### Sri Aurobindo College of Dentistry Indore, Madhya Pradesh INDIA



#### MODULE PLAN

TOPIC :NON-PHARMACOLOGICAL BEHAVIOR MANAGEMENET TECHNIQUES

SUBJECT: PEDODONTICS

TARGET GROUP: UNDERGRADUATE DENTISTRY

MODE: POWERPOINT – WEBINAR

PLATFORM: INSTITUTIONAL LMS

PRESENTER: DR. ABHILASHA MANKER

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Behavioral dentistry is an interdisciplinary science which needs to be learned, practiced and reinforced in the context of clinical care and within the community oral health care delivery system.





- Behavioral pedodontics Study of science which helps to understand development of fear, anxiety and anger as it is applied to child in dental situations. - Wright (1975)
- Behavioral science It is the science which deals with the observation of behavioral habits of man and lower animals in various physical and social environment; including behavior pedodontics, psychology, sociology and social anthropology.



#### CATEGORICAL RATINGS OF BEHAVIORAL PATTERNS

Large study's have contributed to classification of child's behavior since 1960, as it correlates with clinical diagnosis and patient management.

### CLASSIFICATION OF CHILD BEHAVIOUR IN DENTAL CLINIC



### Classifications of child's behavior

- Wilson's classification (1933)
- Lampshire Classification (1970)
- Wright's clinical classification (1975)
- ☑ Garcia-Godoy (1986)
- Pinkham
- Solution State State
- Sarnat's behavior scale

Wright's modification of frankl's behavior rating scale (1975)

### Wilson's classification (1933)

#### Normal or bold:

The child is brave enough to face new situations, is co-operative, and friendly with the dentist.



#### **Tasteful or timid**:

The child is shy, but does not interfere with the dental procedures.



#### Hysterical or rebellious:

Child is influenced by home environment - throws tempertantrums and is rebellious.



#### **Nervous or fearful**:

#### The child is tense and anxious. fears dentistry.





#### **LAMPSHIRE'S CLASSIFICATION (1970)**



### Wright (1975)

#### 1. Cooperative behavior

2. Lacking cooperative ability

3. Potentially cooperative
i. Uncontrolled /Hysterical
ii. Defiant /Obstinate behavior
iii. Timid /Shy behavior
iv. Tense cooperative
v. Whining behavior
4. Stoic behavior

### Pinkham's Classification

Category 1	Emotionally compromised
Category 2	Shy, Introvert child
Category 3	Frightened child
Category 4	Child who is adverse to authority

#### **I. EMOTIONALLY COMPROMISED CHILD**

#### Anxiety is common

 They are poor dental patients, no fun loving
 Even though Parents are intelligent but they have no idea that anything is wrong, because they grow accustomed to child's behavior.

Situation is unfortunate as most emotional illness are diagnosed and manageable



 Emotional illness can be problem for children from broken homes and unfortunate parenting circumstances
 Eg:-abused and neglected children



#### **II- SHY, INTROVERT CHILD**

- Seen in very young patients
- Demand rapport and communication between dentist and child but the shy child finds the dental treatment is stressful.
- Stress can relate the child to cry.
- Dentist's first objective is establishing good rapport, trust, and communication
- Requires patience as they are unskilled at "feeling people out"
- CAN OVERCOME :- Using praise and TSD

### **III-FRIGHTENED CHILD**

- Treating this child is a challenge for dentist, teachers and parents and physicians
- It is intense and requires enormous cooperation from the child.
- Fear ranges from fear of needles to bodily harm and fear of unknown



#### • MANAGED BY:-

 Postponing dental work to avoid more anxieties or even may include procedures under general anaesthesia.

#### **IV. CHILD WHO IS AVERSE TO AUTHORITY**

- They are spoiled, incorrigible, overindulged and defiant
- Children exhibit variety of misbehaviors
- Nature can be of emotional illness, introversion or fear simply is not the reason for inappropriate behavior at dentist's office.
- They usually want things to go in their way and tries to rule over dentist



## Garcia-Godoy (1986)

- 1. Fearful
- 2. Timid
- 3. Spoiled
- 4. Aggressive
- 5. Adopted
- 6. Handicapped
- 7. Cooperative

#### **FEARFUL**

- Resists entering operatory, cries and screams
- Could be passive, accepting treatment but will state his fear to treatment.

#### <u>TIMID</u>

- Enters operatory cautiously, thoughtful with eyes on the floor.
- Does not look at professional staff when talked





#### **SPOILED**

- Enters operatory with arrogant and proud behavior.
- Neglects treatment and states preferences on treatment and gives order.



#### AGGRESSIVE

- Screams, does not open the mouth, kicks.
- Sits on dental chair and neglects treatment



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#### **ADOPTED**

- Combination of spoilt and fearful behavior
- Posses timid characteristics

#### <u>COOPERATIVE</u>

Cooperative with treatment



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#### **HANDICAPPED**



Children with mental or physical handicapping conditions

will need special care

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# FRANKL BEHAVIOUR RATING SCALE (1962)

#### RATING 1: DEFINITELY NEGATIVE

 Complete refusal of treatment, forceful crying, fearfulness





#### RATING 3: POSITIVE

• Acceptance of treatment, cautious behavior, is cooperative but may become uncooperative once treatment starts.





### Wright's modification of frankl's scale

Rating 1	Definitely negative ()
Rating 2	Negative (-)
Rating 3	Positive (+)
Rating 4	Definitely positive (++)

### Sarnat's behavior scale

#### ■ Active cooperation


# Passive cooperation









# Sompletely uncooperative, strongly opposed



## Houpt Scale (Categorical Rating Scale)

Crying:	1: screaming	
	2: continuous crying	
	3: mild, intermittent crying	
	4: no crying	
Co-operation:	1: violently resists/disrupts treatment	
	2: movement makes treatment difficult	
	3: minor movement/intermittent	
	4: no movement	
Apprehension:	1: hysterical/disobeys all instructions	
	2: extremely anxious/disobeys some instruction/delays treatment	
	3: mildly anxious/complies with support	
	4: calm/relaxed/follows instructions	
Sleep:	I: fully awake	
	2: drowsy	
	3: asleep/intermittent	
	4: sound asleep	

Hosey MT, Blinkhorn AS. An evaluation of four methods of assessing the behaviour of anxious child dental patients. International Journal of Paediatric Dentistry, 1995 Jun:5(2):87-95.

