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Parent and teacher ratings of adaptive and challenging behaviours in young children with autism spectrum disorders

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ABSTRACT

This study examined parent and teacher rating correspondence of adaptive and challenging behaviours for children with autism spectrum disorders (ASDs) enrolled in an early intervention program. Data were collected on the Behaviour Assessment System for Children, second edition (BASC-2; $n = 22$), and Vineland Adaptive Behaviour Scales, second edition (VABS-II; $n = 28$). Adaptive behaviour ratings generally demonstrated high parent–teacher correlations, while challenging behaviour ratings demonstrated relatively low correlations. Only adaptive skills on the BASC-2 showed significant mean parent–teacher differences, with parent ratings suggesting greater impairment. Results suggest that clinicians should consider gaining both parent and teacher perspectives on a child's challenging behaviour, but that a single informant measure of adaptive behaviour, either parent or teacher, may be sufficient after initial assessments are completed.

1. Introduction

Early intervention is a promising approach for improving the outcomes of individuals with autism spectrum disorders (ASDs; Magiati, Tay, & Howlin, 2012; Matson & Jang, 2013; Prior, Roberts, Rodger, Williams, & Sutherland, 2011). ASDs are lifelong conditions, so the main aims of treatment are to minimise symptoms and maximise the individual's ability to function effectively in their environment (Ozonoff, Goodlin-Jones, & Solomon, 2005). The skills to achieve this effective functioning are adaptive behaviours (Paul et al., 2004). Challenging behaviours (e.g., hyperactivity, aggression, attention problems) are a similarly important outcome variable, as they are often one of the greatest difficulties in families and barriers to education (Lecavalier, Leone, & Wiltz, 2006). At least one challenging behaviour is usually present for children with ASDs (Matson, Nebel-Schwalm, & Matson, 2007), and, in some circumstances, such behaviour can place others at risk of injury (Murphy, Healy, & Leader, 2009). These problems can exclude individuals from accessing community services, preventing effective integration into society (Matson et al., 2007; Murphy et al., 2009).

Selecting an appropriate measurement system for these variables is a necessary decision facing clinicians in early intervention. Measurement must be accurate to effectively assess progress (Reed & Osborne, 2013) and inform future treatment. This requires the measurement tools to be appropriate for the target population and treatment goals (Lord et al., 2005). The decision should also consider how much unique information the system provides about a child's condition; minimising unnecessary assessments is important as financial resources and time are both limited for many services providing intervention for ASDs. Two commonly used assessment tools for children with ASDs are the Vineland Adaptive

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Behaviour Scales, second edition (VABS-II; Sparrow, Cicchetti, & Balla, 2005), and the Behaviour Assessment System for Children, second edition (BASC-2; Reynolds & Kamphaus, 2004). The VABS-II focuses on adaptive behaviours, but includes maladaptive behaviour indices on the parent rating form. In contrast, the BASC-2 focuses on challenging behaviours, but includes adaptive scales on both the parent and teacher rating forms.

The use of multiple informants (such as parents and teachers) assumes that these individuals will provide unique information beyond what is possible from one informant. It might be expected that they would establish similar assessments, but this is not always the case (Kalyva, 2010; Kanne, Abbacchi, & Constantino, 2009). Rating differences likely represent much more than measurement error (Achenbach, 2011; Hartley, Zakriski, & Wright, 2011), and potentially arise due to changes in behaviour across different situations or environments (Kanne et al., 2009). For instance, in the home environment, there may be few demands placed on the child beyond normal activities. In contrast, the teaching or intervention environment likely contains more goal-directed activities. These environments likely affect children on a person-by-situation basis (Hartley et al., 2011), with effects possibly being moderated according to preferences, such as for structure versus autonomy. However, studies suggest environmental factors cannot account for all rating disparities. For instance, researchers have found modest parent–teacher correlations even when rating aggression following specific events (Hartley et al., 2011) or when teachers rated the children's behaviour based on observations in a home-based intervention context (Reed & Osborne, 2013). Another potential source of ratings differences draws from characteristics of the informant. Recent research suggested that parent education level and age affect perceptions of autism symptoms (Hattier, Matson, Belva, & Adams, 2013). Past studies have found that stress or depression levels correlate with more severe parent ratings (Szatmari, Archer, Fisman, & Streiner, 1994; Youngstrom, Loeber, & Stouthamer-Loeber, 2000), possibly through reducing tolerance for disruptive behaviour or a lack of receptiveness to social advances. These factors may affect ratings through influencing interactions with the child (changing the child's behaviour) or through a cognitive bias (changing the informant's perception).

