

EFFECTS OF DIFFERENTIAL PARENTING

EFFECTS OF DIFFERENTIAL PARENTING ON THE DEVELOPMENTAL
OUTCOMES OF SIBLINGS OF CHILDREN WITH
AUTISM SPECTRUM DISORDERS

by

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Abstract

It is common in families of children with autism spectrum disorders (ASD) and at least one other child who is neurotypical (NT) for parents to vary their parenting based on the child's status. The present study sought to determine whether differential parenting was present in a group of 52 mothers and 25 fathers with both an ASD child and an NT child between the ages of 8 and 16, whether parenting behaviors differed between mothers and fathers of these children, and how parenting behaviors affect the NT child. There was no difference in parenting between the ASD and NT children. Mothers and fathers differed in their parenting in that mothers reported significantly more conflict with their children than fathers. Although parental warmth was not associated with the mental health of the NT child, parent-child conflict for both mothers and fathers, as well as closeness to the mothers, predicted higher levels of depression and anxiety in their NT children. This study was unique in its inclusion of fathers, but future studies should include a greater proportion of fathers in their data and be broader in the distribution of participants across socioeconomic, educational, and racial backgrounds. Future studies could also analyze parenting behavior and potential differences between ASD and NT siblings across different age groups.

Effects of Differential Parenting on the Developmental Outcomes of Siblings of Children with Autism Spectrum Disorder

Between 2000 and 2014, the prevalence rate of autism spectrum disorder (ASD) in the United States rose from 6.7% to 16.8% (CDC, 2019). With ASD steadily increasing in the population, it is especially important to consider how this might be affecting our communities. Previous research has found higher levels of stress in families of children with ASD, as well as lower levels of family cohesion and adaptability (Higgins, 2005). While the effects of ASD on parents of children with ASD, especially on mothers, has been extensively researched, very little is known about siblings. This study aims to consider how having a sibling with ASD affects neurotypical (NT) siblings and how differential parenting could be a contributing factor. It will also consider whether differential parenting practices differ between mothers and fathers of children with ASD.

ASD is a developmental disability that presents with challenges socially, communicationally, and behaviorally. Current prevalence rates estimate that 1 in 59 children present with ASD (CDC, 2019). Experts can reliably provide an ASD diagnosis by 24 months of age, but one third to one half of parents of children with ASD report noticing a problem before their child's first birthday (CDC, 2019). Most notably, ASD is classified by restrictive and repetitive behaviors (RRBs) and issues with social communication and reciprocity. The RRBs characteristic of individuals with ASD range from stereotyped and repetitive motor mannerisms, like arm flapping or jumping, to higher cognitive symptoms, like restrictive interests and preoccupation with routines (Ravizza, Solomon, Ivry, & Carter, 2013). Deficits in social communication common in individuals with ASD include reduced eye contact, challenges with perspective taking, abnormal volume or pacing of speech, abrupt starts and ends of

conversations, verbal scripts, and difficulty with non-literal language (Vicker, 2009). These behavioral and communication deficits may present challenges for the parents of children with ASD.

It is important to consider the effects of ASD on the entire family, not just the affected child. Family systems theory explains that the family is an emotional unit, with a change in one member's functioning resulting in changes in the functioning of other members (Palombi, 2016). Mothers of children with ASD experience higher levels of stress, anxiety, and depression and lower levels of family satisfaction compared to mothers of children without ASD and mothers of children with other developmental disabilities (Halstead, Ekas, Hastings, & Griffith, 2018). In addition to maternal anxiety and depression, mothers of children with ASD report lower levels of perceived confidence as a parent (Katkic et al., 2017). A study of the contributing factors of maternal depression in mothers of children with ASD found that elevated depressive symptoms were associated with lower daily positive affect and more daily frustrating parenting interactions (Pruitt et al., 2016).

