



AMERICAN
PSYCHOLOGICAL
ASSOCIATION

Journal of Family Psychology

Manuscript version of

Parental Coping as a Buffer Between Child Factors and Emotion-Related Parenting in Families of Children With Autism Spectrum Disorder

Jasmin Alostaz, Jason K. Baker, Rachel M. Fenning, Cameron L. Neece, Sasha Zeedyk

Funded by:

- Eunice Kennedy Shriver National Institute of Child Health and Human Development

© 2021, American Psychological Association. This manuscript is not the copy of record and may not exactly replicate the final, authoritative version of the article. Please do not copy or cite without authors' permission. The final version of record is available via its DOI: <https://dx.doi.org/10.1037/fam0000757>

This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.



CHORUS *Advancing Public Access to Research*

Brief Report: Parental Coping as a Buffer between Child Factors and Emotion-Related Parenting in Families of Children with Autism Spectrum Disorder

Date Submitted: May 14, 2020

Abstract

Parents of children with autism spectrum disorder (ASD) experience high levels of stress related to their children's symptoms and comorbid behavior problems. Adaptive parental coping in response to child-related stressors is proposed to serve a buffering function, and yet little research has examined whether coping actually moderates associations between child factors and parent outcomes in this population. The few studies to do so have focused on parent wellbeing as the primary outcome and have not considered the degree to which child-related stressors may affect parenting and contribute to maladaptive transactional parent-child processes over time. The current study tested whether adaptive parental coping was associated with reduced associations between higher levels of child ASD symptoms and comorbid externalizing problems and poorer quality parent reactions to child negative emotions in 63 families of children with ASD. Parents reported on their children's externalizing problems, their own coping behavior, and their reactions to their children's negative emotions, and child ASD symptoms were measured through direct testing. Adaptive coping—primarily active planning—moderated the association between children's behavior problems and supportive parent reactions such that parents of children with more externalizing problems reported less supportive reactions, but only when adaptive coping was low. Child ASD symptoms did not significantly relate to parent reactions, and coping did not moderate these associations. This cross-sectional study is the first to identify parental coping as a potential protective factor for parenting behavior in families of children with ASD and comorbid behavior problems. Implications for future longitudinal research are discussed.

Keywords: Autism spectrum disorder, parent coping, parenting quality, externalizing problems, emotion socialization

Brief Report: Parental Coping as a Buffer between Child Factors and Emotion-Related Parenting in Families of Children with Autism Spectrum Disorder

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by deficits in social communication and the presence of restricted and repetitive behaviors (American Psychiatric Association, 2013). Parents of children with ASD report higher levels of stress compared to parents of children with neurotypical development and those of children with other developmental disabilities (Abbeduto et al., 2004; Hayes & Watson, 2013). Although there are many factors underlying increased stress in families of children with ASD, carefully controlled longitudinal designs suggest that children's ASD-related symptoms and elevated comorbid externalizing behavior problems may play a causal role in driving parenting stress (Lecavalier et al., 2006; Rodriguez et al., 2019), which in turn may adversely affect parenting behavior (Shawler & Sullivan, 2017) and exacerbate child difficulties over time (Lecavalier et al., 2006; Rodriguez et al., 2019).

Evidence that some families of children with ASD adapt well despite these risks has prompted efforts to understand resilience processes (Benson, 2014). In particular, certain forms of parental coping, such as active planning, problem-solving, and seeking support from others, have been linked to positive wellbeing in parents of children with ASD, whereas those involving psychological avoidance, denial, and disengagement are often associated with maladaptation (Benson, 2010, 2014; Smith et al., 2008). The present study examined whether parents' adaptive coping might also buffer associations between potential child-related stressors (ASD symptoms and externalizing behavior), and emotion-related parenting in families of children with ASD.

