

## Overview of Behaviour Management in Paediatric Dentistry

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### Abstract

**Introduction:** Behaviour management is widely accepted by many clinicians and is one of the important factors in providing dental care to children. If the child's behaviour cannot be managed accordingly, then it is almost impossible to perform the dental procedures that are needed. Both pharmacological and non-pharmacological techniques in behaviour management help in reducing anxiety. They instil a positive attitude in children, allowing clinicians to perform a quality health care treatment efficiently and safely in children, infants, adolescents, and to all with special health care needs. The technique is selected based on the behaviour of the patient as well as the skills of the practitioner. Therefore, behaviour management should be empathetically carried out in children for their wellbeing and better treatment result.

**Aim of the Study:** The purpose of the review is to understand the different behaviour management techniques used in paediatric dentistry.

**Methodology:** The review is a comprehensive research of PUBMED since the year 1976 to 2014.

**Conclusion:** Since children are hard to manage during dental treatment, it is mandatory for dental practitioners to easily recognize the childhood dental disease and effectively treat them with skills acquired in day to day practice. The effective treatment includes the understanding of a child's behaviour and family response to the same. Behaviour guidance includes helping children identifying the appropriate and inappropriate behaviour in dental setup, develop impulse control, learn problem-solving strategies, being empathetic, and develop self-esteem. The process is a continuous interaction of the child with the dentist and dental team with the goals to establish communication, reduce the level of fear and anxiety in children, build a trusting relationship, promote a child's positive attitude, and deliver quality dental treatment. In this way, scientific knowledge of behaviour guidance is necessary for proper implementation of the technique and by no mean the misbehaviour should be punished, power asserted or used any technique that hurt or belittles the child patient.

**Keywords:** Behaviour Modification; Tell Show Do the Technique; Hand Over Mouth Exercise; Positive Reinforcement; Pharmacological Management; Non-Pharmacological Management

## Factors predicting the child’s behaviour

### Child’s attribute

The attribute of the child is a very important factor in behaviour guidance; the dentist thus should be able to assess the level of development in a child, his attitude towards dental treatment, his temperament, and any anticipated reaction on any particular action. Factors such as developmental delay, any physical or mental disability, chronic disease can be the reason the child’s noncompliance during the treatment. It becomes even more difficult to assess fears, situational anxiety, past unpleasant experiences in dental setup when the child is healthy and communicating [1,2].

### Influence of parents

It is commonly known that parents influence their child’s behaviour at a dental clinic in many ways. Parents’ roles come into play when they propagate a positive attitude towards oral health care. Early preventive care can decrease the need for dental treatment and causing fewer dental diseases hence lesser opportunities for painful treatment or any negative experience early in childhood. Parents can also transmit their dental anxiety or fear to children because of their past negative dental experiences. Therefore, they adversely affect the child’s behaviour; the child, in this way, anticipates a subjective fear [3].

### Dental environment

Every person in dental setup, including non-clinical staff such as receptionist, assistant, etc. play an important role in behaviour guidance. The first contact is always made by the receptionist regarding the scheduled appointment as well as any telephonic conversation. Thus, the tone of the call should be pleasant and welcoming, should actively engage the parent to know the child’s problem and need special healthcare or any cultural or linguistics needs [2,4].

### Assessment of patient

The assessment of a child’s cooperative behaviour is essential for treatment planning and to select the technique for behaviour guidance. There is no single assessment method available, which is accurate in predicting child patient’s behaviour. Frankl behavioural scale is one such parameter [5].

	<b>Frankl behavioral scale</b>
--	Definitely negative. Refusal of treatment, forceful crying, fearfulness, over evidence of extreme negativism
-	Negative. Reluctance to accept treatment, uncooperative, evidence of negative attitude but not pronounced (sullen, withdrawn)
+	Positive. Acceptance of treatment: cautious behavior at times, willingness to comply with the dentist, at times with reservation, but follows the dentist’s direction cooperatively
++	Definitely positive. Good rapport with dentists, interest in the dental procedure, laughter, and enjoyment.

