

# Conscious Sedation for Dentistry

Second Edition

N. M. Girdler • C. M. Hill • K. E. Wilson



WILEY Blackwell



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*N. M. Girdler*  
*Newcastle University*  
*School of Dental Sciences*  
*UK*

*C. M. Hill*  
*Cardiff University*  
*School of Dentistry*  
*UK*

*K. E. Wilson*  
*Newcastle University*  
*School of Dental Sciences*  
*UK*

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*Editorial Office*

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## About the Companion Website

Don't forget to visit the companion website for this book:

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There you will find valuable material designed to enhance your learning, including:

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## 1

## Spectrum of Anxiety Management

### Introduction

The aim of this chapter is to introduce the reader to the nature and development of dental anxiety and to provide an understanding of how and why patients behave in the way they do. This forms the basis for the practice of conscious sedation in the management of dental anxiety. The latter part of the chapter explains the development of conscious sedation, the accepted definition and the current guidelines relating to the practice of the technique in dental practice.

One of the main indications for the use of conscious sedation for dental care is 'anxiety'. The prevalence of dental anxiety and phobia is high. The 2009 United Kingdom Adult Dental Health Survey indicated that 36% of adults had moderate dental anxiety and a further 12% reported extreme dental anxiety. The significance of dental anxiety as a barrier towards obtaining dental care, particularly as a result of avoidance, is well recognised. It has also been reported that dental anxiety does not just affect the patient but can have a significant effect on the general dental practitioner who treats the anxious patient. Treating the anxious patient can be a major source of stress for dentists within their daily working environment.

It has been postulated that the aetiology of dental anxiety is multifactorial and modifies and evolves with time. This concept is particularly relevant for the twenty-first century. With the decline in dental caries in childhood, dental trauma will have a reduced role. Other factors such as the attitudes of family, friends and peers, media influence or the extent to which dental anxiety is part of an overall trait, will become more apparent.

There is a need to understand the individual components of dental anxiety as this will help to increase the dental healthcare worker's awareness in recognising and managing the dentally anxious patient.

### Fear and Anxiety as a Normal Phenomenon

Fear is often considered an essential emotion, augmenting the 'fight or flight' response in times of danger and manifesting as an unpleasant feeling of anxiety or apprehension relating to the presence or anticipation of danger. Fears are found throughout childhood, adolescence and adulthood.

Intense fears in childhood generally subside with maturity and the development of an ability to reason. If they do persist, however, this can result in the development of a 'phobia', a persistent, irrational, intense fear of a specific object, activity or situation. Phobias cause more distress to the patient and are difficult to overcome as they are more resistant to change. Very often some form of psychological/therapeutic intervention is required. Dental phobia invariably leads to dental neglect and total avoidance of dental care and is much more difficult to manage than dental anxiety.

It is therefore important to distinguish between 'phobia' and 'anxiety'.

### Anxiety

*Anxiety* is a more general non-specific feeling, an unpleasant emotional state, signalling the body to prepare for something unpleasant to happen. Typically, anxiety is accompanied by physiological and psychological responses including the following.

#### Common Physiological Responses

- Increased heart rate
- Altered respiration rate
- Sweating
- Trembling
- Weakness/fatigue.

#### Common Psychological Responses

- Feelings of impending danger
- Powerlessness
- Tension.

### Phobia

*Phobia* may be considered as a form of fear that

- Is irrational and out of proportion to the demands of the situation
- Is beyond voluntary control
- Cannot be explained or reasoned
- Persists over an extended period of time
- Is not age specific.

## Aetiology of Dental Anxiety

The aetiological factors associated with the development of dental anxiety will be dealt with under the following headings:

- General anxiety and psychological development
- Gender
- Traumatic dental experiences
- Family and peer-group influences
- Defined dental treatment factors.

## General Anxiety and Psychological Development

It has been suggested that dental anxiety is a function of personality development associated with feelings of helplessness and abandonment. It is therefore important to consider the age and degree of psychological development of a child when assessing their ability to cope with stressful situations.