### Global Rating Scale 5 = excellent 4 = very good 3 = good 2 = fair1 = poor/aborted

Global Rating Scale of overall behaviour was scored by the child's dentist after each visit and is a measure of both the successful completion of treatment at that visit and of the dentist's perception of the child's anxiety.

Hosey MT, Blinkhorn AS. An evaluation of four methods of assessing the behaviour of anxious child dental patients. International Journal of Paediatric Dentistry. 1995 Jun;5(2):87-95.

# FACTORS WHICH AFFECT CHILD'S BEHAVIOR IN THE DENTAL OFFICE

UNDER THE CONTROL OF THE DENTIST	OUT OF CONTROL OF THE DENTIST	UNDER THE CONTROL OF PARENTS	
<ul> <li>effect of dental office environment</li> <li>effect of dentist's activity and attitudes</li> <li>dentist's attire</li> <li>presence/absence of parents in the operatory</li> <li>presence of an older sibling</li> </ul>	<ul> <li>growth &amp; development</li> <li>nutritional factors</li> <li>past dental experiences</li> <li>genetics</li> <li>school environment socio-economic status</li> </ul>	<ul> <li>home environment</li> <li>family development and peer influence</li> <li>maternal behavior</li> </ul>	

## A) UNDER THE CONTROL OF THE DENTIST

## 1. DENTAL CLINIC:

Bohuslov (1970) stated that psychologic preparation of the child is based on the physical environment





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#### **2. EFFECTS OF DENTIST'S ABILITY AND ATTITUDE**

- **Jenks** has described 6 categories of activities by which the dentist can foster or enhance co-operation in children.
- a. Data gathering and observation
- **b.** Externalization
- **c.** Empathy and support
- **d.** Flexible authority
- e. Structuring
- f. Education and training

#### a. Data gathering and observation or The fuctional enquiry:

This includes collecting the type of *information about a child and his parents* that can be obtained by a formal and informal office interview or by a written questionnaire

### b. <u>Structuring:</u>

Refers to *establishing* certain *guidelines of behavior* set by the dentist and his team to the child so that the child knows what to expect and how to react during dental experience



#### c. Externalization:

It is a process by which child's *attention is focused away from* the sensations associated with the *dental treatment* 

2 components:

- 1. Distraction
- 2. Involvement



#### d. Empathy and support:

empathy is the capacity to understand and experience the feelings of another without losing one's own objectivity.

Dentist should have the capacity and sensitivity to respond to the child's feelings and shouldn't be totally engrossed in the technical aspect of the therapy

#### e. Flexible authority:

This includes *compromise* made by the dentist to meet the *needs* of a particular patient

#### f. Education and training:

The dentist should implement a program which both educates *children and their parents* as to what constitutes good dental health and which stimulates them to make the behavioral changes necessary to achieves these goals.

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#### 3. EFFECT OF DENTIST'S ATTIRE

If the child has previously experienced a stressful situation which includes **the presence of someone in white attire** such as a physician, the mere presence of a white clothed individual would be sufficient to evoke a negative behavior



#### 4. PRESENCE OR ABSENCE OF PARENTS IN THE OPERATORY

Mother's presence is essential for a preschool child because of close symbiotic relationship.

An older child does not require mother's presence because of emotional independence of these children as they grow up. Parental influences play a major part in how a child copes with the stresses and stimuli of dental treatment

[Bailey et al., 1973].

Earlier research showed that at least with only mildly anxious children, passive parental presence does not make a child's behaviour worse and in pre-school children it has a positive effect.

[Frankl, 1962; Pffefferle, 1982]

- However, a parent who is directly communicating with their child during treatment can make the dentist/child communication more difficult.
- There does seem to be a trend for parents to have a greater desire to be actively involved in all aspects of their children's life and a growing unwillingness to allow another responsible adult to guide their child's behaviour.

[Pinkham, 1991; Peretz and Zadik, 1998],

Parental presence or absence can be used as a behaviour management strategy but it is much influenced by the ability of the dentist concerned

[Fenlon et al, 1993; Feigal, 2001; Kotsanos et al., 2009].

#### **5. PRESENCE OF AN OLDER SIBLING**

An older sibling serve as a **role model** in a dental situation. it has:

- a) little effect on behavior of a 3 year old patient
- b) no effect in case of 5 year old patient
- c) most noticeable effect among 4 year olds

# **OUT OF CONTROL OF THE DENTIST**

- Growth & Development
- Nutritional factors

 Past medical and dental experiences



#### ➤ Genetics:

- COMT is an enzyme involved in the inactivation of chemical compounds within both the serotonin and dopamine pathways,
- Single nucleotide polymorphism in the COMT gene, whereby there is a substitution of methione for valine.
- The Val allele—with its higher levels of prefrontal dopamine catabolism has been associated with anxiety disorders including phobias

(*McGrath et al., 2004*).

#### School environment

➢Socio-economic status

Lee in 2008 found out that younger children exhibit more dental fear than elder. He also stated that invasive and painful experience during first visit contribute to disruptive behaviour.

Lacker D(1996), Tenberge (2001) and Versloot J (2009) concluded that past medical and dental experiences are most prominent of all factors.

# **UNDER THE CONTROL OF PARENTS**

- 1) Home environment
- 2) Family development and peer influences
- 3) Maternal Behavior



# **MATERNAL ATTITUDE & CHILD'S BEHAVIOUR**

More contact

Maternal influences on – mental, physical and emotional development before birth.

Mother's nutritional and physical health affects neurologic and somatic development. Bell has termed this relationship "one-tailed"- parental characteristics have a unilateral influence on developing child.

Child's personality, behaviour, and reaction to stressful reactions
 – direct product of maternal characteristics

Schaefer & Bayley(1967) has developed a model in which gradations of maternal behaviour are

arranged sequentially around two reference pairings of Autonomy Vs Control and Hostility Vs Love. AUTONOMY freedom detached democratic indifferent cooperative neglecting accepting rejecting HOSTILITY LOVE demanding overindulgent antagonistic authoritarian protective dictatorial 63 indulgent possessive overprotective CONTROL

- Suggested that loving mothers tended to have calm, happy sons, while hostile mothers had sons who were excitable and unhappy.
- Mothers who allowed autonomy and who expressed affection had sons who were friendly cooperative and attentive.

Conversely punitive mother's children did not have + behaviour

Bayley N, Schaefer ES. Maternal behavior and personality development: Data from the Berkeley growth study. Readings in the psychology of parent-child relations. New York: Wiley. 1967:157-69.

