



Sensory Processing Strategies and Interventions

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Introduction

Autism is a disorder that has been growing exponentially in the past decade. One in sixty- eight people will be diagnosed with autism spectrum disorder (ASD), which makes this the fastest growing disorder, beating out childhood cancer [1]. About 90% of people with autism have a difficult time with sensory processing, which can be displayed in “hyper- or hypo- reactivity” [2]. Some methods, such as Sensory-based interventions, can help children with autism to process their environmental stimuli. There are other useful methods, such as wearing noise-canceling headphones or dimming fluorescent lighting. Sensory processing in people with autism cannot be cured; therefore, it is important to help mitigate and reduce factors that are overstimulating for people with autism. Through continued evidence-based research, certain methods have been found to help children with autism process stimuli, which can eventually reduce overwhelming feelings and create strategies to prevent overstimulation. This paper examines the classroom strategies that educators can employ to benefit children with autism, facilitating their ability to process stimuli.

Understanding Sensory Processing in Autism

Sensory processing is how the nervous system re

ceives messages from the senses and converts them into suitable motor and behavioral responses [3]. A person with autism may become under stimulated or, more commonly, overstimulated. “Sensory oversensitivity presents as an aversion to loud noises, discomfort from bright lights, or even distress caused by specific textures, smells, or tastes” [4]. Overstimulation can result from loud noises or even issues with balance. There is a neurological component involved in sensory processing. Though researchers are still trying to understand why people with autism have difficulties with sensory processing, initial research suggests it is caused by “dysregulation in sensory processing pathways in the brain” [5]. There is a lack of research on the topic of sensory processing that needs to be explored further to understand why people with autism struggle to process stimuli. People who have sensory processing issues can become withdrawn and struggle to engage with other people or activities. Others are sensory seeking, meaning that they are actively seeking stimuli through running, spinning, or crashing into things. Researchers need to focus on sensory processing strategies and research because there is a lack of understanding and empirical evidence that shows effective methods that parents, educators, and others can utilize to help children with autism.

Social, Emotional, and Communication Impacts

There is a significant impact on children with autism who struggle with communication because the classroom environment is made up of social interaction and emotional regulation. “Children with sensory processing challenges often need supports to access, participate in, and achieve at school” [6]. Ways that the classroom environment can become more inclusive to children with autism would be to create a sensory-inclusive classroom. Having dim lights, lamps, spinning chairs for sensory needs, and noise-canceling headphones are great ways to create an open and inclusive classroom environment. Special education teachers should go through thorough training so that they feel confident that they can support their students with autism.

Setting is important for students with autism, which is based on placing the student in the Least Restrictive Environment (LRE). Children with autism who have sensory issues may do well in the general education classroom with the proper supports, and others may be better suited in a self-contained classroom. This varies and is individual to each child. It is vital to address a child with autism’s social and emotional well-being to nurture their emotional security and make students with autism feel safe and supported in school.

Evidence-Based Interventions and Strategies

For educators to be the most effective at their job, evidence-based strategies must be used to have a reliable, student-centered approach that aims to provide students with all the resources necessary to thrive in the classroom environment. This includes modifying the classroom environment, going on a sensory-based diet, having proper supports, and seeing an occupational therapist. Modifying the classroom environment to a sensory-friendly environment can look like covering fluorescent lighting to dull the bright lights, having noise-canceling headphones available, providing fidgets, allowing for movement breaks, and any other supportive modifications. Sensory-based diets can help reduce interruptions to one’s ability to process sensory information. “Sensory diets may have changed participants’ sensory processing, psychosocial skills, and classroom engagement behaviors” [7]. Although sensory diets may have a variety of responses, it can be helpful to develop skills such

as jumping, deep pressure, and brushing techniques. An occupational therapist can provide sensory integration therapy (SIT) to help treat children with autism and sensory dysfunction [8]. SIT was developed in 1970 and was inspired by “A. Jean Ayres’s Sensory Integration Theory” [9]. Through repeated exposure to environmental stimuli, SIT can help reduce dysregulation and help individuals with autism respond better to sensory information. SIT can help with passive and active activities. Passive activities are things like receiving a hug or playing with shaving cream. Active activities are things like running, jumping, and climbing.

