Sensory Sensitivities of Young Adults with High-Functioning Autism Spectrum Disorders

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ABSTRACT

The present study examines sensory processing issues in young adult males (n = 11) and females (n = 3) with High-Functioning Autism Spectrum Disorders. Participants were currently enrolled or planning to enroll in a southeastern college. This study used The Adolescent/Adult Sensory Profile® to measure the range of sensory processing issues within four sensory processing domains (Low Registration, Sensory Seeking, Sensory Sensitivity, and Sensory Avoidance) and six sensory stimulus modalities (Taste/Smell, Movement, Visual, Touch, Activity Level, Auditory). Scores showed more sensory processing issues in the Low Registration and Sensory Avoidance Quadrants compared to neurotypical norms. Further analysis showed a significant difference between sensory stimuli modality scores within all four sensory quadrants. The findings of this study may provide a more concrete understanding of the complex sensory issues that young adults with Autism Spectrum Disorders (ASD) face every day.

The diagnostic criteria for individuals living with autism has rapidly shifted and evolved over the past twenty years, as more awareness and understanding of the disorder expands. In The Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; DSM–IV-TR; American Psychiatric Association, 2000), Autistic Disorder (Autism) and Asperger’s Disorder (Asperger’s Syndrome) were separate diagnoses within the larger category of Pervasive Developmental Disorders. While not a diagnostic category, High-Functioning Autism (HFA) is a term used to categorize individuals previously diagnosed with Autistic Disorder who have a higher level of cognitive and social functioning compared to individuals with more severe autism. The diagnostic criteria for Asperger’s Syndrome in the DSM-IV-TR was similar to High-Functioning Autism, but differed in two main domains: No clinically significant delay in language or in cognitive abilities in childhood (DSM-IV-TR, 2000). In 2013, the DSM-V was released and contained revised diagnostic criteria for disorders within the former Pervasive Developmental Disorders category. According to the DSM-V, Autistic Disorder and Asperger’s
Disorder, among other diagnoses, are all categorized under one disorder with differing levels of severity, known as Autism Spectrum Disorder (ASD). The main diagnostic criteria include: deficits in social communication and interactions, restricted and repetitive behaviors, interests or activities (including atypical sensory behaviors), present symptoms in childhood, and symptoms limit and impair functioning (DSM-V, 2013). There exists a large variability in the severity of symptoms, manifestation of diagnostic criteria, and functioning level of individuals with this diagnosis, and it is therefore viewed as a spectrum disorder to represent this variability. The present study was conducted with young adults who were diagnosed before the introduction of The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM–5; American Psychiatric Association, 2013), and all participants disclosed diagnoses according to the DSM-IV-TR criteria.

In the DSM-IV-TR (2000), sensory abnormalities were not included as diagnostic criteria for Autistic Disorder or Asperger’s Disorder, though research from that time period indicated that differences in sensory processing did occur in these individuals (Ben-Sasson et al., 2009). The recognition of sensory behaviors as diagnostic criteria for Autism Spectrum Disorders is one of the most significant additions to the DSM-V (2013). Atypical sensory behaviors can range significantly depending on the individual and the severity of autism but generally include hyper or hypo-reactivity to sensory input or sensory stimuli in the environment (DSM-V, 2013). Among individuals higher on the autism spectrum, difficulties with social interaction are most predominant, but sensory abnormalities still persist and can severely interfere with functionality in school, work, and everyday life (Dunn, Myles, & Orr, 2002; Crane, Goodard, & Pring, 2009).

Research on sensory processing issues of individuals with Autism Spectrum Disorders has expanded with increased awareness of this complex disorder. Although there is substantial sensory research, the age groups and functional levels of the sample population vary greatly and comparisons across studies are difficult to make due to the variety of methodological techniques. The majority of research on this topic has focused on younger children with lower functionality, due to the more visible and quantitative nature of the sensory processing issues in this population (Ben-Sasson et al., 2009). Of the limited research that includes adolescents and adults, the sensory processing issues are often discussed as less significant compared to children, and studies are limited by variability in age or severity of autism. The available research on individuals with Autism Spectrum Disorders is abundant (Ben-Sasson et al., 2009), and although literature related to sensory processing issues is not lacking, there still exists a lack of research geared particularly towards adolescents and young adults on the higher end of the autism spectrum. As new diagnosis methods and therapies are developed and implemented within the population, the number of individuals with ASD better able to function and contribute to society is growing (Hart, Grigal, & Weir, 2010). The number of students in higher education with a diagnosis of Autism Spectrum Disorder may be increasing (Hart et al., 2010), but there still lacks an understanding of the sensory processing issues of this subset of the population that might be impacting functioning in an educational setting. The present study seeks to understand the unexplored sensory processing issues of young-adults on the higher end of the autism spectrum in advanced educational settings.