# **Maternal Attitudes:**

Overprotective:.
Overindulgent
Under affectionate
Rejecting

■ Authoritarian

# **Mother-child Behaviour Interactions:**

## **Overprotective**:

- $\boxtimes$  exaggeration of love and affection.
- Summa time state
  Su
- Causes: H\o long delay in conception, only child, sick\handicapped, if one of sibling has died, cannot have any more children.

# i. Overprotective Dominant:

#### features-

Child submissive, shy, anxious, not allowed to make decisions himself, lacks self confidence, does not learn to cope – anxieties and problems of life.

#### Management:

- Create self confidence
- Familiarize, good rapport
- Tell, show, do technique

# ii. Overprotective overindulgent mother:

- Child is aggressive, demanding, display temper tantrums, if wishes not met.
- $\blacksquare$  Used to "Getting their own ways at home".
- Solution Strate, Stubborn and Spoilt, try to dominate over dentist and demanding
- Well behaved-cannot establish a good rapport.

# **Overindulgence:**

- May be associated with overprotection
- All financial demands are met
- Very little restraint
- **Relatives mostly grandparents**
- Spoiled child, temper tantrums

## **Under affectionate mother:**

- $\square$  Child is devoid of love and care.
- Varies from mild detachment to neglect.
- Child well behaved, well adjusted, shy, difficult to develop rapport, may be uncooperative.
- Causes: unwanted, birth not anticipated, hampers career and ambitions, unhappy mother, emotional problems

# **Rejection:**

- May be in form of physical violence, verbal ridicule neglect, severe punishment, nagging and resistance to spend- time and money.
- Children: over reactive, revolting, aggressive, disobedient, emotionally insecure, difficult to treat.
- Causes: unstable unhappy marriages, birth not anticipated, interference with career and emotionally immature mother

# Management –

- Show love and care
- Meet their demand as soon as possible
#### **Authoritarian mother:**

- Has got certain norms for the child to follow.
- Submission with resentment, later evasion, dawdling child, obeys commands slowly and with delay.
- Parents are not supportive to child and rather criticize.
- Child shows a heightened avoidance gradient and seeks to delay response.
- Evasive or escaping behavior



## **Behavior management**



# "Although the operative dentistry may be perfect, the appointment is failure if child departs in tears."

McElory 1895

#### **BEHAVIOR MANAGEMENT:-**

(Wright 1975)

It is defined as the means by which the dental health team effectively and efficiently performs dental treatment and thereby instills a positive dental attitude in the child.



BEHAVIOR SHAPING:- is the procedure which slowly develops behavior by reinforcing a successive approximation of the desired behavior until the desired behavior comes into being.

BEHAVIOR MODIFICATION:- is defined as the attempt to alter human behavior an emotion in a beneficial way and in accordance with laws of learning.

Eysenck 1964

#### ■ Behavior guidance

Behavior guidance is the process by which practitioners help patients identify appropriate and inappropriate behavior, learn problem solving strategies, and develop impulse control, empathy, and selfesteem.

AAPD 2015

### **FUNDAMENTALS OF BEHAVIOR MANAGEMENT**

- 1. Positive approach- Positive statements
- 2. Team attitude- Friendly and caring
- 3. Organization- Well organized dental team and treatment
- 4. Truthfulness- Black or White, nothing gray
- 5. Tolerance- Ability to rationally cope with the misbehaviors
- 6. Flexibility- as situation demands

#### Objectives of behavior management

To establish effective communication with child and parent
 Gain child and parent confidence for dental treatment
 Teach child positive aspect of preventive dental care
 Provide a comfortable, relaxing environment to the child

Snowder 1980

### **BEHAVIOR MANAGEMENT**

Non pharmacological (Psychological approach)

### Pharmacological

#### Process of predicting child behaviour and synthesizing a behaviour management strategy for child patient (pinkham 1979)

### Non-Pharmacological methods of behavior management

#### COMMUNICATION

#### BEHAVIOUR SHAPING

- DESENSITIZATION (TSD)
- MODELLING
- CONTINGENCY MANAGEMENT

- BEHAVIOR MANAGEMENT
  - AUDIO ANALGESIA
  - BIOFEEDBACK
  - VOICE CONTROL
  - HYPNOSIS
  - COPING
  - RELAXATION
  - IMPLOSION
  - AVERSIVE CONDITIONING

Traditional behavior management Tell show do

Distraction TLC Modelling

Positive Reinforcement Voice Control Aversive behavior management Hold and go Restraining HOME

### Pharmacological management

Conscious sedation

Deep sedation

General anesthesia

### **AAPD 2000**

#### **BASIC BEHAVIOR MANGEMENT**

Communication Positive pre-visit imaginary **Direct observation** Tell-show-do Ask-tell-ask Voice control Non verbal communication Positive reinforcement and descriptive praise Distraction **Memory restructuring** Parental absence/presence  $NO_2/O_2$  inhalation

#### ADVANCE BEHAVIOR MANAGEMENT

Protective stabilization

Sedation General anesthesia

AAPD 2015-16

### **Pre-appointment behaviour modification**

- Prepares patients and eases introduction to dentistry
- Modeling- audiovisual aids, live models
- Merits: Rimms and Masters
  - 1) Stimulation of new behaviors



- 2) Facilitation of new behaviour in a more appropriate manner
- 3) Disinhibition of inappropriate behavior due to fear
- 4) Extinction of fears
- Pre-appointment mailings, pre-recorded messages or customized web page

Rimm DC, Masters JC. Behavior therapy: Techniques and empirical findings. Academic Press; 1974.

### **Communicative management:**

- It is the basis for establishing a relationship with a child which may allow the successful completion of procedures.
- Complex Multisensory process- transmitter (dentist), medium (spoken words) and receiver (pt).
- Basis for establishing relationship and instill + attitude
- Types:
- Verbal
- Nonverbal



#### How to communicate ?

- Comfortable and relaxed.
- Solution Notice → Words and tone of voice → Words should express pleasantness, friendship & concern .(Korch 1972)
- Voice gentle, constant, empathy, firmness
- Ask child's nick name, age, class, background, likes\dislikes.
- $\blacksquare$  At eye level, single source
- Art of listening is also important
- Communication with children aged 2-7 years should be based on Jean Piagets concept – Animism : Giving life to an inanimate object

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### Use of Euphemisms

Dental terminology	Word substitute	
Probe	Tooth feeler\counter	
Tweezers	Tooth wiggler	
Needle prick	Mosquito bite	
LA	Sleepy water for tooth	
SSC	Cow boy hat	
Silver filling	Silver soldier	
Rubber dam	Rain coat	
Hand piece	Tooth whistler	
radiograph	Tooth photo	
Rubber dam clamp	Tooth button	

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Dental terminology	Substitute words	
High speed suction	Vacuum cleaner	
Air syringe	Wind	
Forceps	Tooth wiggler	
Impression material	Pudding	
Bur	Brush or pencil	
Caries	Sugar bugs	
Matrix	Fence for filling	
Prophylactic paste	Special tooth paste	
Rubber dam frame	Coat rack	
Band	Ring for tooth	
X-ray equipment	Camera	
sealant	paint	

Nonverbal communication is the reinforcement and guidance of behavior through appropriate contact, posture, facial expression, and body language.