Occupational therapy can help individuals with autism become better equipped to participate in everyday activities and reduce sensory dysregulation. When OT is combined with supportive family and special education teachers, a child with autism has a strong support system to help create effective and consistent strategies.

Implementation Challenges and Considerations

The challenge that any family of an autistic child will face is that the resources to get help are too limited for those who need it most. Therapies such as occupational and speech therapy are very expensive, and can be difficult for schools to hire and retain talented therapists. Each child is unique and requires an individualized education plan that is tailored to their specific needs. For some children with autism, it can be stressful to work through sensory dysregulation. Teachers need to be trained on sensory processing and dysregulation so that they can best support children with autism in the classroom environment.

Conclusion

With a growing number of children being diagnosed with autism spectrum disorder, it is more important than ever to develop further research on ways that educators can best support sensory dysfunction. “Sensory dysfunction affects the neurological processing of sensory information and sensory systems, which causes negative impacts on learning and development” [8]. Through therapies like occupational therapy and speech therapy, children with autism can work with trained professionals toward a common goal of participating in everyday activities. Sensory-based interventions are not

yet at the most reliable stage of interventions, such as evidence-based interventions, which are repeated many times and have proven validity.

Through more exposure and repeated studies, sensory-based interventions can become more reliable and effective, which can help mitigate any “mixed and inconclusive” reviews [10]. Many educators and therapists are dedicated to helping families of autistic children reach goals and have fun. There is a lot of importance in understanding and researching methods to help children with autism process sensory information in the classroom environment, and it starts with educators.

References

1. Boutot EA (2017) autism spectrum disorders: Foundations, characteristics, and effective strategies. 2nd edition Boston: Pearson <https://www.pearson.com/en-us/subject-catalog/p/autism-spectrum-disorders-foundations-characteristics-and-effective-strategies/P200000000817/9780137413683?srsId=AfmBOorVvzuyoLPSfV8ksZGDIVcf-FU2ZD3S8M0nOR-0ImD176yxqwbqU>.
2. Glod M, Riby DM, Honey E, Rodgers J (2015) Psychological Correlates of Sensory Processing Patterns in Individuals with Autism Spectrum Disorder: A Systematic Review. *Rev J Autism Dev Disord* 2: 199-221.
3. STAR Institute (2024) What is sensory processing? <https://www.spdstar.org/basic/understanding-sensory-processing-disorder>.
4. Narzisi A, Muccio S, Scattoni ML, Muratori F (2025) Sensory processing in autism: A call for research and action. *Frontiers in Psychiatry* 16.
5. Green SA, Hernandez L, Tottenham N, Krasileva K, Bookheimer SY, et al. (2015) Neurobiology of sensory overresponsivity in youth with autism spectrum disorders. *JAMA Psychiatry* 72: 778-786.
6. Katy Unwin, Kylie Wales, Tennille Johnson, Carl Leonard, Gaenor Dixon, et al. (2024) Evidence synthesis and clinical recommendations for supporting school children with sensory processing challenges. *American Journal of Occupational Therapy* 78.
7. Pingale D, Borhade A, Pise A, Bhosale A (2022) Effects of sensory diets: A single-subject study. *Journal of Occupational Therapy, Schools, & Early Intervention*, 15: 251-264.
8. Wikimedia Foundation (2025) Sensory integration therapy. Wikipedia https://en.wikipedia.org/wiki/Sensory_integration_therapy?utm_source=chatgpt.com.
9. Schaaf RC, Benevides TW, Kelly D, Mailloux Z (2018) Efficacy of occupational therapy using Ayres Sensory Integration®: A systematic review. *American Journal of Occupational Therapy* 72: 7201190010.
10. Harun D, Mohd Ali Piah H, Wan Yunus F, Mohd Rasdi HF (2025) Sensory-based intervention in improving sensory processing, social, and play skills among children on the autism spectrum: A systematic review. *International Journal of Environmental Research and Public Health* 67: 1282-1300.