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## **Developmental, Individual-Difference, Relationship Based Treatment - The DIR Model (Floor Time) With Additional Considerations - The Child's Sensory Processing**

**How does a child develop the miraculous abilities to attend, to be calm and interested in the world, to desire to interact with others and to woo those around them to interact with them? How does the child learn to read the other's gestures, and indicate their needs initially through gesture and then through the use of language? How does a child develop the ability to think and plan how to interact with their world and to solve physical problems to achieve their goals? How do they develop the ability to become a social being, to think, to communicate and to create as well have compassion for others? Many child development theories focus on only one part of this puzzle, such as genes, cognition, or behavioral management. The wonderful thing that gives meaning to all parts of this puzzle and defines a child as a humane and intelligent human being is the affective, emotional and sensitively paced interaction that occurs between a parent and their child.**

**Stanley Greenspan, MD, Serena Wieder, PhD and their colleagues over the last 25 years have through observation and research identified six essential types of experiences that occur in the first four years of life that simultaneously promote a child's intellectual and emotional growth - to be "an able learner but to also develop the capacity for warmth and intimacy and to enjoy many rich and rewarding relationships". In addition, these experiences help a child develop an awareness of what constitutes appropriate behavior, to have a sense of right from wrong, and to be able to make wise judgments in unfamiliar situations. This then contributes to a child feeling good about themselves, to show persistence, flexibility, and creativity."**

The core capacities for functional and emotional development that Greenspan describes occur in the flow of parent/infant interaction in the first four years of life. As core capacities develop they enable the child to become calm, regulated and attentive, to develop warmth, intimacy, the ability to develop relationships and to function as a member of society. The six levels of development include:

**"Attention and Regulation"** In the first few months of life the parent is helping the infant calmly regulate himself while he becomes interested and takes pleasure in the sights, sounds, tastes, and touches that the parent offers him. This ability will help him organize his senses and motor responses and create a deep sense of security.

**"Forming Relationships and Mutual Engagement"** - During his second stage of development, when he is between three and six months of age, the baby grows in his ability to engage in an intimate relationship with the parent. He'll experience more and more warmth

and pleasure and all the related other feelings that spring out of engagement with the parent. This is the time that the infant "woos" the parent and the parent falls in love with the infant. The infant also seeks interaction with the parent for comfort and soothing when needed, so that he can deal with satisfactions and frustrations. As the child grows, the capacity for engagement will embrace the full range of emotions (joy, caring, anger, jealousy, fears, competition etc), supported by affect cues (e.g. smiles or scowls) from others. Mutual engagement helps the child stay engaged and feel comfortable and curious about different experiences.

**"Intentional Two Way Communication with Gestures":** By the time the child is about nine months old he exchanges gestures in a purposeful way. With parental support, reading and responding to his cues, he will eventually be able to string together more and more of these emotional expressions, sounds and actions. This is the beginning of the child conveying his intentions or desires to start the "conversations" needed to participate actively in the world. The simple gestures of a child less than a year old, such as pointing or playing "give and take", turn to complex gestures in the second year, and then to back and forth conversation as the child develops language. The parent's response such as making a funny face, or tempting actions, such as covering his favorite rattle with your hand, will inspire him to master the baby version of logic or two-way communication far better than any educational toy or pictures book.

**"Two Way Purposeful Interactions with Complex Gestures and Problem Solving"** - By the time that the child is a year to a year and a half, the child will be learning to be a "complex social problem solver". He will take you by the hand to get you to help him. He is starting to figure out how the world works and may even vocalize his own version of words, along with a few real ones, to help you understand his intentions. Complex gestures involve sequences - all the steps needed to communicate and solve problems - first through actions and then with words as well. When the child grabs his parent's hand and points to the cupboard to get a toy he wants, he is making his first attempt at social problem solving. As the parent nods back, the child motions until the parent hoists him up in their arms and he's able to nab the toy for him. The child is not only delighted and proud, he'll be on his way to becoming a budding scientist. The toddler learns that problems get solved through many interrelated steps, and that the world, including his physical surroundings and his own personality and that of his parent, is made up of patterns. No colorful pop-up toy or computerized light and sound gadget can come close to matching the companionable lessons in problem solving that a parent can offer their child as they play and engaged in gestural dialogues together.

**"Elaborating Ideas, Pretend Play, Creating Symbols"** - By the time the child is 24 to 30 months the child is displaying a new ability that is nothing short of miraculous. He will be capable of creating richly detailed, multisensory pictures that we commonly refer to as symbols, or ideas. The child and parent share the development of the child's use of ideas and creativity. Now instead of just acting on his environment to get his needs met, he can form mental images of his wants and desires, and label it with specific spoken words. Instead of plucking your sleeve, dragging you over to the cupboard, pointing to the bag of cookies and jumping up and down in anticipation, he'll look you in the eye and demand, "Cookie now!". The parent and the child share the development of the child's use of ideas and creativity. This occurs as the child and the parent begin to expand play as they pretend to be a "cat and a dog", a "king and a queen",

"have a tea party". The child begins to express thoughts, ideas and feelings through symbols, using pretend play and words. A child can communicate what she imagines through role play, dress up, dolls, action figures, which now represent experiences from real life as well as those learned from other sources. These become her own as she projects her feelings into the character and actions. Play emerges as the child's choosing rather from set games or impersonal manipulative or computerized toys.

