Lec. 3

Management of Children Behaviors

Behavior Management

Behavior management is not just the application of individual technique formulated to deal with individuals but rather is a comprehensive methodology meant to build a I ship between patient and dental professional.

Most children willingly accept dental treatment when approached in a positive, supportive manner, but for those who exhibit considerable anxiety or problematic behaviors, child behavior management requires skills in expressive communication, empathetic listening and coaching. Treatment of the fearful and anxious or physically resistive child is formidable task. Successful and efficient management of those children requires considerable, effort and expertise from the dental practitioner. Thus, behavioral management of children in clinics is an integral part of pediatric dentistry, it has evolved from traditional "behavior control" to behavioral guidance.

Individuals usually differ. Therefore, appropriate management should be chosen depending on the individual's needs, every practitioner integrates his/her personality on the basic psychological principles in managing children t works with one may not necessarily work with the other.

Management of Children Behaviors

Definitions

❖ **Behavior:** It is an observable act, which can be described in similar ways by more than one person.

❖ **Child dental management:** it is the process of leading a child through a dental appointment; it is the mean by which a course of treatment for a young patient can be completed in the shortest possible period, while at the same time ensuring that he will return for the next course willingly.

The goals of behavior management are:

• To employ age-appropriate communication and emotional regulation strategies.
• Alleviate fear and anxiety to provide a relaxing and comfortable environment for the dental team to work in, while treating the child.
• Deliver quality dental care
• Build a trusting relationship between dentist, parent and child.
• Promote child's positive attitude towards oral/dental health.

Behavioral Pedodontics

A professional is to promote positive dental attitudes and improve the dental health of society. Logically, children are keys to the future. Since childhood experience plays an Important role in forming the adult behavior, proper behavior management from the early stages will help in the development of a proper oral health attitude among individuals throughout life.

A major difference between the treatment of children and the treatment of adults is the relationship. Treating adults generally involves a one- to -one relationship, that is, a dentist-patient relationship. Treating a child, however, usually relies on a one-to-two relationship among the dentist, the patient, and parents or caregivers. This relationship, known as the pediatric dentistry treatment triangle.

Because these individuals and their relationships cannot be segregated from external Influences, the triangle is encircled by society. Management methods acceptable to society and the litigiousness of society have been factors influencing treatment modalities.

The child is at the apex of the triangle and he is the focus of attention of both the family and the dental team. Although mothers' attitudes have been shown to significantly affect their children's behaviors in the dental office, the roles of families have been changing, and the entire family environment must be considered. The arrows placed on the lines of communication remind us that communication is reciprocal.

The relation here is not just you and the pt. it's a three-way (arrows) process, other say it's 4-way process (you, the pt., his parents, and dental team) it's a dynamic process that starts before the pt. arrives and it involves dialogue, voice tone, facial expressions, body language, and touch.

Some people do not like to use the word management. Because they think, it is a little harsh, so they use "Behavioral Guidance" instead because it guides the child toward communication and education, using a continuous Interaction involving the dental health team, the dentist, the patient and his parents leading to a good dental treatment and creating a positive experience to the child himself. So, behavior guidance is a continuum of interaction involving the dentist, the dental team, the patient and the parent directed towards communication and education which ultimately builds trust and allays fear and anxiety.

Societal overlay:

- Media representation of dentistry
- Parental dental fear
- School-based oral health programs
- Online peer influence

PEDIATRIC DENTAL PATIENTS

Although there may be expectations for children's skills based upon chronological age, the practitioner must assess the individual child's understanding and be familiar with the family environment. Differences in genetics, personality, and experience influence the way the child engages with his surroundings.
If influences are in harmony, healthy development of the child can be expected; if they are dissonant, behavioral problems are almost sure to ensue. Key to a practitioner's interaction with a child is remembering that each child is unique and exists in the context of his family.

Each child's behavior reflects an interaction of:

- Neurodevelopmental maturity
- Temperament and personality
- Family environment
- Previous experiences

Child development

Child development involves the study of all areas of human development from conception through young adulthood. It involves more than physical growth, which often implies only an increase in size. Development implies a sequential unfolding that may involve changes in size, shape, function, structure, or skill.

