

SENSORY DISCRIMINATION DISORDER

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We will finish our year's column on Sensory Processing Disorder (SPD) with the sixth subtype, Sensory Discrimination Disorder (SDD). First, a quick reminder: children do not fall neatly into only one of the six subtypes of Sensory Processing Disorder; most of the time children have multiple symptoms and fit into more than one subtype of SPD.

Sensory Discrimination Disorder is the last and most difficult category to describe in 1,200 words! It is really eight separate subtypes if you consider

that SDD can occur in any combination of sensory domains: visual, auditory, proprioceptive, vestibular, tactile (touch), olfactory (smell), gustatory (taste), and/or interoceptive (sensations from internal organs such as the stomach).

Discrimination is the ability to interpret information. It allows you to compare various details, disregarding irrelevant information. A disorder of discrimination means that you have difficulty interpreting information (i.e., differentiating stimuli in the affected sensory systems). For example:

Auditory: Did she say *cat*, *cap*, or *pack*?

Tactile: Is that a quarter or a nickel in my pocket?

Visual: Where is the key that looks like this?

Proprioceptive: How hard should I push this forward to move it, but not break the glass?

Vestibular: Which way am I turning?

This discussion highlights how discrimination challenges in each sensory domain might affect a child.

Tactile Domain

Children with tactile discrimination difficulties typically have difficulty determining what they touch “by feel”; they must see it (*stereognosis*). We use stereognosis many times a day. We just don’t think about it because it comes to us automatically. For example:

- buttoning a shirt or pants while holding cell phone to ear
- touching something got out of microwave to know if it’s the right temperature

Proprioceptive Domain

How do we choose “just the right amount” of tension or force required to interact with an object (e.g., how hard to lift to carry box up the stairs)? It is our proprioceptors that give us the information about how hard our muscles have to contract to accomplish the box-lifting task. If a child demonstrates difficulty in this area, he may show some of the following problems:

- roughhousing to the point of someone getting hurt
- judging how much force to use when throwing a ball
- using gentle touch to pet an animal

Vestibular Domain

“The vestibular system helps determine where our head is in space, relative to gravity. If a child has difficulty with vestibular discrimination, he may not feel when he is starting to fall and will not be able to catch himself before he gets hurt” (Bialer and Miller 2011, 160). For example:

- poor awareness of movement of body in space (gets disoriented easily)
- knows he’s falling, but can’t tell which way and can’t protect himself

Auditory Domain

Children with auditory discrimination challenges may be mislabeled with attention deficit hyperactivity disorder (ADHD) or disciplined for “never listening” because they appear to ignore what is said to them. It may be difficult for them to hear the difference between background noise and the teacher asking, “Take out your science books and turn

to page 103.” Symptoms may include the following:

- talks too loudly or softly
- experiences confusion when given directions
- appears to ignore others

Visual Domain

Children with poor visual discrimination tend to have trouble in school. It may be difficult for them to “read” emotions or to recognize letters and symbols. This causes problems such as letter reversals, problems finding pictures in a busy background, or difficulty reading. Other symptoms may include difficulty with the following:

- lining up numbers in a math problem
- scanning a page to find the keywords in a story
- judging the distance between oneself and an object or person

Olfactory/Gustatory Domain

Smell and taste discrimination do not cause as severe a social problem, so they are usually only treated when they occur with another sensory discrimination issue. For example:

- difficulty telling the difference between things that are somewhat sweet and those that are too sweet
- cannot tell if bread is burning, but has general sense something is wrong
- does not know familiar smells (e.g., grandma’s perfume, coffee shop you frequent)

Interoceptive Domain

Many functions of daily life depend on sensory messages from our body organs. Some examples include the following:

- soreness you feel after a good abdominal workout
- sensation of being hungry or too full
- sensation of an upset stomach
- sensation of a full bladder

Ways to Help a Child with SDD

It is important to make sure that a child is regulated before intervening with discrimination issues. You will know when a child’s overresponsivity causes a meltdown. You will know if

he is a sensory craver and runs around trying to get more, more, more! But discrimination challenges are harder to see. Often discrimination issues, which are frequently missed by diagnosticians, are the cause of school problems.

Children who have poor discrimination need sensory-rich activities in the domain in which they have issues.

Visual: category games (e.g., find everything in the room that’s a circle, while driving point to all food-related signs)

Interoceptive: Talk about how your body feels at times when you are happy versus worried. Say things such as, “I’m so happy, I can feel my heart beating fast!” or “I always feel nervous when I [fill in the blank]. My stomach feels like it is flipping over.” That way the child will begin to understand the body sensations related to emotional content.

Auditory: Play the same-and-different game, “I’m going to say two words, and you tell me if they are the same or different. Then it will be your turn to try to trick me.”

Proprioceptive: Play Simon Says or Mother May I? performing unusual, novel body movements.

While we have enjoyed presenting this series of six Sensory Solutions columns, we are also painfully aware of all that remains unsaid, especially in this last column on SDD. The take-home message is this: If you have or work with a child who you suspect has Sensory Processing Disorder, seek out a multidisciplinary evaluation that includes occupational therapy. Don’t settle for “Don’t worry, he’ll grow out of it” or “Here’s a brochure on parenting classes.” Follow your instincts and find answers. Remember, there is help and hope! ■

Reference

Bialer, D. S., and L. J. Miller. 2011. *No Longer A SECRET: Unique Common Sense Strategies for Children with Sensory or Motor Challenges*. Arlington, TX: Sensory World.