Marital Satisfaction, Parental Stress, & Perceived Social Support of Mothers of Children with Autism Spectrum Disorders

by

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Abstract

Title: Marital Satisfaction, Parental Stress, & Perceived Social Support of Mothers of Children with Autism Spectrum Disorders

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The present study investigated the effects of both formal and informal social supports on mothers of children with autism spectrum disorder’s marital satisfaction and parental stress. To our knowledge, no other study has examined the relationship between various formal support types and marital satisfaction. This study aimed to fill this gap by examining the effects of both formal and informal social supports on mothers of children with ASD’s marital satisfaction and maternal stress. A sample of 151 mothers of children with ASD completed the online survey, assessing their use of formal and informal supports, their perceived effectiveness of said social supports, their marital satisfaction, and their parental stress. Results indicated that informal social support was significantly associated with marital satisfaction. Parents of other children with ASD/other disorders, significant other/spouse, and respite care were identified as the most effective forms of social support. Specifically, parents of other children with ASD/other disorders and significant other/spouse were identified as the most understanding of the child’s difficulties and needs. Both parents of other children with ASD/other disorders and significant other/spouse had a significant positive relationship with marital satisfaction. Several findings were consistent with previous research conducted on mothers of children with ASD; however, a few findings were inconsistent with prior research, possibly due to
a lack of variability of this study’s sample and previous research being conducted in New Zealand and Australia instead of in the United States. Results from this study can inform the advancement of parental interventions and treatment aimed at increasing marital satisfaction, increasing social support use and effectiveness, and reducing parental stress.
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Chapter 1: Marital Satisfaction, Parental Stress, & Perceived Social Support of Mothers of Children with Autism Spectrum Disorders

Research has consistently shown that parents of children with autism spectrum disorders (ASD) experience more stress than parents of not only neurotypical children, but also of children with intellectual disability, Down syndrome, and cerebral palsy (Cuzzocrea et al., 2016; Dabrowska & Pisula, 2010; Eisenhower et al., 2005; Hayes & Watson, 2013). Furthermore, parents of children with ASD are at an increased risk for experiencing depression, anxiety, and marital dissatisfaction (Brobst et al., 2009; Estes et al., 2009; Gau et al., 2012; Hartley et al., 2010; Hayes & Watson, 2013). Factors such as: (a) their child’s intellectual functioning, (b) verbal skills, (c) differences in social skills, (d) difficulty with executive functioning skills, such as self-regulation, (e) symptom severity, (f) challenging behaviors, (g) parent-child interactions, (h) parenting approaches, (i) time spent on their child, (j) increased caregiver loads, and (k) uncertainty over their child’s future, can all produce parenting stress and anxiety (Baker-Ericzen et al., 2005; Estes et al., 2009; Hutchison et al., 2016; Lecavalier et al., 2006; Picardi et al., 2018; Rivard et al., 2014; Safe et al., 2012).

Furthermore, the financial cost of therapies and specialized schools/programs for children with ASD poses a financial stressor (Broady et al., 2017; Fletcher et al., 2012; Lecavalier et al., 2006; Marsack-Topolewski et al., 2021). In the United States, medical expenses are approximately four to six times greater for children with ASD than children without ASD (Shimabukuro et al., 2007). Families of children with ASD also have less combined annual family income than families of neurotypical children (Cidav et al., 2012). Parents of children with ASD face emotional and financial struggles exacerbated
by unmet needs and limited access to social supports, medical, psychological, and educational resources (Kuhlthau et al., 2019; Lindly et al., 2016; Marsack-Topolewski et al., 2021). Thus, these stressors may negatively affect parents of children with ASD’s well-being and their child’s functioning (Lindly et al., 2016).

When parents of children with ASD live in a coupled household, the caregiver burden, financial cost, and time commitment of raising a child with ASD may be lessened, potentially leading to a decrease in parental stress and an increase in dyadic coping and social support (McAuliffe et al., 2017; Ramisch et al., 2014). Among mothers of children with ASD, marital satisfaction is positively associated with maternal well-being (Benson & Kersh, 2011). However, parents of children with ASD experience high levels of financial stress (Fletcher et al., 2012; Lecavalier et al., 2006; Myers et al., 2009), caregiver burden, lack of self-care, poor health, social isolation, and marital strife (Broady et al., 2017; Fletcher et al., 2012; Lecavalier et al., 2006; Myers et al., 2009). Furthermore, parents of children with ASD report decreases in quality time spent with their significant other (Myers et al., 2009) and more marital conflict (Hartley et al. (2017b). Research has shown that parents of children with ASD are less satisfied in their marriages than parents of neurotypical children or children with other disabilities (Brobst et al., 2009; Estes et al., 2013; Hartley et al., 2017; Higgins et al., 2005).

There are mixed findings regarding the divorce rate in couples raising a child with ASD; Hartley et al. (2010) found that the divorce rate is higher for parents of children with ASD than for parents of children without ASD, although not all marriages are strained (Hock et al., 2012; Myers et al., 2009). In fact, an ASD diagnosis can strengthen some marriages. Having a child with ASD can promote increased closeness, resilience,
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intimacy, compassion, gratitude, and commitment within couples (Hock et al., 2012; Myers et al., 2009; Sim et al., 2017) and improve marital quality, family closeness, and support (Hock et al, 2012; Myers et al., 2009). How couples cope, find meaning, manage stress, and adapt to their child’s diagnosis, can ultimately impact their relationship and marital satisfaction (Hock et al, 2012; Ramisch et al., 2014; Sim et al., 2017). Despite couples with a child with ASD having decreased marital satisfaction compared to controls, no significant differences between the two samples have been found regarding reported spousal support, respect for their spouses, or commitment to their marriages (Brobst et al., 2009). Parents of children with ASD who report greater subjective well-being, who can adapt positively to their child’s diagnosis, and who receive sufficient and effective social support are more likely to report marital satisfaction (Benson & Kersh, 2011; Ekas et al., 2015; Hock et al, 2012; Lickenbrock et al., 2011; McGrew & Keys, 2014). The current study investigates mothers of children with ASD’s perceived social support and its relationship to marital satisfaction and stress.
Chapter 2: Review of the Literature

Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental disorder characterized by persistent impairment in social communication and social interaction, such as deficits in social-emotional reciprocity and nonverbal communication and difficulties with interpersonal relationships. ASD is also marked by restricted and repetitive motor movements, interests, or activities, difficulty with flexibility, and sensory differences (Black & Grant, 2014).

Autism Spectrum Disorder was previously referred to as an autistic disorder, Asperger’s syndrome, high-functioning autism, atypical autism, and pervasive developmental disorder-not otherwise specified (Parritz & Troy, 2017). After decades of research and clinical conceptualization, there was overwhelming evidence that these diagnoses were best understood as part of a disorder continuum (i.e., a spectrum). Therefore, as of 2013, what was previously known as autistic disorder, Asperger’s syndrome, high-functioning autism, atypical autism, and pervasive developmental disorder-not otherwise specified became known as Autism Spectrum Disorder (and will hereafter be referred to as ASD) in the Diagnostic and Statistical Manual of Mental Disorders, DSM-5 for short, (American Psychological Association, 2013).

Criterion A of the DSM-5 pertains to deficits in reciprocal social communication and social interaction across multiple settings. Manifestations of ASD symptoms typically vary by age, expressive language level, cognitive functioning, and individual differences in temperament, personality, level of support, treatment history, and other factors. Many individuals with ASD have difficulties with language, wherein functional
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speech may be absent, language onset may be delayed, or meaningful speech may be minimal. Individuals who have verbal skills with complete vocabulary and grammar may still have communication deficits. For example, children with ASD tend to instigate minimal to no social interaction with others, have difficulties engaging in reciprocal conversation, and display few emotional expressions and gesture use. Similarly, children with ASD often have limited or no eye contact (Black & Grant, 2014).

