

BRIEF REPORT: The Adaptive Profiles of Individuals with Autism Spectrum Disorder

Abstract

The adaptive profiles of 40 individuals with Autism Spectrum Disorder (ASD) were determined using the Communication, Daily Living Skills, and Socialization domains of the Vineland Adaptive Behavior Scales II. The results revealed that individuals with ASD functioned best in Daily Living Skills and least well in Socialization, with Communication faring in between the two. These results replicate the well documented challenges of those with ASD, and mirror the DSM IV criteria for this condition. Results are discussed for their relevance to our understanding of ASD as well as to how they may inform practice in the area.

It is well documented that individuals with Autism Spectrum Disorder (ASD) experience deficits in adaptive behavior because of their tendency to resist change and to display stereotypical behaviors that interfere with acquiring key developmental tasks. In fact, there is considerable evidence on how to improve it (Krantz, MacDuff, & McClannahan, 1993; Pierce & Schreibman, 1994). The Vineland Adaptive Behavior Scales (VABS) are a comprehensive, reliable, and valid instrument that evaluates Communication, Daily Living Skills, Socialization, Gross and Fine Motor Control Skills and Maladaptive Behaviors (Sparrow, Balla, & Cicchetti, 2005). In the clinical division of Kerry's Place Autism Services (Toronto, Ontario), we have adopted the Vineland to (1) obtain adaptive functioning information to guide our understanding of clients needs; (2) target skills in which the individuals are deficient; and (3) use data upon entry as a baseline against which possible deterioration of functioning may be evaluated in the future.

In assessing adaptive functioning, we have been struck by the uneven profiles of our clients on the VABS. Communication and Socialization domains appeared to be much more delayed than Daily Living Skills, which include the Personal, Domestic and Community. We therefore attempted to systematically examine these apparent differences.

Method

Data on the Vineland were collected following administration guidelines through interview with the individuals' caregivers and, in some instances, their parents. The data were then entered into a computer-assisted scoring system which yields extensive information on all clients. However, the present study's focus was on the three key domains, Receptive and Expressive Language, Personal Living Skills- Domestic and Community- and Social Interaction-Coping. The data on

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these domains for 40 individuals with ASD who have been assessed thus far were employed for statistical analyses. Chronological ages ranged from 10 to 65 years and all individuals were diagnosed with ASD by at least a psychiatrist or clinical psychologist, and usually by more. Most participants were adults. The data were collected as part of regular clinical practice and analyzed anonymously.

Results

A series of pairwise *t* tests, comparing the means from Receptive and Expressive Language and the three domains of Daily Living Skills were

carried out. As shown in Table 1, there were significant differences in all three comparisons with Receptive Language, favoring each of the three Daily Living Skills. All but one of the comparisons was significant; Community was not significantly related to Receptive Language. All three comparisons with Expressive Language were highly significant.

We then examined how scores from two Social Skills subscales, namely Interpersonal Relations and Coping, were related to the three Daily Living Skills domains and the two Language domains (Table 2). Consistent with expectation, in all instances the differences were highly significant, favoring Daily Living

Table 1. Relationship between Language and Daily Living Skills in individuals with ASD.

	<i>Means</i>	<i>t values</i>	<i>d.f.</i>	<i>Significance</i>
Receptive vs. Personal	-19.64	-2.63	38	.012
Receptive vs. Domestic	-31.59	-3.37	38	.002
Receptive vs. Community	-9.77	-1.12	38	n.s.
Expressive vs. Personal	- 31.03	- 4.62	39	.000
Expressive vs. Domestic	- 41.28	- 4.71	39	.000
Expressive vs. Community	-17.65	-3.05	39	.004.

Table 2. Relationship between Socialization and Language and Daily Living Skills in individuals with ASD.

	<i>Means</i>	<i>t values</i>	<i>d.f.</i>	<i>Significance</i>
Interpersonal vs.				
Receptive	- 20.10	- 4.32	38	.001
Expressive	- 12.56	- 3.49	38	.016
Personal	-43.78	-6.78	39	.000
Domestic	-54.03	-7.34	39	.000
Community	-30.40	-5.52	39	.000
Coping vs.				
Receptive	-4.60	-.78	38	n.s.
Expressive	3.10	.66	38	n.s.
Personal	-27.92	-4.66	38	.000
Domestic	-37.95	-5.53	38	.000
Community	-14.51	-2.38	38	.022

Skills over either Interpersonal Relations or Communication. Table 2 also shows that there was clear superiority in the means of both Receptive and Expressive Language compared to Interpersonal Relations. However, no significant differences were obtained for the comparison of Coping and the two language measures.

Discussion and Conclusions

Consistent with our expectations, Daily Living Skills were better developed than Language and Social Skills in individuals with ASD. Moreover additional insights were obtained as to how the various skills of individuals with ASD are interrelated. We believe that superiority in Daily Living Skills compared to both Communication and Social Interaction skills relates to the better developed Sensory-Motor skills of these individuals. The various personal and domestic skills assessed involve a sequence of steps that appear to be within these individuals' competence (i.e., they are able to follow a series of interdependent steps). Moreover, many of these skills involved visual support in the form of visual schedules which are well adapted to the needs of this population (MacDuff, Krantz, & McClannahan, 1993). By contrast, Language and Social Interaction involve higher level skills which appear to be more difficult for individuals to process. Theories have been proposed to account for these difficulties, including the Theory of Mind (Baron-Cohen, Leslie, & Frith, 1985), Weak Executive Functioning (Ozonoff, & Jensen, 1999) and Weak Central Coherence (Frith, 2003). It is of interest that the data obtained somewhat mirrored the DSM IV. Thus, in a way, one could argue that an adaptive behavior scale could be used for confirming diagnosis of ASD.

Of the two areas of language, Expressive was the least well developed. As well, and something not previously demonstrated, Communication was better developed in individuals with ASD than was Social Interaction. Though the reasons for this finding remain unclear, it is consistent with Kanner's (1943) emphasis on the deficits in the social domain, and with Perry, Flanagan, Dunn Geier, and Freeman's (2009) finding of lower Socialization skills among young children with ASD (compared to children with other forms of developmental delay). These results fully support the present findings; the profiles identified in our study are also likely present in childhood

and maintained across time into adulthood. Another recent study also reported that adaptive functioning relates to symptomatology in high functioning individuals with ASD (Kenworthy, Case, Harms, & Hume, 2010) using the Adaptive Behavior Assessment System.

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