Foundational work in this field includes a study by Ben-Sasson et al. (2009) that examined the sensory modulation symptoms in individuals with autism spectrum disorders in a comprehensive analysis. The inclusion criteria for this meta-analysis was as follows: parent-report measure that covered sensory processing over multiple modalities, individuals with ASDs as a distinct population, reported the findings in English, included a neurotypical or other development disorder comparison group, and provided
enough statistical information to perform an effect size test. Distinct moderators were used to categorize the studies: chronological age, percent of autism diagnosis, and type of control group. A total of 14 studies were analyzed for scores in total sensitivity, over-responsivity, under-responsivity, and sensory seeking (Ben-Sasson et al., 2009). The 14 studies comparing ASD with a neurotypical control group found that effect size across all studies was significant for all sensory scores (d = .82 - 2.01). The analysis also concluded that of the four sensory modalities, under-responsivity occurred most often, then over-sensitivity and sensory seeking. Chronological age was found to be a significant factor across all sensory modalities, and effect size tended to increase from birth until age nine, and decreased thereafter. The mean effect size for the chronic age groups was as follows: 0-3 years (d = 1.27), 3-6 years (d = 1.58), 6-9 years (d = 1.89), < 9 years (d = 1.26). The meta-analysis showed that individuals with ASD’s show heightened sensory modality symptoms when compared to a neurotypical control group, but show variability in magnitude when chronological age and severity of autism are considered (Ben-Sasson et al., 2009). Findings report that individuals on the autism spectrum show substantial and significant sensory processing issues when compared to a neurotypical group. This meta-analysis suggests that the next step for research in this field is to address the following question: To what extent do individuals with ASD show decreased sensory processing issues after age nine? The research of Ben-Sasson et al. (2009) served as the foundation for the present study in regards to overall sensory processing issues in individuals with ASD, but left gaps in areas relating to age and functioning level.

Ben-Sasson et al. (2009) provided statistical evidence that individuals with ASD experience abnormal sensory symptoms. In addition, Kern et al. (2007) examined the relation between auditory, visual, touch, and oral sensory dysfunction in autism and the relation to multisensory dysfunction and severity of autism. This study described individuals (n = 104) with a childhood diagnosis of autism, between 3 to 56 years of age. The caregivers of participants completed The Sensory Profile (Dunn, 1999) to assess the frequency of particular responses to sensory experiences and the Childhood Autism Rating Scale (CARS) to assess the severity of autism for each individual. Participants were divided into three age groups in order to analyze the correlation between age, severity of autism, and multisensory dysfunction: 3 to 12 years of age (n₁ = 37); 13 to 25 years of age (n₂ = 33); and 26 and over (n₃ = 34). Correlational analyses were performed to examine the possible relationship between abnormal sensory processing and severity of autism, as well as change in age as a factor in the relationship between Sensory Profile and CARS scores. No correlation was found between scores on The Sensory Profile and CARS, indicating that overall sensory processing abnormalities may not be related to severity of autism. These findings indicated that sensory processing abnormalities are consistent in the autism population independent of functioning level, although the extent of these issues was not indicated. Correlation analysis of age groups found a significant positive correlation between abnormal sensory processing and CARS score in children, but no correlation was found within the adolescent/young adult or adult participants (Kern et al., 2007). The results of this study indicate a possible negative relationship between severity of sensory abnormalities and age, finding that as age increases, sensory processing abnormalities seem to lessen in severity. Although the findings of this study are significant and shed light on the complex sensory processing abnormalities of this population, there are still questions in the research left unanswered. The sensory sensitivities in adolescents and adults may be less severe than in children, but the extent of these issues is unclear.

Research examining children with higher-functioning Autism Spectrum Disorders was conducted by Dunn et al. (2002) and differed from the research of Kern et al. (2007) by
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examining the specific sensory processing issues associated with Asperger’s syndrome in children when compared to a neurotypical group. The Sensory Profile was used to measure the sensory processing issues of both participant groups. The profile consisted of 125 questions that measured the degree in which children showed difficulties in sensory processing, behavioral and emotional responses, responsiveness to sensory events, and modulation. The study found that children with Asperger’s syndrome were significantly different from the neurotypical control group on 22 of 23 items on the Sensory Profile. These results revealed that children with Asperger’s syndrome show a significantly different pattern of sensory processing issues from their peers without disabilities (Dunn et al., 2002).

Previous research provides a limited understanding of how individuals with Autism Spectrum Disorders (ASD) process and react to sensory stimuli in the environment because it does not examine all subgroups within the broad spectrum, specifically adolescents and adults on the higher-functioning end of the autism spectrum. Crane et al. (2009) provided more information about this subgroup by researching sensory processing in older adults with ASD. The Adult/Adolescent Sensory Profile (AASP) is a 60 item self-report questionnaire that describes everyday situations where sensory problems are encountered, and is divided into four quadrants: low registration, sensation seeking, sensory sensitivity, sensation avoiding. Crane et al. found a significant difference in overall scores on the AASP between ASD and a comparison group; adults with ASD displayed significantly higher AASP scores in the low registration, sensory sensitivity, and sensation avoidance quadrants, but scored lower in the sensation seeking quadrant. The results of Crane et al.‘s research provided a foundation for the present study, confirming that older individuals with high-functioning ASD display sensory processing issues.

Previous research conducted by Ben-Sasson et al. (2009) and Kern et al. (2007) indicated that individuals with autism spectrum disorders manifest significant sensory processing issues in childhood positively correlated with severity of autism, but the intensity of these abnormalities decreases with age. The findings of Dunn et al. (2002) more thoroughly examined the relation between individuals with less “severe” autism and sensory abnormalities, showing that children with Asperger’s manifest substantially different sensory processing when compared to a neurotypical group. Crane et al. (2009) focused on a larger group of adults with ASD, using a well-known and implemented clinical questionnaire. The present study sought to replicate the research of Crane et al. (2009), but within the subgroup of young adults with High-Functioning Autism and Asperger’s syndrome in a higher education setting. No previous research has examined this group specifically, and with a growing number of young adults on the autism spectrum pursuing further education after high school (Hart et al., 2010), the need to research this group was apparent.

The hypotheses for the present study were: 1) Young adults with higher-functioning Autism Spectrum Disorders will manifest more sensory processing issues in at least two quadrants when compared to neurotypical standards, and 2) Sensory modality scores will differ significantly within all sensory processing quadrants.

Method

Participants

Undergraduate male (n = 11, ages 18-24) and female (n = 3, ages 18-24) college students diagnosed with High-Functioning Autism or Asperger’s Syndrome were recruited. Participants were currently enrolled or planning to enroll in a higher education establishment in North Carolina. The undergraduate students were recruited through Disability Services at a small private liberal arts college, a large state university from the same city, and from several agencies associated with the local autism advocacy groups.
Diagnosis for participants associated with local advocacy groups was self-reported on the consent form. The present study was conducted with young adults who were diagnosed before the introduction of The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM–5; American Psychiatric Association, 2013), and all participants disclosed diagnoses according to the DSM-IV-TR criteria. The present study respected the choice of some participants to identify diagnoses under the previous DSM, but to remain consistent with the current DSM-V, all participants in the study are labeled as having “High-Functioning Autism Spectrum Disorder.” The participants were representative of the autism population (1:4 female to male). Participation was voluntary and anonymous and participants were treated in accordance with the “Ethical Principles of Psychologists and Code of Conduct” (APA, 2002). The Meredith College Internal Review Board approved the present study.

Comparison Group

Brown and Dunn (2002) developed a standardization study for the AASP using a sample of 950 adolescents and adults considered to represent the neurotypical population without disabilities. The neurotypical sample was separated into three distinct age groups: adolescents (n = 193, ages 11-17), adults (n = 496, ages 18-64), and older adults (n = 261, ages ≥65). Sensory profiles and summary charts were created for each group. Mean age, standard deviation, and participant recruitment methods were not disclosed. The present study used the results of Brown & Dunn’s AASP standardization study as a comparison for the High-functioning ASD group.