As children mature, so their level of understanding increases and the nature of their fears change. In infancy and very early childhood, fear is usually a reaction to the immediate environment, for example loud noises or looming objects. Relating this to the dental environment, it is understandable therefore that a very young child may find the sounds and smells in a dental surgery overwhelming, as well as the sight of the dentist and dental nurse in clinical uniform.

By the early school years, it is suggested that such fears have broadened to include the dark, being alone, imaginary figures, particular people, objects or events (animals and thunder). This could also equate with the dental situation, where a child is perhaps left in the dental chair with the dentist. He or she is unsure of what is going to happen and is unfamiliar with the dental environment.

At about nine years of age, the fear of bodily injury starts to feature strongly. It is clear therefore that for many children the thought of invasive dental procedures may be anxiety-provoking. As children mature they are more able to reappraise the potential threat of the situation and may be able to resolve that anxiety.

In adolescence, fear and anxiety are centred on social acceptance and achievement. Some teenagers will be particularly aware of their appearance and possible criticism from peer groups.

In adulthood, although anxieties can develop spontaneously, it is more commonly related to social circumstance or bad experiences.

## Gender

There are varying reports and opinions regarding the influence of gender on the aetiology of dental anxiety. Female patients tend to have higher scores for dental anxiety and consider themselves more fearful of dental treatment when compared to men. When considering prevalence studies in children, it would appear that generally girls report more fears than boys. There is much debate as to whether this is due to

- Men being less willing to admit their anxiety
- Women feeling more vulnerable
- Women being more open about their anxieties.

## Traumatic Dental Experience

Negative dental experiences are often quoted as the major factor in the development of dental anxiety with direct negative experiences including painful events, frightening events and embarrassing experiences leading to the development of dental anxiety. Such experiences can occur during childhood, adolescence and adulthood, however, for dental anxiety to develop, it is the nature of the event that appears to be more important than the age at which it occurs.

Traumatic medical experiences can also have a significant relationship with negative dental behaviour and may be important factors in the development of dental anxiety in children.

### Family and Peer-Group Influences

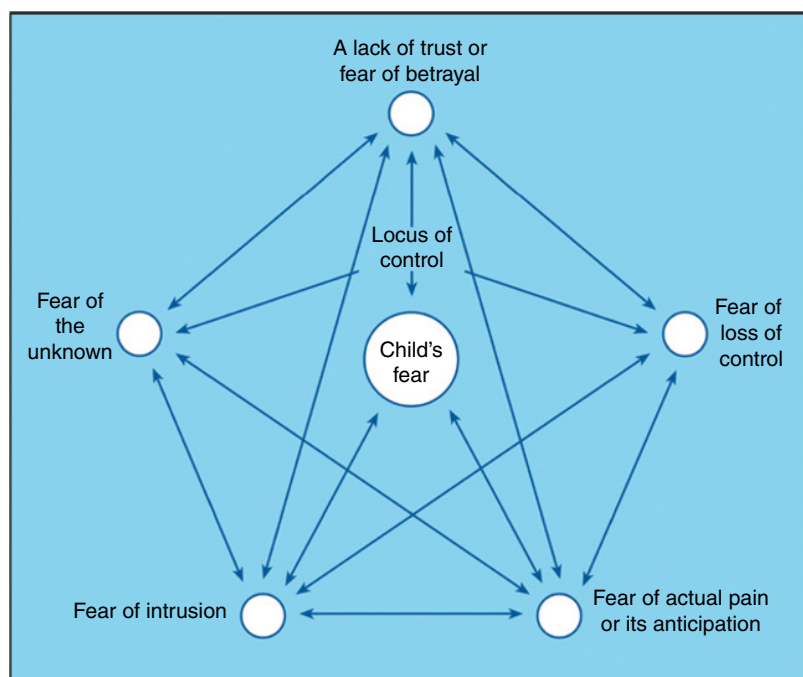
Influences outside the dentist's control can often heighten dental anxiety. Indiscriminate comments, conversations and negative suggestions about dentistry can induce fear in children and the expectation of an unpleasant experience during dental treatment. Such comments may be made by family members or the child's peers and act as an important source of negative information.