• Objectives: The objectives of nonverbal communication are to:

enhance the effectiveness of other communicative management techniques, and

— gain or maintain the patient's attention and compliance

Good communication with parents is also essential. This is needed to facilitate understanding and acceptance of treatment plans and behavioral techniques used by the dentist [Murphy et al., 1984; Lawrence et al., 1991], and also to minimize the likelihood of litigious action [Klein, 1985].

### Positive pre-visit imagery

• Patients are shown positive photographs or images of dentistry and dental treatment in the waiting area before the dental appointment.

Objectives: The objectives of positive pre-visit imagery are to:
provide children and parents with visual information on what to expect during the dental visit, and
provide children with context to be able to ask providers relevant

questions before dental procedures are initiated.

### **Systemic Desensitization**

Demonstrated by James & popularized by Wolpe

Exposing the pt. to a series of dental experiences, presented in an order of increasing anxiety evocation, progressing only when the child can accept the previous one in a relaxed state

[Wolpe, 1958; Machen and Johnson, 1974].

### **Systemic Desensitization**

Traditionally used with a child who is already anxious about the dental situation.

#### **Objectives**

- To help the child overcome dental anxieties.
- To expose the child to a graduated series of potentially anxietyinducing experiences.

### INDICATIONS

- Sirst Visit
- Subsequent visits when introducing new dental procedure
- Image: Searful Child
- Apprehensive Child because of information received from parents or peers.



### TELL SHOW DO TECHNIQUE

### (By ADDLESLON 1959)

• It is the classic model for communicating with children & favourably conditioning them to the dental experience.



# First described in words and phrases appropriate to the child's understanding ('Childrenese' [Kreinces, 1975]),

#### Objectives:

- To allow the child to learn about and understand dental procedures in a way that minimizes anxiety.
- Used with rewards, to gradually shape the child's behavior towards acceptance of more invasive procedures.

#### Indications:

• May be used with all patients. Can be used to deal with pre-existing

#### anxieties and fears, or with patients facing dentistry for the first time.

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• Kreinces GH. Ginott psychology applied to pedodontics. ASDC journal of dentistry for children. 1975;42(2):119-22.

• Martinoff JT. Robert B. Berson, DDS Daniel Brostoff, DDS, MS Ed. James T. Martinoff, M. Ed., MA, Ph. D. PEDIATRIC DENTISTRY.;2(2):111.

### Acclimatization...getting familiarized



Levy and Domoto (1979) observed TSD as one of the most highly employed behavior management technique.

Carr et al 1999 in a survey in South-eastern states of USA found that only 62% of them used TSD with all children. Crossley and Joshi 2002 reported TSD as most popular technique for managing children.

Grewal in 2003 mentioned that 70% dentist use TSD while normal conversation was listed as the first strategy when dealing with children.

Sharma et al in 2011 mentioned that TSD modifies behavior and Aids in achieving treatment goal effectively in all age groups.

Al Daghanin et al in 2017 revealed that the most accepted tech by parents was TSD,
 & the 2<sup>nd</sup> preferred was NO2 inhalation followed by GA. Least preferred was HOM.

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### Ask-tell-ask

• Description:

This technique involves inquiring about the patient's visit and feelings toward or about any planned procedures (ask); explaining the procedures through demonstrations and non-threatening language appropriate to the cognitive level of the patient (tell); and again inquiring if the patient understands and how she feels about the impending treatment (ask). Objective: The objectives of ask-tell-ask are to:

assess anxiety that may lead to noncompliant behavior during treatment;

— teach the patient about the procedures and how they are going to

be accomplished; and

— confirm the patient is comfortable with the treatment before proceeding.

• Indications: May be used with any patient able to dialogue.

Contraindications: None

### Tell-Play-Do

Based on learning theory where interchange of thought & 2- way interchange of information takes place

Child performs dental T/t on dental imitating toys

So, he understands the dentist's frame of reference & feels more comfortable & develops cooperative behaviour



Vishwakarma AP, Bondarde PA, Patil SB, Dodamani AS, Vishwakarma PY, Mujawar SA. Effectiveness of two different behavioral modification techniques among 5–7-year-old children: A randomized controlled trial. Journal of Indian Society of Pedodontics and Preventive Dentistry. 2017 Apr 1;35(2):143.

### Modeling

by Bandura and Walters1969

It developed from social learning principle

Procedure involves allowing a patient to observe one or more individuals (models) who demonstrate a positive behavior in a particular situation.

#### ☑ CAN BE DONE WITH

- Live
- Filmed
- Posters
- Audiovisuals

#### **Objectives**

- To reduce anxiety & fear in a child with previous experience.
- To introduce a child to dentistry.
- To stimulate acquisition of new behaviors
- To facilitate behavior already present in pt.


#### Adelson & Goldfried (1970) have stated that:

- 1. a child is able to learn complex behavior patterns by observing a model.
- 2. Modeling for pt. is effective when:
  - a) The observer is in a state of arousal
  - b) The model has relatively more status & prestige &
  - c) There are +ve consequences asso. with the model's behaviour

#### Modelling has been shown to be an effective technique with either

filmed modelling

#### [Machen and Johnson, 1974; Melamed et al., 1975],

Solution State State

[Ghose et al., 1969; Gordon et al., 1974].

Live modelling is a technique worth practicing in pediatric dentistry. The model used (e.g., mother or father) and the age of the child represent determining factors in the success of this technique.

Nada Farhat-McHayleh et al (2009)

S. Karan & M. Manvi (2016) found that mother as a live model can be highly effective

#### General principles to evaluate technique

- effectiveness: the potential of the technique to manage children's behavior in the dentist's office
- social validity: acceptance of the technique by parents, as well as public perception of the technique
- **isks associated with the technique**
- cost: time spent practicing the technique and cost of any materials and equipment used

Live modelling is a technique worth practicing in pediatric dentistry.