Materials & Procedure

The Adolescent/Adult Sensory Profile® (Brown & Dunn, 2002), a Scale Information Sheet, and a writing utensil were provided. The Adolescent/Adult Sensory Profile is a 60-question survey measuring the extent of sensory processing issues among adults and adolescents. Participants answered how often a certain sensory related situation applied to them using a Likert scale of Almost Never, Seldom, Occasionally, Frequently, and Almost Always. The profile is divided into six different sensory stimuli modalities: Taste/Smell, Movement, Visual, Touch, Activity Level, Auditory. Each modality contains questions related to four unique sensory processing quadrants: Low Registration, Sensation Seeking, Sensory Sensitivity, and Sensation Avoiding. The sensory quadrants are used to describe the response of an individual when processing sensory stimuli in the environment. Crane et al. (2009) defined each of the sensory quadrants as follows: “Low registration: Responding slowly or not noticing sensory stimuli; Sensation seeking: Actively pursuing sensory information; Sensory sensitivity: Experiencing discomfort in response to sensory stimuli; Sensation avoiding: Engaging in behaviors designed to reduce exposure to sensory stimuli.” (pp. 19) A Scale Information Sheet was provided to quantify the Likert scale for individuals who were not able to understand the qualitative nature of the scale. The AASP contains a Summary Score Sheet that sums items from each sensory quadrant to create the sensory profile. The Adolescent/Adult Sensory Profile also contains a Quadrant Summary Chart for three age groups, containing classifications based on an AASP standardization study of neurotypical adolescents and adults (Brown & Dunn, 2002). The Quadrant Summary Chart is divided into five classifications: Much Less Than Most People, Less Than Most People, Similar To Most People, More Than Most People, and Much More Than Most People.

Once participants were recruited, they were required to provide consent, and asked to complete a 60-question survey measuring individual range of sensory processing issues. Surveys were either mailed to a participant’s home to be mailed back or they were completed in person at a designated location.
Raw scores for each quadrant were totaled on the Summary Score Sheet. Each quadrant raw score was compared with the neurotypical norms included in the AASP [Brown and Dunn (2002)] and fell into a range of classifications (Much Less Than Most People, Less Than Most People, Similar To Most People, More Than Most People, Much More Than Most People).

Results

Inferential statistics were not appropriate when analyzing the sensory quadrant data due to the small sample size (N = 14), thus descriptive statistics were used for analysis of this mixed design. The AASP Quadrant Summary Chart was used to compare average quadrant scores of participants with the comparison group of individuals without disabilities. On average, participants scored higher in the Low Registration Quadrant and the Sensation Avoiding Quadrant compared to the neurotypical comparison group. The neurotypical range in the Low Registration Quadrant is a score between 24 and 35, placing the participant average score (M = 39.21, SD = 7.44) outside of the range and into the More Than Most People (36 to 44) classification of the AASP summary chart. The neurotypical range in the Sensation Avoiding Quadrant is a score between 27 and 41, placing the participant average score (M = 44.64, SD = 10.49) outside of the range and into the More Than Most People (42 to 49) classification of the AASP summary chart. The mean score in the Sensory Sensitivity Quadrant was 41.43 (SD = 10.01) and Sensation Seeking Quadrant was 44.86 (SD = 6.05), with participants scoring similarly to the neurotypical comparison group and within the Similar To Most People classification. These results indicated that participants in this study on average score outside of the neurotypical range and show more sensory processing issues in the Low Registration and Sensation Avoidant Quadrants than most people.

The Adult/Adolescent Sensory Profile contains six distinct modalities related to types of sensory stimuli: Taste/Smell, Movement, Visual, Touch, Activity Level, and Auditory. Scoring for the profile is based on the four sensory quadrants and does not contain individual scores for each sensory modality. Previous research using this profile (Kern et al., 2007; Dunn et al., 2002; Crane et al., 2009) defines the extent of sensory processing issues based on how an individual responds to sensory stimuli, quantified by sensory quadrant scores (i.e. low registration, sensation avoidant, sensation seeking). By only using quadrant scores to demonstrate sensory processing issues, previous research generalized that individuals had only one sensory response for each modality. Each sensory processing quadrant was analyzed through a univariate general linear model to examine trends among specific sensory stimuli modalities. The present study found significant differences between mean sensory processing modality scores within all four sensory quadrants (Figure 1).

The Sensation Seeking quadrant had significant differences between mean sensory processing modality scores [F (5, 60) = 8.49, p = .000]. Post hoc comparisons using the LSD test indicated the following: the Taste/Smell modality was significantly lower than the Movement, Visual, and Auditory modalities; the Movement modality was significantly higher than the Touch and Activity level modalities; the Visual modality was significantly higher than the Touch and Activity level modalities; the Touch modality was significantly lower than the Auditory modality; the Activity level modality was significantly lower than the Auditory modality.

The Sensory Sensitivity quadrant had significant differences between mean sensory processing modality scores [F (5, 60) = 10.45, p = .000]. Post hoc comparisons using the LSD test indicated the following: the Movement modality was significantly lower than the Touch modality; the Activity Level and Auditory modalities were significantly higher than all other modalities.

The Sensation Avoidant quadrant had significant differences between mean sensory
Figure 1. Mean Likert scale scores for sensory processing modalities by quadrant. Error bars represent standard deviations.
present study, the unique sensory sensitivities of the participants were made clear by the abnormal sensory processing trends within high-functioning ASD group compared with a neurotypical group, and the further analysis of modalities. The meta-analysis provides empirical evidence that individuals with ASD show heightened sensory modality symptoms when compared to a neurotypical control group, but show variability in magnitude when chronological age and severity of autism are considered (Ben-Sasson et al., 2009). The present study supported these findings, and provided more concrete evidence for the variability in sensory modality symptoms within a small subset of the ASD population (higher-functioning young adults) that was previously unexamined.

Similarly, Kern et al. (2007) examined the relationship between multisensory dysfunction and severity of autism in individuals (N = 104) with a childhood diagnosis of autism, representing multiple age groups and functioning levels. The findings of Kern et al. (2007) in regards to processing modalities were further validated by the present study, but current findings indicate sensory abnormalities exist in an older population with higher-functioning ASD. The present study found that participants with higher-functioning ASD had unique sensory processing issues when compared to a neurotypical comparison group, regardless of their age and severity of autism. It is not possible to conclude that these sensory processing issues are less severe than individuals in a younger age group because the AASP standardization results for neurotypical adults were used instead of a college-age comparison group. However, the present study does show that sensory processing issues still exist in individuals with ASD after childhood, independent of their severity of autism. These differences in findings might be due to the different methods of measurement, but that they could also be indicative of a difference in perception between parents and guardians versus the individual with ASD.

Crane et al. (2009) expanded previous processing modality scores [F (5, 60) = 17.50, p = .000]. Post hoc comparisons using the LSD test indicated that the Movement sensory modality was significantly lower than all other modalities except for Touch; the Activity Level and Auditory modalities were significantly higher than the Taste/Smell, Movement, and Touch modalities.

These results revealed the complexity of sensory processing issues of participants, showing that individuals with ASD have specific sensory responses for each stimulus, and the sensory processing issues cannot be generalized by sensory quadrant.

Discussion

The hypotheses of the present study were: 1) Young adults with higher-functioning Autism Spectrum Disorders will manifest more sensory processing issues in at least two quadrants than a neurotypical comparison group, and 2) Sensory modality scores will differ significantly within all sensory quadrants. Based on the results of the data, the hypotheses were supported.

The meta-analysis conducted by Ben-Sasson et al. (2009) was further validated by the present study. The findings in the meta-analysis revealed that individuals with ASD show heightened sensory modality symptoms when compared to a neurotypical control group. The meta-analysis found that of the four sensory modalities, underresponsivity occurred most often, followed by over-sensitivity and sensory seeking. The results of the present study validate the overall findings of the meta-analysis, finding that in the particular subset of young adults with higher-functioning ASD, Low Registration and Sensation Avoiding quadrants showed the most sensory processing issues. In the present study, the unique sensory sensitivities of the participants were made clear by the abnormal sensory processing trends within high-functioning ASD group compared with a neurotypical group, and the further analysis of modalities. The meta-analysis provides empirical evidence that individuals with ASD show heightened sensory modality symptoms when compared to a neurotypical control group, but show variability in magnitude when chronological age and severity of autism are considered (Ben-Sasson et al., 2009). The present study supported these findings, and provided more concrete evidence for the variability in sensory modality symptoms within a small subset of the ASD population (higher-functioning young adults) that was previously unexamined.

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Crane et al. (2009) expanded previous
research on higher-functioning children with ASD to adults with autism spectrum disorders and the sensory processing issues among this group. The present study validated the findings of the Crane et al. (2009) study. The studies are very similar, but the present study targeted young adults in a higher education setting. Crane et al. (2009) found a significant difference in overall scores on the AASP between ASD and the comparison group. Results specifically revealed that adults with ASD displayed significantly higher AASP scores in the low registration, sensory sensitivity, and sensation avoidance quadrants, but scored lower in the sensation seeking quadrant (Crane et al., 2009). The present study found similar results, showing that young adults with higher-functioning ASD had higher AASP scores in the low registration and sensation avoidance quadrant, but scored within neurotypical range in the sensation seeking and sensory sensitivity quadrant. Further investigation is needed to determine whether the difference in findings regarding the sensory sensitivity quadrant is simply an artifact of the smaller sample size and limited age range, or whether it represents a real difference specific to the present population.

