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BRIEF REPORT: Maladaptive Behaviour in Autism

Abstract

This study evaluated the usefulness of the Maladaptive Behavior Domain of the Vineland Adaptive Behavior Scales-II in assessing maladaptive behaviour in children with autism. Our sample was composed of 117 children with autism or Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS). Scores from the Maladaptive Behavior Domain were examined in relation to autism severity, cognitive ability, age, gender, and adaptive skills, all of which have been found to be related to maladaptive behaviour in previous research. Our results were mostly inconsistent with recent research, calling into question the validity of the Maladaptive Behavior Domain in its present form for use with children with autism.

It is well known that children with Autistic Disorder (AD) often engage in maladaptive behaviours such as aggression, self-injurious behaviour, and stereotyped behaviour (e.g., Dominick, Davis, Lainhart, Tager-Flusberg, & Folstein, 2007), and that these correlate positively with levels of stress in caregivers (e.g., Hastings, Kovshoff, Ward, degli Espinosa, Brown, & Remington, 2005). The presence of maladaptive behaviours also places a child at a heightened risk for social exclusion and makes it difficult to acquire education in a typical school setting (Horner, Carr, Strain, Todd, & Reed, 2002). Thus, it is important to explore this area in an effort to minimize its negative impact. However, the measurement of maladaptive behaviours is an important issue that has received inadequate attention, and there is no standard measure currently employed. This brief report summarizes findings of a study exploring the use of the Maladaptive Behaviour Domain of the new Vineland scales to measure maladaptive behavior.

The Second Edition of the Vineland Adaptive Behavior Scales (Vineland-II; Sparrow, Cicchetti, & Balla, 2005) is an assessment measure of adaptive skills. Along with several other updates, the Vineland-II includes a reorganized its Maladaptive Behavior Domain, which has four sections assessing different groups of maladaptive behaviour: Internalizing, Externalizing, Critical, and Other. The Vineland-II is routinely used in psychological assessments of children with autism (and other children). However, since it is relatively new, there is a very limited literature about it, and none of it addresses the use of the Maladaptive Behavior Domain among children with AD.

Based on previous literature, we hypothesized that scores on the Maladaptive Behavior Domain would be positively correlated with autism severity, negatively correlated with cognitive ability, and uncorrelated with adaptive skill level or age. We also expected that there would be modest gender differ-

ences, with boys scoring higher on Externalizing and girls scoring higher on Internalizing.

Method

File review data were available for 117 ethnically and socioeconomically diverse children (104 males, 13 females) ranging in age from 3 to 12 years (M = 6.46 [SD = 2.49]). Children had a diagnosis of either AD (n = 85) or Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS; n = 32), as confirmed using DSM-IV-TR criteria (American Psychiatric Association, 2000). At the time of assessment, parents gave consent for the data to be used in future studies. Ethics approval for this study was received through York University.

Measures

Severity of autism was measured using the *Childhood Autism Rating Scale* (CARS; Schopler, Reichler, & Renner, 1988). Verbal, Non-Verbal, and Full-Scale Ratio IQ scores were derived from the *Mullen Scales of Early Learning* (Mullen, 1995), *Wechsler Preschool and Primary Scale of Intelligence-Third Edition* (Wechsler, 2002), or *Stanford-Binet Intelligence Scales-Fifth Edition* (Roid, 2003), depending on the child's age and functioning level. The *Vineland Adaptive Behavior Scales-II* (Sparrow et al., 2005) were administered by parent interview to determine the children's adaptive skills (i.e., Communication, Daily Living Skills, Socialization, Motor Skills, and Adaptive Behavior Composite) as well as Maladaptive Behavior (i.e., Internalizing, Externalizing, Other, and Critical raw scores, and Maladaptive Behavior Index (MBI standard score).

Results

Correlations between CARS scores and the four Maladaptive raw scores as well as the MBI scores indicated that there were significant correlations between the CARS and MBI scores (r = .25, p < .01), Internalizing scores (r = .26, p < .01), and Other scores (r = .24, p = .01), although these were modest in magnitude.

Table 1 shows the correlations between the four raw scores for maladaptive behaviour and the MBI with Verbal, Non-Verbal, and Full-Scale IQ scores. Externalizing scores were significantly positively correlated with all the cognitive scores.

Table 2 shows similar correlations with the Adaptive Behavior scores. Again, Externalizing was consistently significantly positively correlated with all adaptive scores; the ABC was also significantly positively correlated with the Critical items raw score.

We did not find any significant (p <. 05) gender differences or correlations between age and scores on the Maladaptive Behavior Domain.

Discussion

The results obtained in this study were somewhat inconsistent with the research that has been conducted concerning maladaptive behaviour in relation to age, gender, cognitive abilities, and adaptive skills in other samples, using other measures. Therefore, it brings into question whether scores on this measure give a "true" picture of the level of maladaptive behaviour in a given child with autism. On the

Table 1. Correlations between Cognitive Ability and Maladaptive Behaviour (n = 117)

	Verbal IQ	*Non-Verbal IQ*	*Full-Scale IQ*
Internalizing	-.01	.00	-.02
Externalizing	.32**	.32**	.31**
Other[a]	-.18*	-.16	-.18
Critical[a]	.09	.09	.09
MBI	.00	.02	-.03

** p < .05, ** p < .001*
[a] n = 116

Table 2. Correlations between Adaptive Skills and Maladaptive Behaviour (n = 117)

	Communication	*Daily Living Skills*	*Socialization*	*Motor Skills*[a]	*ABC*
Internalizing	-.10	-.08	-.11	-.19	-.07
Externalizing	.36**	.32**	.33**	.26*	.40**
Other	-.11	-.19*	-.13	-.03	-.06
Critical	.07	.06	.02	.03	.25**
MBI	-.04	-.08	-.07	-.02	.02

** p < .05, ** p < .001*
[a] n = 75

other hand, possible sample characteristics (for example, age and developmental level) in the present study may have played a role. Future research is clearly needed to determine the usefulness of the Maladaptive Behavior Domain in this population.

The prevalence of maladaptive behaviour, as well as the impact it has on the child and his or her family, necessitates having a valid measure of this construct. The revision of the Maladaptive Domain in the Vineland-II seems promising in this regard, but further analysis using larger and broader samples, and examining the measure at the item level, may bring us closer to the establishment of a more valid and clinically useful way of measuring maladaptive behaviour in children with AD. Such a measure would also assist in evaluating program effectiveness and gaining a better understanding of maladaptive behaviour in autism. These ideas are currently being explored in a larger, more heterogeneous data set (Wells, Perry, Bebko, Luthra, & Weiss, 2010).

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