The mother as live model more effective than father as a model in reducing children anxiety during the first visit.

The model used (e.g., mother or father) and the age of the child represent determining factors in the success of this technique.

Salah Adeen Mohammed Alrshah et al (Mansoura Journal of Dentistry 2014;1(3):72-77)

## <u>Contingency Management,</u> (by Skinner)(1938)

- It is a method of modifying the behavior of child by presentation of positive reinforcers or withdrawal of negative reinforcers.
- Includes positive reinforcement
  - negative reinforcement
  - omission or time out
  - punishment



#### Reinforces can be:

- Positive Re-inforcer (Henry W Fields 1984)
- Negative Re-inforcer (Stokes & Kenndy 1980)
- Positive reinforcer is one whose presentation increases the frequency of desired behavior
- Negative reinforcer is one whose contingent withdrawal increases the frequency of a behavior.



## Type of reinforcements

Social : Praise, Positive facial expression, shaking hands, holding hands and patting shoulder.
 Material: may be given in form of toy and game.
 Activity Reinforces: Involving child in some activity, like watching TV show fixed on ceiling at eye level.



## MEMORY RESTRUCTURING

- Given by KENATH 2013
- It is a behavioural approach in which memories associated with a negative or difficult event are restructured into +ve memories using information suggested after the event has taken place.
- Restructuring involves 4 components:
  - 1. Visual reminder
  - 2. Positive reinforcement through visualization
  - 3. Concrete eg to encode sensory details
  - 4. Sense of accomplishment

- 1. A visual reminder could be a photograph of the child smiling at the initial visit (i.e., prior to the difficult experience).
- 2. Positive reinforcement through verbalization could be asking if the child had told her parent what a good job she had done at the last appointment. The child is asked to role-play and to tell the dentist what she had told the parent.
- 3. Concrete examples to encode sensory details include praising the child for specific positive behavior such as keeping her hands on her lap or opening her mouth wide when asked.
- 4. The child then is asked to demonstrate these behaviors, which leads to a sense of accomplishment.

## **Distraction technique**

Distraction is the technique of diverting the patient's attention from what may be perceived as an un-pleasant procedure thereby reducing the anxiety.





Objectives: The objectives of distraction are to:
 — decrease the perception of unpleasantness, and

— avert negative or avoidance behavior.

Indications: May be used with any patient.

Contraindications: None

- Choice of distraction is chosen by the patient
- Has a Placebo effect
- > Types:

Audio distraction: headphones
 Audiovisual distraction: through – tv, videogames or AV glasses

Magora in 2010 observed audiovisual wireless eyeglasses method of distraction was able to replace visual and auditory signals from the environment by a pleasant movie.

He concluded that audiovisual aids may be beneficial to uncoopeartive and anxious children and prevent pharmacologic means of sedation by offering a pleasurable method without adverse effect. Frere et al (2001), Prabhakar et al in 2007 and Ram D IN 2010 also stated that audiovisual distraction is a promising technique for behavior management.

Sivakumar et al in 2014 evaluated the effect of 3D glasses for AVD in children during LA administration & concluded it to be more effective as compared to music.

### Coping: signal system

by Lazaue 1980

Coping: It is defined as the cognitive and behavioral effort made by individual to master, tolerate or reduce stressful situation.

Coping effect is of two types:

- 1. Behavioral coping:
- 2. Cognitive coping:

#### **1.** Behavioral coping:

Efforts include physical or verbal activities in which the child engages to deal with stress.

2.Cognitive coping: Efforts that involve manipulation of emotions

Children who were taught coping skills like- imagery, relaxation, selftalk demonstrated less stress during T/t.



S.no.	Coping strategy	Dentist's behavior
1.	Distraction/ displacement	Talk to patient about hobbies, or just babble
2.	Expressive communication (verbalization fear)	Ask what the patient is feeling, or describe what you think they feel
3.	Relinquishing control to authority figure	Display confidence
4.	Gaining manipulative control over source	Tell patient what if something bothers them to put up their hand like this (demonstrate a safe way) Tell patient to count to 10 with you as you go through the procedure, finishing at the end of the count Give patient a mirror to watch with structure choices, for example, "Would you like orange or strawberry flavor?" "Would you like to play with my chair?"
5.	Affiliation	Be empathetic
6.	Conscious instruction to oneself	Tell patient to count to "Breath deep", or "Relax"
7.	Mental rehearsal	Inform patient of the steps to be performed prior to the procedure, and use Tell–Show–Do

Helmreich RL, Collins BE. Situational determinants of affiliative preference under stress. Journal of Personality and Social Psychology. 1967 May;6(1):79.

## **RETRAINING**

- Technique similar to behavior shaping, designed to fabricate positive values & to replace negative behavior.
- Objective:
  - To build a series of associations in child's mind
- Indicated in:
  - Children with apprehension or negative behavior
  - Due to previous bad experience or improper peer or parental orientation

#### • Approaches:

- Avoidance of extensive therapies
- Substitution(eg. High speed handpiece for spoon excavator)
- Distractions

#### **RELAXATION**

**1. Relaxation breathing**Solution Notice Through paced breathing

 Relaxation breathing or diaphragmatic breathing reduces anxiety & perceived pain.

Armfield et. al. 2013

2. Progressive muscle relaxation:
☑ Jacobson's relaxation training
☑ Autogenic training

### Voice control

- **By Pinkham in 1985**
- Solution Notice Control is a controlled alteration of voice volume, tone, or pace to influence and direct the patient's behavior.
- Objectives:
  - Gain the patient's attention and compliance;
  - Avert negative or avoidance behavior;
  - Establish appropriate adult-child roles.

Brauer [1964] was of the opinion that a sharp, loud, surprise comment of -

"Open your mouth and stop crying" will frequently be effective.

It has been suggested that besides the change in voice quality, the associated facial expression may be important in affecting a behavior change

[Pinkham, 1985].

## HYPNOSIS by Romanson 1981

 1<sup>st</sup> suggested by Franz A Mesmer in 1773
 It is an altered state of consciousness characterized by a heightened suggestibility to produce desirable behavioral and physiological changes



#### Hypnosis is also defined as:

A state of mental relaxation & restricted awareness in which subjects are usually engrossed in their inner experiences such as imagery, are less analytical & logical in their thinking, & have enhance capacity to respond to suggestions in an automatic & dissociated manner.

