

**ASSOCIATIONS BETWEEN PARENTING FACTORS AND MENTAL HEALTH  
OUTCOMES IN FATHERS OF CHILDREN WITH AUTISM**

by

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Submitted in partial fulfillment of the  
requirements for Departmental Honors in

the Department of Psychology

Texas Christian University

Fort Worth, Texas

November 30, 2020

**ASSOCIATIONS BETWEEN PARENTING FACTORS AND MENTAL HEALTH  
OUTCOMES IN FATHERS OF CHILDREN WITH AUTISM**

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### **Abstract**

Families who raise children with autism spectrum disorder (ASD) often have elevated stress levels and overall lower psychological well-being. Mothers raising children with ASD have reported higher levels of depression and parental stress as compared to mothers raising neurotypical (NT) children. Past research has focused on how mothers and the family system are affected by raising a child with ASD but has neglected to focus solely on fathers. The goal of the current study was to examine how fathers' parenting and mental health is impacted by raising a child with ASD. The current study included 111 fathers raising children with ASD. Fathers answered a series of questionnaires pertaining to their well-being, mindfulness, family cohesion, and their perceived parenting ability. Fathers' parenting behaviors were also assessed during an observational family task. Results indicated that fathers' parenting behaviors, and family cohesion significantly predicted fathers' outcomes.

## **Associations Between Parenting Factors and Mental Health Outcomes in Fathers of Children with Autism**

The prevalence of autism spectrum disorder (ASD) has increased over the last decade. The presence of a child with ASD may negatively affect the family, interfering with typical functioning. Research has shown that raising a child with ASD impacts parents in many ways, including their mental health, quality of life and stress levels (Davis & Carter, 2008; Hayes & Watson, 2012; McStay, Trembath & Dissanayake, 2014). Unfortunately, we know little about how fathers are impacted because most research typically includes only mothers or studies the family as a whole. The primary goal of the current study was to examine how fathers' parenting and mental health is impacted by raising a child with ASD.

In the 2000s, the prevalence of ASD was 1 in 150 children and the most recent data from 2016 shows that the rate has increased to 1 in 54 children (Maenner et al., 2020). ASD also affects boys more commonly than girls, with a four to one ratio of prevalence among boys versus girls (CDC, 2020). ASD is generally characterized by difficulties in two domains: social communication and the presence of restricted and repetitive behaviors (APA, 2013). Within the domain of social communication, children with ASD struggle with making friends, interpreting social cues and expressing themselves. Children with ASD also struggle with repetitive and restricted behaviors such as lining toys up, intense interest in specific topics or activities, upheaval by minor changes, wearing clothing made of certain kinds of fabric, and self-stimulating behaviors.

There are many challenges associated with raising a child with ASD. For example, parents raising children with ASD report that having to use community care for their children has caused employment problems (Montes & Halterman, 2008a). Montes and Halterman (2008b),

found that 14% (\$6200) of a family's annual income is put towards caring for their children with ASD. Family problems are not the only implications of ASD, ASD is a life-long disorder that cannot be outgrown; when children become adults they experience an increased risk of mental health problems, suicide, sexual abuse and victimization (Hirvikoski et al., 2016; Hofvander et al., 2009; Weiss & Fardella, 2018).

Raising children with ASD has many impacts on parents, one of which is increased levels of depression and anxiety in mothers and fathers (Al-Farsi, Al-Farsi, Al-Sharbati & Al-Adawi, 2016; Bitsika & Sharpley, 2004; Cohrs & Leslie, 2017). Olsson and Hwang (2008), found that mothers raising children with ASD had significantly higher levels of depression compared to mothers raising children with a non-ASD intellectual disability or those raising neurotypical (NT) children. They found no significant difference in fathers' level of depression between the groups. Similarly, other studies have found that mothers who have children with ASD report higher levels of depression and higher levels of parental stress as compared to mothers raising NT children (Carter, Martinez-Pedraza & Gray, 2009; Estes et al., 2009; Taylor & Warren, 2011; Weitlauf, Vehorn, Taylor, Warren, 2012). There is little research pertaining to only father depression; nonetheless, fathers are still impacted. Hartley, Seltzer, Head and Abbeduto (2012), found that fathers raising young adults with ASD had significantly higher levels of depression as compared to fathers raising young adults with Down Syndrome and Fragile X Syndrome. As a family unit, parents who raise children with ASD experience higher levels of depression and report higher levels of family stress as compared to families raising NT children or children with Down Syndrome (Sander & Morgan, 1997). Taken together, this body of research suggests that raising a child with ASD adds stress and lowers the parental quality of life, but there are positive coping mechanisms to help eliminate this family stress.

At the family level, studies have shown that a positive coping mechanism for families is cohesion (Altiere & Von Kluge, 2008). Family cohesion can be defined as the connection family members have between one another and how they work together as a functional unit. A highly functioning family can be seen supporting one another, everyone being valued and loved, and providing security in hard and easy times. Cohesion has been studied across different cultures, all showing that cohesion is a highly beneficial coping mechanism for families of children with ASD (Ekas, Ghilain, Pruitt, Celimli, Gutierrez & Alessandri, 2016; Higgins, Bailey & Pearce, 2005; Lin, Orsmond, Coster & Cohn, 2011). Despite the positive effects of family cohesion, families raising children with ASD have lower cohesion, higher stress, and overall family functioning is impacted negatively (Gau, Chou, Chiang, Lee, Wong, Chou & Wu, 2012; Johnson, Frenn, Feetham & Simpson, 2011; Sikora et al., 2013). For example, Gau and colleagues (2012), found that parents of children with ASD reported lower levels of family functioning when compared to parents raising NT children. Parenting behaviors, such as coerciveness, may be contributing to lower levels of family functioning.

Parents who have created a loving and safe environment for their children growing up, likely created a secure emotional attachment between them and their child. Mary Ainsworth and John Bowlby laid the foundation for what we know as the attachment theory, including the identification of three emotional attachment styles: secure, avoidant, and anxious (Bretherton, 1992). Ideally, children would be securely attached to their parents, as a secure attachment allows a child to explore their surroundings, grow trust, and know that their needs will be met by their caregiver (Alhusen, Hayat & Gross, 2013). Parents of children with a secure attachment style typically engage in positive parenting behaviors, including sensitivity, warmth, and responsiveness (Blacher, Baker & Kaladijan, 2013). While these parenting behaviors are critical

during infancy, they continue throughout the child's development in various forms that are appropriate for the child's developmental level.

Baumrind (1989), developed a theory on parenting styles, in which she identified four types of parents: authoritative, authoritarian, permissive and uninvolved parenting; the ideal type of parent would be an authoritative one. Authoritative parenting entails a parent who is controlling yet rational, warm, encouraging, and emotionally supportive (Baumrind, 1971). Emotionally supportive parents are able to recognize their children's emotional state and provide comfort when needed. Authoritarian parents, on the other hand, are withdrawn, overly controlling, coercive, and emotionally flat (Baumrind, 1971). Parents who are coercive make threatening or manipulative statements to their children as a way of gaining control over their children's behavior. Permissive parents do not control their children and they do not demand anything from their children either, but they are warm and supportive (Baumrind, 1971). Finally, uninvolved parents do not support, demand, or control their children, they merely feed them and give them shelter and lack nurturing (Baumrind, 1971). Authoritative parents often create a secure attachment to their children, permissive parenting creates avoidant attachment, and authoritarian parenting creates anxious attachment (Akhtar, 2012; Doinita & Maria, 2015; Karavasilis, Doyle & Markiewicz, 2003).

Research has shown that parents raising children with ASD tend to use the authoritarian or permissive parenting style and their children are found to be insecurely attached (Capps, Sigman & Mundy, 1994; Gau et al., 2010; Hutchison, Feder, Abar & Winsler, 2016; Rutgers, Bakermans-Kranenburg, Ijzendoorn & van Berckelaer-Onnes, 2004; Rutgers et al., 2007). For example, Hutchison, Feder, Abar and Winsler (2016), found that parents who had children with ASD who reported lower levels of cognitive functioning and higher levels of parenting stress,

were typically authoritative or permissive parents. These negative parenting styles, coerciveness, lack of emotional support and controlling behaviors may be contributing to the negative family functioning as well as parents' behaviors toward their children.

Parenting styles have been researched immensely in relation to NT children and research has also been conducted pertaining to mothers of children with ASD. In general, research on fathers and their children with ASD is lacking. Current research has found that when mothers and fathers are compared to one another, mothers raising children with intellectual disabilities have higher stress levels than fathers (Little, 2002; Moes, Koegel, Schreibman & Loos, 1992; Ozturk, Riccadonna & Venuti, 2014). Foody, James and Leader (2015), found that mothers raising children with ASD reported higher levels of stress than fathers; however, fathers had higher blood pressure and heart rate variability. When people are extremely stressed, they typically experience higher blood pressure levels and may have a higher heart rate as a result (Matthews, Woodall & Allen, 1993). Research has also shown that parents, across many cultures, typically self-report what they feel is a socially appropriate response when asked questions about negative parenting behaviors and stress (Bornstein et al., 2015). These results could explain why fathers self-reported levels of stress are higher than mothers. Research has also shown that when fathers are studied exclusively, they do experience elevated levels of stress and depression (Hartley, Seltzer, Head & Abbeduto, 2012; Paynter, Davies & Beamish, 2018). Boyraz and Sayger (2011) compared fathers raising NT children to those raising children with intellectual disabilities and found that fathers raising children with intellectual disabilities reported higher levels of self-acceptance in regards to psychological well-being. They also found that family cohesion significantly, and positively, predicted the well-being of fathers. Fathers

have been minimally researched, especially when it comes to fathers raising children with ASD; however, as previously stated, there is cause for them to be included in research.

The overall aim of the current study was to examine parenting among fathers of children with ASD. Given the lack of research with fathers, my first aim was to determine whether father's self-reported parenting behaviors were consistent with actual parenting behaviors observed in a laboratory setting. Based on previous research with fathers of NT children (Sheh, 2013), I hypothesized that fathers self-reported behavior would be incongruent with observed parenting behaviors. Next, I sought to determine the factors that influenced fathers' psychological well-being. To accomplish this, I examined whether family functioning (e.g., cohesiveness) and parenting behaviors (self-reported) were associated with fathers' self-reported depression, well-being and mindfulness. I hypothesized that when the family is more cohesive, fathers would report lower levels of depression, higher levels of mindfulness and well-being. Similarly, and consistent with previous research with mothers (Carter, Vehorn, Taylor & Warren, 2012; Chan, Lam, Law & Cheung, 2018; Dolev et al., 2016), I expected that fathers who were more emotionally supportive would have lower depressive symptoms and greater well-being.

## **Methods**

### **Participants**

The current study recruited 120 families raising children with ASD between the ages of 10 to 17 years. The family eligibility included the parents being married or cohabitating for at least one year and living with their child half of the time. The participants were recruited from a large metropolitan area in the Southern USA. Our recruitment efforts were extended to schools, pediatricians, ASD related events, psychologists, and social media within the metropolitan area.

The eligibility for the children required them to have been given a community diagnosis of ASD and could not have a co-morbid intellectual disability. Children were excluded from the study if they had any visual or hearing impairments, serious medical conditions, and or metabolic disorders. An in-person assessment was conducted with the children to determine if they had an IQ score greater than or equal to 75 and a vocabulary score exceeding 70, all of which were needed for the children to participate.

For the current study, 116 families qualified and participated, there were 111 fathers. The average age of children who participated was 12-years old ( $M = 13.12$ ,  $SD = 2.16$ ) and most participants were male ( $n = 94$ ). Most of the parents who participated in the current study were married (88.8%) and the other parents reported cohabitating with their significant other (9.5%). On average, the fathers were in their mid-forties ( $M = 45.08$  years,  $SD = 6.96$ ), they were White (76.7%), had completed a college degree (60.3%), and reported that their household income was more than \$40,000 per year (91.4%). See table 1 for more descriptive statistics.

## **Procedure**

In order to determine family eligibility, a trained graduate research assistant would conduct an initial phone screening. The phone screening asked questions that were based on the previously stated eligibility criteria. Families who passed the initial phone screening were then scheduled for an in-person assessment to further assess their eligibility. For the first visit only one parent needed to attend with their child; however, for the second and third visit, both parents and child were required to attend. At the beginning of the visit, all participants provided informed consent.

At the first visit both the child and parent completed questionnaires that assisted in determining their eligibility in the study. The first visit lasted about three hours and participants

were compensated for their time, \$75 for the family and the child received \$10. If the child participating had an IQ score lower than 75, vocabulary comprehension below 70 or the ASD diagnosis was not confirmed, the family became ineligible to continue in the study and were notified of this within a week of their visit.

Families that were eligible to continue after the first visit, were invited back for a second in-person lab visit. This visit was scheduled for two weeks after the original visit and the mother and father were required to be present as well as the child. Parents completed questionnaires that asked them information about their income, education, personal well-being, parenting, and information about their child. During this time, their child is in a different room completing questionnaires with the assistance of a research assistant. Once both parties finished filling out their questionnaires, the family was instructed to sit around a table, with the child in the middle and the parents on either side of their child. A research assistant explained that the family would be playing Jenga for ten minutes. A card with instructions was placed on the table for the parents to read to the child. The research assistant then instructed the parents to read the instructions on the card to the child before beginning playing as a refresher or as a means to teach the child to play if they had not played before. They were to play the game for ten minutes, and to continue playing even if the tower fell over. The family was then told that they would be recorded and the experimenters would not be watching but would let them know when their ten minutes was over. After Jenga, the parents and child both were asked to separately complete a second set of questionnaires. Once the session finished, the parents were given a \$75 gift card and the child was given a \$10 gift card for their participation.

## **Measures**

**Father Mindfulness.** The Five Facet Mindfulness Questionnaire-15 (FFMQ-15; Baer & et al., 2008) is a 15-item self-report measure that was developed to assess the participants' ability to be aware of what is happening in the present moment. The FFMQ-15 is on a 5-point Likert scale based on how often a participant experiences the statement (1 = never or very rarely true, 5 = very often or always true) with higher scores indicating experiencing the statement more often. A question used in the questionnaire was "I pay attention to sensations, such as the wind in my hair or sun on my face." Several items were reverse coded. All questions are combined to get an overall score, a higher score indicates higher mindfulness. This questionnaire has internal reliability in this study (Cronbach's alpha = .73).

**Father Well-Being.** The Inventory of Depression and Anxiety Symptoms (IDAS; Watson et al., 2007) is a 26-item self-report measure that was developed to examine participants' levels of depressive and anxiety symptoms. This scale was used to determine the overall well-being of the participants. A question that was used in the questionnaire was "I felt hopeful about the future" and was answered by a 5-point Likert scale (1 = not at all, 5 = extremely) based on how often the participants experienced these feelings in the past two weeks. The questionnaire is internally consistent (Cronbach's alpha = .89).

**Parenting Behavior.** The Parental Bonding Instrument (PBI; Parker, 1989) is a 30-item self-report measure that was developed to measure parenting behaviors and styles. A sample question was "I am very strict with my child" and fathers were instructed to think of their child participating in the current study. This scale was based on a 3-point Likert scale (1 = not like, 3 = a lot like). The items were combined to get an overall score for the subscales of parental care and overprotection. The scale displays internal reliability within the three subscales: warmth and

acceptance (Cronbach's alpha = .84), psychological control (Cronbach's alpha = .68) and firm control (Cronbach's alpha = .66).

**Family Functioning.** The Family Environment Scale (FES; Moos & Moos, 1987) is an internally reliable 45-item measure that was developed to examine how participants view their family environment. This scale uses a true or false reporting system and a question asked was "we fight a lot in our family." There are three subscales (conflict, cohesion and expressiveness) however only family cohesion was utilized for the current study. Cronbach's alpha in the current study was .72.

**Observed Family Functioning and Parenting.** The System for Coding Interaction and Family Functioning (SCIFF; Lindahl & Malik, 1996) is a behavioral coding system used to determine different aspects of family functioning based on family, parent and child behaviors. The current study only utilized the parent-level (Coercion, Rejecting and Invalidating, and Emotional Support) and family-level factors (Negativity and Conflict, Positive Affect, Parenting Style and Cohesiveness). The behaviors were coded using a team system consisting of undergraduate research assistants. First, each coder watched the video on their own and then were placed into a pair which they were then asked to come to a consensus on the score for each individual item. The pairs' codes were then compared to a master code which was created by a graduate student and a faculty member. In order to determine team reliability, all team codes had to match at 80% or higher of the master code. Once reliability was established, each coding team had to maintain 25% consistency with the master coders to ensure that all coders remained reliable.

*Parenting Behaviors.* The Rejection and Invalidation code is based on how often and intensely the father makes cruel, critical, blaming, or insensitive statements to the child. A high score indicates a father is both rejecting and invalidating while a low score indicates a father who is neither. The Coerciveness code is based on the frequency of threatening or manipulative statements a father directs towards their child. A score of one indicates the father made zero coercive statements to their child whereas a score of five means four or more coercive statements were made by the father. The Emotional Support code assesses the father's ability to both recognize and meet the child's emotional needs and provide comfort or reassurance through both verbal and nonverbal cues. A low score indicates a father who expresses little to no emotional attunement to their child and a high score indicates a father who is emotionally supportive and attuned to their child's emotional experiences.

### **Data Analysis Plan**

In order to examine the hypothesis that father's parenting affects their mental health and mindfulness, multiple statistical tests were utilized. An examination of the descriptive statistics and tests of normality were first conducted. Pearson's correlations were analyzed to determine whether any relationships existed between the fathers' self-reported and observed parenting behaviors. Finally, a series of simple and multiple linear regressions were conducted to examine the predictive associations between the variables.

### **Results**

#### **Descriptive Statistics**

For the current sample, based on the IDAS scale, fathers' depression levels ( $M = 40.59$ ,  $SD = 10.71$ ) and well-being self-reports ( $M = 25.70$ ,  $SD = 5.70$ ) were all average (Watson et al., 2007). Based on the FFMQ scale, our sample had average levels of mindfulness ( $M = 52.27$ ,  $SD = 7.41$ ; Baer & et al., 2008). Fathers' cohesion levels ( $M = 11.6.64$ ,  $SD = 2.13$ ) were aligned with the average cohesive family unit (Moos & Moos, 1987). Based off of previous research, all fathers had an average score on parenting warmth ( $M = 11.92$ ,  $SD = 3.96$ ) and moderately high levels of control ( $M = 18.05$ ,  $SD = 2.04$ ; Parker, 1989).

Statistical assumptions for all variables were examined. First, since all variables are on a continuous scale and each outcome variable came from separate participants, the assumption of variable type and independence of observation have been met. Second, tests of normality were examined on the unstandardized residuals of the dependent variable. The Shapiro-Wilk test revealed that when the dependent variable depression was compared to family cohesion, the distribution was not normal ( $p = .04$ ). Based on central limit theorem, given the large sample size ( $N = 111$ ), it is assumed that the data should approximate a normal distribution (Field, 2013). Third, tests of linearity and homoscedasticity were examined, and assumptions were not met. The study utilizes a clinical samples and, therefore, any variability is indicative of what is actually occurring within families. Independent variables are unrelated to error, the assumption is met through experimental design. In order to test independent errors a Durbin-Watson statistic, all dependent variable values were  $1 \geq 3$ .

### **Associations between Self-Reported and Observed Parenting**

First, I conducted Pearson Product Correlation Coefficients to examine the relationship between fathers' self-reported parenting ability and their observed parenting ability. Separate

tests were conducted for negative and positive parenting behaviors. The results revealed a small, positive correlation between fathers' self-reported positive parenting behaviors and observed positive parenting ( $r = .20, p \leq .05, R^2 = .04$ ). The results also revealed no significant associations between fathers' self-reported negative parenting and observed negative parenting behaviors ( $p \geq .05$ ).

### Regression Analyses Predicting Father Outcomes

First, a simple linear regression was performed to determine whether family cohesion was a predictor of father depressive symptoms. Results were significant, showing that higher levels of family cohesion predicted lower levels of father depressive symptoms ( $b = -1.53$  ( $SE = .458$ ),  $t = -3.34, p = .001, R^2 = .09$ ). Therefore, for every one-point increase in family cohesion, fathers' depressive symptoms decrease by 1.53 points. Next, a simple linear regression was performed to determine whether family cohesion was a predictor of fathers' well-being. Results were significant, showing that higher levels of family cohesion predicted higher levels of fathers' well-being ( $b = .835$  ( $SE = .244$ ),  $t = 3.42, p = .001, R^2 = .10$ ). Therefore, for every one-point increase in family cohesion, fathers' depressive symptom decreases by .835 points. Another simple linear regression was conducted to determine the effects of mindfulness. There was no significant relationship found between family cohesion and fathers' mindfulness,  $p = .340$ .

A multiple linear regression was performed to determine if positive (warmth/acceptance) and negative parenting behaviors predicted fathers' well-being. Results were significant, showing that overall, our predictors were able to predict father's well-being,  $F(2,108) = 4.77, p = .010, R^2 = .08$ . Positive parenting was significantly predictive of fathers' well-being when controlling for negative parenting ( $b = .475, SE = .159, t = 2.98, p = .004, R^2 = .08$ ). Negative

parenting was not predictive of fathers' well-being when positive parenting was controlled ( $p = .611$ ).

Finally, a multiple linear regression was performed to determine if positive parenting, negative parenting, cohesion, depressive symptoms, and mindfulness were predictors of father's well-being. Results were significant, showing that overall, our predictors were able to predict father's well-being  $F(5,104) = 14.95, p = .000, R^2 = .42$ . Mindfulness ( $b = .180, SE = .060, t = 2.99, p = .004, R^2 = .05$ ), positive parenting ( $b = .360, SE = .209, t = 2.70, p = .008, R^2 = .04$ ) and fathers depressive symptoms ( $b = -.233, SE = .043, t = -5.35, p = .000, R^2 = .16$ ) significantly predicted fathers' well-being when all other variables were controlled. Cohesion ( $p = .197$ ) and negative parenting ( $p = .932$ ) were not significant predictors of fathers' well-being when all other variables were controlled.

## Discussion

The overall aim of the current study was to examine parenting among fathers of children with ASD. Specifically, I aimed to determine whether fathers' self-reported parenting behaviors were congruent with their observed parenting and identify whether family functioning and parenting behaviors predicted father well-being (e.g., depressive symptoms, well-being, and mindfulness). Results indicated that fathers' self-reported levels of positive parenting were similar to their observed parenting behaviors. However, there was no significant relationship found between their negative parenting self-reports and observations. Family cohesion emerged as a significant predictor of fathers' depressive symptoms and overall well-being, but not their levels of mindfulness. Finally, positive parenting behaviors were positively associated with fathers' well-being.

The results of this study suggest that there is congruence between fathers' self-reported positive parenting behaviors and their observed behaviors when interacting with their child. This is inconsistent with previous research in NT families, which found that fathers reported low levels of permissive and authoritarian parenting, but observational reports showed these fathers were scoring high for both parenting types (Sheh, 2013). Parents raising children with ASD have been found to be very aware of their self-acceptance levels, especially with respect to their psychological well-being (Boyras & Sayger, 2011). Being self-aware may have allowed fathers to be more in tune to how they parent their children. By being in tune to parenting, one would expect to see parents' self-reports and observed behavior be aligned, which is what we found.

With respect to negative parenting behaviors, however, there was evidence of incongruence between self-reported and observed behaviors. This is consistent with previous research, which found that parents in general typically self-report what they feel is a socially appropriate response when asked questions about negative parenting behaviors (Bornstein et al., 2015). Parents may be attuned to all aspects of their parenting ability, but they may not feel their negative parenting behaviors are socially acceptable. Therefore, when given the option, parents self-report having minimal negative parenting behaviors. However, observation shows that they are more negative than they self-report. Parents of children with ASD have been found to be negative in their parenting, typically aligning with authoritarian or permissive parenting styles (Capps, Sigman & Mundy, 1994; Gau et al., 2010). These two parenting styles are often associated with negative developmental outcomes for children. In order for fathers to raise their children to the best of their ability, they should be aware of negative parenting behaviors and be sure to use them in an appropriate manner in order to best support their child's well-being.

The second goal of this study was to identify predictors of fathers' well-being. There has been little research focusing on the well-being of fathers of children with ASD and the existing research primarily focuses on comparing their levels to mothers (Al-Farsi, Al-Farsi, Al-Sharbati & Al-Adawi, 2016; Bitsika & Sharpley, 2004; Cohrs & Leslie, 2017). In the current study, higher levels of family cohesion were related to lower depressive symptoms and better overall well-being. This is consistent with previous research showing that family cohesion significantly, and positively predicted fathers' well-being (Boyras & Sayger, 2011). Bronfenbrenner's (1986), ecological systems theory highlights how important families are within a child's life. Families have a direct impact on their child's development. A child watches their parents interact with each other, family members and friends, and these interactions have a direct influence on a child's ability to learn about their social environment. If a family is not cohesive, a child will learn maladaptive behaviors to align with their environment. As humans, we are social creatures, having a cohesive family unit that is seen supporting, loving and valuing one another, can help to promote the well-being of all family members.

I also examined whether fathers' parenting behaviors predicted their well-being. Previous research suggests that fathers who are emotionally supportive have lower depressive symptoms and greater well-being (Carter, Vehorn, Taylor & Warren, 2012; Chan, Lam, Law & Cheung, 2018; Dolev et al., 2016). In the current study, fathers' positive parenting behaviors predicted better psychological well-being. This is consistent with other research that compared fathers raising NT children to those raising children with intellectual disabilities. This research found fathers raising children with intellectual disabilities reported higher levels of self-acceptance (Boyras & Sayger, 2011). Previous research also showed that positive parenting behaviors, such as encouraging and emotional support, are behaviors of a healthy parenting style (Baumrind,

1989). Healthy parent-child relationships can encourage positivity in families which, in turn, could increase fathers' psychological well-being. Supporting fathers by encouraging them to use positive parenting tactics to increase their well-being could be a fruitful avenue for intervention. However, fathers' negative parenting behaviors were not associated with their well-being. Previous research has shown that parents who report high levels of parenting stress were typically authoritative or permissive parents (Hutchison, Feder, Abar and Winsler, 2016). Thus, it is possible that the measure of well-being used in the current study may not adequately capturing these effects. Future research should include a measure of parenting stress.

The findings of this study have implications for clinicians who are working with families of children with ASD. Fathers are relatively neglected in parent and family-oriented interventions. My findings suggest that fathers' mental health is significantly impacted by their family relationships and parenting behaviors. Once a formal diagnosis has been given for their child, fathers should be given explicit advice on ways to promote their well-being. Interventions focused on parenting behaviors and mental health should be widely used to increase fathers' awareness of the possible future mental health effects of raising a child with ASD. Findings also suggest that fathers are not able to successfully identify their negative parenting. Helping fathers identify their negative parenting would help fathers' well-being and help them continue to develop a healthy parent-child relationship.

### **Limitations**

This study has several limitations that warrant discussion. The sample for this study is predominantly White, upper middle class, and highly educated. This is not representative of the larger population of parents of children with ASD as it excludes low-income families and lacks

ethnically diverse participants. In addition, participants had to be in a relationship and cohabitating to be a part of the study. This does not take in to account the additional life-stressors of single parents, particularly single parents raising a child with ASD. These fathers' depressive symptoms indicated that they were not clinically depressed. Fathers may have reported lower levels of depression due to social standards which may cause the results to be skewed. Future research should examine a clinically depressed group of fathers as their family dynamics and parenting behaviors may be qualitatively different from the fathers in the current study. There should also be more research conducted on single fathers. The current sample was of fathers who were living with their partner, raising their child together.

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Table 1

*Demographic characteristics for fathers of children with ASD.*

<b>Demographic</b>		<b>%</b>
Biological Parent	Yes	84.5
	No	15.5
Education Level	Some High School	1.8
	High School	4.5
	Vocational School	5.4
	Some College	26.1
	College Degree	40.5
	Post College Degree	21.6
Household Income	\$20,001-\$30K	0.9
	\$30,001-\$40K	7.3
	\$40,001-\$50K	5.5
	\$50,0001-\$60K	5.5
	\$60,001-\$80K	11.8
	\$80,001-\$100K	14.5
	\$100,001-\$150K	29.1
	Greater than \$150,000	25.5
Ethnic Background	White	78.4
	African American	2.7
	Native American	1.8
	Hispanic or Latino	12.6
	Asian or Pacific Islander	5.4