

Supporting Children to Participate Successfully in Everyday Life by Using Sensory Processing Knowledge by Winnie Dunn, PhD, OTR, FAOTA

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This article from the spring 2007 issue of *Infants & Young Children* explores how children's and adults' sensory processing affects their everyday life experiences. The article is divided into 3 parts. The first section reviews a model of sensory processing. The second section describes behaviors often associated with different types of sensory processing patterns. The article's final section discusses the implications for sensory processing knowledge in early intervention planning, and offers applied, real-world techniques for working with children within each processing pattern.

In 1997, Dunn formulated a model of sensory processing based on neurological thresholds and self-regulation strategies. This model was tested in various age groups, as well as in people with and without disabilities. Research has demonstrated that sensory response patterns and response intensity are normally distributed among people without disabilities across all ages. Research has also shown that people with certain disabilities (such as autism, Asperger's syndrome, and schizophrenia) are more likely to have both distinctive and more intense patterns of sensory processing as compared with their peers without disabilities. With more extreme sensory responses, sensory processing is more likely to interfere with daily life.

Within Dunn's model, neurological thresholds and self-regulation strategies are both considered to be on a continuum. At the ends of the continuum, thresholds are categorized as either high or low, and self-regulation as either passive or active. Individuals with low thresholds will notice and

respond to stimuli readily, whereas those with high thresholds will miss stimuli that others notice because stronger stimuli are needed for nervous system activation.

"For those who serve vulnerable children...and their families, it is important to link patterns of sensory processing to everyday life behaviors as part of assessment; the relationship between sensory processing and everyday life informs intervention possibilities."

Individuals with a passive self-regulation style often let things happen around them and then react. Conversely, people with an active self-regulation strategy attempt to control the amount and type of sensory input coming to them.

Four basic patterns of sensory processing emerge from the intersection of these two continua:

- **sensation seeking** (high thresholds and active self-regulation),
- **sensation avoiding** (low thresholds and active self-regulation),
- **sensory sensitivity** (low thresholds and passive self-regulation), and
- **low registration** (high thresholds and passive self-regulation). The author stresses that no one individual has only one pattern of sensory processing, and each individual has a unique pattern of sensory processing.

Awareness of these four patterns of sensory processing can help adults working with children understand motivation behind some behavior. Equally as important, these patterns can also point to strategies for behavior modification. Occupational therapists are often trained specifically in applying

sensory processing knowledge to supporting children in daily activities; consultations with these professionals can often prove helpful when designing effective interventions for everyday life settings.

The article outlines specific intervention strategies for supporting children within each of the four sensory response

patterns. These charts suggest activities focused on the six main senses (touch, movement, visual, auditory, taste/smell, and body position/proprioception) when bathing, dressing, feeding, playing with, settling for bed, and going on outings with a child (see examples on the next page). Vignettes of individualized intervention planning are included to demonstrate the potential impact of sensory processing knowledge on a child's participation in daily routines. ☺

Examples of strategies for supporting children who...

Miss cues in everyday life (low registration):

Bathing: Use rough and varied textures for washcloths and towels (touch)

Playing: Place mirrors at floor level, add colored tape to door jams (visual)

Create opportunities for sensation in everyday life (sensation seeking):

Dressing: Place clothing items in different places to increase opportunities for moving (movement)

Outings: Tell child what you see, hear, and smell; ask what they are noticing (auditory)

Move away from sensations in everyday life (sensation avoiding):

Mealtime: Use one food temperature and limit textures (touch)

Bedtime: Use unscented products on bedding, hands (taste/smell)

React quickly to sensations in everyday life (sensory sensitivity):

Playing: Crawl in tight spaces; carry/push heavy objects (body position)

Bathing: Pick one stable position for bathing (movement)