## lypnosis

Most effective in the presence of anxiety

**Relies on the role, skill and training of operator** 

Not all patients can be hypnotized

According to Barber et al (1963) tjis is effective in at least 1/3<sup>rd</sup> of pts.

#### Hennon outlined following uses:

Reduce/eliminate nervousness and apprehension
 Eliminate defense mech. that pt. use to postpone dental work
 Control functional or pscychosomatic gapping
 Prevent thumb-sucking
 Prevent bruxism
 To induce anesthesia

### **Contraindications of hypnosis**

The technique needs to be avoided in those with mental health problems, personality disorders, and neurodegenerative disorders.

# Technique

- 1. Patient preparation
- 2. Hypnotic induction
- 3. Deepening
- 4. Posthypnotic suggestion
- 5. Altering patient after therapy

## Audio Analgesia by Gardner, Licklider 1959



White Noise' is a method of reducing pain. This technique consists of providing a sound stimulus of such intensity that the patient finds it difficult to attend to anything else.



In 1959, Gardner and Licklider described a new phenomenon, the suppression of pain by sound, which was called Audio-Analgesia.

Sound from an Audio-Analgesic apparatus was transmitted to the individual through a set of earphones. He received sounds of two types, stereophonic music and white noise, the ratio and intensity of which he himself controlled.

- The individual was instructed to increase the intensity of either the music or the white noise or both, when he felt pain.
- The neurophysiological theory of the phenomenon is based upon the interaction of sensory modalities.

- Gardener and Licklider and Mittleman(1960) indicated that the sound spectrum produced by white noise saturates the auditory nerve with impulses, which in turn excites the medial geniculate body of thalamus.
- Impulses being originating from painful stimulus
- **Register in the ventral nucleus of the thalamus**
- This surrounding area being confused by white noise

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Solution Not State S

Carlin et al 1962, conducted a series of experiments They report that "there is no evidence that noise reduces sensitivity when a tooth is stimulated electrically" Carlin concludes that "perhaps the effectiveness of auditory analgesia in a clinical situation depends on both suggestion and distraction acting jointly."
B Howitt 1967 conducted experiments

On 138 children to determine the effect of various components of the audio analgesic experience on "clinical response thresholds" and "clinical tolerance threshold".

The results were summarized as follows:

- The clinical effect of audio analgesia is mediated by psychological rather than physiological factors.
- The effect of an audio-analgesic technique is not confined to any particular instrument, but is common to a number of stimulations.

- Cross-sensory masking is not widely accepted, today, as the explanation of audio analgesia.
- It seems to rest on the "physiological" theory of pain, with its "pain receptors", "pain pathways", and a "pain center" in the brain.

Vanellall 1964 also reports that he found no suppression of GSR in the presence of masking sounds, and no single complex of sounds which masked pain perception better than any other single complex of sounds tested. Subjective responses reported some lessening of pain. Sidney 1962 has reported the results of audioanalgesia in 110 pediatric patients.

And the author reported good to excellent reduction of the awareness of pain in the remaining patients.

# Prabhakar et al in 2005 also concluded that audio analgesia reduces anxiety of the child but not to a significant level.

# Biofeedback

### by Buonomono 1979

Involves use of certain instruments to detect certain physiological process.

Example: If blood pressure is high instruments give stimulation, useful in anxiety and echocardiogram can also be used.





# **Acupuncture**

Very ancient rather than new technic for pain control while not solely concerned with anesthesia and analgesia from the metaphysical standpoint, acupuncture has reportedly been unusually effective in relieving pain in many pts. & in providing surgical anesthesia for a no. of procedures.

Most of these reports are from China,

# Aversive conditioning

- $\square$  It is used for definitely negative behavior child.
- Two common methods used in the clinical practice are HOME and physical restraints

# Hand over mouth exercise

This measure involves placing a hand (punishment) over a child's mouth to extinguish an unacceptable response to the dental situation.

It is another form of behavior modification.

- Solution Not the second se
- Crammer (1973) has referred to it as "aversion", because it is used to avert or ward off an undesirable type of behavior.
- Wright and Feasby (1972), it was known as "restraint discipline".
- **Lampshire, 1970-** "emotional surprise therapy".
- Levitas (1947) used HOMAR- HOM airway restricted

No technique of behavior management has been debated by dentists as extensively and vigorously as hand-over-mouth.

A publication by Craig (1972) and the strong reader response demonstrated the diametrically opposing views surrounding aversive conditioning.

- The major purpose of this technique is to gain control over the child's behavior.
- It enables the dentist to establish communication so that the child can be taught the appropriate responses and expectations.

Before applying the technique, however, a child should have been prejudged to be of normal intelligence and capable of understanding what is expected of him.

### ■ INDICATIONS

### • 3 TO 6 YRS OLD.

- Healthy child who can understand but who exhibits defiance and hysterical behavior during treatment.
- A child who can understand simple verbal communication.
- Children displaying uncontrollable behavior.

# CONTRAINDICATIONS

■ Child under 3 years of age.

■ Handicapped/Immature Child.

Physical, mental and emotionally handicap.

### **Technique**

- Finn (1957) has stated that before applying hand-over-mouth, all other avenues for establishing communication should have been exhausted.
- When these have failed and the child's behavior remains uncontrolled the technique is applied.
- It is easy to visualize the highly emotion-packed scene.
- Therefore, the dentist must be fully cognizant of his objectives and his actions.

■ It could be stated that success with techniques requires proper application and this is particularly true for this technique.

Partial success seldom is claimed with this form of aversive conditioning.

The dentist's position in close proximity to the child' ear is of major importance

### Several variations of home

- HOMAR: HOM with airway restricted
- HOM and nose with airway restricted
- Towel held over mouth only
- Dry Towel held over mouth and nose
- Wet Towel held over mouth and nose

## HOMAR

The advantage behind airway restriction is that child will be quite so as to breath and screaming will decrease.

■ Together with home, nostrils are pinched for 15secs only.

BELANGER believed that airway restriction was critical element and it should be avoided.

Although HOMAR has been utilized by some practitioners," the technique has never been included in AAPD guidelines. In May, 2006, the American Academy of Pédiatric Dentistry (AAPD) eliminated the hand over mouth exercise (HOME) technique from its clinical guidelines on behavior management.

Prior to eliminating HOME, the techniques use had long been a matter of controversy among practitioners for its objectives, perceived consequences, and legal and ethical objections. An early reference, possibly the first in the dental literature dated 1898 by Bethel, described the technique when it was successfully used by a young patient's mother to gain his cooperation.'