### Defined Dental Treatment Factors

Specific dental treatment factors have been defined as the immediate antecedents of dental anxiety, the two most anxiety-arousing being the injection and the drill. Other factors also play a part such as fear of criticism by the dentist, the dentist's attitude and manner and the dental environment. The dentist's attitude may lead to the development of a dentally anxious patient. For example, an abuse of trust by one dentist may result in all dentists being mistrusted. A proposed model for dental fear in children can be seen in Figure 1.1 (Chapman and Kirby-Turner, 1999).

### Measuring Dental Anxiety

Within dental education the behavioural sciences have become an increasingly important component. One element of this has been the application of psychological methods to study and quantify behaviour and attitudes relevant to dental care, in particular, dental



**Figure 1.1** A model of dental fear in children proposed by Chapman (1999). Source: Taken from Chapman and Kirby-Turner (1999). Reproduced with Permission from Wiley-Blackwell.

anxiety and behaviour during dental treatment. This has included a wide range of methodological approaches and techniques, including questionnaires and behaviour measures. Examples of such measures include children's drawings, observation of behaviour, visual analogue scales, ratings by dentists and self-report questionnaires. The most common method of measuring dental anxiety is by using questionnaires and rating scales. It is important to ensure the measures used are reliable, valid and applicable to the population to which they are aimed.

### Commonly Used Anxiety Scales

#### Adults

- Modified Corah Dental Anxiety Scale
- Visual analogue scale (Figure 1.2)
- Short Dental Anxiety Scale.

#### Children

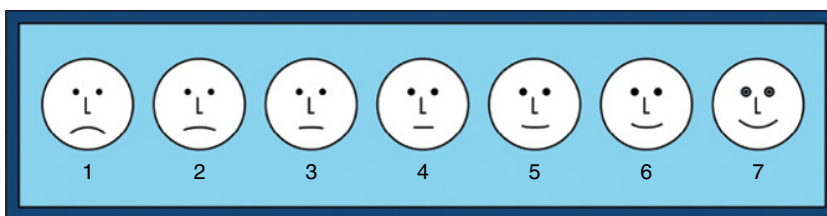
- Children's Fear Survey Schedule Dental Subscale
- Smiley Faces Scale (also known as Wong or Venham faces Figure 1.3).

### Summary

In summary, it is clear that dental anxiety has a multifactorial aetiology comprising age and psychological development, gender of the patient, past traumatic dental and medical experiences, influence of family and peer groups and the immediate antecedents of dental anxiety. All patients will hold their own attitudes and emotions towards the dental situation, as well as their own past dental experiences. The social circumstances and family dynamics will also have an influence on the patient's behaviour and the level of dental anxiety. It is important therefore for those in the dental profession to be aware of this multifactorial aetiology to be able to provide effective behavioural management in the dental setting.

Very Anxious -----X----- Not at all Anxious

**Figure 1.2** Visual analogue scale – A straight line measuring 10 cm, labelled Very Anxious at one end to Not at all Anxious at the other end. The patient is asked to place a X on the line to represent the extent of their anxiety.



**Figure 1.3** Smiley faces anxiety scale – The child is asked to circle the face that best represents how they feel.

## Behaviour

In order to understand the rationale behind the methods used in treating anxious patients, it is necessary to understand why people behave in the way they do. It is also useful to know how behaviour can be modified in a way that is beneficial for both the patient and the dentist. This can often be achieved without resorting to the use of drugs, allowing long-term anxiety management.

### Nature of Behaviour

Behaviour may be defined as functioning in a specified, predictable or normal way. In psychological terms, behaviour is a response or series of responses of a person to a given stimulus. The borderline between what is normal (or acceptable) and abnormal (or unacceptable) behaviour is blurred by a host of factors including time, culture, conditioning and other considerations.

The intent of adults would most commonly be to want to behave in a rational and sensible manner, whereas the same intent would not always be present in children and adolescents. It therefore follows that the management of what appears to be similar but abnormal behaviour in the different groups needs to be tackled from a different viewpoint. This illustrates the complexity of the problem when it comes to teaching or learning techniques of behavioural management.