Criterion B of the DSM-5 diagnosis for ASD requires the individual with ASD to engage in restricted and repetitive behaviors, interests, or activities. For instance, the child may display stereotyped or repetitive motor movements, such as motor stereotypies (i.e., finger posturing, hand flapping, finger tapping), lining up objects, or echolalia, wherein the child repeats meaningless words or phrases. Individuals with ASD are prone to be inflexible and engage in ritualized patterns, such as experiencing extreme distress at small changes, needing to eat the same food every day, and overall difficulty with transitions. Highly fixated interests, such as bus schedules, are a common feature of ASD. Furthermore, children with ASD are prone to hyper- or hypo-reactivity to sensory stimulation or have unusual interests in sensory input (e.g., adverse response to textures or sounds, disproportionate smelling, licking, or touching of objects, only eating non-solid foods, and enchantment with lights; Black & Grant, 2014).

Additional criteria for the diagnosis of ASD include symptoms across the lifespan, starting in early life, and symptoms causing significant difficulties across multiple contexts. The age at which children receive a diagnosis varies widely, given that the stage in which social-communication deficits become evident varies on a case-by-case basis. While diagnostic criteria are apparent throughout the child’s development, the
use of intervention, compensation, and supports may disguise some difficulties throughout the lifespan (Black & Grant, 2014).

Prevalence studies of ASD indicate a recent steady increase in the diagnosis (Maenner et al., 2020) and a reported rate of approximately 1 in 54 children in the United States being diagnosed with ASD (Centers for Disease Control and Prevention [CDC], 2020). The prevalence (total number of diagnosed individuals in the population) and incidence (total number of new diagnoses per year) of ASD has been progressively increasing in the United States, and other countries, for the past 50 years (Murdoch Children’s Research Institute [MCRI], 2011). This increase has been attributed to many factors, namely the broadening and encompassing diagnostic criteria (i.e., the spectrum) that recognizes that children can present with fewer ASD symptoms throughout the lifespan, the diagnosing of ASD as a primary diagnosis over a language disorder or intellectual disability, increased knowledge of ASD among both parents and health care workers, and a decrease in stigma (MCRI, 2011). Most of these factors are associated with changes in how we conceptualize the diagnosis (MCRI, 2011). However, biological factors may likewise play a role in the rise of ASD. Autism rates may also be growing due to the increased survival rates of premature infants, given that recent research suggests a significantly higher prevalence of ASD in the preterm population (Agrawal et al., 2018). Presently, no one environmental factor has been found to explain the rise in ASD diagnoses (MCRI, 2011).

ASD is prevalent among all races, ethnicities, and socioeconomic groups. The Autism and Developmental Disabilities Monitoring Network (ADDMN; CDC, 2019) has reported no significant difference in the prevalence of ASD among black youth compared
to white youth. However, ASD has been diagnosed less frequently in Hispanic youth than white and black youth (CDC, 2019). Approximately one-third of children with ASD also have an intellectual disability (CDC, 2019). Males are four times more likely to have an ASD diagnosis than females (CDC, 2019).

The higher prevalence and incidence rates, the chronicity of this developmental disorder, and the comorbidity with intellectual disability suggest that children with ASD and their parents experience various challenges (Hartley et al., 2010). Research has consistently revealed more stress, adjustment problems, and poorer mental health in parents of children with ASD than both parents of neurotypical children or children with Down syndrome (Brobst et al., 2009; Montes & Halterman, 2007; Sanders & Morgan, 1997). Poor parental outcomes, or disadvantages, have often been conceptualized as parental style, parental stress, parental coping, parental self-efficacy, family stress, family hardiness, adjustment problems, marital satisfaction, or as mental health issues (Hartley et al., 2010; Hutchison et al., 2016; Lecavalier et al., 2006; Montes & Halterman, 2007; Sanders & Morgan, 1997; Weiss et al., 2013).

Parenting Style

One of the critical elements of the parent-child relationship pertains to parenting style. Delvecchio et al. (2019) conducted a study examining the relationship between an authoritative and authoritarian parenting style and neurotypical children's behavioral difficulties, controlling for a component of parenting stress, the parent's perception of their child being "difficult" (p. 517). Results indicated that an authoritative parenting style was correlated with less child maladjustment, whereas an authoritarian parenting style was associated with a greater likelihood of perceiving their child as difficult. Both
parents responded similarly; however, mothers were significantly more affected by their perception of having a difficult child. Therefore, when both mothers' and fathers' style was authoritative, they reported significantly lower levels of stress by their perception of having a difficult child. The opposite relationship was found when their parenting style was authoritarian. Furthermore, the greater their parental stress over their belief of having a difficult child, the greater the behavioral problems they reported in their child. These associations were partially mediated by the parent's belief that their child was difficult, which was partially attributed to the interaction effect between parenting style and child behavior problems. Just as parents’ perception of having a difficult child influenced child behavior problems, so too did parenting styles (Delvecchio et al., 2019). Several studies corroborated these findings, such that an authoritarian parenting style predicted maladaptive behaviors in neurotypical children (Ueda et al., 2020) and in children with attention-deficit/hyperactivity disorder and ASD (Hutchison et al., 2016). Similarly, parental distress was significantly correlated with authoritarian and permissive parenting styles, in both parents of children with ASD and without (Hutchison et al., 2016; Ueda et al., 2020). Therefore, parents' perception of how difficult their child is, an aspect of parenting stress, affects how problematic they deem their child's behaviors to be, their parenting style, and their child's externalizing behaviors (Delvecchio et al., 2019; Hutchison et al., 2016; Ostberg & Hagekull, 2000; Ueda et al., 2020).

Parenting Stress

Per Lazarus and Folkman (1984), “psychological stress is a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (p. 19). Thus,
stress is experienced when an individual faces a situation that exceeds their ability to cope (Amireh, 2019). Child-rearing is demanding and is a source of stress for many parents (Amireh, 2019; Leavitt et al., 2017).

The journey of parenting is filled with a variety of stressors and demands as couples adapt and adjust to their new role of parenting together (Leavitt et al., 2017). The stress couples transitioning into parents face is partially attributed to a sense of destabilization of their family system as they learn to adapt from a two- to three-person system and learn how to co-parent (Leavitt et al., 2017). Members of the couple dyad may feel a decrease in attention or quality time received from their partner as the couple devotes more time and attention to child-rearing (Leavitt et al., 2017).

