



Do individuals with high functioning autism have the IQ profile associated with nonverbal learning disability?

Diane L. Williams^{a,*}, Gerald Goldstein^b,
Nicole Kojkowski^{c,1}, Nancy J. Minshe^d

^a *Department of Speech Language Pathology, Rangos School of Health Sciences,
Duquesne University, 600 Forbes Avenue, Pittsburgh, PA 15282, United States*

^b *VA Pittsburgh Healthcare System and University of Pittsburgh School of Medicine, United States*

^c *University of Pittsburgh School of Medicine, United States*

^d *Departments of Psychiatry and Neurology, University of Pittsburgh School of Medicine, United States*

Received 8 August 2007; received in revised form 13 August 2007; accepted 14 August 2007

Abstract

Previously researchers have noted a high level of occurrence of the IQ profile associated with nonverbal learning disability (NLD) in Asperger syndrome (ASP) but not in high functioning autism (HFA). We examined the IQ profile scores of a large sample of children ($n = 69$) and adults ($n = 77$) with HFA, stringently diagnosed according to ADOS, ADI-R, and DSM-IV criteria, and a corresponding sample of typical child ($n = 72$) and adult controls ($n = 107$). At least one of the three primary components of the Wechsler pattern seen in NLD were found in 17–26% of the children and 20–32% of the adults with HFA. All three components occurred in slightly more than 5% of the children and adults with autism. Overall, the VIQ > PIQ profile seen in NLD occurred in 18% of the sample of individuals stringently diagnosed with HFA. Therefore, obtaining this IQ profile is not a valid clinical discriminator between NLD and HFA.

© 2007 Elsevier Ltd. All rights reserved.

Keywords: Autism; Nonverbal learning disability; Asperger syndrome; Wechsler intelligence scales

Individuals with high functioning autism (HFA), Asperger syndrome (ASP), and nonverbal learning disability (NLD) are all described as having difficulties in making sense of and

* Corresponding author. Tel.: +1 412 396 4217; fax: +1 412 396 4196.

E-mail address: williamsd2139@duq.edu (D.L. Williams).

¹ Nicole Kojkowski is now at the University of Miami, FL, United States.

navigating the social environment, resulting in interpersonal awkwardness (Frith, 2003; Rourke, 1989; Volkmar & Klin, 2000). In addition to problems with social functioning, all three disorders are characterized by right hemisphere language impairments such as difficulty understanding figurative language, sarcasm, and humor as well as abnormalities in prosody, facial expression, gaze, gesture, and body language (Ellis, Ellis, Fraser, & Deb, 1994; Jolliffe & Baron-Cohen, 1999; Ozonoff & Miller, 1996; Rourke & Tsatsanis, 2000; Sabbagh, 1999). The overlaps in the behavioral presentation of these three disorders create a challenge for diagnosticians.

Differentiating between the disorders is further complicated because the means by which the diagnoses of HFA, ASP, and NLD are established are different. HFA and ASP are behaviorally defined syndromes determined on the basis of agreed upon diagnostic criteria (DSM-IV; APA, 1994; ICD-10, 1993). Structured research diagnostic instruments have been developed that operationalize these criteria and provide reliability and validity of diagnosis across sites. The diagnostic instruments consider developmental course and current expression across many domains and, in so doing, distinguish the autism spectrum disorders from other psychiatric and developmental disorders. The cognitive and neuropsychological basis of behavior was defined for HFA once the diagnosis was established with these instruments (Joseph & Tager-Flusberg, 2002; Minshew, Goldstein, & Siegel, 1997; Williams, Goldstein, & Minshew, 2006). Similar work has been completed with individuals with ASP (Klin, Volkmar, Sparrow, Cicchetti, & Rourke, 1995; Manjiviona & Prior, 1999).

In contrast, NLD was identified as a learning disability of the right hemisphere on the basis of its neuropsychological profile (Weintraub & Mesulam, 1983). Impairments in visuospatial and arithmetic abilities are one aspect of this profile and result in a Verbal IQ score that is 10 points or more higher than the individual's Performance IQ score (Rourke, 1989, 1995). Rourke and various collaborators elaborated on this syndrome with extensive studies that demonstrated a specific pattern of neuropsychological assets and deficits. Briefly, this pattern includes bilateral tactile-perceptual and coordination deficits, substantially deficient visuospatial abilities, deficits in novel problem solving and concept formation, poor mechanical arithmetic, and well-developed rote verbal capacities. Behavioral descriptions commented on deficient social perception and judgment, interaction verbosity of a repetitive nature, and problems in adapting to novel situations (Rourke & Tsatsanis, 2000).

Whether or not the cognitive and social skill behaviors associated with NLD are identical to those exhibited by individuals with HFA or ASP remains to be determined. Descriptions certainly suggest similarities in presentation, and prior reports establish sufficient overlap as to require investigation and clarification with important clinical implications. NLD has a better outcome for function, as impairments are limited to the right hemisphere. In addition, the inattention to left space, visuospatial disability, general spatial disorientation, and arithmetic disability associated with NLD result in adaptive impairments that are not commonly encountered in HFA or ASP. They require conscious awareness but are amenable to remediation through the use of cognitive strategies.

Clinicians have found it challenging to differentiate between these disorders during the diagnostic process. Whereas Rourke has provided a fuller description of NLD syndrome (Rourke & Tsatsanis, 2000) that goes beyond a pattern of IQ scores, it has been our experience that, in clinical practice, many clinicians diagnose an individual with a significant developmental social impairment without psychosis as having NLD or ASP rather than HFA whenever they obtain an IQ profile that is consistent with that of NLD or even simply a Verbal IQ that is greater than the Performance IQ. According to this practice, given similar behavioral presentations, a diagnosis

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات