-analysis of studies published between 1968 and 2007 investigated the relationship between child and parent anxiety [42]. The findings revealed that parental DFA plays a significant role in child DFA for children younger than 8 years old; however, for older children the evidence was conflicting. It is difficult to ascertain the mechanisms responsible for the relationship between the

parent's and child's DFA using cross-sectional studies alone. Nonetheless, the management of parent's anxiety in the dental clinic is of high importance in order to minimise the possibility that their fears and anxieties will be transferred to their child.

1.5.1.3 Information Pathway

The final pathway proposed by Rachman [33] relates to the acquisition of fears through social processes. This pathway posits that children will learn to be fearful as a result of the negative information they have seen or heard from parents, family members, peers, teachers, television or social media [11]. DFA may therefore develop as a result of exposure to negative information about dentistry/dental procedures. Bedi and co-authors [43] found that the number of people a child reported to know with DFA was a strong predictor for DFA in that particular child. Indeed, there is a wealth of information about dentistry available to children via the Internet, and the provision of negative (and often inaccurate) information about dentistry is easy to access. This information can lead to the formation of unhelpful thoughts/beliefs which could elevate the child's DFA level.

1.5.2 Endogenous Factors

Of course some children who experience DFA have not been exposed to negative experiences or information. An alternative explanation for why some children develop dental anxiety is that some individuals may be particularly vulnerable to feelings of anxiety. Endogenous factors which may increase an individual's susceptibility to DFA include genetic vulnerability, personality traits, age and gender [44, 45].

1.5.2.1 Genetic Basis for Dental Anxiety

While some specific phobias have been shown to have a strong genetic component, little is known about the hereditability of DFA [46]. There is however some evidence of a genetic basis for the condition. Ray et al. [47] investigated concordance for DFA between monozygotic and dizygotic twins in a longitudinal study. The 1480 paired participants were part of a Swedish twin study on child and adolescent development. The authors found that in females, but not males, the risk of having DFA if your sibling did was higher for monozygotic than dizygotic twins. Additionally, as has previously been discussed, research has revealed an association between child and parental anxiety [41]. However, there are several possible explanations for this association, which also include social learning theory (e.g. modelling).

1.5.2.2 General Anxiety

Weiner and co-authors [48] proposed psychological and temperamental vulnerability factors may result in an increased susceptibility to developing dental anxiety. Certainly, studies have demonstrated that high levels of youth DFA are associated

with social, emotional and behavioural problems, generalised anxiety and the temperamental trait of negative emotionality [49–53]. However, studies reporting an association with high levels of general fear and shyness have been conflicting, and no association has been found with levels of trait anxiety or depression [49, 54, 55].

1.5.2.3 Age

As previously discussed, the development of fears and anxieties is considered part of normal child development and follows a consistent and predictable pattern into adulthood. It is proposed that identifying children with persistant DFA that does not reduce in response to increased familiarity. Generally, young children have the greatest number of fears and anxieties [56]. Indeed, a number of studies have revealed that DFA is higher in younger children [24, 57, 58]. Majstorovic and Veerkamp [59] reported a decrease in DFA in children aged between 4 and 11 years old but then noted after children turned 11 years old DFA levels increased again [60]. In the UK, 12-year-old children actually had the highest prevalence DFA in both the 2003 and 2013 Child Dental Health Survey [12, 29]. However, other studies have failed to find a relationship between DFA and age [23, 61–63]. Therefore, the research suggests there is no clear age/stage at which developmentally appropriate DFA would be expected to have diminished. For dental professionals, identifying children with persistent DFA that does not reduce in response to increased familiarity with the dental setting is perhaps a better indicator of problematic DFA than using age as a guide.

1.5.2.4 Gender

Research has typically revealed that females have increased levels of DFA compared to males and also tend to report greater specific fear and anxiety about drilling, local anaesthesia and pain than their male counterparts [7, 64]. However, the reasons why females report higher levels of anxiety are not clear. One possible explanation is that it is more socially acceptable for girls and woman to admit they are anxious or worried than it is for a boys or men to [11]. It is therefore important for dental professionals to be mindful of the fact that boys in particular may not volunteer information about their DFA without skilful and sensitive prompting from the dental professional.