As a result of gender role expectations, women are expected to dedicate more time to child-rearing and to completing most of the household chores, daily tasks, etc., than men (Capistrant et al., 2020; Wolf et al., 1989). However, it is worth mentioning that in dual-earner households, the division of household labor tends to be split more evenly, with fathers contributing more to child-rearing and household duties (Capistrant et al., 2020). The traditional socialization pattern that parenting comes easily to women and that women are natural nurturers may also contribute to greater parenting stress among mothers (Hauari & Hollingworth, 2009; Leavitt et al., 2017). The child-rearing experience differs by gender, given that fathers typically do not have the same expectations and responsibilities as mothers regarding child-rearing (Matud, 2004; Wolf et al., 1989). Thus, throughout the journey to parenthood, women may feel more parenting stress than men, which may be indicative of women feeling overwhelmed by the expectations of motherhood (Leavitt et al., 2017; Matud, 2004).
Ostberg and Hagekull (2000) have reported a significant relationship between social support and stress, in which mothers who experienced more social support experienced less parental stress and vice versa. Furthermore, mothers who reported greater parental stress tended to be older, have several children, have a high level of household responsibilities, viewed their child as difficult or fussy, and had experienced several adverse life events, in addition to reporting low social support (Ostberg & Hagekull 2000). Relatedly, anxiety has been linked to greater egocentrism, mostly explained by uncertainty appraisal tendencies (Todd et al., 2015). In other words, experiencing anxiety or feelings of uncertainty or pressure increases an individual’s reliance on their egocentric worldview and thus, decreases their ability to understand and connect with others’ perspectives (Todd et al., 2015). Therefore, it is possible that if a partner feels increased stress or anxiety, their ability to empathize and connect with their partner will decrease, which could result in conflict (Todd et al., 2015). Parenting stress has been found to have a negative effect on sexual satisfaction (Leavitt et al., 2017). Research has also indicated that a partner’s stress and emotions can spill over and affect their partner (Goetz et al., 2019; Larson & Almeida, 1999; Leavitt et al., 2017; Matjasko & Feldman, 2006; Story & Repetti, 2006). For instance, if a member of a couple dyad has a negative experience at work or has a high volume of work, the couple is more likely to experience marital dissatisfaction, namely greater marital anger and withdrawal (Goetz et al., 2019; Story & Repetti, 2006). Thus, the experiences of one partner can influence the other.
Parents of typically developing children experience parenting stress. However, having a child with a disability increases the level of parenting stress and family system stress, which can overwhelm the parent’s ability to cope (Amireh, 2019). Parents of children with developmental disabilities’ mental health and well-being, namely parenting stress, depression, and marital dissatisfaction, increases as their child’s maladaptive behaviors increase (Baker et al., 2005; Beck et al., 2004; Davis & Carter, 2008; Hassall et al., 2005; Hastings, 2003b; Lecavalier et al., 2006; Robinson & Neece, 2015; Sikora et al., 2013; Zablotsky et al., 2013). In fact, greater levels of parenting stress are better explained by a child’s increased problematic behavior, such as externalizing behaviors and difficulty self-regulating, instead of a child’s absence of adaptive behaviors or cognitive delay (Baker et al., 2005; Beck et al., 2004; Davis & Carter, 2008; Hastings, 2003b; Robinson & Neece, 2015).

A study conducted by Robinson & Neece (2015) found that among parents of children with developmental disabilities, parental stress was associated with child externalizing and internalizing problems (i.e., aggressive behavior, emotional lability, disturbed sleep, withdrawal tendencies, mood disturbance, persistent developmental issues, and oppositional/defiant tendencies). However, no significant relationship was found between parental stress and child anxiety/depression symptoms, somatic difficulties, stress, and attention-deficit/hyperactivity disorder symptomatology. Nonetheless, this study’s sample size was small, which may have reduced the power of the findings. Therefore, despite there being a relationship between parental stress and child behavior issues, correlations may not have been statistically significant (Robinson
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& Neece, 2015). Robinson and Neece (2015) reasoned that parental stress may be correlated with specific problematic behaviors more than others, such as conduct issues, being destructive, and having difficulty with emotional regulation (Baker et al., 2003; Davis & Carter, 2008; Huang et al., 2014; Lecavalier et al., 2006).

**Parental Burden.** Parental burden is conceptualized into four distinct areas: financial, time dependence, developmental, and emotional (Marsack-Topolewski et al., 2021). Financial burden refers to the costs needed to care for a family, including the child with special needs, and having financial access to healthcare, therapies, education, and vocational options when the child is an adult (Marsack-Topolewski et al., 2021). It is not unusual for parents of children with ASD, especially mothers, to endure forced unemployment, decline promotions, decline career and educational advancement opportunities, change careers, and reduce working hours to care for their child, which can result in lower parental income (Cidav et al., 2012; Koydemir-Ozden & Tosun, 2010; Marsack-Topolewski et al., 2021). Annual family income in families of children with ASD is 28% less than in families of neurotypical children (Cidav et al., 2012). A study conducted by Marsack-Topolewski et al. (2021) found that financial burden was the most significant source of caregiver burden for parents of children with ASD, followed by developmental burden, time dependence, and emotional burden.

The time dependence domain refers to the parental burden associated with time constraints due to the chronic and pervasive demands placed on them to care for their child into adulthood (Marsack-Topolewski et al., 2021). Parents of children with ASD, particularly mothers, tend to dedicate a lot of time to raising their child and driving their child to different types of therapies, which affects their time spent in the labor force,
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caring for the home, and leisure time (Cidav et al., 2012; Myers et al., 2009; Safe et al., 2012). Thus, time dependence can limit the parent’s ability to further their career goals and engage in respite, hobbies, and other value-add opportunities (Cidav et al., 2012; Marsack-Topolewski et al., 2021; Myers et al., 2009). Similarly, time dependence can negatively affect the parents’ interpersonal relationships by limiting parents’ ability to further their relationships with work colleagues, friends, family, and romantic partners (Cidav et al., 2012; Marsack-Topolewski et al., 2021; Myers et al., 2009; Safe et al., 2012).

The developmental burden domain refers to parents’ feeling of being on a different timeline than other parents their age (Marsack-Topolewski et al., 2021). Developmental burden is associated with increased caregiving demands (Marsack-Topolewski et al., 2021) and perceived judgment from others (Ludlow et al., 2011). Research has consistently found that parents of children with disabilities are more likely to feel like they are “missing out on a normal way of life” (Marsack-Topolewski et al., 2021, p. 2), which can result in feelings of social isolation from family and friends (Ludlow et al., 2011; Woodgate et al., 2008). Thus, developmental burden can contribute to perceiving a lack of support and understanding from their community (Marsack-Topolewski et al., 2021; Marsack & Samuel, 2017; Myers et al., 2009; Safe et al., 2012; Woodgate et al., 2008).

Parents experiencing emotional burden may be subject to emotions like grief, dysphoria, sadness, anxiety, blame, and guilt (Benson, 2002; Dumas et al., 1991; Estes et al., 2009; Fletcher et al., 2012; Hamlyn-Wright et al., 2007; Marsack-Topolewski et al., 2021; Myers et al., 2009; Olsson & Hwang, 2001; Padden & James, 2017; Safe et al.,
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2012). The literature consistently states that having a child with ASD can have an emotional toll on the family, marked by “never-ending stress” (Ludlow et al., 2011, p. 9). Similarly, parents of children with ASD are at greater risk for depression than parents of neurotypical children or other children with disabilities (Abbeduto et al., 2004; Bromley et al., 2004; Dumas et al., 1991; Myers et al., 2009).

Burden can also be conceptualized into two types: objective burden and subjective burden (Picardi et al., 2018). Objective burden involves practical problems (i.e., conflictual interpersonal dynamics, limitations on social, respite, and work involvement, financial struggles; Magliano et al., 2005; Picardi et al., 2018). Subjective burden infers the impact on parents’ mental state (i.e., depression, hopelessness, grief, anxiety, or shame; Magliano et al., 2005; Picardi et al., 2018). Subjective burden is often studied by assessing parenting stress, the emotional distress associated with parenting demands and responsibilities (Picardi et al., 2018).