Major area of development

1. Physical development

It is term used to describe the child's total physical growth and efficiency from the moment of conception until adulthood together. The broad area of physical development involves changes that occur in children's size, strength, motor coordination, functioning of body systems, and so forth. Because a child's physical development is relatively independent of other major areas of development, subareas of physical development must be relatively independent. Child's coordination cannot be judged by physical size and the physical strength is not related to dental development.

Relating key aspects of development to chronological ages has led to the establishment of developmental milestones as a means of assessing individual children. Each child is unique and may develop at varying rates relative to their same-aged peers, for example, one child may present with strong motor skills but less well-developed language, while this may be the opposite for another same-age peer.

Typical personality characteristics related to specific chronologic ages that have relevance to dentistry are listed below which can help in the development of behavioral guidance strategies:

Age- related psychosocial traits and skills for 2-5 years old children

TWO YEARS

Geared to gross motor skills, such as running and jumping
Likes to see and touch
Very attached to parents
Plays alone; rarely shares
Has limited vocabulary; shows early sentence formation
Becoming interested in self-help skills

THREE YEARS

less egocentric; like to please
Has a very active imagination; likes stories
Remains closely attached to parent

FOUR YEARS

Tries to impose powers
Participates in small social groups
Reaches out—expansive period
Shows many independent self-help skills
Knows "thank you" and "please"

FIVE YEARS

Undergoes a period of consolidation; deliberate
Takes pride in possessions
Relinquishes comfort objects, such as a blanket or thumb
Plays cooperatively with peers

From these data, two pieces of information about development milestone:

1. The average age at which a child acquires particular skills.
2. The normal range of ages at which the skill is acquired.

❖ Knowing the general developmental principle reminds the clinician to consider the ability or readiness of the individual to perform a given task.

2. Social development

It includes both interpersonal relationships and independent functioning skills. An important process for dentists is the child's growth toward independent functioning. For their survival, infants are dependent on others to clothe, feed, and nurture them. As children grow and their ability to care for themselves improves, they gain social independence.

Recognizing that the change from functional dependency to functional autonomy is a normal process in social development can assist the dentist. Many young children want to brush their own teeth but lack sufficient digital dexterity. Parents, on the other hand, understand the lack of digital skills and often insist on attending to their children's oral health care.

3. Intellectual development (mental development)

It is a method that employed quantified mental abilities in relation to chronologic age. It led to the concept of the intelligence quotient (IQ), which was measured by tasks examining memory, spatial relationships, reasoning, and a variety of other primary mental skills.

This enabled an examiner to determine a child's mental age based on performance. The basic Binet IQ formula used is:

IQ= (mental age/ chronological age) × 100

Therefore, the child whose mental age and chronological age were identical had an IQ of 100. The 8-year- old child whose mental age was 6 would have an IQ of 75(6/8 ×100=75).

Individuals with intelligence deficiency or intellectual disability may require special behavior guidance.

The Wechsler Intelligence Scale for Children (WISC), developed by David Wechsler, is an individually administered intelligence test for children aged 6 years 0 months through 16 years 11 months. The WISC-V takes 45–65 minutes to administer and generates a Full-Scale IQ (formerly known as an intelligence quotient or IQ score) which represents a child's general intellectual ability. The WISC is used not only as an intelligence test, but also as a clinical tool.

Some practitioners use the WISC as part of an assessment to diagnose attention-deficit hyperactivity disorder (ADHD) and learning disabilities, for example. This test provides a broad assessment of general intellectual functioning and school-related abilities.

Wechsler intelligence scales are available for preschoolers (Wechsler Preschool and Primary Scale of Intelligence, or WPPSI), children (Wechsler Intelligence Scale for Children-Revised, or WISC-R), and adults (Wechsler Adult Intelligence Scale, or WAIS).

What are the differences between Anxiety, Fear and Phobia?

Fear (Apprehension based on history): It is a primal emotion which stems from a recognized source developed to protect the individual from harm and self-destruction it has safety value when given proper direction and control. The subject is able to pinpoint what he/she is afraid of e.g. fear of needle. Fear sets in a series of physiological responses to prepare a subject for fight/flight response.