When assessing informant differences, past research has identified the value of using a combination of correlation statistics and mean difference testing (Szatmari et al., 1994; Voelker, Shore, Lee, & Szuszkiewicz, 2000). Correlations provide evaluation of whether the children are rank-ordered consistently between informants, whereas mean differences can reveal potential tendencies to rate higher or lower. When taken together, these statistics can indicate whether there are differences and whether these differences are systematic or random. This approach requires that parent and teacher ratings be matched for each assessed child.

Parent and teacher congruence has been examined for many behaviours and age groups of children with ASDs (Geiger, Smith, & Creaghead, 2002; Kanne et al., 2009; Lecavalier et al., 2006; Murray, Ruble, Willis, & Molloy, 2009; Reed & Osborne, 2013). Few studies were found reporting on parent–teacher rating congruence for children with ASDs on the BASC and VABS (limited to Barnhill et al., 2000; Foley Nicpon, Doobay, & Assouline, 2010; Szatmari et al., 1994). One of these studies included correlation statistics, using the original VABS ($N = 83$; Szatmari et al., 1994). Szatmari et al. found that although parent–teacher correlations were moderate to high ($r = .42–.83$), parents systematically rated the children's impairments as more severe than teachers did. Voelker et al. (2000) found similar results with a sample of children with low intellectual quotients (IQs) without ASDs. However, they highlighted that the norm referencing method for the original VABS resulted in parent scores having a lower absolute limit, artificially biasing scores to make them appear more severe than teacher scores. Also in a study with children with non-ASD disabilities, Hundert, Morrison, Mahoney, and Vernon (1997) found that parent ratings were only more severe than teacher ratings for children with severe developmental delays and not for those with moderate or no delays. These findings support Voelker et al.'s (2000) argument that differences are due to a lower absolute limit, as scores for children with moderate and no impairment would tend to be insufficiently low to elicit the effect and thus show no parent–teacher differences. No study (to the authors' knowledge) has reported on parent–teacher ratings using the updated VABS-II, so it is unclear whether these results would replicate for this instrument.

Barnhill et al. (2000) examined differences between parent and teacher ratings of children and adolescents with Asperger disorder on the original BASC ($N = 20$). They found that, on average, teachers rated all composites (externalising problems, internalising problems, behavioural symptoms, and adaptive skills) more positively than did parents. Foley Nicpon et al. (2010) found similar differences between parent and teacher ratings on the updated BASC-2 for children ($n = 39$) and adolescents ($n = 15$) with ASDs and intellectual giftedness. However, both studies did not include correlation statistics, making it unclear whether these differences were systematic. Furthermore, as Foley Nicpon et al. did not match the parent and teacher ratings, extra parent ratings were included due to a higher response rate from parents. Studies with other measures of challenging behaviour have not replicated these results (Lecavalier et al., 2006; Reed & Osborne, 2013). For instance, Reed and Osborne, using the Connors' Rating Scale (CRS-R; Conners, 1997) as a measure of challenging behaviour, found mean parent–teacher differences only for oppositional behaviours (e.g., rule breaking, authority problems) in a sample of young children with ASDs ($N = 52$; M age = 44.4 months). Teachers rated these problems more severely than parents did. This contrasts with results on the BASC, but may be attributable to differences in the age of the children and the context of the teacher relationship. Reed and Osborne's teacher respondents were involved in a home-based treatment program. Correlation statistics showed that parent–teacher correspondence was poor for all behaviours, except attention deficit hyperactivity disorder (ADHD) symptoms when assessed by a parent with low stress.

The present study focused on children diagnosed with ASDs, aged 2½ to 6 years who participated in an early intervention program at an AEIOU centre.The AEIOU foundation is a not for profit organisation in Queensland, Australia, providing full-time early intervention to children with ASDs. The AEIOU program aims to support development in four areas: social