While much research has been conducted with mothers of children with ASD, very little has been done on fathers or siblings. Consistent with family systems theory, this is important as the presence of a child with ASD can affect all members of the family. One study on the experience of fathers of children with ASD found that they experienced higher levels of parental stress and depressive symptoms, similar to what has been found in mothers of children with ASD (Paynter, Davies, & Beamish, 2018). Much of the research into dynamics of families of children with ASD has focused on the relationship between the parents. Higher levels of marital dissatisfaction and divorce were found in parents of children with ASD, with 23.5% getting divorced compared to 13.8% among parents of children with no developmental disability

(Hartley et al., 2010). This is especially important, as partner stress and marital dissatisfaction predicted poorer family cohesion and adaptability in families of children and adolescents with developmental disabilities (Mitchell, 2016). In surveying caregivers of children with ASD, Lei (2018) found higher family cohesion and lower family adaptability compared to the general population.

Perhaps the biggest risk facing siblings of children with ASD is the risk of recurrence. Hansen and colleagues (2019) found that a younger sibling of a child with ASD was 8.4 times more likely to have ASD compared to unaffected families. Another important factor to consider in researching families of children with ASD is broad autism phenotype (BAP). BAP describes traits associated with ASD that do not meet the clinical requirements for an ASD diagnosis, as was originally described in parents of children with ASD (McDonnell & Nuttall, 2018). The presence of BAP in siblings may affect how they are impacted by having a sibling with ASD. In a study considering the social development of NT siblings of children with ASD, all of the siblings studied had high scores on measures of sociability and number of social relationships, but they also had higher incidences of mental health issues. These issues were even more likely in siblings with BAP, and the BAP siblings were less likely to have long-term relationships or close friendships. However, the difference between unaffected and BAP siblings was still significantly less than that of BAP siblings and their siblings with ASD (Howlin, Moss, Savage, Bolton, & Rutter, 2015).

Research into the effects of ASD on NT siblings, though, is mixed. Some studies find increased risk of developmental, behavioral, or emotional issues in NT siblings while others find no difference from the general population. Others even indicate a higher level of psychosocial and emotional adjustment (Howlin, Moss, Savage, Bolton, & Rutter, 2015). When asked what it

was like growing up with a sibling with ASD, most siblings described at least as many positive as negative experiences related to having a sibling with autism (Moss, Eirinaki, Savage, & Howlin, 2019). Tudor, Rankin, and Lerner (2018) considered what may be causing the perception of negative impacts and found that poor sibling relationship quality, maternal depression, and differential attention were all associated with greater emotional, behavioral, and social impairments in siblings of children with ASD. They also found that larger age gaps between the NT siblings and their sibling with ASD were linked with more challenging behaviors in the NT siblings. Although Ferraioli and Harris (2010) concluded that the majority of siblings of children with ASD function well in childhood, adolescence, and adulthood, they found a number of factors correlated with poorer developmental outcomes. These included the sibling's own emotional development, the intellectual ability and behavior of the child with ASD, and the parents' response to each child.

Parentification could be an important contributing factor in maladjustment of NT siblings of children with ASD. This occurs when children take on caregiving roles and responsibilities typically reserved for adults, directed at either parent (parent-focused) or toward the sibling (sibling-focused). While sibling-focused parentification predicted positive attitudes about the sibling relationship, parent-focused parentification predicts distress and anxiety in NT siblings (Tomeny, Barry, Fair, & Riley, 2017). Engaging in parent-focused parentification is also associated with fewer perceived benefits of the caregiving role and decreases future caregiving intention (Nuttall, Coberly, & Diesel, 2018). Despite these negative effects, parent-focused parentification continues to be prevalent in NT siblings of children with ASD, even more so than sibling-focused parentification (Nuttall, Coberly, and Diesel, 2018).

Differential attention, or differential parenting, is another possible contributing factor to maladjustment of NT siblings. Rivers and Stoneman (2008) define differential parenting as differences in parenting experienced by siblings within the same family. In general, this has been consistently linked to negative outcomes between siblings, such as less prosocial behavior and engagement, increased conflict, and greater competition (Rivers & Stoneman, 2008). For the disfavored child, differential parenting leads to poorer social understanding, both of one's own emotions and those of others (Pauker et al., 2017). It is suggested that differential parenting is common among families of children with developmental disabilities, including ASD. NT siblings consistently receive less attention than their sibling with ASD, who needs more daily assistance (Tudor, Rankin, & Lerner, 2018).