Anxiety (Fear of the unknown): It is one of the primary emotions acquired soon after birth. It is a personality trait and is apprehension, tension or uneasiness that stems from anticipation of

danger, the source of which is largely unknown or unrecognized. Anxiety is evaluated by two means, either observation of the behavior or self-report.

There is no clear division between fear, anxiety and other responses to stress. Fear and anxiety can intensify pain or misattribute pain e.g. Events which are not pain provoking can be perceived as painful.

Phobia (Pathological fear): It is persistent, excessive, unreasonable fear of a specific object, activity or situation, attached to a certain stimulus which resembles the original episode.

 Fear is best understood within a multifactorial context of personal, environmental, and situational factors in combination with the child's development and intelligence. Fearfulness is a personality trait often associated with temperament, shyness and negative mood. Most of the time parents instill the fear of dentistry in their children as a means of punishment. Fear should be channeled in the correct direction such as those that causes harm to the child's existence or wellbeing. Children should be taught that dental office is not a place to fear, and the parents should never employ dentistry as threat or punishment. Using it in this manner creates fear of dentistry or dentist. On the other hand, if the child has become attached to the dentist, fear of loss of his approval may have some value in motivating the child for dental treatment.

The child's fears change with age:

Two Years Old

They are in precooperative stage of lacking cooperative ability. Solitary play is preferred, as child has not yet learned to play with other children. Fear or anxiety of this age group is fear of falling, sudden jerky movements, bright lights, separation from the parents and fear of strangers.

Three Years Old

Communication is easier. Child has great desire to talk and often enjoy telling stories. Fear of this age group is fear of strangers. It is the right time to introduce the child to dentistry. This is also the appropriate time to begin any preventive procedures.

Four Years Old

They are usually listeners to explanations with interest and normally responsive too verbal directions. They usually have lively minds and may be great talkers, although they tend to exaggerate in their conversation.

In some situations, they may be defiant. There is increased ability to evaluate fear-producing stimulations. Intelligent children display more fear, may be because of greater awareness of the danger and reluctance to accept verbal assurance without proof.

Fears of this age group: Fear of falling, of noise and of strangers is lessoned. Fear of bodily injury is present. Prick of hypodermic needle or sight of blood produces increased response disproportionate to that of pain.

Fears of 4-8 years old

Children are related to prior situations and experiences. They begin to anticipate situations and react with fear. During this period fantasy plays a role, and gains comfort and the courage to meet the real situation. Intelligent children display more fear because of their greater awareness of danger and reluctance to accept verbal assurance.

Fears of 9 years of age

Fear is usually associated with personal failures and social peer situations. Child can usually resolve fears of dental procedures if dentist explains, and reasons will. Child has also learned to tolerate unpleasant situations and has marked desires to be obedient, carrying frustrations well. The child develops considerable emotional control. However, objects to people making light of his suffering, bullying, injustice or ridiculing whether it is from a friend or a dentist.

Fears are of two types:

A child may experience two types of fear during dental treatment:

1. Objective fears 2. Subjective fears

Objective fears: These are acquired objectively or those produced by direct physical stimulation of the sense organs (seen, felt, smelt, or contacted) but not of parental origin, which are disagreeable and unpleasant in nature.

• Fears from previous unpleasant contact with dentistry

• Unrelated experiences like repeated hospitalization leading to fear of uniforms worn by dental team or even characteristic smell of hospital, drugs or chemicals associated with unpleasantness arouse fear.

Subjective fears: These are based on the feelings and attitudes suggested to the child by others without the child personally experiencing them.

These imitative fears are transmitted while displayed by others (parent) and acquired by the child without being aware of it. They are generally recurrent, deep seated and are difficult to eradicate. Displayed emotion in parent's face creates more impression than verbal suggestions.

Even a tight clenching of the child's hand in dental office while undergoing dental treatment crates fear in child's mind about dental treatment. These fears also develop from friends, playmates, reading books and periodicals, watching media and theater and depend on repetition.

**Value of fear: Fear lowers the threshold of pain so that every pain produced during dental treatment becomes magnified.

Since our aim is to reduce anxiety, what's dental anxiety?

