

#### **Exploring Sensory Processing Disorder in the Adult Population** Kaisey Showers, Occupational Therapy Student; Dr. Valley McCurry, PhD, MBA, OTR/L Department of Occupational Therapy | University of Alabama at Birmingham Tricialyn Green, VP of Health Services | Ability Plus Inc., Huntsville, AL

#### Introduction

Typically, when sensory processing disorder (SPD) is considered, the population that first comes to mind is adolescents. However, children with untreated sensory processing disorder grow into adults with a condition that can affect many aspects of occupation and functioning. . Sensory dysfunctions and sensitivities can appear as a co-morbidity to a number of other conditions, including but not limited to: autism spectrum disorder (ASD), intellectual disabilities, schizophrenia, and attention deficit/hyperactivity disorder.

The capstone project aims to collect information from staff and caregivers at Ability Plus in Huntsville, Alabama regarding sensory processing disorder in adults with autism spectrum disorder. This information will be used to identify gaps in education and training regarding sensory processing disorder, which will be used to develop and implement an educational program for the staff and caregivers within the company. The educational program will be used to increase education on caring for those who experience symptoms related to sensory processing disorder, and who also have a diagnosis of autism. The ACOTE standard addressed by this capstone project is education.

Ability Plus is an organization that has 37 group homes spread throughout four counties in Alabama. The organization provides housing, full time care, and nursing services to over 100 clients with various disabilities. The common diagnoses of these clients include underlying intellectual disabilities (some unspecified), autism spectrum disorder, cerebral palsy, down syndrome, fetal alcohol syndrome, and traumatic brain injuries. Most of these conditions are accompanied with various mental health disorders. Ability Plus serves individuals aged 15+. The primary focus of the capstone project is on the clients with autism spectrum disorder, due to these clients exhibiting symptoms of sensory processing disorder.

#### Methods

Five staff members of Ability Plus were verbally interviewed to collect qualitative data regarding sensory processing disorder in adults with autism spectrum disorder. The interviews were conducted on site at Ability Plus and lasted approximately 10-15 minutes. The interviews followed a predetermined set of questions. The participants were asked information regarding the symptoms, habits, routines, and behaviors of the clients under their care. Participants were also asked about their responses to certain behaviors when exhibited. Information regarding the participants background and knowledge of sensory processing disorder was also collected. Participant roles include caregiver, Qualified Intellectual Disabilities Professional, supervisor, house manager, and registered nurse. Length of employment of participants ranged from approximately 2 months to 11 years at time of interview. Participant demographics are illustrated in the table below.

Participant #	Role at Ability Plus	Length of Employment
1	Qualified Intellectual Disabilities Professional	2 years
2	Supervisor	11 years
3	House Manager	8 Years
4	Caregiver	~ 6 Months
5	Registered Nurse	~ 2 Months



# Results

The results of the study were analyzed and split into 2 main categories: behaviors of clients and caregiver/staff responses to these behaviors. The behavioral responses of clients with autism were reported by the participants included screaming, fidgeting, tearing up furniture, hitting furniture, biting others, self-injurious behavior, hand flapping, and repetitive behavior. The behavioral responses varied between clients, and participants stated that the intensity of behaviors correlated to the level of autism and cognitive impairment. The participants were also asked about triggers of these behaviors. One participant stated that her client "dislikes loud noises, changes in scenery, staff changes, and inconsistency". Another participant, who cares for a client with food seeking behaviors, stated that "the refrigerator and trash can have to remain locked up. The smell of food is a trigger". Participants report frequency of behaviors ranging from multiple times a day to once a month, depending on the client. The responses to these behaviors, as reported by the participants included redirecting, cueing, verbal distractions, and removing the client from the situation or environment. The results also indicated a lack of understanding of what sensory processing disorder is and how it effects clients with autism. The caregiver and staff responses are formed from experience working with the individual, and the behavioral support plan that is individualized for each client. The participants state that they have found "what works" through trial and error. The figure below illustrates behavioral responses and the caregiver responses to these behaviors.



### Discussion

The results of this study are conclusive with the previous evidence that there is a lack of understanding regarding symptoms and behaviors related to SPD as a co-existing condition in adults with ASD. This information has been used to identify gaps in education and training regarding caring for adults with SPD behaviors, which was used to develop and implement an educational program for the staff and caregivers within the company.

**Correlation Between Autism Spectrum Disorder and Sensory Processing Disorder** Adults with ASD are more likely to have sensory dysfunction. Increased sensitivity to sensory input or abnormal attention to sensory aspects of the environment is included as a diagnostic criterion in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (American Psychiatric Association, 2013). Additionally, maladaptive behaviors of some adults with autism can often be linked to these sensory processing sensitivities, which may stim from a co-existing condition of sensory processing disorder. Since these two diagnoses go hand-in-hand, it is important to understand the behavioral tendencies in adults with ASD and SPD, and how to address them. Behavioral Tendencies in Adults with Autism

One of the key findings of the research study was determining the behavioral tendencies in the adults with ASD as reported by staff and caregivers that provide care for them. These described behaviors were consistent with the research on behaviors linked to sensory processing sensitivities. These findings support the idea that sensory processing sensitivities can be linked to ASD in adults, and that these behaviors can cause dysfunction in daily life and meaningful activities. **Responses to Behavior** 

The employees at Ability Plus that care for clients with behavioral issues correlated to ASD and SPD reported receiving basic training and redirection skills as part of their pre-employment training. The results of the study also highlighted that the employees create an individual behavior support plan for each client which identifies how to react in specific cases of behavioral issues. These support plans are adapted when the suggested response does not work for the individual



### **Discussion Continued**

#### Implications

The occupational therapy framework includes many areas relating to sensory functions and sensory regulation. Sensory functions are listed under the body functions section, and includes visual, hearing, vestibular, taste, smell, proprioceptive, touch, interoception, and pain functions (AOTA, 2014). Sensory processing is also listed under self-regulation interventions in the framework. Occupational therapists are responsible for addressing sensory issues related to these bodily functions, and creating interventions to promote self-regulation of sensory processing. In addition, ASD is a common diagnosis that will be encountered by occupational therapists in almost every work setting. It affects people of all ages, race, and gender. This diagnosis is one that lasts throughout the life span, and it is important that it is addressed at all ages and stages of life. **Future Research and Sustainability** 

Due to the nature of this research project and the limitations, additional research would be beneficial to support the idea that SPD is prominent in the adult population, and that occupational therapy can be beneficial to lessening the symptoms of SPD. Further investigation, including clinical observations of clients with ASD and suspected SPD, as well as caregiver/ staff observation, would be beneficial to filling in the gaps in the current literature regarding this topic.



Despite the limitations listed above, this research was conclusive in contributing to the growing body of research that supports the correlation of SPD in adults with ASD. These results demonstrate common behavioral expressions of adults with ASD when triggered by certain sensory events. The results also list some of the ways that the participants address these behavioral outbursts when they occur. These responses are in line with current research that addresses interventions for these kinds of behavioral responses. The study also indicated a need for continued educational services for caregivers working with adults with autism to increase knowledge on sensory processing disorder.



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#### **Acknowledgement & Contact information**

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## Conclusion

#### References