Picardi et al.’s (2018) study comparing parents of children with ASD and parents of children with Down syndrome and Type 1 diabetes mellitus found that parents of children with ASD had greater objective and subjective burden, greater emotional distress, and received less social support. Furthermore, mothers of children with ASD reported a higher subjective burden than fathers. The most reliable predictors of both objective and subjective parental burden were the severity of ASD symptomatology and the parents' perceived social support. Other predictors of parental burden were spiritual well-being, hardiness, distraction and disengagement coping strategies, engagement coping strategies, and the child's cognitive functioning and adaptive behavior (Picardi et al., 2018).
A qualitative study on mothers of children with chronic disabilities conducted by Green (2003) found that when controlling for mother and child characteristics, the effects of objective burden and mothers’ belief that individuals with disabilities are stigmatized by others increases mothers’ experience of distress (subjective burden). This study also found a negative relationship between maternal perception of stigma and their child with disabilities’ relationships with same-age peers. In other words, the children with mothers who perceived high rates of stigma in the community socialized less often with same-age peers in their own homes or those of other children as well as in their communities (Green, 2003). Thus, the perceived stigma of individuals with disabilities can be a source of parenting stress for parents of children with special needs and can compound feelings of isolation (Woodgate et al., 2008) by limiting socialization opportunities for both mothers and children.

**Parenting Stress in Families with Children with ASD**

Parents of children with ASD report significantly greater levels of stress, anxiety, and depression compared to parents of children without disabilities (Baker-Ericzen et al., 2005; Hayes & Watson, 2013; Padden & James, 2017; Pisula & Porebowicz-Dorsmann, 2017; Weiss, 2002). High levels of parenting stress are often attributed to specific behavior problems associated with ASD, such as difficulties with social skills and functional communication (Zablotsky et al., 2013).

Padden and James (2017) compared the parenting stress of parents of children with ASD and parents of typically developing children and found that parents of children with ASD were reporting clinically significant levels of parenting stress. Not only do parents of children with ASD experience greater levels of stress than parents of
neurotypical children, but they also experience significantly more stress than parents of children with other developmental delays (Eisenhower et al., 2005; Estes et al., 2013), and intellectual disabilities like Down syndrome (Abbeduto et al., 2004; Amireh, 2019; Dabrowska & Pisula, 2010; Eisenhower et al., 2005; Picardi et al., 2018; Pisula, 2007; Sanders & Morgan, 1997).

Such high levels of parenting stress among parents of children with ASD serves as a risk factor for developing psychological distress and depression (Abbeduto et al., 2004; Bromley et al., 2004; Dumas et al., 1991; Myers et al., 2009; Zablosky et al., 2013). In comparison to parents of children with intellectual disability, developmental disorders, behavioral disorders, Down syndrome, Fragile X, and typically developing children, parents of children with ASD display an increased risk for depression, anxiety, and general psychopathology (Abbeduto et al., 2004; Cuzzocrea et al., 2016; Dumas et al., 1991; Eisenhower et al., 2005; Estes et al., 2009; Hamlyn-Wright et al., 2007; Olsson & Hwang, 2001). The risk may be increased if the parent or child has a comorbid psychological disorder, if the child’s ASD symptoms are more severe, or if the child exhibits more problematic behavior (Estes et al., 2009; Ghaziuddin & Greden, 1998; Kring et al., 2008; Lecavalier et al., 2006; Zablotsky et al., 2013).

In addition, ongoing stress serves as a risk factor for physical health issues; parents of children with ASD tend to report worse physical health outcomes than parents of neurotypical children (Allik et al., 2006; Gallagher & Whiteley, 2012; Lovell et al., 2021; Padden et al., 2018; Smith et al., 2012). Through a meta-analysis on psychophysiological measures of stress, Padden et al. (2018) found that many parents of children with ASD had blunted cortisol levels, suggesting chronic stress. In addition,
Seltzer et al. (2010) found that a child with ASD’s behavioral difficulties had a long-term effect on maternal cortisol levels, which is indicative of the bidirectional relationship between parenting stress and child behavior problems.

**Familial Stress.** Families with children with ASD tend to report more familial strain than families with typically developing children (Baker et al., 2005; Baker-Ericzen et al., 2005; Hayes & Watson, 2013; Padden & James, 2017; Weiss, 2002; Yamada et al., 2007; Zablotsky et al., 2013). Compared to mothers of neurotypical children, mothers of children with ASD perceive their child with ASD as being “harder to care for than most children his/her age” (Montes & Halterman, 2008, p. e1043) and report more marital dissatisfaction (Brobst et al., 2009; Estes et al., 2013; Fletcher et al., 2012; Hartley et al., 2010, 2017a; Higgins et al., 2005; Myers et al., 2009).

According to family systems theory, the spillover hypothesis explains that emotion and behaviors experienced in one relationship can spill over into other relationships (Cox et al., 2001). Thus, negative emotions experienced in marriage can spill over into the parent-child relationship and vice versa (Cox et al., 2001; Erel & Burman, 1995). Parents may be less emotionally available to their children after experiencing a negative marital interaction (Cox et al., 2001). They may struggle to both identify their child’s needs and emotionally support them if they are experiencing marital distress (Cox et al., 2001). Owen and Cox (1997) found a relationship between prolonged marital conflict spilling over into less sensitive and responsive parenting which, predicted insecure attachment in children.

Similarly, Stroud et al. (2014) studied families in a laboratory setting and found that marital quality influenced the parent-child relationship. Furthermore, marital quality
was indirectly associated with both girls’ and boys’ internalizing and externalizing behaviors through decreased co-parenting warmth. Stroud et al. (2014) also found a relationship between marital quality and fathers’ responsiveness to their child, but not mothers’; however, only mothers’ responsiveness was associated with child adjustment. Spillover between the marital dyad and the parent-child dyad has been found in families with typically developing children, such that mothers and fathers were more likely to report challenging interactions with their children after having experienced marital conflict (Almeida et al., 1999; Erel & Burman, 1995). Similar findings have been found in families of children with ASD (Goetz et al., 2019; Hartley et al., 2016). Hartley et al.’s (2012) longitudinal study of married mothers of children with ASD found a significant relationship between child problem behaviors, which are associated with parenting-related stress and psychological distress, and marital satisfaction at five different time points spanning seven years.

It is essential to mention that a child with ASD’s functioning may moderate spillover. Almeida et al. (1999) indicated that spillover is more likely to occur in high-stress situations, particularly in the context of ongoing stressors. Parents of children with ASD who are more low functioning (i.e., more severe ASD symptoms, increased occurrence of problem behaviors, and comorbidity with an intellectual disability) experience greater parenting stress, maternal depression, and less family adaptability (Abbeduto et al., 2004; Brobst et al., 2009; Estes et al., 2009; Gau et al., 2012; Hastings, 2003b; Lecavalier et al., 2006; Orsmond et al., 2007; Picardi, 2018; Rivard et al., 2014; Zablotsky et al., 2013), and as such may be more susceptible to the spillover effect. Co-occurring behavior problems, specifically conduct problems and minimal prosocial
behaviors, are stronger predictors of parenting stress than the child’s ASD symptomatology, adaptive skills, or cognitive functioning (Baker et al., 2005; Beck et al., 2004; Davis & Carter, 2008; Hastings, 2003b; Huang et al., 2014; Lecavalier et al., 2016; Rao & Beidel, 2009; Robinson & Neece, 2015); as a result, greater occurrence of behavior problems may serve as a risk factor for spillover among parents of children with ASD.

