Behavior Shaping

Behavior shaping is a common nonpharmacological technique. It is a form of behavior modification; hence, it is based on the established principles of social learning. By definition, it is that procedure which very slowly develops behavior by reinforcing successive approximations of the desired behavior until the desired behavior occurs.

The following is an outline for a behavior-shaping model:

1. State the general goal or task to the child at the outset.
2. Explain the necessity for the procedure. A child who understands the reason is more likely to cooperate.
3. Divide the explanation for the procedure. Children cannot always grasp the overall procedure with a single explanation; consequently, they have to be led through the procedure slowly.
4. Give all explanations at a child's level of understanding. Use euphemisms appropriately.
5. Use successive approximations. Tell-show-do technique has remained a cornerstone of behavior guidance. It is a series of successive approximations, and it should be used routinely by all members of the dental team who work with children. Dental assistants, dental hygienists, and dentists should demonstrate various instruments step by step before their application by telling, showing, and doing. When the dentist works intraorally, a pediatric patient should be shown as much of the procedure as possible.
6. Reinforce appropriate behavior. Be as specific as possible because specific reinforcement is more effective than a generalized approach. Immediate and specific reinforcements can reduce children's fear-related behaviors.
7. Disregard minor inappropriate behavior. Ignored minor misbehavior tends to extinguish itself when not reinforced.

Behavior shaping may include:

- ✓ Desensitization
- ✓ Tell-Show-DO
- ✓ Modelling
- ✓ Contingency
- ✓ Distraction

Desensitization

It is also called as reciprocal inhibition. It is a training procedure or steps taken to reduce the sensitivity of the patient to a particular anxiety producing situation or object. Each situation or object is then introduced progressively starting from least fear producing to more threatening stimuli.

The Technique Involves 3 Stages

1. Training the patient to relax
2. Constructing a hierarchy of fear producing stimuli related to the patient's principal fear.
3. Introducing each stimulus in the hierarchy in turn to the relaxed patient, starting with the stimulus that causes least fear and progressing to the next only when the patient no longer fear that stimulus.

Indications:

1) First Visit
2) Subsequent visits when introducing new dental procedure
3) Fearful Child
4) Apprehensive Child because of information received from parents.

Tell-Show-Do (TSD)

It is a component of behavior shaping that should be routinely used by all members of the dental team who work with children. Specifically, the dentist tells the child what is going to be done in words the child can understand. Second, the dentist demonstrates to the child exactly how the procedure will be conducted. Finally, the practitioner performs the procedure exactly as it was described and demonstrated.

Objectives

1. To teach the patient aspects of dental visit and to familiarize him with the dental setting.
2. To shape patients response to various procedures through desensitization and welldescribed expectations.

Note: With Tell-Show-Do we don't ask permission

Modeling (What is modeling?)

The child learns a certain behavior by observing the behavior of other children whom receiving the same treatment by a mean of modeling. It involves allowing the patient to observe one or more model who demonstrate appropriate behavior in a particular situation. Modeling will encourage the appropriate behavior when the patient see the dentist is happy with other child, so this will give them a desire to mimic the other child's behavior as well, so it is better to bring somebody to be a model for them.

Types of modeling

1. Audio-visual
2. Live modeling by sibling or parent

Advantages

1. Obtain the patient attention.
2. Designed behavior is modelled.
3. Physical guidance of the desired behavior.
4. Reinforcement of the guided behavior.

Objectives

1. Stimulate acquisition of new behavior.
2. Facilitating the behavior already in the patients in a more appropriate manner.
3. Elimination of avoidance behavior.
4. Extinction of fear.

Q: Is modeling technique always considered positive and effective?

Contingency

Contingency management is the term used for presentation or withdrawal of reinforcers in behavior management.

Reinforcers can be:

I. Positive reinforcers- presentation of which increases the frequency of desired behavior.

II. Negative reinforcers- withdrawal of which increases the frequency of desired behavior. Example :-

(Exclusion of the parents once the child shows an inappropriate reaction at the dental clinic)

Therefore, we are shaping the child behavior by removal of a stimulus (parents) and this action (the exclusion of parents) is what considered unpleasant to the child [Negative reinforcement]

Reinforcers can of the following types:

1. Materials reinforcers - In the form of gifts like toothbrush kits, drawing kits, favorite cartoon stickers or toys appropriate for their age.
2. Social reinforcers (the most effective) - In the form of a pat on the back of shoulder, shaking hands, hugging the child or verbal praise in the presence of their parent for which the child will be happy.
3. Activity reinforcers- In the form of allowing, the child to perform his/her choice of activity (like watching a favorite TV show or movie or playing his favorite instrument for some time or games of interest, e.g. giving the child privilege of participating in a preferred activity). This is only after performing a less preferred behavior i.e. first you work, then you may play.

