Social Perception Deficits in Adolescent and Adult Autism Spectrum Disorders

Holdnack, J.A. PhD1; Drozdick, L.W. PhD1

1Pearson

Introduction

The Advanced Clinical Solutions for the WAIS-IV/WMS-IV (Wechsler, 2009) is a battery of tests and procedures designed to supplement the standard WAIS/WMS-IV. One component of the ACS is the Social Perception subtest. This subtest is designed to measure processes thought to be involved in social interactions and communication. Neurodevelopmental disorders are often associated with impairments in social behavior, particularly in Pervasive Developmental Disorders (APA, 2000). Individuals diagnosed with autism spectrum disorders show deficits in the development of multiple aspects of face processing including face recognition and affect recognition (Golarai, Grill-Spector, & Reiss, 2006). Adults diagnosed with high functioning Autistic or Asperger’s Disorders do not show normal brain activation in the amygdala and orbitofrontal regions in response to fearful faces but do show activation in the anterior cingulate and superior temporal lobes (Ashwin, Baron-Cohen, Wheelwright, O’Riordan, & Bullmore, 2007). Asperger’s Disorder in adults is associated with atypical event-related potentials when identifying facial expressions of emotion (O’Connor, Hamm, & Kirk, 2005) and reduced activation of the extrastriate cortex and fusiform gyrus (Deeley et al., 2007). Adults diagnosed with Autistic Disorder show deficits in identifying fearful, disgusted, happy, (Humphreys, Minshew, Leonard, & Behrmann, 2007) and sad (Boraston, Blakemore, Chilvers, & Skuse, 2007) facial expressions. The deficits in affect recognition seen with Autistic Disorder are not attributable to impairments in lower level visual-perceptual processing (Humphreys et al., 2007). In addition to deficits in facial affect recognition, adults with Autistic Disorder also have deficits in identifying emotion from prosody (Hollander et al., 2007).

Methods

Participants

The sample was comprised of 800 examinees ages 16-90 years of age. Exclusionary criteria included any history of neurological, psychiatric, developmental or medical condition affecting cognitive functioning. Subjects were screened for general cognitive impairment and poor effort. The demographic characteristics of the sample were matched to 2005 census data for ethnicity and education level. Examinees above the age of 70 were excluded based on research with previous editions of this subtest that showed declining visual and spatial discrimination skills interfered with older examinees’ performance on this subtest.

Clinical Groups

The clinical samples were collected as part of the ACS standardization. Sixteen adults (21.7 \pm 6.4 years of age) diagnosed with Autism and having an IQ > 70 participated in this study. Twenty-seven adults (22.1 \pm 7.7 years of age) diagnosed with Asperger’s Syndrome and having an IQ > 70 were sampled for this study. Age, education, and ethnicity matched controls were randomly selected from the normative sample.

Results

Reliability and Correlation with Intellectual Functioning

In the normative sample, obtained internal consistency measures were: Social Perception Total (.70-.84), Affect Naming (.53-.85), Prosody (.64-.79), and Pairs (.78-.85). The Social Perception Total score correlated significantly with WAIS-IV GAI, VCI, and PRI are available to rule out deficits due to general or specific intellectual deficits resulting in low scores on social perception.

Example of a Picture from a Pairs Item

![Example of a Picture from a Pairs Item](image)

Conclusion

Adolescents and adults with Autism show general deficits in social perception while those with Asperger’s syndrome had specific difficulties with affect naming. These results validate the use of the ACS: Social Perception subtest in these clinical samples.