1.6 Maintenance of Dental Anxiety

A study by Locker and co-authors [65] revealed that around half of people report that their dental anxiety developed during childhood. What is particularly interesting is these individuals tend to have more severe DFA in adulthood than people whose anxiety developed in adolescence or adulthood. Research has also revealed that children with DFA are more likely to go on to become symptomatic, rather than proactive, users of dental services in adulthood [66]. These longer-term consequences of childhood DFA highlight the importance of intervening early and treating children's dental anxiety. Therefore, while much of the previous research has

focused on the factors associated with the *development* of dental anxiety, the reasons why DFA persists/intensifies into adulthood for a proportion of individuals need to also be examined [67].

1.6.1 The Role of Unhelpful Cognitions

Cognitions can have an important role in the maintenance of DFA [68]. During periods of anxiety, unhelpful thoughts can develop and become pervasive and intrusive [69]. These negative thoughts influence how a dental situation is interpreted [70]. For example, an anxious individual may become very self-critical: 'mind read' what other people think about them, believe 'worst-case' scenarios will happen and take on all responsibility for poor outcomes [69]. Kent and Gibbons [71] identified that the higher the level of dental anxiety an individual suffers, the greater the number of negative thoughts they have about the dental situation.

Armfield's [72] cognitive vulnerability model highlights the role of cognitive schema in the aetiology and maintenance of dental anxiety. It is proposed within this model that perceptions of the stimulus being unpredictable, uncontrollable, dangerous and disgusting play a key role in causing individuals to experience feelings of vulnerability. If the vulnerability schema is activated by a dental trigger, then it is suggested that this causes an automatic fear reaction (flight or fight) and a slower cognitive evaluation of the significance of the situation to that individual (which can be further affected by cognitive biases and selective attention) [72]. Because the reactions that result from this process can incorporate unhelpful or unpleasant cognitive, emotional, behavioural and physiological responses, these can then feed back into the vulnerability schema, reinforcing the dental fear. Cognitive theorists, such as Armfield, therefore propose that cognitive processes (which may develop due to a combination of genetic factors, personality and previous experience) play a fundamental role in the maintenance of anxiety disorders [73–75].

1.6.2 The Role of Unhelpful Behaviours

Anxiety and fear can also cause individuals to adopt unhelpful behavioural strategies such as escape/avoidance, aggression and immobility [69]. In the survival context, these responses maximise our chances of survival [76]. However, these behaviours are not helpful in response to situations where no actual threat exists and perpetuate the vicious cycle of anxiety [69]. For example, avoidance can reinforce fear by preventing the individual from gaining new positive experiences which would help to reduce or extinguish their fear. It is therefore widely recognised that avoidance of dental care is a key component in the maintenance of dental anxiety and deterioration of oral health [77]. However, because avoidance results in a short-term drop in anxiety, this reduction of anxiety acts to negatively reinforce the avoidance behaviour (see Fig. 1.2).

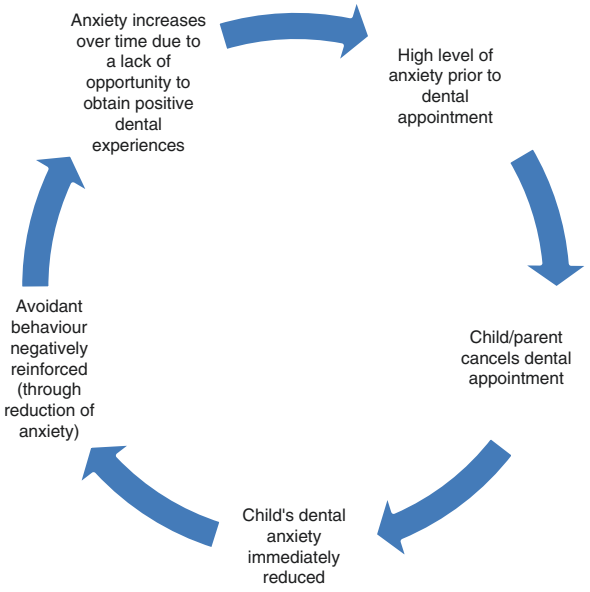

Fig. 1.2 The cycle of avoidance

Childhood DFA is indeed associated with avoidance behaviour and irregular dental visits. Prevalence of missed appointments in children is higher in those with DFA than their peers [13]. Parents of children with DFA do report that they have sometimes been unable to convince their child they needed to attend dental treatment [18]. Other parents have reported reluctance to put their child through unpleasant dental experiences that they themselves had endured during childhood and avoided taking their child because they didn't want to pass their DFA onto them [78]. Strategies which guide parents on practical ways to help their child cope with dentistry will be discussed in Chapters 2 and 13.

1.6.3 Dental Professionals' Behaviour

Not only can negative dental interactions be responsible for the development of DFA, but they also play a significant role in the maintenance of dental anxiety. It is therefore important that all members of the dental team are aware of the ways in which their behaviours may impact on children. There is certainly evidence that the behaviour of the dentist may influence DFA levels of children. Zhou et al. [79] undertook a review of the literature which had examined the impact of dental staff behaviour on children's DFA. They found that dentists were able to reduce DFA in children through the use of an empathetic communication style (which focused on

the child's feelings) and the use of brief and appropriate physical contact (e.g. a pat on the arm) accompanied by verbal reassurance. Interestingly, in contrast to this, children had increased levels of DFA when dentists criticised the child's behaviour. It has therefore been proposed that empathy is a particularly important attribute for dentists to demonstrate when treating children who are experiencing DFA [80]. This topic will be explored further in Chapters 7 and 8.

1.6.4 The Five-Area Model™ of Anxiety

Williams and Garland proposed the Five Areas Assessment Model of anxiety as a theoretical framework that describes how anxiety may be maintained over time through negative cycles of interrelated thoughts, feelings, behaviours, physical responses and situational influences [69]. The inclusion of situational factors in this framework enables the consideration of both internal and external factors in the maintenance of an individual's DFA. An important situational factor which may maintain children's dental anxiety is the behaviour of dental professionals, as has previously been discussed. Figure 1.3 provides examples of the different maintenance factors which may influence childhood DFA. Every child is different, and there will be a unique set of experiences and factors which have contributed to their anxiety. The assessment and effective management of children's DFA therefore

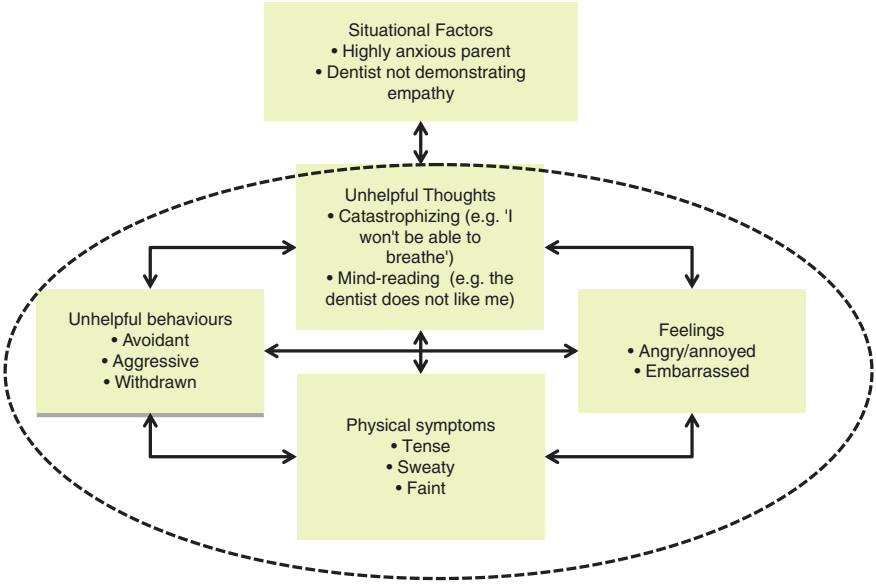

Fig. 1.3 Factors which may contribute to the cycle of dental anxiety (Based on the Five Areas Assessment Model [69])

starts with both the child and dentist developing a clear understanding of the factors which are contributing to the individual's DFA; this is discussed in more detail in Chapter 13.

