

22 Feb
2024

How Social-Emotional Interactions Drive Sensory-based Interventions: UNDERSTANDING AYRES SENSORY INTEGRATION® and Floortime

By [Jake Greenspan](#) In [Floortime](#)

In the 1960's, Jean Ayres, an occupational therapist, psychologist, and neuroscientist challenged traditional occupational therapy ideals by looking at the whole child and their perception and response to their environment, not simply focusing on specific components of a motor pattern. In 1972, Ayres stated that sensory systems develop in an integrated manner and depend on one another, and do not develop independently of one another (Understanding Ayres Sensory Integration®, https://www.researchgate.net/publication/289758466_Understanding_Ayres_Sensory_IntegrationR)

When Dr. Greenspan created his Greenspan/DIR™ model in the late 70's, he used elements of Jean Ayres's sensory integration to identify and describe a child's foundational regulation and processing skills. He also used the idea of a child's growth through milestones, similar to Piagetian stages, and identified how our early childhood experiences with our caregivers impacted our social-emotional development, mirroring concepts from Erickson and Freud. He stated that emotions are the driving force for all developmental learning processes and provide the 'glue' for integrating sensory information.

One of the main differences between Jean Ayres's Sensory Integration® theory and intervention of and many other current versions of sensory integration is that she believed it was the emotional system that mediated the sensory system. In order to develop and improve our ability to integrate sensory information, a child must be working within a multi-sensory child-led socially purposeful experience. **She described the necessity of the child's active participation in a sensory based activity while maintaining interaction with the adult to encourage adaptive responses during the sensory activity.**

Dr. Greenspan agreed with this and expanded on it in his model of social-emotional development. He showed how children's emotional interactions directly impacted their cognitive, motor, and social-emotional development, and that the development of the sensory system and the emotional system are inseparably intertwined starting at birth. Every experience we're exposed to gets interpreted by our brain as both physical information and an emotional perception of that experience. For a young child who may not yet be familiar with their different emotional perceptions, the engagement and interaction that happens with the caregiver while performing these play-based physical activities is essential for their developing an understanding of the physical information and emotional perceptions within the experience. The emotional signaling from the caregiver provides the experience with meaning and understanding for the child. (His Greenspan/DIR™ model has been validated in numerous studies and is part of the Bayley Scales used by professionals to evaluate infants around the world.)

Bundy et al. (2002) stated this postulate of sensory integration theory as follows: “Learning is dependent on the ability to take and process sensation from movement and the environment and use it to plan and organize behavior” (p. 5). According to Spitzer and Smith Roley (2001), “Intervention emphasizing a sensory integration approach addresses the sensory needs of the child in order for the child to make adaptive and organized responses to a variety of circumstances and environments” (p. 17). It is best distinguished by the **active engagement** of the child who is allowed to move, jump, swing, and crash.

(Understanding Ayres Sensory Integration®,
https://www.researchgate.net/publication/289758466_Understanding_Ayres_Sensory_IntegrationR)

The following principles are deemed essential to the delivery of intervention using a sensory integration approach (Parham, Cohn, et al., 2007):

- Activities are rich in sensation (especially vestibular, tactile, and proprioceptive sensation), and offer opportunities for integrating that information with other sensations, such as visual and auditory.
- Activities promote regulation of affect and alertness and provide the basis for attending to salient learning opportunities.
- Activities promote optimal postural control in the body, oral-motor, ocular-motor areas, and bilateral motor control, including maintaining control while moving through space and adjusting posture in response to changes in the center of gravity.
- Activities promote praxis, including organization of activities and self in time and space.
- Intervention strategies provide the “just-right challenge.”
- Opportunities exist for the client to make adaptive responses to changing and increasingly complex environmental demands. Highlighted in Ayres Sensory Integration intervention principles is the “somatomotor adaptive response,” which means that the person is adaptive with the whole body, **moving and interacting with people and things in the three-dimensional space.**
- Intrinsic motivation and drive are used to interact through pleasurable activities; in other words, play.**
- The therapist engenders an atmosphere of trust and respect through contingent interactions with the client.** The activities are negotiated, **not preplanned**, and the therapist is responsive to altering the task, interaction, and environment based on the client’s responses.
- The activities are their own reward, and the therapist ensures the client’s success in whatever activities are attempted by altering the activities to meet the client’s abilities.

As you can see from the list of essential principles, an effective Sensory Integration intervention must include (but is not limited to) following the child’s lead and maintaining their intrinsic motivation, establishing and maintaining a positive relationship and interaction with the child. It is also necessary for a child to be using as many sensory systems as possible at one time while interacting with the adult, where the adult integrates small subtle consistently changing challenges, and encourages and validates **the child’s own adaptive responses** ([making it a ‘Thinking Based Intervention’](#)). These principles are identical to Dr. Greenspan’s intervention, The Greenspan Floortime Approach®

Help your child Relate, Communicate and Think by learning how to APPLY The Greenspan Floortime Approach®. Register for the Professional or Caregiver/Parent Course at www.stanleygreenspan.com. Parents and Professionals can also receive Greenspan Floortime® Expert Tele-Coaching with additional video analysis and feedback. For in-person Greenspan Floortime® based OT, SLP, Social Group Programs, and coaching contact The Floortime Center®, www.thefloortimecenter.com.

*Understand how [Dr. Greenspan’s Greenspan Floortime® is different from ICDL’s DIR®Floortime.](#)