Note: Externalization: It is a process by which the child's attention is focused away from the sensation associated with dental treatment by involving in verbal or dental activity.

Objectives:

- ✓ To decrease perception of unpleasantness.
- ✓ To interest and involve children.

Distraction

Distraction is stealing the attention of the child either from the whole dental clinic like make them feel somewhere else (in different environment) or from stealing their attention from something specific unpleasant the dentist want to do at the clinic such as giving local anesthesia . Therefore, dentist will shift their attention. (This is a newer method of behavior management in which the patient is distracted from the sounds and / or sight of dental treatment thereby reducing the anxiety.)

The aim of it is to decrease the perception of unpleasantness experienced by the target patient, which will then facilitate our clinical work.

Types of Distraction:

I. Audio Distraction

Patient listens to audio presentation through headphones throughout the course of the treatment. (This is useful for adults mostly and shows low success for children.)

II. Audio-visual distraction

Patient is shown audio-visual presentation through television during the entire treatment. (Here we show children (cartoons) while working and that will reduce any unwanted behavior and also let the child know that it will be switched off if they not behave appropriately)

III. A combination of both visual and auditory:-

Recently, an (audio-visual glasses) has been used which offer an effective way of distraction and reduces unpleasantness and distress throughout the restorative procedures

** Using combination of both visual and auditory is much better than using a single mean alone

Objectives:

To relax the patient and to reduce anxiety during treatment.

Aversive Conditioning

There are three modes of aversive conditioning.

1. Hand over mouth technique
2. Physical, restraining
3. Voice control.

Hand Over Mouth (HOME)

The behavior modification method of aversive conditioning is also known as hand-over-mouth exercise (HOME). Its purpose is to gain the attention of a highly oppositional child so that communication can be established and cooperation obtained for a safe course of treatment. The technique fits the rules of learning theory: maladaptive acts (screaming, kicking) are linked to restraint (hand over mouth), and cooperative behavior is related to removal of the restriction and the use of positive reinforcement (praise). It is important to stress that aversive conditioning should not be used routinely but as a method of last resort, usually with children from three to six years of age who have appropriate communicative abilities.

Aversive conditioning can be a safe and effective method of managing a child with an extremely difficult behavior problem.

The purpose of HOME is to gain the attention of a child so that communication can be achieved.

The Technique:

Informed consent by the parents and explanation of the indication for the use of HOM should be done at first. After determining the child's behavior, the dentist firmly places his hand over the child's mouth and behavioral expectation are calmly explained close to child's ear. When the child's verbal outburst is stopped and child indicates his willingness to co-operate, the dentist removes his hand. Once the child cooperates he should be complimented for being quiet and praised for good behavior. The whole procedure should not last for more than 20-30sec.

Indication:

- ✓ A healthy child who can understand but who exhibits hysterical behavior during treatment
- ✓ 3 to 6 yrs. old child
- ✓ Children displaying uncontrollable behavior

Contraindication:

- ✓ Child under 3yrs of age Frightened child
- ✓ Physical, mental and emotional handicap
- ✓ It should not be set as routine procedure, inform the parent about the procedure

Restraints

Restraints are devices, wraps or other individuals assisting in dental operatory that are designed to prevent patients from causing harm to themselves and to the dental personnel. Partial or complete immobilization of the patient sometimes, is necessary to protect the patient and/or the dental staff from injury while providing dental care.

Recently the term **Protective stabilization'** is used instead of Immobilization. Restraints can be performed by the dentist, staff or parent, with or without the aid of a restraining device.

The parents must be informed and the consent must be documented, before immobilization is used, they should have a clear understanding of the type of immobilization to be used, the rationale, and duration of use.

Indications for Using Immobilization

- ✓ A patient who requires diagnosis or treatment and cannot cooperate because of lack of maturity.
- ✓ A patient who requires diagnosis or treatment and cannot cooperate because of mental or physical disabilities.
- ✓ A patient who requires diagnosis or treatment and does not cooperate after other behavior management techniques have failed.
- ✓ When the safety of the patient or practitioner would be at risk without the protective use of immobilization.