The initial information regarding the child’s personality, cognitive development, temperament can be gathered by questioning parents. It includes their anxiety, fear, behaviour at a previous dental and medical visit, reaction to strangers, how the parents anticipate the child, and later on, the dentist can evaluate a child’s cooperative potential by observing and interacting with the patient [6].

### The behaviour of dental team

The combined and individual behaviour of dentists and all the dental staff are the primary tool used in the behaviour management of child patients. The attitude of the dentist, body language, and communication skills are a few parameters helps in creating positive dental

visit for child and therefore, gaining trust from child and patient. This positive behaviour of dentists and staff helps in reducing anxiety inpatient and encourage them for cooperation. It can be achieved by giving clear specific instructions in an empathetic way with an appropriate level of physical contact as well as constant verbal reassurance [3,7].

### Requisites before the treatment

#### Informed consent

The decision regarding the implementation of any behaviour guidance technique cannot be made alone by the dentist, but the dentist must involve parents. The dentist should make parent awareness about the treatment options, potential benefits, and risks involved and let the parents decide what is best for their child [3].

#### Control of pain management during treatment

Pain is the main factor a child may show a variety of behaviour varies from crying to throwing tantrums, making treatment almost impossible to carry. Pain assessment and management is one critical procedure and important to carry out since pain has a direct influence on the behaviour of a child [8].

#### Documentation

The child's behaviour in every visit, all the previous dental history, medical history, the past eventful experience must be recorded since this serves as an aid for a future appointment [3].

### Non-pharmacological behaviour management

#### Communication

When it comes to non-pharmacological behaviour, communication is one of the most significant factors. Communication includes imparting or interchange of thoughts, opinions, or information by various methods. In a dental setup, it is done through dialogue, tone of voice, facial expression, and body language of the dentist [8].

#### The four ingredients of communication are [9]:

- The sender.
- The message (with facial expression and body language of the sender).
- The context or setting in which the message is sent.
- The receiver.

To have successful communication, all the above four should be present with consistency. In the absence of consistency, there may be a misunderstanding for the intended message and for what is understood. The cognitive development of a child decides the amount of information interchanged between the dentist and child. A child may not understand the concept, which may appear unrealistic to them; the dentist should use appropriate vocabulary and body language to send messages in a consistent way from the receiver's intellectual point of view. Dentists rushing through the treatments, not taking enough time to explain the procedure, barring parents from the examination room, and being impatient are known to cause low parent satisfaction. whereas when they offer compassion, empathy and genuine concern, there is better acceptance of care [6-8].

### Positive pre-visit imagery

In this method, patients are shown positive photographs or images of various dental treatments waiting are before the appointment [10].

#### Objective

- To provide children and parents on what to expect during a dental visit with visual information
- To provide children with a context to be able to ask providers relevant questions before the dental treatment starts.

### Direct observation/modelling

The patient is shown a video or is allowed to observe a young cooperative patient undergoing dental treatment [11].

#### Objectives

- Familiarize the patient with dental setting and allow the patient to understand the specific steps involved in dental procedure.
- It allows the patient and parent to ask questions about the dental procedure.

### Tell-show-do

This technique contains three parts that are a verbal explanation of the procedure to be done by a dentist inappropriate way according to the cognitive development of the child or in a way in which a child can understand it. (Tell). Demonstrating the patient the visual, olfactory, and auditory aspects of the procedure in a way that it appears non-threatening to them (Show). Without modifying or deviating from what is explained and demonstrated, the dentist should finish the procedure (Do) [3,4].

#### Objective

- This technique teaches the patient about important aspects of a dental visit and makes them familiar with the dental setting.
- It is positive reinforcement, and it shapes the patient's response to procedures through desensitization.

### Indication

Any moderately cooperative child patient above three years old who can understand the verbal explanation and understand the procedure shown to them.

### Contraindication

Child showing extreme behavior and is not ready to comply with any verbal command, a child under three years of age, mentally challenged patients who find it difficult to understand, patient with visual or hearing impairment.

### Ask-tell-ask

This technique involves inquiring about patient's concern and feeling towards impending procedure (Ask), then explaining the procedure through a demo in a most non-threatening language according to the cognitive development of a child (Tell), and after that again asking about if the patients understand the impending treatment or how he feels about it (Ask). If he still has concerns, then the dentist either may repeat the technique or use other alternatives for behavior guidance [12].

### Objective [12]

- This technique is useful in assessing underlying anxiety that a child may have.
- It teaches the patients about the procedure is going to be accomplished
- The technique may confirm if the patient is comfortable with treatment before proceeding to it.

### Indication

The technique can be used in moderately cooperative child patient that may show concern about the procedure that is going to be done, any patient that can understand the verbal explanation [12].

### Contraindication

None.

### Voice control

Voice control includes a deliberate alteration of voice in the form of volume tone or pace to influence and direct the child's behavior. The tone should not be assertive since it may appear aversive to some parents; therefore, a prior explanation of the technique would prevent misunderstanding [3-5].

### Objective

- To gain patients the attention and compliance.
- To avert negative and avoidance behaviour.
- Establish an appropriate adult-child role.

### Contraindication

Patient with impaired hearing.

### Non-verbal communication

Non-verbal communication is the guidance of behaviour by having appropriate contact, posture, facial expression, and body language [3,4].

### Objectives

- This method can enhance the effectiveness of other communicative methods
- It helps in gaining patient's attention as well as in maintaining it.

### Positive reinforcement and descriptive praise

This method is to establish desirable behaviour in patients. Thus it is essential to give appropriate feedback. Positive reinforcement rewards the desired behaviour and thus increases the likelihood of recurrence of those behaviours. The social reinforcers are positive voice

modulation, facial expression, praising the child verbally, appropriate demonstration of affection, and physical contact by the dentist and all the dental team. Descriptive praise is to enhance cooperative behaviour shown by the child, e.g. "Thank you for sitting still," "You're doing great, keep it up," "Good job," etc. Non-social reinforcers may include a token of appreciation and toys. The objective of this technique is to reinforce desired behaviour in children during dental treatment [13].

### **Distraction**

Distraction technique uses the diversion of a patient's attention away from what may appear or perceived unpleasant by them. Giving them a short break is one effective way of distraction [5,8,14].

### **Objective**

- To decrease the perception of unpleasant experience during treatment
- Avert negative or avoidance behaviour.

### **Memory restructuring**

Memory restructuring means an approach in which negative memories such as first dental visit, local anaesthesia administration, extraction is restructured into positive ones [15].

It involves visual reminders (photograph of a child smiling at first visit), positive reinforcement through verbalization (dentist and parents praise child by saying he has done a good job), concrete examples of encoding sensory details, and sense accomplishment (praising a child for positive behavior) [15].

### **Objectives**

To restructure past negative dental experiences into positive ones and improve behavior in further dental visits [15].

### **Desensitization**

Desensitization includes presenting a child with a series of dental experiences in increasing anxiety suggestion, systematic only when the child admits the earlier experience in a relaxed state [16].

### **Hand over mouth exercise**

It is one of the advanced behaviour guidance techniques. It is aversive in nature and is used in an uncontrollable child throwing tantrums and crying forcefully, this includes placing a hand over the mouth (allow the child to hear), the nose must not be covered, the dentist then explains to the child that hand will be removed as soon as he stops crying, and as the child stops, the hand is removed, and child is praised. Since it's an aversive technique, prior explanation to parents is mandatory. This technique enables one to regain the child's attention and communication and is recommended for children aged 4 - 9 years. HOME is contraindicated in young, emotionally, and mentally challenged patients [17].