In conclusion, behaviour is a complex issue governed by a multitude of factors, some of which are illustrated in Figure 1.4. Equally, the management of behaviour is a difficult and extensive subject. However, the successful treatment of any patient depends on a dentist's ability to manage the patient's behaviour satisfactorily and some of the techniques of behavioural management are discussed below.

## Behaviour Management

### Simple Methods

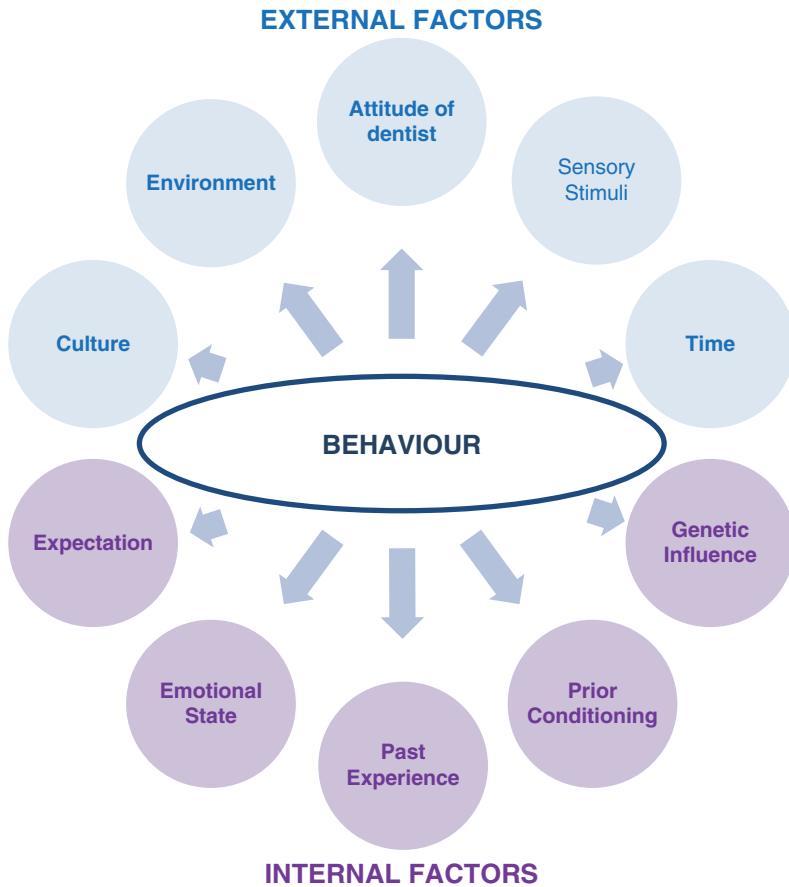
There is an element of fear in all unknown situations in the majority of normal individuals. Probably the most important aspect of behavioural management is to ensure that the provoking stimulus is minimised as far as possible. Much of this is common sense and includes paying attention to such factors as room decoration, the way staff are dressed and the playing of gentle music in the background.

### Positive Distraction

Positive distraction can be applied with the use of ceiling-mounted televisions and personal music systems, as in Figure 1.5.

Although the five sensations of sight, sound, hearing, touch and smell can all be offensive to patients at the dentist, it is undoubtedly the fear of pain which is the most commonly quoted factor that inhibits individuals seeking treatment or which underlies the apparently irrational behaviour of many anxious patients.





**Figure 1.4** Factors influencing behaviour.

### **Tell, Show, Do**

Simple behavioural management consists of informing verbally and demonstrating practically before actually performing a procedure. This has commonly been interpreted as a 'tell, show, do' sequence and there is good evidence that it is effective for many people (Figure 1.6). It does, however, depend on patients being able to adopt a rational approach to unknown situations. It is unlikely to be very effective in phobic patients or those demonstrating other types of neurotic behaviour.

### **Permissible Deception**

Another simple method of behavioural management, and one that is particularly suitable for use in children, is sometimes referred to as 'permissible deception'. An example of this would be the introduction of an infiltration local anaesthetic into an upper premolar region without a patient being told they were having an 'injection'. Providing adequate topical anaesthesia has first been given and the needle is not seen by the patient, abnormal behavioural responses are rarely seen in such situations. In such techniques, it is important not to tell lies but to be 'economical with