The research on sibling perceptions of their relationship with their sibling with ASD proves varied findings. McHale et al. (1986) found that siblings of children with ASD rated their sibling relationship less favorably if they had difficulties coping with their sibling's condition, perceived parental favoritism, felt rejection towards their sibling, and if they were worried about their sibling’s future. A study conducted by Kaminsky and Dewey (2001) found that siblings of children with ASD reported less intimate relationships with their ASD sibling than siblings of children with other diagnoses and siblings of neurotypical children. Sibling relationships of children with ASD also tended to be less nurturing and they involved less adaptive behavior than sibling relationships of children with Down syndrome or typically developing children (Kaminsky & Dewey, 2001). However, Kaminsky and Dewey (2001) found strengths in the sibling relationship; siblings of children with ASD and Down syndrome reported lower rates of conflict and rivalry with each other, and an increase in admiration for their sibling, compared to relationships among neurotypical siblings. Consistent with these findings, Petalas et al. (2009) found that siblings of children with ASD reported feelings of pride regarding their sibling's accomplishments and skills. Studies have also found that despite several siblings expressing uncertainty and tension towards their sibling with ASD, jealousy over the
increased attention their sibling receives, increased sibling demands, and having to cope with peers not understanding their sibling with ASD, which provoked feelings of embarrassment, siblings of children with ASD rated their sibling relationship positively (Ludlow et al., 2011; McHale et al., 1986; Petalas et al., 2009). Parents in several studies reported worrying over their child with ASD’s sibling and the lack of attention they give them since most of their attention is directed at the child with ASD (Aylaz et al., 2012; Fletcher et al., 2012; Hall & Graff, 2010; Ludlow et al., 2011; Ooi et al., 2016). These reported lower-quality relationships could weaken the family system (Zablotsky et al., 2013).

Families with multiple children with disabilities have a unique experience. ASD has a powerful genetic influence, such that the concordance rate among monozygotic twins is approximately 96%, and the concordance rate among dizygotic twins is approximately 23% (Ritvo et al., 1985). Family members may be more vulnerable to ASD-related traits through the broad autism phenotype (McDonald, 2021; Orsmond et al., 2007). Several studies have found that siblings of children with ASD are at a greater risk for ASD, behavior problems, or behavioral adjustment difficulties compared to siblings of children with other disabilities or neurotypical children (Griffith et al., 2014; Hastings, 2003a; Orsmond et al., 2007), whereas other studies reported that they might not be at an increased risk (Hastings, 2007). Having a child with ASD and a second child with a disability is associated with more challenges to family functioning and maternal well-being (Orsmond et al., 2007). Per Orsmond et al. (2007), mothers of multiple children with disabilities (one with ASD and one with ASD or another disability) reported greater depression and anxiety symptoms and less family adjustment and
cohesion than mothers parenting one child with ASD. Families who experience many stressors may struggle in attending to every family member’s needs, which negatively affects said family members (Higgins et al., 2005; Orsmond et al., 2007). Compared to families of neurotypical children, families of children with ASD report decreased family adaptability and cohesion, which suggests that these families are less flexible and less warm and that family members experience less connection with each other (Gau et al., 2012; Higgins et al., 2005).

Family hardiness is considered a family trait, “defined by a family’s sense of control over life events and stressors, perception of change as beneficial, active orientation to adapting to stressors, and confidence that they can endure challenges” (Weiss, 2013, p. 1310). It is otherwise known as family resilience (der Kinderen & Greef, 2003). Weiss (2002) found lower hardiness levels in families of children with ASD compared to families of children with intellectual disabilities and neurotypical children. Further, there was a significant relationship between hardiness and fewer symptoms of depression, anxiety, somatic complaints, and experiences of depersonalization (Weiss, 2002). In families of children with ASD, greater family hardiness has been linked with a decrease in family stress, likely due to an increased adaptive coping response to stressors (Gill & Harris, 1991; Weiss et al., 2013). Family hardiness and perceived social support serve as predictors of maternal adjustment (Gill & Harris, 1991; Weiss, 2002) in this population. Family hardiness has been found to significantly mediate the relationship between mothers’ chronic stressors (namely mothers’ negative life experiences and their child’s challenging behavior) and family distress (Weiss et al., 2013). Furthermore, the association between family hardiness and chronic stress is mediated by mothers’ use of
informal social supports and their sense of control and mastery in raising a child with special needs (Weiss et al., 2013). Therefore, maternal use of social supports and mothers’ perceived ability to raise a child with a disability impacts mothers’ perceived level of family resilience and experienced stress (Gill & Harris, 1991; Weiss et al., 2013). Chronic stressors can substantially impact parents of children with ASD’s coping capabilities, which can influence how parents perceive or appraise a situation, which affects their experience of distress and ability to meet demands (der Kinderen & Greef, 2003; Patterson, 1988).

Some ASD behaviors may produce a greater stress response among family members than other behaviors. For example, destructive or violent behavior inflicted by the child with ASD onto their parents or siblings is not uncommon and can negatively affect the parents’ and siblings’ emotional and physical well-being (Aylaz et al., 2012; Myers et al., 2009; Tsao et al., 2011). Another challenging behavior that affects the family system pertains to the distinctive food aversions the child with ASD may experience. Sensitivity to food textures and rigidity with food options can result in food restrictions and make meal preparation challenging (Marquenie et al., 2011). Further, rigidity over cutlery, crockery, and table seating arrangements add to the potential difficulty experienced at mealtime (Marquenie et al., 2011). Behavioral challenges surrounding bedtime are also prevalent. Many children with ASD have bedtime rituals involving the need for specific plush toys, pillows, blankets, night-lights, and predictable sequences and routines (Marquenie et al., 2011).
Parenting Stress & COVID-19

The COVID-19 pandemic became prevalent in the United States in March of 2020 and increased parents' levels of stress and changed their day-to-day life, including those with children with ASD (Manning et al., 2021). Manning et al. (2021) studied families of children with ASD in Michigan. They found greater stress in parents of younger children with ASD and parents of children with more challenging ASD symptoms and behaviors. Furthermore, higher stress levels were also most common among parents whose children received more services before the COVID-19 pandemic (Manning et al., 2021).

Additionally, parents of children with ASD often use several services, which were disrupted during COVID-19 because of social distancing requirements and stay-at-home orders (Baweja et al., 2021). The pandemic left many parents feeling isolated, without their usual supports, and having to fend for themselves (Baweja et al., 2021). Children with ASD depend heavily on predictable routine and structure and may need 1:1 classroom support from a paraprofessional/registered behavioral technician, require specialized instruction, etc. (Baweja et al., 2021). Being required to learn via Zoom posed a significant challenge. Despite having the assistance of a parent, who may be simultaneously working from home or maintaining the house in order, oftentimes, parents do not possess the specific skillset required to apply their child’s educational plan at home (Baweja et al., 2021). Requiring parents to essentially act as specialized education teachers and therapists while caring for their own work/household and caregiving duties could certainly increase parental stress.
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Research conducted prior to the COVID-19 pandemic reported that respite care was one of the most frequently unmet health service needs in families of children with ASD (Lindly et al., 2016). Throughout the COVID-19 pandemic, parents of children with ASD reported a greater need for respite care, and the parents that reported needing it the most had children with more severe ASD symptoms (Manning et al., 2021). Some of the identified factors associated with this increase in parenting stress were the reduced accessibility to therapy and services, distance learning/homeschooling, an increase in time spent caring and entertaining the child with ASD, interruptions to parent’s work/employment, financial stress, and lack of respite care (Baweja et al., 2021; Manning et al., 2021). Parents identified their greatest stressor as having their child with ASD constantly at home, followed closely by becoming sick or having their child become sick (Manning et al., 2021).

Parental Coping

The ability to cope with the challenges of raising a child with ASD depends on the number of coping supports used and their perceived effectiveness (Zablotsky et al., 2013). According to Folkman (1984), coping mechanisms are the “cognitive and behavioral efforts to master, reduce, or tolerate the internal and/or external demands that are created by the stressful transaction” (p. 843) to restore functioning. If the coping strategy the individual implements is not effective or the demands of the stressor are too high, stress occurs (Hayes & Watson, 2013). Most parents of children with ASD utilize effective coping mechanisms and thus demonstrate family resilience in the face of stressors (Bayat, 2007); however, several parents use coping mechanisms that are less helpful in managing stress (Dunn et al., 2001; Landon et al., 2018; Ramisch, 2012;
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Zablotsky et al., 2013). Emotion-focused coping is used to control or reduce painful or unwanted emotions related to feelings of stress, often through avoidance (Dunn et al., 2001; Orsmond et al., 2007; Ramisch, 2012). On the other hand, problem-focused coping involves finding solutions to decrease the experience of stress (Orsmond et al., 2007; Ramisch, 2012).