### **Protective stabilization**

Protective stabilization is another aversive method that restricts the patient's freedom of movement with or without the patient's permission, to decrease the risk of injury and allowing to complete the treatment. The use of this technique may have serious consequences

such as physical and psychological harm, loss of dignity, and violation of patients' right; therefore, it must be used with caution and only when it is necessary, and when done, careful and continuous monitoring of patients is a must. Various protective stabilization devices used are mouth prop, stabilization tools such as papoose board, and paedo wrap as well as physical restraining by taking assistance from dental staff. The parents must be informed and explained the technique before the procedure is carried out. Indicated in patients who are not cooperative, lack maturity, mental or physical condition prohibiting them from staying still. It is contraindicated in a healthy cooperative patient [18].

### **Pharmacological behaviour management**

#### **Nitrous oxide/oxygen inhalation [19]**

Nitrous oxide/oxygen inhalation is one safe and effective technique to reduce anxiety in patients and enhance effective communication. It is reversible, with a rapid onset of action and recovery. It mediates a variable degree of analgesia, amnesia, and gag-reflex reduction, thus helping the dentist in properly diagnosing and treating the patients.

#### **Objectives**

- To reduce and eliminate anxiety, enhance communication, and patient cooperation with appropriate pain control.
- Reduces unwanted movements of the patient.
- Aid in the treatment of mentally/physically challenged or disabled patients.

#### **Indication**

Used in a fearful, anxious, loud patient, patient with special health care needs, patients with severe gag reflexes.

#### **Contraindication**

Patients with chronic obstructive pulmonary diseases, severe emotional disturbances, the first trimester of pregnancy, compromised airway [19].

#### **Sedation [20]**

Sedation can be safely used in patients who are unable to cooperate due to psychological or emotional maturity or mental/physical/medical disability. Before administration and informed consent must be taken along with detail medical history, the patient's level of consciousness, responsiveness, heart, and respiratory rate, oxygen saturation are some important parameters to be considered.

#### **Objectives**

- Minimize physical discomfort and pain, control anxiety, minimized psychological trauma.
- Control behaviour and movement to safely allow the completion of treatment.
- Maximize the potential for amnesia.

### Indication

Fearful, anxious patients for whom non-pharmacological methods have not been effective, patients who show lack of cooperation due to emotional, mental, physical, medical disability.

### General anaesthesia [20]

General anaesthesia (GA) is a controlled state of unconsciousness accompanied by loss of protective reflexes such ability to maintain an airway independently and unresponsiveness to physical stimuli or verbal command. It is sometimes necessary to use GA to provide quality dental treatment, but in the absence of conclusive evidence, it would be unethical to withhold sedation and anaesthesia when necessary. 95 Before the administration, informed consent must be taken with clear instructions to be provided to parents, a dietary precaution, as well as pre-operative health evaluation, is to be done. The decision to use GA must be taken into consideration in terms of age of the patient, alternative modalities, risk-benefit analysis, treatment deferral, dental needs of the patient, patient's medical status.

### Objectives

- To provide safe, efficient, and effective dental care.
- To eliminate anxiety, reduce unwanted movements and reaction to dental treatment.
- To aid treatment in patients who are mentally, physically, or medically compromised.

### Indication

GA is indicated for patients who cannot cooperate in dental treatment due to psychological or emotional maturity, any mental, physical, or medical disability, patients for whom local anaesthesia is ineffective, a patient requiring immediate comprehensive dental care.

### Contraindication

GA is contraindicated in healthy cooperative patients with less or minimal dental needs or treatment, a young patient with minimal dental needs that can be done with therapeutic intervention such as ITR, fluoride varnish, etc. any predisposing condition that would make administration of general anaesthesia inadvisable.

### Conclusion

A different variety of behavioural management techniques are available to paediatric dentists. The practitioner must be used appropriately taking into account cultural, philosophical, and legal requirements in the country where he is practicing, and every technique used must be concerned with dental care of children solely for the benefit of the child.

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