Results of the present study indicate substantial sensory processing issues in young adults with higher-functioning Autism Spectrum Disorders. Further analysis of the data showed that sensory stimuli modalities within each quadrant are significantly different. The present study brings to light very unique and complex sensory sensitivities in a subset of individuals with ASD that have not been considered or researched previously. The potential impact of this research spans multiple fields, some of which include: occupational therapy, vocational rehabilitation, and higher education.

Further analysis of sensory modalities found that participants may have overall sensory processing trends, but the way they processing sensory information depends greatly on the particular stimuli/sensory modality. This information could be used to further modify and redesign the Adolescent/Adult Sensory Profile. In regards to the hard copy version of the profile, the grading system only allows for results in relating to sensory quadrants. The present study shows that displaying sensory processing results only in relation to how sensory information is processed as a whole, and not how this information is processed based on the sensory stimuli is limiting and does not fully reveal the extent of an individuals sensory processing issues. The profile could be improved by including a more in depth analysis of sensory processing issues in relation to each sensory modality. By adding more depth to the analysis of results, the profile would be able to not only display sensory quadrant scores as a whole, but also the sensory modality score within each of the sensory quadrants. This modification would make the profile more appropriate for a population where sensory processing issues are complex and variable.

While the results of the present study indicate that there is a difference in the way that young adults with higher-functioning ASD process sensory information when compared to a neurotypical group, this preliminary study is limited. The biggest limitation to this study is the small sample size (N=14) and lack of control group, allowing for great variability in the results. A t-test was not conducted due to a lack of access to the normative data set used for the AASP control group. The particular sub-population of individuals with ASD was small, but previous research has been conducted with similar sized samples (Crane et al., 2009). The present study relied on the normative data included in the Adolescent/Adult Sensory Profile to compare ASD scores, and did not actively recruit a college-age comparison group. The distribution of age in the AASP neurotypical group (ages 18-64) was much greater than the ASD group (ages 18-23) used in this study, possibly limiting the validity of results. Sampling in the present study was subject to selection bias due to the use of existing groups (i.e., the AASP neurotypical sample) and a convenience sample (i.e., the ASD group). The present study did not use any psychological
assessments to validate the self-disclosed diagnosis of participants, although Disability Services of local colleges and autism advocacy groups provided significant proof of diagnoses. Participants were not asked to disclose any diagnoses besides ASD, and comorbidity could have affected the internal validity of the present study.

Participants in the present study were pursuing or planning to pursue a degree from a higher educational institute. The applications of this study are most appropriately geared towards helping individuals with higher-functioning ASD adjust and succeed in a higher education setting. It is crucial that individuals with these diagnoses receive the support necessary to grow and advance their unique abilities and skills. Further research should include a neurotypical comparison group and use inferential statistics to analyze sensory processing differences. Research in the future could examine the satisfaction rates of individuals with higher-functioning ASD in a higher education institute where The Adolescent/Adult Sensory Profile® is given to professors. By providing both students and faculty with the results of this profile, individuals with higher-functioning ASD can better quantify and understand their sensory processing issues, while faculty members would be able to further adapt and modify their classrooms and teaching methods to best accommodate the sensory processing needs of their students. For example, if a particular student scored abnormally high on the Sensory Sensitivity quadrant, particularly in response to visual stimuli, a professor might then be able to adjust the lighting in the classroom to make it easier for the student to focus in class. Similarly, if a student scored abnormally high in the Sensation Avoidant quadrant in regards to large groups of people, the faculty members might instead place the student in smaller class sizes.

In conclusion, young adults diagnosed with higher-functioning ASD manifest sensory processing issues in the Low Registration and Sensation Avoiding Quadrant outside of neurotypical norms. Despite trends in the sensory processing quadrants as a whole, within each sensory quadrant there was substantial variability between the sensory stimuli modalities. The data show that young-adults with Higher-Functioning Autism Spectrum Disorders can have different sensory processing experiences than the neurotypical population, and their sensory processing issues as a whole cannot be easily generalized.

References


