

Sensory Processing and Autism in the Classroom

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What is ASD?

Autism Spectrum Disorder is a neurodevelopmental disorder that impairs a child's ability to communicate and interact with others. It can also include repetitive behaviors, interests and activities which can cause significant impairment in social, occupational and other areas of functioning.

As of May 2013, Autism is now considered a single disorder that includes disorders that were previously considered separate — autism, Asperger's syndrome, childhood disintegrative disorder and pervasive developmental disorder not otherwise specified.

What does Autism look like?

Autism can take a variety of forms. There are many different behaviors associated with Autism. These include:

- delayed language skills
- poor eye contact
- engages in solitary play, poor reciprocal play skills
- persistent fixation on parts of objects
- narrow interests
- rigid behavior
- extreme anxiety

Kids with Autism sometimes have cognitive delays, often have motor coordination deficits and almost always have sensory integration problems. For high functioning children with Autism, it's usually their sensory integration difficulties that contribute to behavioral challenges and learning difficulties in the classroom. Therefore, a working knowledge of sensory processing and the sensory system is imperative to create optimal learning environments for children with Autism.

What is SPD (Sensory Processing Disorder)?

To understand SPD (sensory processing disorder) we have to understand the basics of sensory processing. Sensory processing (or sensory integration) refers to the communication between the nervous system and the body's senses that result in motor and behavioral responses. Our bodies are constantly processing sensory information from our surrounding environments. It's the successful integration of

the messages that it processes that allow us to adapt to our environments accordingly.

It's important to note that we actually have 8 senses, not just 5, that work together in our bodies. They are:

1. olfactory/smell
2. tactile/touch
3. oral/taste
4. auditory
5. visual
6. vestibular (balance)
7. proprioceptive (sense of where body is in space)
8. interoceptive (body's sense of what's going on internally)

Most of us have some difficulty processing certain types of sensory information, but we adapt and go on living our lives. However, when sensory processing difficulties are chronic and effect the quality of a person's everyday life, this becomes known as SPD (sensory processing disorder).

According to the Sensory Processing Disorder Foundation it is currently estimated that 1 in every 6 children have sensory symptoms that significantly impact their daily lives.

What does SPD look like?

Some characteristic behaviors that you may see in the child with SPD are:

- feeding/eating difficulties
- discomfort with clothing
- clumsiness, bumps into things constantly, awkward movements
- high pain tolerance
- chews/mouths non-food objects
- resists hugs, cuddles, touch from others
- doesn't notice when face is messy
- doesn't tolerate getting hands or face messy
- constant movement, can't sit still
- enjoys falling/crashing
- covers ears often
- doesn't understand personal space, excessively touches people/objects
- unaware of being touched or bumped into
- avoidance of fine motor tasks (coloring, cutting, eating with utensils)
- difficulty with transitions (between activities, places)

- trouble following verbal instructions

Before understanding how to identify behaviors of and to accommodate the child with Autism or with SPD, we have to be aware of the 3 different types of SPD.

1. Sensory modulation disorders - where children are either under-responsive, over-responsive or sensory seeking.

- Sensory under-responsive (hyposensitive) - this child requires additional sensory input to register and become organized. The underresponsive child often appears self-absorbed and usually hyperfocused on their preferred toy/activity. They may have toileting accidents and have difficulty knowing when they are hungry or thirsty. They may not notice if someone bumps into them. This child would benefit from "body awareness" types of activities throughout their day (animal walks, yoga)
- Sensory over-responsive (hypersensitive) - this means that they need to decrease their sensory intake for a particular sense to become organized. For example, the child with tactile hypersensitivity can't tolerate messy play or walking barefoot outside. Their nervous system is easily overloaded with information. This child would benefit from having a choice of writing utensils/surfaces (paper, white board, ipad, chalkboard)
- Sensory seeking/craving - these children constantly seek intense input in order to regulate/organize their nervous systems. The sensory seeker may move excessively or often fixes their gaze on bright, flashing lights or makes excessive noise with their mouth or toys. This child would benefit from a schedule with deep pressure/vestibular breaks worked into it (crashing, jumping, swinging in circles) which assist in keeping the nervous system organized for extended periods of time.

2. Sensory based motor disorder - this results in disorganized motor output, which causes children to have trouble with coordination and postural control. This is the child who prefers to lie down instead of sit up in a chair, or sits slumped over in a chair. This child is often clumsy, moves awkwardly, and has poor core strength and endurance. This child would benefit from activities that increase their core strength and endurance - like carrying heavy books for the teacher, pulling a classmate in a wagon, or lying on their tummy to read or color.

3. Sensory discrimination disorder - this results in sensory information being processed incorrectly. For example, the child with a sensory discrimination

disorder may have difficulty identifying smells, may talk too loudly or softly, or may not be able to differentiate between background noise and being asked a question. This child would benefit from games that practice sorting into categories or games like Simon Says that practice new body movements.

A sensory friendly classroom

To best understand how to accommodate a child with SPD it helps to imagine the child with SPD as having a disorganized nervous system. You and I sometimes have disorganized nervous systems too, but we can find ways to reorganize them on our own by going for a run or listening to our favorite CD, for example. Children with SPD have a difficult time reorganizing their nervous system. It's our job as their educators, caregivers, parents etc. to provide them with the tools in their environment to "get organized" and to function at full capacity throughout the day.

A sensory friendly classroom will benefit all children in the classroom, not just the kids with Autism and SPD. It will provide a space for children to sustain their focus, improve their learning abilities, and reduce stress. Here are some examples of simple ways to contribute to a sensory friendly learning environment:

- Lighting: use incandescent lighting/no fluorescents, natural light is best if possible
- Colors: colors of walls should be soft and neutral (no bright walls - they exhaust the eyes)
- Noise: decrease background noise, play calming music, provide noise cancelling headphones/earplugs
- Seating: alternative seating (therapy balls, Hoki stools), seating that engages the core/ backless chair
- Organization: eliminate clutter, use visual schedules to help kids anticipate what comes next, keep the day structured
- Writing/drawing: use various types of writing utensils/mediums (pencils, pens, markers, shaving cream, paint, chalk, etc.)
- Fidgets: keep a bin with fidget toys (squishy, spiky, tacky balls) available
- Cozy Corner: provide an area to retreat to (a corner with beanbags and/or a tent)

References

SPD Foundation - <http://spdfoundation.net>

CDC (Center for Disease Control and Prevention) - <http://www.cdc.gov/ncbddd/autism/index.html>

Ayers, J (1979) *Sensory Integration and The Child* - WPS