The present study aims to determine whether parenting practices and the quality of parent-child relationship differs between children with ASD and their NT siblings. Based on previous research it is hypothesized that parenting practices will differ, with the parents paying greater attention to the child with ASD (Nuttall, Coberly, & Diesel, 2018; Rivers & Stoneman, 2008; Tomeny, Barry, Fair, & Riley, 2017; Tudor, Rankin, & Lerner, 2018). Consequently, I expect to find lower quality relationships between the parent and the NT sibling compared to their child with ASD. Whether differential parenting and quality of parent-child relationships differs between mothers and fathers will also be evaluated. Since mothers score significantly higher on measures of nurturing, I expect to find a stronger relationship between mothers and the children with ASD compared to fathers and that fathers will have a stronger relationship with the NT sibling, who needs less nurturing (Bentley & Fox, 1991). Finally, the study will consider the effects of differential parenting on NT siblings of children with ASD. It is predicted based on previous research that higher levels of differential parenting will correlate with more mental and

adjustment problems in the NT siblings (Ferraioli and Harris, 2010; Pauker et al., 2017; Tudor, Rankin, and Lerner, 2018).

Methods

Participants

Fifty-two mothers and 25 fathers of children between the ages of 8 and 16 (ASD: $M = 11.85$, $SD = 2.79$; NT: $M = 11.79$, $SD = 2.84$) were recruited from past participants in studies from the Families, Autism, and Childhood Emotion Studies (FACES) lab at Texas Christian University and through social media. The majority of both the ASD and NT children were male (ASD: 82.9%; NT: 55.8%).

On average, mothers in the study were about 42 years old ($M = 42.02$, $SD = 5.21$) from affluent backgrounds, as the majority were married to and living with their partner (67.3%) with at least a college degree (61.5%) and a household income of over \$60,000 per year (65.5%). Most mothers were White/European American (88.5%) with the remaining mothers split between Asian/Asian American (5.8%), Black/African American (3.8%), and Hispanic/Latino/Spanish American (3.8%). Fathers in the study were about 42 years old ($M = 42.12$, $SD = 6.31$) and reported similar backgrounds to the mothers. A majority of the fathers were married and living with their partners (84.0%) with at least a college degree (72.0%) and a household income over \$60,000 per year (72.0%). Similar to the mothers, most of the fathers were White/European American (92.0%) with the remaining fathers split equally between Asian/Asian American, Black/African American, and Hispanic/Latino/Spanish American (4.0% each). See Table 1 for more demographic information about the sample.

Procedure

Individuals interested in participating were screened via email to ensure they met the study criteria. Eligible participants were then sent a link to an online Qualtrics survey consisting of a series of questionnaires about themselves, their child with ASD, and their NT child.

Participants were compensated with a \$15 gift card to Amazon.

Measures

Demographics. Demographic information was taken through a series of questions developed by the researchers. These included questions about parent education and income levels, marital status, racial background, and the gender and age of both parents and their children.

Parent-Child Relationship Quality. The Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979) was used to measure the nature and quality of relationship between the parents and their children. It consists of 56 items on a 3-point Likert scale (1 = very true to 3 = not at all true). Parents completed this twice; once about their child with ASD and again about their NT child. The Child-Parent Relationship Scale (CPRS; Pianta, 1992) was used to measure the parents' perception of their relationship with their children. It consists of 30 items on a 5-point Likert scale (1 = definitely does not apply to 5 = definitely applies).

Child Mental Health. The Children's Depression Inventory (CDI; Kovacs, 1985) was used to measure depressive symptoms in the children. It consists of 17 items on a 4-point Likert scale (1 = not at all to 4 = much or most of the time). The Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher, Brent, Chiappetta, Bridge, Monga, & Baugher, 1999) was used to measure anxiety symptoms in the children. It consists of 40 items on a 3-point Likert scale (1 = not true or hardly ever true to 3 = very true or often true).

Results

The following results controlled for these variables: ASD and NT gender, parent income and education level. A one-way analysis of variance (ANOVA) was conducted to determine whether differences in parenting behaviors existed between the ASD and NT children. There was no difference in parenting behaviors as demonstrated by responses on the PBI, $F(1,138) = .112, p = .738, \eta_p^2 = .001$. Considering specific aspects of parenting behavior, there was also no difference when considering parent-child conflict, $F(1,138) = 2.15, p = .145, \eta_p^2 = .015$, or parent-child closeness, $F(1,138) = 1.61, p = .207, \eta_p^2 = 0.12$, between ASD and NT children.