HOME surveys have generally investigated the use of the technique by pediatric dentists and the teaching strategies of pediatric dentistry departments.

■ Recently, usage or teaching of HOME has declined dramatically.

Two surveys, conducted in 1972 and 1981 by the Association of Pedodontic Diplomates, showed that 80% and 90%, respectively, of pediatric dentists utilized HOME technique when hysterical behavior was demonstrated by children.

In **1989, Nathan** reported that 66% of pediatric dentists used HOME.

In 1999, Carr et al reported that 57% of respondents never used HOME." ■ The latest HOME survey, conducted in 2004, showed that 79% of AAPD members did not use it."

In 2004, Adair et al reported that HOME was taught as an acceptable technique in only 28% of postgraduate programs.

### **Parental acceptance of HOME**

- In 1984, Murphy et al reported that parents ranked HOME as the fourth least acceptable behaviour management technique after sedation, general anesthesia, and use of the papoose board."
- Similar findings were reported in 1991 by Lawrence et al.
   Wilson reported in 1991 that HOME was among the least acceptable techniques.'"

In a more recent study, Eaton J, McTigue D, Fields H, Beck M. In 2005, HOME was ranked by parents as the least acceptable behaviour management technique."

Change in parenting styles over the past 3 decades is considered one of the main factors that influence parental attitudes and acceptance of different behavior management techniques used in pediatric dentistry including HOME. However, a recent survey of 2,600 members of the AAPD recorded that 350 of the 704 respondents (50%) believed HOM was still an acceptable technique [Oueis et al., 2010]. Hence, it still continues to be a very controversial technique.

# PHYSICAL RESTRAINTS

**I** by Kelly 1976

■ It is the last resort for handling uncooperative patient

Physiological restraints involves restriction of head, hand, feet or body it can be

- ACTIVE: Restraints performed by the dentist staff or parent without the aid of restraining device
- PASSIVE: With aid of restraining device

# **PROTECTIVE STABILIZATION**

AAPD has included use of protective stabilization (formerly referred to as physical restraint and medical immobilization) in its guidelines on behavior guidance since 1990. Protective stabilization is defined as "any manual method, physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his or her arms, legs, body, or head freely."

Parents must be informed & consent must be documented.

### **Objectives:-**

- To reduce / eliminate the untoward movement
- To protect the dental staff, pt from the injury
- To render the quality dental treatment in these pts.

### **Indications**

- A patient requires immediate diagnosis and/or urgent limited treatment and cannot cooperate.
- Emergent care is needed and uncontrolled movements risk the safety of the patient, staff, dentist, or parent without the use of protective stabilization.
- A previously cooperative patient quickly becomes unco-operative during the appointment in order to protect the patient's safety and help to expedite completion of treatment.
- A sedated patient may become uncooperative during treatment.
   A patient with special health care needs.

### **Contraindications**

- Child with complicating physical or mental condition.
- Non sedated patient with non emergent treatment requiring lengthy appointments.
- Patient has experienced previous physical or psychological trauma from physical restraint.

- Child suffering from respiratory problems (asthma) which may compress respiratory function



# Papoose Board (PB)

### **Definition:**

- A Papoose Board is a device commonly used to immobilize children for dental work.
- The child is placed on a flat board and wide fabric straps are wrapped around the upper body, middle body, and legs.

# Types Papoose Board - Small Papoose Board - Regular Papoose Board - Large Papoose Board - Extra Large


## Pedi wrap

- This is the most widely used paediatric arm immobilizer.
- Also referred to as paediatric splints which are available in pairs.
- It has reinforced nylon mesh sheet with Velcro closures, available in small, medium and large sizes.
- It can be placed on prepositioned chair with Velcro fasteners around chest followed by arms and legs to avoid movement. It is designed to fit children from infancy to above ten years.

# **Towel and Tape**

A simple restraint device is to wrap the patient's arms in a towel, then wrap adhesive tape around the towel and finally tape the arms to the chair arm rests.

■ The same procedure may be used to restrain the patient's legs against the base of the dental chair.

#### **Posey straps**

- Posey straps also known as posey vest is a type of physical restraint used to restrain child to dental chair.
- The vest is placed on the patient, and meshy straps extending from each corner are tied either individually to each side or together to the back of a chair.
- They are fastened to the arms. They allow patients the freedom to move around their arms and legs if no limb restraints have been applied.



# Bean bag dental chair insert

#### **FEATURES**:-

- Help comfortably accommodate severly spastic persons who need more support and less immobalization in a dental environment
- Reusable and washable
- One size fits many people
- Patients with physical disabilities relax more in setting



# Mouth props

#### Also known as 'BITE BLOCK' is a wedge shaped

- rubber like texture and made typically from 'thermoplastic vulcanizate' (TPV) material.
- necessary for dental treatment of disabled patients who lack the ability to keep their mouths open.
- Mouth props are mechanical restraints that protect the patient and practitioner from injury that could occur during sudden and unexpected closing of the mouth.
- They also improve access and visibility.

### Types

- 1) Molt mouth prop
- 2) Mc Kesson Rubber Bite Block
- 3) Disposable mouth prop (EZ-Prop)
- ☑ 4) Silicone mouth prop
- S) Pearson mouth prop
- Solution State State



Researchers have contended that the method of aversive conditioning is unscientific and that it may cause psychological trauma to the child patient

(Davies and King, 1961; MacGregor, 1952).

No scientific data ever been presented to support this viewpoint. Indeed, the opinions of psychiatrists tend to support the use of it

(Goering, 1972; Chambers, 1970).

- The second issue is a legal one. However, when properly applied and with a brief, suitable explanation to a parent this should not be a concern.
- As Craig (1972) commented:

"When consent be of no more concern than a parent's objection to any other procedure normally used in the office".

### **Risks**

- S physical or psychological harm,
- $\square$  loss of dignity, and
- violation of patient's rights
- Parents may also experience distress when their children are restrained

## Weber DA, Reynolds CR in 2004

Demonstrated that psychological trauma due to physical restraints can have lasting detrimental effects on brain function, and when this trauma is of sufficient intensity, frequency, or duration, subsequent neurodevelopment may be altered and become maladaptive.

# Joel M Weaver in 2010 stated that anesthesia should be accepted more over physical restraints.



# **Implosion therapy**

Implosion Therapy: Sudden flooding with a barrage of stimuli which have affected him adversely and the child have no other choice but to face the stimuli until a negative response disappears. It mainly comprises of Home, Voice Control and Physical Restraints.

