

## Children Living with Sensory Processing Disorder

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### COLUMN ARTICLE

A child is sitting in the front of a classroom. Their teacher at the front of the room is giving a lesson. The lesson and information should be clear to a student sitting upfront yet the child sitting in that classroom is hearing the buzzing of the florescent lights, a pen tapping from the student behind them, and the snap of the gum from the student beside them. In addition, the student begins to feel claustrophobic because the temperature of the room is two degrees warmer than the day prior. They look around, the bell sounds, they cover their ears due to the loudness, and the class is over. The student suddenly realizes they have not heard anything the teacher was saying and is inundated with anxiety and frustration. A child diagnosed with sensory processing disorder (SPD) may have these types of experiences daily because they are unable to filter incoming sensory information. This inability to filter or process sensory information effectively has been shown to be related to academic struggles, family challenges, and low self-esteem [7,12].

SPD is a chronic, neurological disorder that alters the perceived sensory information by the child [6,7,12]. Also known as a 'neurological traffic jam,' these altered perceptions cause mild to severe daily disruptions in a child's life [7]. Children struggling with SPD misinterpret

multiple sensory cues which leads to difficulties in various environments including academic, family, and social settings [2,8]. Going beyond the various impacted settings, misinterpreted sensory information may impact some or all areas inclusive of auditory, gustatory, interoceptive, olfactory, proprioceptive, tactile, vestibular, and visual discrimination abilities [4,7]. Recognized as an umbrella term, SPD creates multi-leveled and multi-faceted challenges for those diagnosed, their families, and those trying to support and provide treatment.

Researchers have found some evidence for both a genetic link and environmental factors that influence the development of SPD [7,10]. For example, research utilizing diffusion tensor imaging displayed differences in the amount of white matter in the brain of children with and without SPD [11]. Children diagnosed with SPD show decreased levels of white matter in the brain [11]. Research also has demonstrated that environmental factors such as poor prenatal care, low birth weight, and premature births may also contribute to the development of SPD [10]. In addition, there are multiple comorbidities such as autism and ADHD, that often coincide with SPD [7,8]. Beyond the recognized typical behaviors of a child with autism, they also exhibit more sensory issues than children without disabilities [6]. In fact, it is typically recognized sensory issues that prelude the autism diagnosis [3]. Additional unanswered questions remain regarding the complexity

of the co-morbid diagnoses of ADHD and SPD [2]. It is estimated that forty to sixty percent of the children that show symptomology of one disorder, show symptomology of the other [11].

Recognized previously as sensory integration dysfunction [1], sensory issues from these ‘neurological traffic jams’ present red flags for various stages of development [7]. Infant and toddler red flags are obtrusive and can be recognized with difficulties sleeping and eating, motor development delays, an opposition to being held as well as an inability to self-soothe while presenting an over-all discomfort in one’s body [7]. Prominent markers for preschoolers include an extreme over-sensitivity to smells, noises, and touches, continuation of sleeping and eating struggles, contempt for the toilet training process, and exhibition of extreme ‘meltdowns.’ [7]. Grade schoolers present similar challenges as their preschool counterparts, but add to their struggles by fidget increases, distractibility, difficulty making friends, and an overall lack of awareness of their surroundings [7]. As children continue to age and reach adolescence and adulthood, diagnosed individuals tend to keep prior struggles but add to their current challenges. At this stage of development an overwhelming fear of failing at new tasks is present, while more pronounced impulsiveness and distractibility are shown in multiple settings, and poor motor skills and lethargy present obvious challenges [7].

Although SPD has been researched for more than five decades, and research supports SPD as a stand-alone diagnosis, the disorder remains unrecognized in the DSM-V [5]. The lack of recognition can directly impact a child’s ability to receive services for treatment to help improve the umbrella of challenges associated with these neurological traffic jams, or SPD [7,8,12]. While there is limited research on the assessment and treatment of SPD research that provides a deeper understanding of the academic, family, and social challenges experienced by diagnosed children and their families has been minimally explored [12]. Research examining the commonalities of diagnosed children is critical in increasing awareness and understanding of the lived experiences of children with SPD. Significant

challenges will continue for children and their families due to the lack of awareness and understanding among family, educators, and therapists [12]. This type of research may lead to practical benefits related to diagnosis, treatment, and support for these children and their families.

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