Family adjustment, specifically family adaptability and cohesion, can be affected by how mothers cope (Orsmond et al., 2007). The literature has consistently found that mothers of children with ASD often use emotion-focused coping strategies (Dunn et al., 2001; Orsmond et al., 2007). This tendency to rely on emotion-focused coping strategies contributes to increased stress, anxiety, depression, isolation, and marital problems, in addition to decreasing family cohesion (Dunn et al., 2001; Orsmond et al., 2007).

In contrast to parents of neurotypical children, mother-father dyads of children with ASD use significantly more coping mechanisms (i.e., emotional support, humor, positive reframing, planning, and faith/spirituality; Padden & James, 2017). The implementation and greater use of prosocial coping strategies may act as a buffer to the consequences of parental stress (Padden & James, 2017) and has been demonstrated to specifically help mothers of children with ASD in managing their stress and reducing mental health problems (Zablotsky et al., 2013). Effective implementation of coping mechanisms may assist mothers of children with ASD to receive effective social support (Dunn et al., 2001).

Several studies have reported that parents felt hope and were better able to cope upon seeing their child make progress (Hall & Graff, 2010; Koydemir-Ozden & Tosun, 2010). Additionally, improvements in mother-child relationships have been found when
there are improvements in the child’s ASD symptoms and behavioral difficulties (Taylor & Seltzer, 2011). Although raising a child with ASD has its challenges, parents tend to report feeling blessed in having a child with ASD, with some parents saying it brought the family closer together and added meaning to their lives (Altiere & von Kluge, 2009; Marshall & Long, 2010; McGrew & Keyes, 2014; Myers et al., 2009; Waizbard-Bartov et al., 2019). Many parents have reported that having a child with ASD has impacted their perspective on life and made them more appreciative (Altiere & von Kluge, 2009; Myers et al., 2009; Zhang et al., 2015). Having a child with ASD has also been found to promote spiritual growth in parents and enable parents to make fulfilling career changes in the field of ASD treatment or advocacy (Myers et al., 2009; Waizbard-Bartov et al., 2019).

Parents of children with ASD have also reported being more compassionate, patient, understanding, mindful, accepting towards others, and nonjudgmental (Altiere & von Kluge, 2009; Myers et al., 2009; Woodgate et al., 2008; Zhang et al., 2015). Furthermore, many couples raising a child with ASD have reported an increase in compassion and empathy toward their spouse (Altiere & von Kluge, 2009; Myers et al., 2009) and a stronger relationship with their spouse (Myers et al., 2009; Waizbard-Bartov et al., 2019; Zhang et al., 2015). Some couples have also reported experiencing an increase in support from extended family members (Altiere & von Kluge, 2009); however, these findings are not often replicated. The literature has yielded mixed results regarding parental self-esteem. Some studies have reported that parenting a child with ASD resulted in improved parental self-confidence, self-efficacy (Zhang et al., 2015), and feelings of empowerment (Waizbard-Bartov et al., 2019). In two other studies, parents reported that their child’s behaviors contributed to low self-esteem, such as thoughts of being a “failure as a parent”
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(Ludlow et al., 2011, p. 9) and feeling rejected by their child (Ludlow et al., 2011; Woodgate et al., 2008).

**Social Support.** Parents manage the responsibilities associated with work, family, and friends while simultaneously depleting their resources of time, energy, and finances (Broderick & Blewitt, 2015). Having an effective support system and sufficient income may buffer the consequences of having various responsibilities, reducing stress (Broderick & Blewitt, 2015; Perry, 2004; Ramisch, 2012). While social support can buffer stress and improve well-being, lacking social support can negatively impact one’s well-being (Broderick & Blewitt, 2015). When parents are having difficulty keeping up with the expectations of their role, despite having resources, role strain can ensue, which negatively impacts emotional and physical health (Broderick & Blewitt, 2015).

Several studies have found that couples with more resources (i.e., income and social support) tend to report greater marital satisfaction (Benson & Kersh, 2011; Ekas et al., 2015; Hsiao, 2013; McGrew & Keys, 2014; Perrone & Worthington, 2001). Among mothers of children with ASD, Bromley et al. (2004) found a significant correlation between maternal distress and reduced family support. Social support has been found to play a role in biological markers of stress. Gallagher and Whiteley (2012) found a relationship between social support and blood pressure in parents of children with developmental disabilities, wherein social support buffered the impact of stress on daytime systolic blood pressure.

There are a variety of coping mechanisms parents can employ to decrease levels of parenting stress, one of them being social support. According to Cohen (2004), “social support refers to a social network’s provision of psychological and material resources
intended to benefit an individual’s ability to cope with stress” (p. 676). Social support can be divided into two categories, received and perceived social support (Pottie et al., 2008). Received social support implies truly receiving help and support from others, whereas perceived social support refers to the cognitive appraisal of one’s interpersonal relationships and the perception of how available support is (Pottie et al., 2008; Streeter & Franklin, 1992). In other words, perceived social support is the belief that one can receive empathy, care, and assistance from someone (Alon, 2019).

Social support is a coping resource that can be conceptualized as a “social fund” from which individuals draw in the face of a stressor (Rathore & Mathur, 2015, p. 344). Social supports can include informal supports, such as immediate and extended family, friends, neighbors, and significant others, and formal supports such as professional care (i.e., medical, psychological, educational; Marsack & Samuel, 2017; Shepherd et al., 2020; Zablotsky et al., 2013). Parents of children with ASD tend to rate informal social supports as more effective and stress-reducing than formal social supports (Shepherd et al., 2020). Additionally, informal support, as opposed to formal social support, has been found to partially mediate the relationship between parental burden and quality of life, among parents of children with ASD (Marsack & Samuel, 2017). A study on mothers of children with ASD conducted by Zablotsky et al. (2013) found that mothers’ use of strong coping skills, emotional social supports, and neighborhood social supports were correlated with a decreased risk for both maternal stress and maternal mental health issues, compared to mothers of neurotypical children. These maternal coping strategies particularly buffered the risk of stress and mental health problems among mothers of children with more severe ASD symptoms (Zablotsky et al., 2013). These studies
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reinforce previous findings that informal social supports are associated with maternal well-being in families of children with ASD (Boyd, 2002; Dunn et al., 2001; Gill & Harris, 1991; Marsack & Samuel 2017; Wolf et al., 1989). Thus, reducing parental stress through an increase in informal social support may improve parents’ quality of life (Dunn et al., 2001; Marsack & Samuel, 2017; Zablotsky et al., 2013). These findings may be attributed to parents of children with ASD preferring the routine, hands-on assistance, personalness, and accessibility of informal social supports (Shepherd et al., 2020).