It's a vague, unpleasant feeling accompanied by appropriation that something undesirable is about to happen. Dental anxious children are more sensitive to dental pain. The word anxiety differs from the word fear in Fear you know what you are afraid of (more specific) in anxiety it's (more generalized).
An old American study had showed that visiting dentists is rank 4 that causes anxiety to people behind, snakes, heights, and storms, so people don't really like visiting us.

The most procedure that causes anxiety is local anesthesia, and then the sound of the drill (hand pieces).

Modern Classification (AAPD 2024, WHO 2023):

Type	Definition	Example	Modern Management
Fear	Response to known threat	Needle	TSD, gradual exposure
Anxiety	Response to unknown threat	Anticipation of pain	Cognitive-behavioral therapy (CBT), mindfulness
Phobia	Persistent irrational fear	Dental chair, mask	Desensitization, VR exposure therapy, pharmacological aid

Research (Lee et al., *Pediatr Dent*, 2023) shows that digital distraction (VR/AR) reduces procedural anxiety by up to **60%** in 5–9-year-olds.

VARIABLES INFLUENCING CHILDREN'S DENTAL BEHAVIORS

Dentistry had some difficulty identifying the stimuli that lead to misbehavior in the dental office, although several variables in children's backgrounds have been related to it. Those variables are of two types:

1. Major variables **2. Minor variables**

1. Major variables

(1) Parental anxiety

Children when they are very young, they learn everything from their parents, that is what we called (primary socialization), it lasts for life long, but its effect is reduced when the children go to the school and we call it here (secondary socialization). So parents can shape their children's attitude toward oral health.

The importance of the maternal anxiety has been reported and recognized for over 100 years, especially for those less than 4 years old. Parents are also capable of predicting their child's behavior. They can pretend if he is going to cooperate or not, and it's well documented, if the child's mother is anxious, or she can't even look while we're doing the treatment we can ask another member to come with the child to the clinic, so if the parents are afraid of dentists the child of course will be afraid too.

In the past, it has been customary for mothers, more often than fathers, to accompany children to the dental office. Children respond with tension and fear primarily because of the way dental experiences have been described to them. The problem of dental fear is not specific to dental situations or procedure.

The behavior of a child is found to be directly proportional to the level of parental anxiety in which a significant correlation between maternal anxiety and a child's cooperative behavior at the first dental visit. Children of mothers with high anxiety levels exhibit more negative and uncooperative behavior.

High anxiety on the part of parents tends to affect their children's behavior negatively. Children of all ages can be affected by their mothers' anxieties but the effect is greatest with those younger than four years of age. This might be anticipated because of the child-parent symbiosis that begins in infancy and gradually diminishes.

(2) Toxic stressors:

Stress is first experienced in utero and will recur throughout life. Although stress produces some minor physiologic changes, it is normal and necessary for survival. Many stresses, such as receiving immunizations and beginning daycare, are short-lived. Parents offer support to young children experiencing these stressors, but children ultimately must learn how to cope with challenges they encounter. Stress that continues over a prolonged period and has lifelong effects is termed toxic stress. Toxic stressors include child abuse/neglect, chronic exposure to drugs or violence in the home, and parental depression or mental illness. Economic hardship is a stressor experienced recently by many families. Long summarized the influence of economic hardship on children and parents. Parental support, discipline, and caregiving suffer. The child, in turn, may develop behavioral and emotional adjustment problems.

(4) Medical history:

A child who have had a negative experience associated with medical treatments (a lot of surgeries and a lot of appointments) will be anxious of dental treatment even though they didn't try it, or maybe a negative experience from previous bad dental visit. Children with pleasant past medical experiences are more likely to be cooperative; but past experience of pain or negative attitude of the child towards physician results in a negative behavior in the dental operatory. The emotional equality of past visits rather than the number of visits is significant.

The behavior of children with special health care needs may differ from that of healthy children. Those with chronic medical conditions (without developmental delay) can " Because of recurring medical experiences, they may become accustomed to the health care setting and behave "better" than expected.
Pain during previous health care visits is another consideration in a child's medical experiences. The pain may have been moderate or intense, real or imaginary. Parental beliefs about past medical pain are significantly correlated with their children's cooperative behavior in the dental environment. Previous surgical experiences adversely influence behavior at the first dental visits, but this was not the case in subsequent visits.