**"Building Bridges between Ideas, Emotional Thinking, Connecting Symbols Logically and Abstract Thinking"** - Between 36 and 48 months the child begins to develop logical bridges between ideas, or analytical thinking. It emerges from more elaborate pretend play, as well as from debates over bedtime or cookies, and from those around him asking him his opinions. Questions such as "Why do you want to go outside?", "to the park?", or "to grandma's?", rather than rote teaching of letters or numbers teaches the child to connect his ideas and be a logical thinker. As the child begins to build bridges between ideas his play has a logical beginning, middle and end, taking time and space into account. Realistic conversations and pretend play stories are now made up of logically interconnected ideas, with clear motives and anticipated consequences. The child can now also abstract and reflect on various feelings and lessons to be learned.

Typically, each core capacity continues to develop as the child matures, supporting the next level. However, some children may show some capacities in a constricted form at a higher level even if they have not fully achieved more basic levels. For example, they may express many ideas in self absorbed play but not be fully able to attend and engage interactively.

**Development of these core capacities can be affected by individual differences in the child.**

These differences relate to the range and variation in sensory, sensory-motor and motor planning abilities that all children experience. Individual differences affect how we function generally and how our functioning varies depending on the sensory environment in which we find ourselves at a given moment.

Biologically based individual differences are the result of genetic, prenatal, perinatal and maturational variations and/or deficits. They can be characterized functionally as:

- Sensory Modulation including hypo and hyper-reactivity in each sensory modality (sight, sound, touch, taste, smell, pain and vestibular and proprioceptive experience).
- Sensory Processing in each sensory modality (for example, the capacity to decode and comprehend sequences, configurations, and/or abstract patterns in auditory, visual-spatial, and tactile processing, as well as vestibular and proprioceptive - sensory discrimination and motor planning).
- Sensory- affective processing in each modality (for example, the ability to process and react to affect, including the capacity to connect "intent" or affect to motor planning and sequencing, language, and symbols - sensory discrimination and motor planning).
- Motor Planning and sequencing actions to execute one's intent (motor planning)

To understand each child's individual differences, it is essential to have a clear understanding of the

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child's sensory profile. This includes sensory modulation, sensory processing and sensory- affective processing:

The child who is under responsive is slow to respond to a sensory stimulus and will require high intensity or increased duration to invoke an observed behavioral response. The child may have:

A diminished response (behaving in accordance with their threshold)  
Sensory seeking behavior (behaving to counteract their threshold).

This is the child whose behavior suggests that he or she has:  
a diminished perception of sensory input from his or her body,  
a "hazy" perception of his or her body (a "Novocain" sensorimotor cortex) which may contribute to a diminished perception of him or herself as he or she moves and interact.

The child who is over responsive to sensory stimuli has quick or intense response that results in:

exaggerated responses (fight or fright)  
or withdrawal (flight or freeze)

This is the child whose behavior suggests that he or she has:  
an intense and often scattered perception of sensory input from his or her body,  
a **"firecracker" perception of his body** in his sensorimotor cortex that contributes to an exaggerated but scattered perception of him or herself as he or she moves and interacts.

In therapy, in the home during activities of daily living and during social interaction and in the school setting it is essential to interact and handle the child who has difficulties or gaps in these six core capacities of development in ways that are sensitive to his or her sensory profile. As one interacts with the child one should be aware of the power of affect and physical actions but we always need to constantly aware of the child's underlying sensory profile.

- The child who is under responsive responds to activities that are stimulating for them. Affect should be "up", enticing the child with expressive facial expression, gesture and language. As the child is bathed in affect, the physical piece of the interaction should also be "up" with the focus on increasing the child's sense of their body, with the goal to increase their sense of their "body map".
- The child who is over responsive responds to activities that provide a clear localized sense of their body. Affect should be "soothing" with the focus on "down regulation". Facial expression, gesture and language should be clear, with rhythm and predictability.
- Some children who are under responsive seek input but quickly become escalated as they experience the stimulation that they seek in a disorganized manner. As we interact we need to constantly be in tune with the child and adapt our interaction with the child and to change affect and physical interaction as the child changes in his response.

**The Floortime Approach (DIR) is a highly effective treatment approach that focuses on the interactive process with the child. There is an emphasis on the interaction between the child and the parent/caregiver, with the goal being directed toward developing attention and regulation, mutual engagement, purposeful interaction with gestures and problem solving, elaboration of ideas and building bridges between ideas. The Floortime (DIR) approach is appropriate for children who have difficulties in all or some of these areas of development; it is also wonderful as a philosophy of interaction with all children. This approach recognizes that a child's functional emotional capacities and individual differences influence development through the medium of the child-caregiver relationship. The child brings his individual differences into the interaction patterns in order to negotiate and hopefully master each of the core functional developmental capacities.**

**In summary the DIR approach seeks to understand the infant or young child's ability to organize experience and deal with his or her real world - in other words, to function.**

Serena Weider, Ph.D and Stanley Greenspan, MD (Interdisciplinary Council on Developmental and Learning Disorders, Chapter 12; Zero to Three, February/March, 2001, Building Healthy Minds, Stanley Greenspan, MD); Additions by Rosemary White OTR/L, 11.01 and 5.02