By definition, coping is a *response* to stress or stressors, and successful coping is generally considered to involve a reduction in the negative effects of stressors (Smith et al.,

2008). This is essentially a moderation model wherein successful coping serves as a buffer for associations between certain stressors and important outcomes. Despite this understanding, the majority of investigations of parent coping in families of children with ASD have focused either on direct associations between child stressors and parental coping, or on relations between coping and parent wellbeing. Only a handful of studies have considered coping as an actual buffer against identified stressors involved in raising a child with ASD, with mixed findings. Abbeduto et al. (2004) reported that parent coping did not significantly reduce associations between child factors and maternal depression or pessimism in families of children with ASD, Down Syndrome, or Fragile X Syndrome. Similarly, Smith and colleagues (2008) examined 108 interactions between child factors and different coping strategies in the prediction of various indices of maternal mood and psychological wellbeing, with only 7 interactions (6%) emerging as significant. In contrast, Benson (2014) found that, over time, different forms of coping moderated associations between several different child characteristics and various indices of maternal wellbeing. For instance, lower levels of distraction coping buffered the effect of child behavior problems on perceptions of parenting efficacy. These mixed findings suggest that some, but not all, forms of coping may serve the intended function of truly buffering maternal wellbeing against child-related stressors in these families.

Although much remains to be learned about the interactive effects of child characteristics and parental coping on parental wellbeing in families of children with ASD, virtually nothing is known about how these factors may predict parenting *behavior* in this population. Certain aspects of parenting may be more susceptible to child-driven effects than others, particularly processes involving efforts to regulate child emotion and behavior. Experiences of negative emotion are both normative and adaptive, but they are also common triggers for externalizing

problems in children with ASD who, as a group, exhibit significant difficulties regulating emotion (Mazefsky et al., 2013). The ways in which parents respond in these moments are thought to play a key role in how parents socialize emotion in their children (Eisenberg et al., 1998). Thus, parental reactions to children's negative emotions may be both highly influenced by their children's challenging behavior, and a major contributor to the development of the children's regulatory capacities (Morris et al., 2007; 2017).

Supportive behavior in response to children's negative emotions (e.g., validating, encouraging discussion) is robustly associated with positive socioemotional development in children with neurotypical development (Eisenberg et al., 1998; Morris et al., 2017; Spinrad et al., 2020), whereas parental psychological control, minimizing, and criticism have been linked to dysregulation and externalizing problems (e.g., Morris et al., 2017; Spinrad et al., 2020). The few studies examining parental reactions to children's negative emotion in families of children with ASD have revealed links to child functioning, including theory of mind (Mazzone & Nader-Grosbois, 2017) and psychophysiology (Moffitt et al., 2021).

Theories of emotion socialization in neurotypical development have generally adopted a parent-driven perspective, leading to a predominant focus on prediction of child outcomes (Spinrad et al., 2020; Morris et al., 2017). However, recent calls to action have underscored the need to consider determinants of emotion-related parenting (Spinrad et al., 2020), with an emphasis on the influence of parents' own regulatory and coping strategies on the quality of parental responses to child emotion (Hajal & Paley, 2020). Given the pronounced role that child factors appear to play in shaping parental cognitions in families of children with ASD, it is reasonable to posit a child-driven approach to conceptualizing determinants of emotion-related parenting in this population. From this lens, parents may be more likely to experience anxiety or

distress when their children exhibit negative emotion given historical experiences with child challenging behavior, resulting in less optimal in-the-moment parental reactions. Successful coping, however, may allow parents to respond more thoughtfully and with greater intentionality to children's negative emotion, regardless of children's underlying challenging behaviors.

The present investigation examined concurrent relations between potentially stressful child characteristics (externalizing problems and ASD symptom severity) and parent reactions to child negative emotions in families of children with ASD, and considered adaptive parental coping as a moderator of these associations. Specifically, we predicted that higher child externalizing problems and higher ASD symptom levels would relate to lower supportive and higher unsupportive parent reactions primarily under conditions of low adaptive parental coping.

Methods

Participants

Families were drawn from a larger study examining the interplay between parenting and child regulation in families of children with ASD (e.g., Baker et al., 2020). Of the 77 families enrolled in the larger study, 63 (82%) returned questionnaires measuring reactions and coping. The only pattern identified was that missing data were significantly more common in families of children with higher ASD symptom levels, $t = 2.04$, $p = .045$ ($M=8.46$ as compared to $M=7.25$).

The 63 children included in the current sample (79% male) were between the ages of 6 and 10 years (see Table 1) and held a community diagnosis of ASD which was confirmed through a clinical best estimate involving the Autism Diagnostic Observation Schedule–2 (ADOS-2; Lord et al., 2012). The children's primary caregivers participated (95% mothers). The sample was diverse with regard to ethnicity (38% Hispanic; 38% Caucasian, non-Hispanic, 8% "multi-racial," 6% African American, 6% Asian American, and 3% "other"), annual family

income (27% reporting under US \$35,000 per year, 31% over \$95,000 per year), child cognitive functioning (estimated IQ between 47-121), and child ASD symptom levels (Table 1).

Procedure

All procedures were approved by the California State University, Fullerton institutional review board and informed consent was obtained from all participants in this study. As a part of the larger study, children participated in diagnostic confirmation procedures and testing of estimated IQ. Parents completed the measure of child behavior problems at the visit, and report forms measuring parent coping and reactions were completed at home and returned by mail.

Measures

Diagnostic Confirmation and ASD Symptom Levels

Diagnostic confirmation was primarily based upon the existence of an ASD diagnosis by a community physician or psychologist and evidence that the child met the criterion for an autism spectrum classification on our laboratory administration of the ADOS-2 (Lord et al., 2012). The ADOS-2 is a semi-structured assessment that facilitates observation and recording of child behaviors related to language, social communication, play, repetitive behaviors, and restricted interests and was performed by assessors certified as research reliable in the system. The ADOS-2 comparison score was used to provide a robust measure of ASD symptom levels. The comparison score allows for examination of symptom levels across different modules, with 1 indicative of minimal to no evidence of ASD-related symptoms and 10 reflecting a high level of symptoms. As described in previous publications with this sample (Baker et al., 2020), five children did not meet the ADOS-2 criterion for an ASD classification, but were retained following a detailed multi-method clinical best estimate by a licensed clinical psychologist with ADOS-2 research reliability and significant expertise in assessment for ASD.

Child IQ

An estimate of child IQ was obtained using the Stanford-Binet 5 ABIQ (Roid, 2003). The ABIQ is comprised of two subscales with high loading on the general intelligence factor: a Matrix Reasoning task that assesses non-verbal fluid reasoning and a Vocabulary task that evaluates expressive word knowledge.

Child Externalizing Behavior Problems

Externalizing behavior was measured through parent report using the standardized Externalizing Scale *T*-score from the age-appropriate version of the Child Behavior Checklist (Achenbach, 2009).

Parent Coping

The Brief COPE (Carver, 1997) is a 28-item self-report measure that indexes a range of coping strategies in response to stressful experiences. Parents were asked how often they used each type of behavior to, “cope with any difficulties associated with raising your child with autism.” Ratings were made on a four-point scale ranging from (1) “I haven’t been doing this at all,” to (4) “I’ve been doing this a lot.” Pairs of items are summed to generate 14 subscales that consider self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame. A primary adaptive coping factor that included active coping, planning, emotional support, and instrumental support emerged in multiple analyses and predicted wellbeing in parents of children with ASD (Benson, 2010; Hastings et al., 2005). Internal consistency for this composite in the current study was $\alpha = .84$.

Parent Reactions to Child Emotion

The Coping with Children’s Negative Emotions Scale (CCNES; Fabes et al., 2002)

includes six subscales that identify ways parents react to their children's negative emotions. The subscales are typically composited into those considered supportive to the social-emotional development of children (expressive encouragement, emotion-focused reactions, problem-focused reactions), and those that are considered unsupportive (distress reactions, punitive reactions, and minimization reactions; Fabes et al., 2002). Adequate internal consistency, test-retest reliability, and construct validity has been reported for the scale (Fabes et al., 2002), and psychometric support exists for use with families of children with ASD (Bougher-Muckian et al., 2016). Internal consistency scores were acceptable in the current study (alpha for supportive = .87 and unsupportive reactions = .86).

Results

With regard to demographic and relevant child factors, bivariate correlations revealed that the parents of children with higher IQ scores and parents of children with greater externalizing problems reported more adaptive coping (see Table 1). Although coping was considered primarily as a moderator in the present study, it is notable that adaptive coping was positively correlated with more supportive parent reactions. Of interest, neither children's externalizing problems nor ASD symptom severity appeared to have a significant bivariate association with parent reactions, suggesting that moderation may be present.

Two multiple regressions were performed in order to test whether adaptive coping moderated associations between child factors and either supportive or unsupportive parent reactions. In each regression, child externalizing problems and ASD symptom severity were included, along with adaptive coping and the interactions between coping and each of the child factors¹. A significant interaction was present between child externalizing problems and parent

¹ The pattern and significance of results were unchanged when regressions were performed separately for child externalizing behavior problems and child ASD symptoms.

adaptive coping in the prediction of supportive parent reactions (Table 2). Adaptive coping did not significantly moderate the association between externalizing problems and unsupportive parent reactions, and child ASD symptoms did not significantly interact with coping.

The significant interaction between child externalizing behavior and adaptive parent coping was followed up with estimates of the relevant simple slopes between externalizing problems and supportive parent reactions at 1 *SD* below the mean for adaptive coping and 1 *SD* above the mean. These analyses revealed that higher child externalizing problems only predicted less supportive parent reactions when parent adaptive coping was low, simple slope (unstandardized/standardized) = $-.02/-.39$, $t = 2.44$, $p = .018$. Child problems did not predict less supportive parent reactions when parents reported higher levels of adaptive coping, slope = $.00/.06$ $t = 0.34$, $p = .734$ (see Figure 1).

Although it was not necessary to control for child IQ or any other relevant child factor in the regressions due to a lack of association with both the predictor and criterion variables, child IQ was correlated with adaptive parent coping. In order to address the possibility that coping may have served as a significant moderator due to its association with child IQ, we performed the relevant regression with coping replaced by child IQ, which did not emerge as a significant moderator, $\beta = .06$, $p = .639$.

The adaptive coping composite included elements of both active planning and support seeking, which have consistently loaded on a single factor. We performed post-hoc analyses to unpack the significant finding in order to provide more specificity with regard to effective coping components. The active-planning and support-seeking composites were correlated with each other at $r = .58$, $p < .001$ and with supportive reactions at $r = .26$, $p = .036$, and $r = .35$, $p = .005$, respectively; however, when tested in a regression together, only the interaction involving the

active-planning composite was significant, $\beta = .39$, $t = 2.35$, $p = .022$.

Discussion

Raising a child with ASD can be a stressful experience (Abbeduto et al., 2004; Hayes & Watson, 2013), with both child ASD symptoms (Rodriguez et al., 2019; Smith et al., 2008) and comorbid externalizing behavior problems identified as potential contributors to poorer well-being in parents (Hastings et al., 2005; Lecavalier et al., 2006; Rodriguez et al., 2019). Leading models of the development of externalizing problems describe transactional processes wherein children's difficult behavior compromises parenting quality which, in turn, worsens child behavior (Granic & Patterson, 2006). Effective coping should, in theory, provide a buffer between environmental stressors and the negative impact of these stressors on the individual (Smith et al., 2008). As such, adaptive coping may represent a powerful tool for breaking these cycles that maintain or worsen both parenting quality and child difficulties.

Findings from the present study suggest that adaptive coping may not only offer a compensatory function in maintaining supportive parent reactions to child negative emotions in families of children with ASD, but might also buffer against the potential effects of children's behavior problems on this aspect of parenting. More adaptive coping was consistently associated with parents' reports of more supportive reactions, and an inverse association between children's externalizing problems and parent supportive reactions was only observed at low levels of adaptive coping. Follow-up analyses further suggested that while aspects of both active planning and support seeking were related to more supportive parent reactions, only active planning appeared to serve a buffering function against increased child difficulty, suggesting that parents' ability to problem-solve and plan may be key to maintaining positive parenting in the face of problematic child behavior. This finding dovetails nicely with longitudinal evidence that family

adaptability, which includes flexible problem solving, may be key to reducing both maternal depression and child externalizing problems in families of adolescents with ASD (Baker et al., 2011). Together, these findings suggest that interventions aimed at increasing social connection and support may be effective in maintaining certain aspects of parenting quality, but that those more specifically focused on active planning and problem-solving might be particularly useful for parents of children with ASD who also exhibit comorbid externalizing problems. A recent randomized control trial reported significant reduction in the likelihood of clinically-significant stress in mothers who participated in a brief problem-solving-focused intervention following their children's diagnosis of ASD (Feinberg et al., 2014). Targeting adaptive coping in the context of existing interventions or through standalone modules may represent an important way to strengthen resilience and enhance intervention uptake.

In contrast to the findings regarding externalizing problems and supportive parent reactions, adaptive coping did not appear to buffer links between children's ASD symptoms and parenting. Indeed, children's core ASD symptom levels were not significantly related to parent reactions. Although some studies have identified associations between child ASD symptoms and aspects of parent wellbeing (e.g., Smith et al., 2008), a recent meta-analysis revealed child behavior problems to be more strongly tied to parent outcomes, with ASD symptoms less consistently related to parent stress and wellbeing (Yorke et al., 2018). Moreover, while increased child ASD symptom severity may tax parents, associated stress may not adversely influence parenting behavior to the same degree as children's externalizing behaviors. Differences in parental attributions regarding the controllability of child challenges may play a role (Barrowclough & Hooley, 2003), as might the potential specificity with which child externalizing problems are linked with coercive interaction cycles (Granic & Patterson, 2006).

It is notable that children's externalizing behavior problems were more significantly related to reduced supportive parental reactions to child negative emotion than to increased punitive, dismissive, or distressed parental responses. The lack of a significant relation between children's externalizing problems and parent unsupportive reactions was unexpected. However, the size of this main effect was small to moderate, suggesting the potential for a positive association, which might increase in significance over time. It is also possible that this pattern could be suggestive of emerging parental disengagement. Further study is needed to understand the nature of these dynamics and how patterns might unfold longitudinally. Interestingly, parental coping was not significantly related to unsupportive reactions either. Collectively, results suggest that adaptive coping may be specific to promoting supportive reactions, but may not be associated with reducing unsupportive responses. This is one of the first studies to examine parent coping in relation to parenting behavior in families of children with ASD, and future investigations are needed to enhance understanding of these processes.

Limitations of the study include the cross-sectional design and reliance upon parent report for most of the measures. Longitudinal designs would be helpful in clarifying directionality and utilizing observational measures could enhance understanding of parenting behavior. Future work would also benefit from including all parents or caregivers in the family home, and examining the role of parent mental health and parents' own emotion regulation skills (Hajal & Paley, 2020; Spinrad et al., 2020). The current study represents an early but important step in understanding how behavior of children with ASD may relate to the parenting that they receive, and how adaptive parental coping might offer benefit to these processes.

References

- Abbeduto, L., Seltzer, M.M., & Shattuck, P. (2004). Psychological well-being and coping in mothers of youths with autism Down syndrome, or fragile X syndrome. *American Journal on Mental Retardation*, *109*, 237-254.
[https://doi.org/10.1352/0895-8017\(2004\)109<237:PWACIM>2.0.CO;2](https://doi.org/10.1352/0895-8017(2004)109<237:PWACIM>2.0.CO;2)
- Achenbach, T.M. (2009). *The Achenbach System of Empirically Based Assessment (ASEBA)*. Research Center for Children, Youth, & Families, University of Vermont.
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders. 5th ed.* American Psychiatric Publishing.
- Baker, J. K., Fenning, R. M., Erath, S. A., Baucom, B., Messinger, D. S., Moffitt, J. M., et al. (2020). Respiratory sinus arrhythmia, parenting, and externalizing behavior in children with autism spectrum disorder. *Autism*, *24*, 109–120. <https://doi.org/10.1177/1362361319848525>.
- Baker, J.K., Seltzer, M.M., & Greenberg, J.S. (2011). Longitudinal effects of adaptability on behavior problems and maternal depression in families of adolescents with autism. *Journal of Family Psychology*, *25*, 601-609. <https://doi.org/10.1037/a0024409>
- Barrowclough, C., & Hooley, J. M. (2003). Attributions and expressed emotion: A review. *Clinical Psychology Review*, *23*, 849–880. [https://doi.org/10.1016/S0272-7358\(03\)00075-8](https://doi.org/10.1016/S0272-7358(03)00075-8)
- Benson, P. (2010). Coping, distress, and well-being in mothers of children with autism. *Research in Autism Spectrum Disorders*, *4*, 217–228. <https://doi.org/10.1016/j.rasd.2009.09.008>
- Benson, P. (2014). Coping and psychological adjustment among mothers of children with ASD: An accelerated longitudinal study. *Journal of Autism and Developmental Disorders*, *44*, 1793–1807. <https://doi.org/10.1007/s10803-014-2079-9>
- Bougher-Muckian, H., Root, A., Coogle, C., & Floyd, K. (2016). The importance of emotions:

The socialisation of emotion in parents of children with autism spectrum disorder. *Early Child Development and Care*, 186, 1584–1593.

<https://doi.org/10.1080/03004430.2015.1112799>

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief COPE. *International Journal of Behavioral Medicine*, 4(1), 92-100.

https://doi.org/10.1207/s15327558ijbm0401_6

Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion.

Psychological Inquiry, 9, 241–273. https://doi.org/10.1207/s15327965pli0904_1

Feinberg, E., Augustyn, A., Fitzgerald, E., Sandler, J., Suarez, Z., Chen, H., Cabral, H.,

Beardslee, W., & Silverstein, M. (2014). Improving maternal mental health after a child's diagnosis of autism spectrum disorder. *JAMA Pediatrics*, 168, 40-46.

<https://doi.org/10.1001/jamapediatrics.2013.3445>

Fabes, R. A., Poulin, R. E., Eisenberg, N., & Madden-Derdich, D. A. (2002). The Coping with Children's Negative Emotions Scale (CCNES). *Marriage & Family Review*, 34, 285–310.

https://doi.org/10.1300/J002v34n03_05

Granic, I., & Patterson, G. R. (2006). Toward a comprehensive model of antisocial development.

Psychological Review, 113, 101–131. <https://doi.org/10.1037/0033-295X.113.1.101>

Hajal, N. J. & Paley, B. (2020). Parental emotion and emotion regulation: A critical target of study for research and intervention to promote child emotion socialization. *Developmental Psychology*, 56(3). 403-417.

<https://doi.org/10.1037/dev0000864>

Hastings, R. P., Kovshoff, H., Brown, T., Ward, N. J., degli Espinosa, F., & Remington, B.

(2005). Coping strategies in mothers and fathers of preschool and school-age children with autism. *Autism*, 9, 377–391. <https://doi.org/10.1177/1362361305056078>

- Hayes, S. A., & Watson, S. L. (2013). The impact of parenting stress: A meta-analysis of studies comparing the experience of parenting stress in parents of children with and without autism spectrum disorder. *Journal of Autism and Developmental Disorders, 43*, 629–642.
<https://doi.org/10.1007/s10803-012-1604-y>
- Lecavalier, L., Leone, S., & Wiltz, J. (2006). The impact of behavior problems on caregiver stress in young people with autism spectrum disorders. *Journal of Intellectual Disability Research, 50*, 172–183. <https://doi.org/10.1111/j.1365-2788.2005.00732.x>
- Lord, C., Rutter, M., DiLavore, P., Risi, R., Gotham, K., & Bishop, S. (2012). *Autism Diagnostic Observation Schedule, Second Edition (ADOS-2)*. Manual. WPS.
- Mazefsky, C., Herrington, J., Siegel, M., Scarpa, A., Maddox, B., Scahill, L., & White, S. (2013). The role of emotion regulation in autism spectrum disorder. *Journal of the American Academy of Child & Adolescent Psychiatry, 52*, 679-688.
<https://doi.org/10.1016/j.jaac.2013.05.006>
- Mazzone, S., & Nader-Grosbois, N. (2017). How are parental reactions to children's emotions linked with theory of mind in children with autism spectrum disorder? *Research in Autism Spectrum Disorders, 40*, 41-53. <https://doi.org/10.1016/j.rasd.2017.05.003>
- Moffitt, J. M., Baker, J. K., Fenning, R. M., Erath, S. A., Zeedyk, S. M., Messinger, D. S., Paez, S. A., & Seel, S. (2021). Parental emotion socialization and psychophysiological arousal patterns in children with autism spectrum disorder. *Research in Child and Adolescent Psychopathology*. Advance online publication. <https://doi.org/10.1007/s10802-020-00745-1>
- Morris, A.S., Silk, J., Steinberg, L., Myers, S., & Robinson, L.R. (2007). The role of family context in the development of emotion regulation. *Social Development, 16*, 361-388.
<https://doi.org/10.1111/j.1467-9507.2007.00389.x>

- Morris, A. S., Criss, M. M., Silk, J. S., & Houlberg, B. J. (2017). The impact of parenting on emotion regulation during childhood and adolescence. *Child Development Perspectives, 11*(4), 233-238. <https://doi.org/10.1111/cdep.12238>
- Rodriguez, G., Hartley, S. L., & Bolt, D. (2019). Transactional relations between parenting stress and child autism symptoms and behavior problems. *Journal of Autism and Developmental Disorders, 49*(5), 1887–1898. <https://doi.org/10.1007/s10803-018-3845-x>
- Roid, G. H. (2003). *Stanford-Binet Intelligence Scales, Fifth Edition*. Riverside.
- Shawler, P. M., & Sullivan, M. A. (2017). Parental stress, discipline strategies, and child behavior problems in families with young children with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 32*, 142–151. <https://doi.org/10.1177/1088357615610114>
- Smith, L.E., Seltzer, M.M., Tager-Flusberg, H., Greenberg, J., & Carter, A. (2008). A comparative analysis of well-being and coping among mothers of toddlers and mothers of adolescents with ASD. *Journal of Autism and Developmental Disorders, 38*, 876-889. <https://doi.org/10.1007/s10803-007-0461-6>
- Spinrad, T. L., Morris, A. S., & Luthar, S. S. (2020). Introduction to the special issue: Socialization of emotion and self-regulation: Understanding processes and application. *Developmental Psychology, 56*(3), 385–389. <https://doi.org/10.1037/dev0000904>
- Yorke, I., White, P., Weston, A., Rafla, M., Charman, T., & Simonoff, E. (2018). The association between emotional and behavioral problems in children with autism spectrum disorder and psychological distress in their parents: A systematic review and meta-analysis. *Journal of Autism and Developmental Disorders, 48*(10), 3393–3415. <https://doi.org/10.1007/s10803-018-3605-y>

Table 1.*Descriptive Statistics and Correlations among Variables of Interest (n=63).*

	1	2	3	4	5	6	<i>M (SD)</i>
1. Child Age in Years	--						7.89 (1.47)
2. Child IQ	-.10	--					76.81 (22.10)
3. Child ASD Symptoms	-.10	-.17	--				7.25 (2.05)
4. Externalizing Problems	-.21	.07	-.06	--			59.63 (9.99)
5. Adaptive Coping	-.12	.28*	.06	.45***	--		5.76 (1.39)
6. Supportive Reactions	.15	.10	-.06	.01	.34**	--	5.71 (0.59)
7. Unsupportive Reactions	-.10	.02	.06	.19	.10	-.21+	2.26 (0.64)

Note: ASD = Autism spectrum disorder+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 2.

Hierarchical Linear Regressions Predicting from Child Factors and Coping to Parent Reactions.

	Supportive Parent Reactions						Unsupportive Parent Reactions					
	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²
Child Externalizing Problems	-.01	.01	-.17	-1.35	.216	.22	.01	.01	.18	1.20	.235	.05
Child ASD Symptom Levels	-.02	.04	-.08	-0.69	.492		.02	.04	.07	0.51	.610	
Adaptive Coping	.23	.06	.53***	3.80	.000		-.01	.07	-.02	-0.16	.877	
Externalizing x Coping	.01	.01	.27*	2.15	.036		-.00	.01	-.11	-0.77	.447	
ASD Symptoms x Coping	.01	.03	.04	0.33	.743		.00	.00	.02	0.18	.856	

Note: Confidence interval for the significant interaction was 0.001 to 0.019. All variables were mean-centered.

* $p < .05$, *** $p < .001$

Figure 1. Prediction to supportive parent reactions from child externalizing problems at different levels of parent adaptive coping.