Perceived social support from one’s inner circle (i.e., spouse, friends, family) contributes to effective coping, less parental distress, resilience, and well-being (Alon, 2019; Benson, 2002; Boyd, 2002; Ekas et al., 2010; Dunn et al., 2001; Gill & Harris, 1991; Pozo et al., 2014; Weiss et al., 2013; Zablotsky et al., 2013). Social support has been found to mediate the association between resilience and perceived health among parents of children with ASD (Ruiz Robledillo et al., 2014). Parents who feel more supported also report the lowest stress levels (Bristol & Schopler, 1983; Ekas et al., 2010; Gallagher & Whiteley, 2012; Samadi & McConkey, 2014; Wayment & Brookshire, 2018; Zablotsky et al., 2013). A study conducted by Alon (2019) revealed that the social support mothers of children with ASD received contributed to post-crisis growth or resiliency; this finding was not found among mothers of children with Down syndrome. In contrast to Down syndrome, specific features of ASD may be associated with a decrease in maternal post-crisis growth, and these findings suggest that social support is a significant predictor of stress-related growth for these mothers (Alon, 2019). Since social support reduces some of the difficulties associated with rearing a child with ASD, increasing mothers of children with ASD’s social support is imperative to their well-
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being and their family’s (Alon, 2019). A meta-analysis completed by Boyd (2002) found that mothers of children with ASD who report high levels of social support tend to have better relationships with their children. Lower levels of social support, on the other hand, predicted higher levels of anxiety, depression, and anger among mothers of children with ASD (Boyd, 2002).

Research demonstrates that parents of children with disabilities experience greater levels of stress, anxiety, and depression than other parents (Abbeduto et al., 2004; Cuzzocrea et al., 2016; Dabrowska & Pisula, 2010; Dumas et al., 1991; Estes et al., 2009; Hamlyn-Wright et al., 2007; Wolf et al., 1989). Furthermore, families of children with disabilities are more likely to experience more family problems (Rathore & Mathur, 2015). Among families of children with ASD, social supports have been identified as a crucial strategy for decreasing parental and familial stress and ameliorating parental health (Alon, 2019; Bromley et al., 2004; Marsack & Samuel, 2017; Sharpley et al., 1997; Shepherd et al., 2020; Zablotsky et al., 2013).

Social support helps mothers of children with ASD shift their attention onto positive aspects and meaning-making, not just on the challenges of raising a child with ASD (Alon, 2019; Lickenbrock et al., 2011; McGrew & Keyes, 2014; Pozo et al., 2014). Social support can increase mothers’ optimism and feelings of hope, decrease feelings of depression, loneliness, and parental stress, and improve overall well-being (Alon, 2019; Altiere & von Kluge, 2009; Benson & Kersh, 2011; Boyd, 2002; Ekas et al., 2010; Marsack & Samuel, 2017; McGrew & Keyes, 2014; Pottie et al., 2008; Pozo et al., 2014; Zablotsky et al., 2013). Furthermore, mothers who feel positively about their child with ASD tend to report greater marital satisfaction and quality of life (Lickenbrock et al.,
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2011). Social support is associated with fewer marital challenges (Benson & Kersh, 2011; Bromley et al., 2004; Dunn et al., 2001; Ekas et al., 2015; Garcia-Lopez et al., 2016; Kersh et al., 2006).

There are mixed findings regarding the quantity and quality of extended family support. Some studies have reported that parents of children with ASD perceived their extended family as being supportive, helpful, and accepting of their child (Matthews et al., 2011; Myers et al., 2009; Papageorgiou & Kalyva, 2010). Mothers treasured the support received from extended family and claimed that their extended family helped them cope with their child’s diagnosis of ASD and helped them care for their child, in addition to promoting family closeness (Altiere & von Kluge, 2009; Koydemir-Ozden & Tosun, 2010; Matthews et al., 2011; Myers et al., 2009). Other studies have concluded that the extended family did not understand the diagnosis of ASD and went so far as to deny the diagnosis or blame the parent for the child’s behaviors (Broady et al., 2017; Myers et al., 2009; Woodgate et al., 2008). According to parents of children with ASD, other extended family members accepted the diagnosis, despite not understanding it, and thus were unable to offer adequate support, and some were unwelcoming or rejecting of the child with ASD (Broady et al., 2017; Matthews et al., 2011; Myers et al., 2009; Papageorgiou & Kalyva, 2010; Ryan, 2010; Safe et al., 2012; Woodgate et al., 2008).

Parents of children with ASD have also reported resenting their lack of extended family support, thus promoting feelings of isolation (Matthews et al., 2011). Several studies have also found that parents and the child may even be excluded from family gatherings because of their child’s ASD (Matthews et al., 2011; Myers et al., 2009), which suggests stigmatization within the family (Broady et al., 2017).
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Marital Satisfaction

Marriage lays the principal foundation for creating a family and raising the future generation, making it one of the most crucial human relationships (Larson & Holman, 1994). However, despite marriages and long-term relationships being longed for by many, the American Psychological Association (n.d.) reports that approximately 40-50% of marriages in the United States end in divorce, making marital satisfaction hard to obtain (Javanmard & Garegozlo, 2013). Marital satisfaction affects the entire family unit and plays a role in children’s well-being (Javanmard & Garegozlo, 2013; Morrison et al., 1994).

Marital conflict has been shown to affect children’s stress response system, sleep patterns, cognitive performance, attention, memory, school achievement, self-esteem, and emotional security (Amato, 1986; Hinnant et al., 2013; Mannering et al., 2011; Zemp et al., 2021). Children from homes with greater marital discord tend to perceive their parents as being less accepting, responsive, and supportive, and they are more likely to have an insecure attachment style (Sirvanli-Ozen, 2004). Furthermore, these children are more likely to experience maladaptive internalizing and externalizing behaviors throughout development and decreased child adjustment (Rhoades, 2008).

According to Kachooei et al. (2016), marital satisfaction is compromised by the couple's satisfaction regarding adjustment, division of household and caregiving duties, coordination of roles, interactions with others, and engagement in physical displays of affection and emotional intimacy. Greater marital satisfaction is experienced when couples can communicate love and affection. Sharlin et al.'s (2000) multinational study on long-term marriages identified several key ingredients essential for marital
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satisfaction, including: "love, mutual trust, mutual respect, mutual support, corresponding religious beliefs, loyalty and fidelity, mutual give and take, similar philosophy of life, enjoyment of shared fun and humor, shared interests, and shared interests in their children" (p. 68). Research by Terman et al. (1938) comparing couples with high marital satisfaction versus low marital satisfaction reported an association between couple's satisfaction and the following variables: emotional stability, being emotionally dependent, consideration for each other, being a companion, being accommodating, and having high self-esteem.

Burgess and Wallin’s (1953) research on marriage found that regarding spousal support, the husbands’ support is significantly predictive of both the husbands’ and wives’ marital satisfaction. Beach et al. (1990) studied six facets of social support that are most relevant regarding the relationship between marriage and the development of depressive symptoms. The six facets are: “(1) couple cohesion, (2) acceptance of emotional expression, (3) actual and perceived coping assistance, (4) self-esteem support, (5) spousal dependability, and (6) intimacy and confiding” (p. 68). However, Beach et al. (1990) claimed that these adaptive behaviors might be less accessible to mediate marital conflict when marital conflict occurs, which increases the risk of individuals experiencing depressive symptoms. According to Beach et al.’s (1990) marital discord model, discordant wives may experience greater vulnerability to marital conflict than men due to a decreased ability to ward off the adverse effects of marital conflict, which may lead them to respond to their spouses with more negative behavior. Couples begin to condemn, nag, and place increased demands on their spouse, and a spouse or both may start to pull back, disengage, or feel hurt (Beach et al., 1990). Altogether, these
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problematic behaviors increase the risk of depressive symptoms, especially in women (Beach et al., 1990). In fact, if a woman experiences marital dissatisfaction, she is 50% more likely to be depressed (Beach et al., 1985). In contrast, a male unsatisfied in his marriage is 25 times more likely to be depressed (Weissman, 1987). Beach et al. (1990, p. 4) and Najman (2014) have found a bidirectional relationship between marital satisfaction and maternal depression, such that marital conflict can be both “a cause and a correlate” of depressive symptomatology in women. However, Beach et al. (1990) found that it is more common for marital conflict to precede depression than for depression to precede marital conflict. On the contrary, if a woman is satisfied in her marriage, the relationship protects against depression (Brown & Harris, 1978).