It is an intensive form of in vivo exposure therapy for treating phobias. The patient is confronted with the feared stimuli for repeated and prolonged duration until they experience a reduction in their anxiety level.

# conclusion

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# questions

- Discuss the various types of children according to behaviour and personality. Discuss the behaviour management techniques in each type.
- Discuss the management of different kinds of children in the dental office.
- Classify child behaviour. Discuss in detail the various factors influencing it. How will you manage a fearul child in your office.



- The Behaviour Evaluation Scale (BES) is also well known in Japan and it was used for children's behaviour evaluation for the first time by Tsuchiya et al. in 1975.
- It is unknown and new to the pediatric dentists in Europe and USA. BES is first introduced by a study in English in May 2005 that describes the scale and its structure in details to the English-speaking dental researchers.
- Each item of the Kurosu Behaviour Evaluation Scale has been translated from the original Japanese into English

Shinohara S, Nomura Y, Shingyouchi K, Takase A, Ide M, Moriyasu K, Idaira Y, Takahashi T, Yamada Y, Aoyagi Y, Asada Y. Structural relationship of child behavior and its evaluation during dental treatment. Journal of oral science. 2005;47(2):91-6.

Difficulty	Item
1	Wincing
	Closing the eyes
	Looking at the dental equipment
	Stiffening the face
	Rolling the eye
	Staring at the ceiling
	Looking at the fingertips of the dentist
	Looking at the face of dentist
	Linking
	Looking around

Moaning Crying softly Crying out 'Oh' Holding up the hands Putting hands over the chest Moving the hands Screaming, 'it hurts' Moving the legs up and down Screaming, 'No, no' Asking what are you going to do?

2

Moving the body left and right Putting hands over the mouth Moving the body up and down Shaking the legs Holding the hands of the dentist Shaking the head Nodding the head Beating off the equipment Crying loudly

3

## • <u>Assimilation</u>:

Means modifying one's environment so that it fits into one's already dev ways of thinking & acting

### • <u>Accomodation</u>:

Modifying oneself so as to fit in with the existing characteristics of the environment

• Coping mech. Is based on:

Jean Piaget's Cognitive theory

### **Considerations for use of hypnosis**

☑ The practice of hypnosis by dentists poses a political/legal issue.

That is, "if hypnosis is defined as medical psychotherapeutic treatment, then it follows that practitioners of hypnosis should be trained, licensed, and evaluated on the basis of the legal standards for medical and psychotherapeutic practice This technique must be done with caution, and is typically not performed by dentists without additional training in psychology (Hilgard and Hilgard, 1994).

Golan (1997) warned against professionals without specific psychological training using this technique, stating that such practitioners must stay within the parameters of dentistry, using whatever skills are needed to aid patients. Sack and Butler (1997) designed a framework and rationale for health psychology intervention in the field of dentistry, they suggest dentists may welcome consultation for the use of hypnosis in their offices, maximizing the knowledge and experience of both fields (psychology and dentistry), to best serve the patient's needs. On this subject, London (1982) suggests that educating dentist about the usefulness and viability of hypnosis in practice will lead to more acceptance of hypnosis as a legitimate treatment approach.

Therapeutically, the use of hypnosis involves developing a strategy based upon assessment of the patient's problem(s) on varying levels (physical, emotional, social, etc).

- When hypnosis is used as adjunctive therapy, as in dentistry, the techniques should fit into an established treatment plan.
- Overall knowledge of the patient's problems, limitations of the use of hypnosis in dentistry, as well as experience with varying techniques will guide the practitioner toward its effective utilization in the practice of dentistry

## Types of Consent:

Implied consent
Express consent
Informed consent

4. Proxy consent

Example of -ve reinforcement:

When inappropriate behaviour is exhibited the parent is asked to leave. Ideally, the parent should be able to hear, but be out of sight of the child. When appropriate behaviour is exhibited the parent is asked to return, thus reinforcing that behaviour.

### **External Rewards**

An external or extrinsic reward comes from external source. It may be some prize, medal, trophy, certificate, or money.

### **Internal Rewards**

An internal or intrinsic reward is what you experience internally. It is sense of achievement from with-in. It is experiencing the satisfaction comes from your own actions.



# **Behavioral patterns in children**

- Wilson's classification
- Wright classification
- Lamp shire classification

Classification of child's behavior observed in the dental office

# **Behavior Rating Scales**

- Saranat & coworkers classification
- $\square$  Houpt scale
- ⊠ <u>Global rating scale</u>
- ☑ Co-operative behavior rating
# Houpt scale (categorical rating scale)

IJPD 1995;5: 87-95

### **Crying :**

- 1. Screaming
- 2. Continuous crying
- 3. Mild intermittent crying
- 4. No crying

### **Cooperation:**

- 1. Violently resists/ disrupts the treatment
- 2. Movements makes the treatment difficult
- 3. Minor movement/ intermittent
- 4. No movement

### Apprehension

- 1. Hysterical/ disobeys all instruction.
- 2. Extremely anxious / disobeys some instruction delays R<sub>/</sub>
- 3. Mildly anxious / complies with support
- 4. Calm/ relaxed / follows instruction

- **Sleep: S**
- 1. Fully awake
- 2. drowsy
- 3. Asleep/ intermittent
- 4. Sound sleep

\*\*\*

# **Global rating scale**

#### IJPD 1995;5:87-95

- S: excellent S: excellent
- 4: very good
- 3: good
- 2: fair
- 1: poor/ aborted

# **Co-operative behavior rating**

**0** ----- total cooperation best possible working conditions no crying or physical protest

1----- mild soft verbal protest. Crying - signal of discomfort but does not obstruct procedure

2----- protest more prominent & vigorous both crying hand signals. Protest more distracting & trouble some. However, child still complies with requests to cooperate

**3** -----protest present , real problem to dentist. Complies with demands reluctantly, requiring extra effort by dentist

**4** ----- protest disrupts procedure, requires that all the dentist's attention be directed toward the child behavior compliance eventually effort by dentist, but with physical restraint.

5 ------general protestant, no compliance or cooperation. Physical restraint required

# Chamber's voice control theory

Chamber's [1976] suggested that it is how something is said rather than what is said, that matters; it would be just as effective in a foreign language.

Is that that voice control is most effective when used with other communication.

# Solution State State

# Wright in 1975

# Types of bite blocks

## Den wide mouth prop











# Open wide mouth prop with handle and suction attachment



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