An ANOVA test of between-subjects effects was conducted to determine whether parenting behaviors differed as a function of the gender of the parent. There was an effect of gender in that mothers reported more conflict with their children than fathers, $F(1,1) = 8.97, p = .003, \eta_p^2 = .062$. The effect of child status (ASD or NT) was not significant, $F(1,1) = .556, p = .457, \eta_p^2 = .004$. The interaction between parent sex and child status was also not significant, $F(1,1) = 1.51, p = .221, \eta_p^2 = .011$.

Multiple regressions were conducted to determine whether there was a relationship between parenting behavior and depression levels in their NT children. Maternal parenting warmth did not predict levels of depression in their NT child, $b = .122, p = .624, R^2 = .005$, nor did paternal parenting warmth, $b = -.088, p = .768, R^2 = .005$. As conflict between the mothers and their NT child increased, levels of depression in the NT child also increased, $b = .732, p = .003, R^2 = .176$. The same is true for conflict with fathers and levels of depression in the NT child was also found, $b = .782, p = .011, R^2 = .283$. Levels of depression in the NT child also increased as closeness with their mothers increased, $b = .715, p = .010, R^2 = .135$. This relationship between levels of depression and closeness was not present in fathers, $b = -.357, p = .314, R^2 = .052$.

Multiple regressions were also conducted to determine whether there was a relationship between parenting behavior and anxiety levels in their NT children. Similar to depression, maternal parenting warmth did not predict levels of anxiety in their NT child, $b = -.574$, $p = .377$, $R^2 = .020$. Paternal parenting warmth also did not predict anxiety levels in the NT child, $b = -.623$, $p = .352$, $R^2 = .036$. Higher levels of conflict between the mothers and their NT child were related to higher levels of anxiety in the NT child, $b = 1.89$, $p = .003$, $R^2 = .200$, as were higher levels of conflict with the fathers, $b = 1.81$, $p = .010$, $R^2 = .238$. Although closeness to fathers was not related to anxiety levels in their NT children, $b = -.130$, $p = .084$, $R^2 = .001$, anxiety levels increased as closeness to mothers increased, $b = 2.41$, $p = .001$, $R^2 = .254$.

Discussion

This study focused on three research questions: (1) whether the parent-child relationship differed between ASD and NT children, (2) whether parenting differed between mothers and fathers, and (3) whether parenting was associated with the mental health of the NT children. Previous research on siblings of children with ASD has been mixed, and very little has included the perspective of fathers. My study found that mothers reported significantly more conflict with their children than fathers. Closeness and levels of conflict between mothers and their NT children were associated with significantly higher levels of anxiety and depression in the NT children.

The first research question asked whether parenting practices and the quality of the parent-child relationship differed between children with ASD and their NT siblings. I found no difference in parenting behaviors, parent-child conflict, or parent-child closeness between ASD and NT children. This is inconsistent with previous research by Rivers and Stoneman (2008), Pauker et al. (2017), and Tudor, Rankin, and Lerner (2018) which found significant differences

in parenting behavior between ASD children and their NT siblings, with more attention going to the ASD children. The ages of the ASD and NT children in this study were different than past research, which could account for this difference. I sampled children between the ages of 8 and 16 while Rivers and Stoneman (2008) studied children aged 4 to 17, Pauker et al. (2017) studied children with average ages between 3 and 5, and Tudor, Rankin, and Lerner (2018) studied children aged 6 to 17. Older children, regardless of status, require less attention than younger children, and older children with autism may have experienced a reduction in symptom severity and increased family functioning with long-term access to treatment and intervention services (Riesgo, Gottfried, & Becke, 2012). It is possible that differential parenting would be less present in an older sample of children as a result.

The second research question asked whether parenting practices and the quality of parent-child relationship differed between mothers and fathers. We found a difference in parenting between mothers and fathers in that mothers reported significantly more conflict with their children than did fathers. Although not significant, we also found that mothers reported slightly more closeness with their children with fathers. This is consistent with previous research which has found that mothers are more likely to be involved and authoritarian with their children, which could lead to greater levels of conflict (Laudon, 2018; McKinney & Renk, 2008). It is also consistent with the findings of Driscoll and Pianta (2011) showing that mothers report higher levels of closeness and conflict with their children than fathers did. Mothers have long been regarded as the most important figure in childrearing, with or without a child with a developmental disability, and often spend more time with their children and are more involved in school and other activities than do fathers (Crnic, Pedersen y Arbona, Baker, & Blacher, 2009).