Contraindications

- ✓ A cooperative patient
- ✓ A patient who cannot be safely immobilized because of underlying medical or systemic conditions.
- ✓ As punishment
- ✓ Should not be used solely for the convenience of the staff.

The restraints are of the following types:

1. Oral
   - ✓ Mouth props
   - ✓ Padded wrapped tongue blades
   - ✓ Rubber bite blocks
   - ✓ Finger guards
2. Body
   - ✓ Papoose board
   - ✓ Triangular sheet
   - ✓ Pedi-wrap
   - ✓ Bean bag dental chair insert
   - ✓ Safety belt

- ✓ Extra assistant

3.Extremities

- ✓ Posey straps
- ✓ Velcro straps
- ✓ Towel and tape
- ✓ Extra assistant

4.Head

- ✓ Forearm body support
- ✓ Head positioner
- ✓ Plastic bowl
- ✓ Extra assistant

3.Voice Control

Sudden and firm commands that are used to get the child's attention and stop the child from his current activity. Soft, monotonous soothing conversation can also be used as it is supposed to function like music to set the mood. In both cases what is heard is more important because the dentist is attempting to influence behavior directly and not through understanding.

The tone of voice and the facial expression of the dentist are also important as they function like a mirror.

Voice control is most effective when used in conjunction with other communications. A sudden command of "Stop crying and pay attention!" may be a necessary preliminary measure for future communication. Used properly in correct situations, voice control is an effective behavior guidance tool. However, because parents may find voice control to be an aversive technique, discussing this technique with parents prior to its use may decrease the risk for misunderstanding. (It may not be acceptable to all parents or clinicians, some parents might feel offended if you raise your voice on their child.)

Objectives

✓ To gain the patient attention and compliance

✓ To avoid negative or avoidance behavior

✓ To establish authority

Indications

- ✓ Uncooperative and inattentive patients

Contraindications

- ✓ Children who due to age, disability, mental or emotional immaturity are unable to understand.

Parents and their influence on dental treatment

From the moment of their children's birth, parents shape children's behaviors by selective encouragement and discouragement of particular behaviors, by their disciplinary techniques and by the amount of freedom they allow. Children learn the basic aspects of everyday life from their parents. This process is termed socialization, and is ongoing and gradual. By the age of 4 years children know many of the conventions current in their culture, such as male and female roles. The process of transmitting cultural information early in life is called primary socialization. In industrialized countries, obtaining information on many aspects of life is gained formally in schools and colleges rather than from the family. This is termed **secondary socialization.**

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Parental Presence

Objective

1) To gain patient's attention and compliance
2) To avert avoidance behavior
3) To establish authority

Advantages of Parental Presence

1) Supporting and communicating with the child
2) Very young patients

Advantages of Parental Absence

1) Overcoming parental conditioning
2) Avoiding communication interference
3) Avoiding parental interference

Parent-Child Separation

In the past, parents did not expect to enter the operatory. Today's parents actively participate in health care services through the process of informed consent, and increasingly want to accompany their children during their health care experiences. In addition to increasing communication efficiency, parental presence can reassure both the child and the parent.

A parent can be a major asset in supporting and communicating with a child who has a disability, often providing important information and interpretation. Because of the close symbiotic relationship that very young children have with their parents, they often remain together. With older children, an independent experience may contribute toward development of confidence and appropriate coping mechanisms and, ultimately, a positive attitude on the part of the child. Another reason for advocating a separation policy is that the dentist may be more relaxed and comfortable when the parent remains in the reception area, so as not to be perceived as "performing." As a consequence of this more relaxed manner, the dentist's actions are likely to have a more positive effect on the child's behavior. The separation procedure warrants serious consideration. The dentist must develop an office policy, inform the office staff, and assume responsibility to train office personnel in reception room strategies. In this age of accountability, the dentist may also have to explain the policy to a parent. Establishment of the policy should therefore be based on a rationale that takes into account the benefits and drawbacks resulting from separation, the benefits to the individual child, and the dental team's personal comfort level. Because some dentists become tense when parents are present and others enjoy having parents in the operatory, **an office policy** becomes, to some extent, an individual decision.