(3) Awareness of dental problems

When a child came to the dental clinic with cellulites, with pain, and he didn't sleep the whole night, his first dental visit will be anxious, because he knew that something will going to happen.

Ideally, we prefer to see the child for the first time for checkup, hence, children who know they have a dental problem, exhibit more negative behavior at the first dental appointment.
Some children visit the dentist when they are made aware of an existing problem. The problem may be as serious as a chronic dental abscess or as simple as extrinsic staining of the dentition. However, there is a tendency toward negative behavior at the first dental visit when the child believes that a dental problem exists which is likely to make them more apprehensive as the question “what will be done" comes in their minds. Concern about the presence of caries may also lead to missed appointments. The significance of this variable provides the dentist a good reason for educating the parents regarding the value of having the child's first visit prior to any dental problem.

General Behavior Problems

There is a relationship between general behavioral problems and dental behavior management problems. Children who have difficulty focusing attention and/or adjusting activities in their general environment have increased problems complying with behavioral expectations in the dental environment. General fears can be important etiologic factors in the development of dental fears. Some children, however, have behavioral problems only in the dental environment; this may be due to previous negative experiences with dental care.

2. Minor variables

(1) Socio-economic status of the family directly affects child's attitude toward the values of the dental health process. Those of low socio-economic class, below average education, have a tendency to attend dental needs when symptom dictates. These families harbor anxiety from dental treatment and these children take on this fear and tend to be less co-operative.

(2) Position of the child in the family (rank of the child)
The older child may become more anxious than children born later while middle child is usually more outgoing and suggestible because he uses his older sibling and parent as behavior pattern to follow.

(3) Child gender
The responses of children to the dental environment are diverse and complex. The clear effect of the child gender on behavior can be seen in the dental environment for example boys are expected to be brave stronger than girls (boy act as a man and does not cry). Girls exhibited more dental anxiety and dental behavior management problems than did boys.

(4) Child age

There different types of fear at different ages, like in 2-4 years fear of imaginary creatures and small animals then 4-6 years start social and school fear. Fear related to injury, death and so on is shown in those 6 years to adolescent.

(5) Contemporary influences include social experiences, attending nursery school and peer interactions.

The experiences of a child during formal learning at school, summer camps or peer-interactions may be of help to the dentist in determining their level of cooperation.

Those attend nursery school cooperate more with the dental procedure. Communication technologies and media also have a strong influence on the child's behavior.

(6) Modeling or imitation

It can be considered as the most effective means to introduce the child to dentistry, also it is effective for patients who have no previous dental visit.

- Neurodiversity (e.g., ADHD, Autism Spectrum) also can affect the child behavior.

Some general consideration of pediatric patients' management:

1. Always call the patient by his (first/ nick) name.
2. Direct the conversation toward the child whenever possible.
3. Talk at the child's level (physically and mentally).
4. Avoid quick and sudden movements while performing the procedure.
5. Avoid fear promoting words.
6. Communicate with the patient, but once the treatment starts you need to use short commands.
7. Admire and praise the good behavior.
8. Keep self-control all the time, it's not acceptable to lose it, especially while dealing with the pediatric or handicapped patients.

Some factors that might contribute to the child's behavior (related to the dentist):

1.Scheduling: When to see the patient is very important.

Most children are fresher in the morning, we prefer see them in the morning specially pre schooled ones, and we prefer same age group to be there at the same period, so they will be comfortable when they see children who are from their age group.

Another thing is how much will they wait? Because waiting too much in the reception area leads to tiredness and restlessness.

2. Appointment length: new researches suggested to treat each (Quadrant) in each appointment (ex: to treat the 6+E+D at one appointment) creating less numbers of appointments, usually the patient loses his concentration if the appointment is more than 30-45 minutes).

On the other hand, one clinical study stated that the length of the appointment does not affect the behavior negatively and another one stated that it affects the behavior positively.

3. Dental Attire: Some Pediatrics have a negative experience toward the white coat and the mask, especially those who were under GA, and this makes their management harder, so some pediatric dentists tend to wear colorful clothes, but some of them refuse that because they say it is less professional, thus "the dental attire" is a personal choice.

4. **Waiting area design:** Sensory-adaptive environments recommended for neurodiverse children (WHO, 2023).