This increased time would allow for the formation of a closer bond between mothers and their children compared to fathers.

The third research question asked whether parenting practices were associated with the mental health of NT siblings of children with ASD. Neither maternal nor paternal parenting warmth predicted levels of anxiety and depression in the NT child. This is inconsistent with previous findings showing that depression and anxiety levels in children could be predicted by less parental warmth (Yap, Pilkington, Ryan, & Jorm, 2014). Anxiety and depression levels were, however, associated with increased conflict between the NT child and both mothers and fathers. Critical parenting and parent-child conflict has previously been linked to higher anxiety and depression levels in children, which our findings seem to support (Hudson, 2013). Closeness to mothers, but not to fathers, was also related to increased levels of depression and anxiety. This does not support previous research that found closeness to mothers was related to reductions in problematic psychological functioning and higher levels of satisfaction with life in their children (Flouri, 2004). Considering the high rates of depression and anxiety in mothers of children with ASD, it is possible that the parent's own mental health status might serve as a mediator of the relationship between parenting and child outcomes (Halstead et al., 2018; National Research Council and Institute of Medicine Committee on Depression, Parenting Practices, and the Healthy Development of Children, 2009).

Limitations and Future Directions

One limitation of this study was the difficulty in recruiting fathers to participate. The number of fathers represented in this study was less than half the number of mothers, even with limiting the number of mothers who could participate after a certain point, which may have affected the significance of our data. Fathers have historically been underrepresented in

developmental research. In the future, it could be helpful to follow the recommendations Davison, Charles, Khandpur, and Nelson (2018) received from fathers on how to better recruit them for research. These included expanding the distribution of recruitment materials to community sporting events, social service programs, public transportation, playgrounds, and barber shops as well as online.

Another limitation was that I only examined parents' report of their relationship to their children. This could have contributed to the lack of differential parenting found in our study. In their comparison of child-report and parent self-report of parenting behaviors and anxiety levels, Bogels and van Melick (2004) found low levels of agreement between the parents and children. In other words, the parents and their children did not report on parenting behaviors and anxiety levels the same way. The parents' report of their parenting behaviors and potential differences in how they treat their child with ASD compared to their NT child could also be impacted by social desirability effects since differential parenting has a negative connotation. As such, they may have felt the need to report their parenting as more similar between their children than it actually is. According to Booth-Kewley, Larson, and Miyoshi (2007), social desirability effects may be stronger using online surveys than with paper-and-pencil surveys. To reduce the chances of parents misreporting on their parenting behaviors, either because they perceive their parenting behaviors differently than their child does or because of social desirability effects, future research on this topic could include both parent- and child-report of parenting behaviors. The survey could also be administered in a paper-and-pencil format and mailed to participants to keep the geographic region of participants broad, or self-report could be supplemented by direct observation of their parenting.

Characteristics of the participating parents themselves could have also affected the data. Participants in this study were mostly White, affluent individuals with access to higher education. Socioeconomic status (SES) affects how a parent interacts with their child, with lower SES parents behaving harsher and more punitive in their parenting than higher SES parents (Roubinov & Boyce, 2017). The high average educational level (at least a college degree) among the mothers and fathers who participated in this study could have also affected the results. Sharabit and Marom-Galon (2018) found that parental education positively predicted parental involvement among fathers of children with ASD. A parent's racial background could also affect how they parent and interact with their child. Although more similarities than differences in parenting behaviors and attitudes exist across racial groups (White/Caucasian, African-American, Hispanic, and Asian-American), ethnic minority parents placed greater emphasis on their child being self-sufficient and succeeding without their interference (Julian, McKenry, & McKelvey, 1994). This study could be replicated with a more representative sample of participants from different SES, educational, and racial backgrounds to analyze any potential differences between different groups and to ensure that the data can be generalized to the majority of families affected by ASD.

One interesting factor that could have affected the level of conflict level between mothers and their children could be the age of the children in the study. On average, the children of the participating mothers in this study were 12 years old. Loudon (1996) found that mothers reported significantly higher levels of conflict with younger adolescents than with older adolescents. It could be interesting for future researchers to compare differential parenting across different age groups of ASD-NT sibling dyads to see whether the level of conflict and other aspects of

parenting behavior and the parent-child relationship change across development similar to how they do in a typically-developing population.

Conclusion

Having a child with ASD in the family affects the functioning of the family unit as a whole, as well as its individual members. One proposed means of this impact on NT siblings of children with ASD has been differential parenting, whereby siblings of the same family are parented differently. Past research found differential parenting to be a prevalent issue in families by ASD. This study found no difference in parenting between children with ASD and their NT siblings. Instead, it was the NT child's conflict with both parents and closeness to their mothers that was associated with poorer mental health. These could be important things to focus on in family-based therapies to ensure better outcomes for siblings of children with ASD. It could also suggest that differential parenting becomes less of a problem as the ASD-NT sibling dyad gets older, since the children sampled in my study were older than those studied in the past.

References

- Bentley, K. S., & Fox, R. A. (1991). Mothers and fathers of young children: Comparison of parenting styles. *Psychological Reports, 69*(1), 320-322. Doi: 10.2466/pr0.1991.69.1.320
- Birmaher, B., Brent, D. A., Chiappetta, L., Bridge, J., Monga, S., & Baugher, M. (1999). Psychometric properties of the screen for child anxiety related emotional disorders (SCARED): A replication study. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*(10), 1230-1236.
- Bogels, S. M. & van Melick, M. (2004). The relationship between child-report, parent self-report, and partner report of perceived parental rearing behaviors and anxiety in children and parents. *Personality and Individual Differences, 37*(8), 1583-1596. Doi: 10.1016/j.paid.2004.02.014
- Booth-Kewley, S., Larson, G. E., & Miyoshi, D. K. (2007). Social desirability effects on computerized and paper-and-pencil questionnaires. *Computers in Human Behavior, 23*(1), 463-477. Doi: 10.1016/j.chb.2004.10.020
- Centers for Disease Control and Prevention (2019). Autism spectrum disorder (ASD) what is ASD? CDC. Retrieved October 29, 2019 from <https://www.cdc.gov/ncbddd/autism/data.html>
- Crnic, K., Pedersen y Arbona, A., Baker, B., & Blacher, J. (2009). Mothers and fathers together: Contrasts in parenting across preschool to early school age in children with developmental delays. *International Review of Research in Mental Retardation, 37*, 3-30. Doi: 10.1016/S0074-7750(09)37001-9
- Davison, K. K., Charles, J. N., Khandpur, N., & Nelson, T. J. (2017). Fathers' perceived reasons for their underrepresentation in child health research and strategies to increase their

- involvement. *Maternal and Child Health Journal*, 21(2), 267-274. Doi: 10.1007/s10995-016-2157-z
- Driscoll, K. & Pianta, R. C. (2011). Mothers' and fathers' perceptions of conflict and closeness in parent-child relationships during early childhood. *Journal of Early Childhood and Infant Psychology*, 7, 1-24.
- Ferraioli, S. J. & Harris, S. L. (2010). The impact of autism on siblings. *Social Work in Mental Health*, 8(1), 41-53. Doi: 10.1080/15332980902932409
- Flouri, E. (2004). Subjective well-being in midlife: The role of involvement of and closeness to parents in childhood. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 5(4), 335-358. Doi: 10.1023/B:JOHS.0000048461.21694.92
- Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, 38(5) 581-586.
- Goodman, R., Meltzer, H., & Bailey, V. (1998). The strengths and difficulties questionnaire: A pilot study on the validity of the self-report version. *European Child and Adolescent Psychiatry*, 7(3), 125-130.
- Halstead, E., Ekas, N., Hastings, R. P., & Griffith, G. M. (2018). Associations between resilience and the well-being of mothers of children with autism spectrum disorder and other developmental disabilities. *Journal of Autism and Developmental Disorders*, 48(4), 1108-1121. Doi: 10.1007/s10803-017-3447-z
- Hansen, S. N. et al. (2019). Recurrence risk of autism in siblings and cousins: A multinational, population-based study. *Journal of the American Academy of Child Psychiatry*, 58(9), 866-875. Doi: 10.1016/j.jaac.2018.11.017

- Hartley, S. L., Barker, E. T., Seltzer, M. M., Floyd, F., Greenberg, J., Orsmond, J., & Bolt, D. (2010). The relative risk and timing of divorce in families of children with an autism spectrum disorder. *Journal of Family Psychology, 24*(4), 449-457. Doi: 10.1037/a0019847
- Higgins, D. J., Bailey, S. R., & Pearce, J. C. (2005). Factors associated with functioning style and coping strategies of families with a child with an autism spectrum disorder. *Autism, 9*(2), 125-137. Doi: 10.1177/1362361305051403
- Howlin, P., Moss, P., Savage, S., Bolton, P., & Rutter, M. (2015). Outcomes in adult life among siblings of individuals with autism. *Journal of Autism and Developmental Disorders, 45*(3), 707-718. Doi: 10.1007/s10803-014-2224-5
- Hudson, J. L. (2013). Parent-child relationships in early childhood and development of anxiety & depression. *Encyclopedia of Early Childhood Development: Anxiety and Depression*. Retrieved from <http://www.child-encyclopedia.com/sites/default/files/textes-experts/en/550/parent-child-relationships-in-early-childhood-and-development-of-anxiety-depression.pdf>
- Julian, T. W., McKenry, P. C., & McKelvey, M. W. (1994). Cultural variations in parenting: Perceptions of Caucasian, African-American, Hispanic, and Asian-American parents. *Family Relations, 43*(1), 30-37. Doi: 10.2307/585139
- Katkic, L. O., Morovic, M. L., & Kovacic, E. (2017). Parenting stress and a sense of competence in mothers of children with and without developmental disabilities. *Croatian Review of Rehabilitation Research, 53*, 63-76.
- Kovacs, M. (1985). The children's depression inventory (CDI). *Psychopharmacological Bulletin, 21*(4) 995-998.

- Loudon, V. S. (1996). Parenting younger and older adolescents from a maternal perspective. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 57(6-B), 4058.
- McDonnell, C. G. & Nuttall, A. K. (2018). The broad autism phenotype and emotion regulation: The mediating role of autobiographical memory specificity. *Personality and Individual Differences*, 134, 131-136. Doi: 10.1016/j.paid.2018.06.008
- Mckinney, C. & Renk, K. (2008). Differential parenting between mothers and fathers. *Journal of Family Issues*, 29(6), 806-827. Doi: 10.1177/0192513X07311222
- Mitchell, Szczerepa, A., & Hauser-Cram, P. (2016). Spilling over: Partner parenting stress as a predictor of family cohesion in parents of adolescents with developmental disabilities. *Research in Developmental Disabilities*, 49, 258-267. Doi: 10.1016/j.ridd.2015.12.007
- Moss, P., Eirinaki, V., Savage, S., & Howlin, P. (2019). Growing older with autism: The experiences of adult siblings of individuals with autism. *Research in Autism Spectrum Disorders*, 63, 42-51. Doi: 10.1016/j.rasd.2018.10.005
- National Research Council and Institute of Medicine Committee on Depression, Parenting Practices, and the Healthy Development of Children (2009). *Depression in parents, parenting, and children: Opportunities to improve identification, treatment, and prevention*. (England, M. J. & Sim, L. J., Eds.). National Academic Press.
- Nuttall, A. K., Coberly, B., & Diesel, S. J. (2018). Childhood caregiving roles, perceptions of benefits, and future caregiving intentions among typically developing adult siblings of individuals with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 48, 1199-1209. Doi: 10.1007/s10803-018-3464-6

- Palombi, M. (2016). Separations: A personal account of Bowen family systems theory. *Australian and New Zealand Journal of Family Therapy*, 37(3), 327-339. Doi: 10.1002/anzf.1170
- Parker, G. Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology*, 52, 1-10.
- Pauker, S., Prime, H., & Jenkins, J. M. (2017). Differential parenting and children's social understanding. *Social Development*, 26(3), 645-657. Doi: 10.1111/sode.12214
- Paynter, Davies, & Beamish (2018). Recognising the 'forgotten man': Fathers' experiences in caring for a young child with autism spectrum disorder. *Journal of Intellectual and Developmental Disability*, 43(1), 112-124. Doi: 10.3109/13668250.2017.1293235
- Pianta, R. C. (1992). Child-Parent Relationship Scale (CPRS). Retrieved from <https://curry.virginia.edu/faculty-research/centers-labs-projects/castl/measures-developed-robert-c-pianta-phd>
- Pruitt, M. M., Willis, K., Timmons, L., & Ekas, N. V. (2016). The impact of maternal, child, and family characteristics on the daily well-being and parenting experiences of mothers of children with autism spectrum disorder. *Autism*, 20(8), 973-985. Doi: 10.1177/1362361315620409
- Ravizza, S. M., Solomon, M., Ivry, R. B., Carter, C. S. (2013). Restricted and repetitive behaviors in autism spectrum disorders: The relationship of attention and motor deficits. *Development and Psychopathology*, 25(3), 773-784. Doi: 10.1017/S0954579413000163
- Riesgo, R., Gottfried, C., & Becke, M. (2012). Clinical approach in autism: Management and treatment. *Recent Advances in Autism Spectrum Disorders – Volume I*. Doi: 10.5772/54784

- Rivers, J. W. & Stoneman, Z. (2008). Child temperaments, differential parenting, and the sibling relationships of children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 38, 1740-1750. Doi: 10.1007/s10803-008-tak0560-z
- Roubinov, D. S. & Boyce, W. T. (2017). Parenting and SES: Relative values or enduring principles? *Current Opinion in Psychology*, 15, 162-167. Doi: 10.1016/j.copsyc.2017.03.001
- Sharabi, A. & Marom-Golan, D. (2018). Social support, education levels, and parents' involvement: A comparison between mothers and fathers of young children with autism spectrum disorders. *Topics in Early Childhood Special Education*, 38(1), 54-64. Doi: 10.1177/0271121418762511
- Tomeny, T. S., Barry, T. D., Fair, E. C., & Riley, R. (2017). Parentification of adult siblings of individuals with autism spectrum disorder. *Journal of Child and Family Studies*, 26(4), 1056-1067. Doi: 10.1007/s10826-016-0627-y
- Tudor, M. E., Rankin, J., & Lerner, M. D. (2018). A model of family and child functioning in siblings of youth with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 48, 1210-1227. Doi: 10.1007/s10803-017-3352-5
- Vicker, B. (2009) Social communication and language characteristics associated with high functioning, verbal children and adults with autism spectrum disorder. *Indiana Resource Center for Autism*. Retrieved December 4, 2019 from <https://www.iidc.indiana.edu/pages/Social-Communication-and-Language-Characteristics-Associated-with-High-Functioning-Verbal-Children-and-Adults-with-ASD>

Yap, M. B. H., Pilkington, P. D., Ryan, S. M., Jorm, A. F. (2014). Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis.

Journal of Affective Disorders, 156(1), 8-23. Doi: 10.1016/j.jad.2013.11.007

Table 1

Demographic frequency percentages for marital status, education level, annual household income, and ethnic background for participating mothers and fathers

		Fathers	Mothers
Marital Status	Married and living together	84.0	67.3
	Living together but not married	16.0	15.4
Education Level	Some high school	4.0	1.9
	GED or high school diploma	5.8	8.0
	Technical/vocational/art school degree	1.9	0.0
	Some college	26.9	16.0
	College degree	34.6	36.0
	Post-college degree	26.9	36.0
Household Income	\$10,001-\$15,000	4.0	1.9
	\$15,001-\$20,000	0.0	1.9
	\$20,001-\$30,000	8.0	9.6
	\$30,001-\$40,000	8.0	1.9
	\$40,001-\$50,000	8.0	9.6
	\$50,001-\$60,000	0.0	7.7
	\$60,001-\$80,000	16.0	23.1
	\$80,001-\$100,000	16.0	5.8
	\$100,001-\$150,000	32.0	21.2
	Greater than \$150,000	8.0	15.4
Ethnic Background	Asian/Asian American	4.0	5.8
	Black/African American	4.0	3.8
	Hispanic/Latino/Spanish American	4.0	3.8
	White/European American	92.0	88.5