

# Parenting stress in autism: Associations with specific behavioral characteristics and significant reductions in stress over time



The Vista School®

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## ABSTRACT

Research shows parents of children with autism experience high levels of parenting stress. Specifically, higher maladaptive behaviors (e.g., disruptive or hyperactive behavior) common to children with autism and lower adaptive skills (e.g., self-care and communication skills) are associated with higher levels of stress. The present study extends current findings by investigating how specific child characteristics are correlated with parental stress and further reports the reduction of parental stress following three years of intensive treatment using Applied Behavior Analysis. Seventy-four percent of the sample reported significantly elevated levels of stress, which negatively correlated with low levels of several adaptive skills.

## INTRODUCTION

**Background & Significance.** Research shows parents of children with autism experience high levels of parenting stress (Koegel, et al., 1992; Estes et al., 2009; Tomanik, Harris, & Hawkins, 2004). In a study by Tomanik et al. (2004), two-thirds of mothers of children with autism obtained clinically significant scores on a parenting stress measure. Mothers of children with autism display higher levels of parenting stress and psychological distress than mothers of children with other disabilities (Estes et al., 2009).

Maladaptive behaviors common to children with autism are associated with higher levels of parenting stress or anxiety (Tomanik et al., 2004; Lecavalier, Leone, & Wiltz, 2006; Estes et al., 2009; Hastings, 2003). Tomanik et al. (2004) found irritability/agitation (e.g., disruptive behavior), lethargy/social withdrawal, and hyperactivity/non-compliance to be significantly related to maternal distress. In addition, Lecavalier et al. (2006) found conduct problems and disruptive, rule-breaking behaviors are more strongly associated with parental stress than other child and caregiver characteristics.

Research also suggests lower adaptive skills in children with autism are associated with higher levels of parenting stress (Tomanik et al., 2004; Davis & Carter, 2008). Tomanik et al. (2004) found mothers experienced greater stress when their child with autism displayed poor self-care, communication, and interaction skills. Davis and Carter (2008) showed deficits in the social skills of toddlers with autism were associated with stress in both parents. Children's difficulty with self-regulation skills (e.g., eating, sleeping, and emotion regulation) are associated with greater levels of maternal stress.

**Present Study.** The aims of this study were to examine (1) the relationship between stress experienced by parents of children with autism attending The Vista School and the associated adaptive and maladaptive behavior of their children and (2) parenting stress levels over a three year time period in order to evaluate changes over time as their children received intensive ABA treatment.

## HYPOTHESES

1. Self-report of parenting stress and child's measured adaptive behavior skills will be significantly and negatively correlated. Self-report of parenting stress and child's measured maladaptive behavior skills will be significantly and positively correlated.
2. Self-report of parenting stress will significantly decrease over a three-year time period.

## METHOD

### Participants.

Data was collected from 27 caregivers and their children that attend The Vista School. The Vista School is a day school which provides educational and therapeutic programs for children diagnosed with an Autism Spectrum Disorder. See Tables 1 and 2 for other descriptive statistics. All participants received six hours of education and treatment a day, following along a typical school calendar (included five weeks in the summer).

Table 1. Parent descriptives.

	<i>M(SD)</i> or %
Parent age	40.09 (6.16)
Parent gender: male/female	7/93
Parent marital status <sup>1</sup>	93/7
Parent highest year of school	16.24 (1.76)
Parent current status of employment <sup>2</sup>	64/36
Family income <sup>3</sup>	13/17/70

<sup>1</sup> Dual/single; <sup>2</sup>Employed/Unemployed; <sup>3</sup>\$20,000-\$40,000/\$40,000-\$60,000/>\$60,000

Table 2. Child descriptives.

	<i>M(SD)</i> or %
Child age	8.56 (2.49)
Child gender: male/female	85/15
Child ethnicity <sup>1</sup>	85/15
Child IQ <sup>2</sup>	49 (20)

<sup>1</sup> Non-minority/ minority; <sup>2</sup>N=13

### Procedure.

Caregivers completed rating scales measuring parenting stress and their child's adaptive and maladaptive behaviors annually. In addition, teachers and mental health professionals (i.e. behavior consultants) completed rating scales annually measuring the student's adaptive and maladaptive behaviors.