Key Points

- The terms dental anxiety and dental fear are often used interchangeably within the literature; however, dental anxiety is an apprehension that something negative will happen within the dental encounter, and dental fear is the actual reaction which occurs when the individual is subjected to the perceived threat.
- Dental fear and anxiety negatively impact on children, dental professionals and dental services, and therefore understanding the factors which are responsible for the development and maintenance of dental anxiety and fear is extremely important.
- While research has revealed that dental anxiety is common in childhood, accurate prevalence rates are difficult to ascertain because of the differences in how dental anxiety has been assessed across studies.
- The development of dental fear and anxiety is multifactorial, and a mixture of exogenous (external) and endogenous (internal) factors play an important role in the aetiology of this condition; these include previous negative experiences and individual differences.
- The cognitions and behaviours of the child and the patient-dentist relationship play important roles in the maintenance of dental anxiety over time.

Case-Based Scenario

Understanding key factors which contribute to dental anxiety.

Martin is 12 years old and a new patient at your clinic. He failed to attend his previous two appointments but has attended today with his mum due to some pain he has been experiencing. His mum has informed you that Martin is extremely anxious and doesn't like dentists. She reports they had an argument this morning over the dental appointment when Martin refused to get in the car. Martin appears very withdrawn. He refuses to remove his coat and fails to make any eye contact. He sits uncomfortably in the dental chair, gripping the chair arms.

Why is it important to understand what caused Martin's dental anxiety and what may be maintaining his dental anxiety? How can you find out this information?

Understanding the causes of dental anxiety is important because it will enable you to understand Martin's behaviour and what you need to do to support him with his anxiety. Therefore, the first thing you might want to do in this situation would be to ask Martin if he is feeling worried. Martin may not be forthcoming in discussing his anxiety at first, but he is likely to provide some response to your question (even if it is just a nod of the head). Asking Martin this question is

extremely important because it will allow you to acknowledge Martin's anxiety and start building up a rapport and positive relationship with him.

Once you have established that he is feeling anxious, it would be a good idea to provide Martin with some reassurance. You can do this by letting him know that it is normal to feel a little worried when visiting the dentist, that you see a lot of young people who *start off* anxious when they come to your clinic and that everyone has something they are worried of. This can really help to normalise how Martin is feeling and reduce his feelings of embarrassment.

It may then be useful to highlight commonalities between you and him by making reference to something which you are genuinely afraid of (e.g. flying, spiders, heights). You could briefly discuss why you think your fear developed/exists. By doing this, you are demonstrating you have empathy for how Martin feels, and you are also breaking down the power imbalance which can exist between a patient and professional. You can then ask Martin if he knows why he is anxious about visiting the dentist and whether he has ever had any negative experiences when visiting the dental clinic (e.g. experienced pain or discomfort, felt the dentist did not listen to him). If you are able to support Martin in opening up to you in this way, then you will be able to start to understand his anxiety better and provide some tailored reassurance in response to his specific worries/concerns.

Exploring the reasons why Martin felt unable to attend his previous appointments in a non-judgemental way is also really important. The 'best guess' approach ('Did you not feel able to attend your previous appointments because you felt worried?') can be a useful alternative to direct questioning (e.g. 'why did you not attend your last appointment?') which anxious patients may find confrontational. Again demonstrating empathy at this stage is crucial; letting Martin know that you have been in a similar situation (where you avoided something you were worried about) is a good way of demonstrating you understand what it feels like to be anxious. For example, you could say:

'I get it. I didn't want to fly either after my bad experience. The problem for me was the longer I put off flying, the worse my anxiety got. It took a lot for me to get back on the flight. When I eventually did fly again, it did feel a bit scary at first, but it wasn't half as bad as I'd built it up to be in my head'.

This provides a real-world example of how 'unhelpful' behaviours may contribute to higher levels of anxiety in the longer term. You don't have to go into in-depth explanations of how anxiety is maintained through unhelpful behaviours such as avoidance; using a simple example can be just as powerful. Relating this back to your own experiences can be a good way of ensuring you are discussing 'unhelpful behaviours' in a non-judgemental and unthreatening way.

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