### Measures.

•The **Parenting Stress Index, Third Edition Short Form (PSI-3-SF, Abidin, 1995)** is a self-report measure that assesses parenting stress by asking parents to rate items on a 5-point Likert scale ranging from *strongly agree* to *strongly disagree*. The measure includes three subscales: (1) Parental Distress, (2) Parent-Child Dysfunctional Interaction, and (3) Difficult Child (Abidin, 1995), which together yield a Total Stress score. Total Stress scores at or above the 90<sup>th</sup> percentile are indicative of clinically significant levels of stress.

•The **Vineland Adaptive Behavior Scales-Second Edition (VABS-II, Sparrow, Cicchetti, & Balla, 2005)**. Parent/Caregiver Rating Forms and Teacher Rating Forms provide information about four general domains of functioning: communication, daily living, socialization, and motor skills as well as an overall level of adaptive skills yielded by an Adaptive Behavior Composite.

•The **Behavior Problems Inventory-01 (BPI-01, Rojahn et al., 2012)** is an informant-based behavior rating instrument that assesses maladaptive behaviors in individuals with intellectual disabilities and contains three subscales: Self-injurious Behavior, Aggressive-Destructive Behavior, and Stereotyped Behavior. The parent and mental health professional rate the frequency and severity of each item.

## RESULTS

Hypothesis 1 was tested using correlations to explore the relationship between self-reported parenting stress levels using the PSI-3-SF and child characteristics as reported by parents, teachers, and mental health professionals using the VABS-II and the BPI-01. Hypothesis 2 was tested using one-way within subjects analysis of variance (ANOVA) to compute the scores of parenting stress over the past three years.

**Hypothesis 1: Associations between parenting stress, adaptive behavior, and maladaptive behavior.** Using Pearson correlations, authors calculated several significant negative relationships between the PSI-3-SF and VABS-II scores. Parental Distress was negatively correlated with participants' domestic, coping, and socialization skills. Total stress was negatively correlated with interpersonal, play and leisure, and coping skills. Additionally, a positive correlation existed between Parental Distress and the severity of aggressive/destructive behavior as measured by the BPI-01. See Table 3.

Table 3. Hypothesis 1.

	Parental Distress	Total Stress
Domestic Skills (Parent)	-0.524**	
Interpersonal Skills (Parent)		-0.466*
Play and Leisure (Teacher)		-0.437*
Coping Skills (Teacher)	-0.490**	-0.421*
Socialization Skills (Teacher)	-0.412*	
Aggressive/Destructive Behavior Severity (Parent)	0.403*	

\*  $p < .05$ , \*\*  $p < .01$

**Hypothesis 2: Parenting stress scores over a three-year time period.** Analyses found that over time parenting stress was significantly decreasing in the Total Stress and Difficult Child subscales. Pairwise comparisons tested using dependent samples t-tests determined the significant change occurred between the first and third years. See Table 4.

Table 4. Hypothesis 2.

	N	df	F	Time 1 Mean	Time 2 Mean	Time 3 Mean	Direction of Change
Difficult Child	12	(2, 22)	6.111**	46.17	41.42	40.25	Decreasing
Total Stress	12	(1.4, 15.2)	4.148*	112.25	103.08	99.25	Decreasing

\*  $p < .05$ , \*\*  $p < .01$

## DISCUSSION

**Conclusions.** The results add to current research documenting associations between parenting stress levels and child characteristics in children with autism. Overall, 74% of caregivers had significantly elevated scores ( $\geq 90^{\text{th}}$  percentile) on the PSI-3-SF. Analyses suggest higher levels of parenting stress are associated with lower domestic, interpersonal, play and leisure, coping, and socialization scores.

A second important finding was a significant decrease in parenting stress over time; this could be attributed to children's participation in an intensive ABA program or parent training and support programs.

**Limitations.** Several limitations are noted. All data were measured by rating scales that could be subjective in nature. The characteristics of the sample also limited how much these results may be generalized to the population as a whole due to the small sample size, restriction in diagnosis, and gender of the participants. In addition, 33.3% of parents did not attend any parent trainings (e.g., support groups, safety training, ABA training).

**Implications.** Despite these limitations, the current study expands our understanding of the relationship between parenting stress and child characteristics. Focusing intervention on the child characteristics most correlated with parent stress could be an effective strategy for treatment professionals. The study also suggests intensive ABA treatment for children with autism may contribute to decreased parenting stress levels over time. Further studies should investigate factors that contribute to reducing parenting stress over time, including parent training attendance.

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