Beach et al. (1990) also found that couples in marital distress reported heightened stress levels, decreased social support, and decreased ability to cope. For spouses who are not currently experiencing depression, the combination of stress and lack of social support associated with marital conflict will likely increase their chances of having a major depressive episode (Beach et al., 1990). Among depressed spouses, the chronic stress and lack of support they already experience will likely exacerbate the intensity of their depressive episode (Beach et al., 1990; Najman et al., 2014). Lastly, for spouses recuperating from a depressive episode, the stress and reduced spousal support associated with marital conflict will likely delay their improvements further (Beach et al., 1990). Thus, marital distress is related to high stress, decreased spousal support, and depression (Beach et al., 1990; Najman et al., 2014). Since women, in general, are at a greater risk for depression than men, and mothers of children with ASD are at an increased risk for
psychological disorders, including depression, this further amplifies the need to study this population and their relationships with their spouses.

A factor worth considering is the difference in gender roles and expectations within marriage and child-rearing. Given that gender roles are often internalized, women frequently emphasize relationships and caring for others, prioritizing the needs of other family members over their own, regardless of whether their needs are met (Fincham et al., 1997). LeBaron et al. (2014) and Kulik (2002) found a significant relationship between women’s perception of equality in their marriages and marital satisfaction. In other words, women who felt a more egalitarian power distribution in their marriage experienced more marital happiness, compared to women who perceived their marriages as having an unequal distribution of marital power (Kulik, 2002; LeBaron et al., 2014). Women’s greater obligations regarding household- and child-related duties, their tendency to have less power in marriages, and their greater likelihood of experiencing depression than men (Bulanda, 2011) might suggest that women are more vulnerable to marital conflict than men (Fincham et al., 1997).

The literature has consistently shown that women experience less marital satisfaction than men (Bulanda, 2011; Jackson et al., 2014; Kulik, 2002; LeBaron et al., 2014). However, Jackson et al.’s (2014) meta-analysis on this gender difference in marital satisfaction found that this finding was moderated by the admittance of clinical samples in their analyses, with wives in marital therapy being more likely to report marital dissatisfaction than their husbands. The non-clinical sample found no significant differences between husbands’ and wives’ marital satisfaction (Jackson et al., 2014). As previously stated, a strong association has been found between low marital satisfaction
and depression (Fincham et al., 1997; Henderson et al., 2003; Najman et al., 2014; Waring, 1994). Furthermore, Fincham et al. (1997) found that wives’ depression affected their husbands’ marital happiness, but not the inverse. There appears to be a bidirectional relationship between depression and marital satisfaction (Christian-Herman et al., 2001; Fincham et al., 1997; Najman et al., 2014) and gender differences in how these variables relate (Fincham et al., 1997).

Marital Satisfaction in Special Needs Families

As previously mentioned, having a child with special needs and the increase in demands and responsibilities this ensues is considered a family stressor (Burton, 1975; Ramisch, 2012). Parents of children with disabilities experience stress and concern over their child’s developmental trajectory and well-being, in addition to managing the high needs of their child (O’Nions et al., 2018; Ramisch, 2012). Additionally, parents may experience powerful emotions such as guilt, depression, anxiety, grief, and chronic uncertainty (Bonner et al., 2005; Myers et al., 2009; Negash et al., 2015). Alongside this emotional strain, parents must also cope with the gravity of a lifelong disability, the management of behavior problems, a plethora of treatment options to navigate, health issues, and the financial cost of treatments (Negash et al., 2015).

Raising a child with special needs can affect how parents interact with each other, which in turn can affect their relationship (Brobst et al., 2009; Hartley et al., 2010, 2011; Johnson, 2012; Kaufman & Pickar, 2017; Lavee & Mey-Dan, 2003; Negash et al., 2015; St. John et al., 2003; Wijnberg-Williams et al., 2015). Families with children with special needs may need to pay more considerable attention to following routines and family rituals (Kaufman & Pickar, 2017; Marquenie et al., 2011). For example, parents of
children with disabilities often experience greater caregiving demands, responsibilities, and routines. Spending more time in a child-rearing role contributes to higher levels of burnout (Keller & Honig, 2004; Negash et al., 2015; Ramisch, 2012). The increase in parenting demands and amount of time needed to care for a special needs child often affects parents’ careers or education opportunities by leaving one parent to care for the child while the other parent adds on more work shifts to sustain the family on one income (Fletcher et al., 2012, Matthews et al., 2011; Myers et al., 2009; Negash et al., 2015).

These adjustments families of children with special needs often make lead parents to experience fewer interactions with one another and less intimacy in their marriage (Negash et al., 2015; Wijnberg-Williams et al., 2015). Among a sample of parents of pediatric cancer patients in the Netherlands, mothers reported feeling significantly less emotional intimacy than fathers (Wijnberg-Williams et al., 2015). Another study on parents of pediatric cancer patients conducted by Lavee and Mey-Dan (2003) corroborated that parents’ sexual intimacy was the relationship component that was most impacted by their child’s illness. However, Negash et al. (2015) suggested that sexual desire may not adequately predict marital adjustment in parents of children with disabilities. These parents may prioritize other factors as being more critical in their marital satisfaction (Negash et al., 2015).

Several studies of families of children with developmental delays have found that marital satisfaction has a buffering effect on parental stress (Robinson & Neece, 2015) and that higher marital satisfaction can predict lower parental stress (Kersh et al., 2006). Research has consistently found a relationship between parenting stress and marital satisfaction (Beach et al., 1990; Brobst et al., 2009; Hartley et al., 2012, 2016; Gerstein et
al., 2009; Goetz et al., 2019; Kersh et al., 2006; Najman et al., 2014; Robinson & Neece, 2015; Sim et al., 2017), and that parental stress, depression, and marital satisfaction are associated with child maladaptive behavior (Baker et al., 2002, 2005; Beck et al., 2004; Brobst et al., 2009; Davis & Carter, 2008; Garcia-Lopez et al., 2016; Hartley et al., 2012, 2016; Hassall et al., 2005; Hastings, 2003b; Lecavalier et al., 2016; Picardi et al., 2018; Rao & Beidel, 2009; Robinson & Neece, 2015; Sikora et al., 2013; Zablotsky et al., 2013).

Robinson and Neece (2015) studied the relationship between marital satisfaction, parenting stress, and child behavior problems among parents of young children with developmental delays. They found a statistically significant relationship between marital satisfaction and both parenting stress and child behavior problems (Robinson & Neece, 2015). Parents who were less satisfied in their marriages also had more significant parenting stress and a child with greater externalizing and internalizing problems (Robinson & Neece, 2015). Parents who were more satisfied in their marriages reported fewer child behavior problems (Robinson & Neece, 2015). Marital satisfaction was associated with child externalizing behaviors (i.e., attention problems, hyperactivity, aggression, defiance) and internalizing behaviors (i.e., anxiety, depression, and affective lability), in addition to sleep difficulty (Robinson & Neece, 2015).

Robinson and Neece’s (2015) findings are consistent with prior research, indicating that marital dissatisfaction significantly affects child-rearing behavior and the quality of the parent-child interaction (Erel & Burman, 1995; Stroud et al., 2014). Greater marital quality is associated with greater parental warmth, which is related to better child adjustment and fewer child behavior problems in both boys and girls (Stroud et al.,
These findings are consistent with the spillover hypothesis (Hartley et al., 2012; Stroud et al., 2011, 2014); marital quality impacts child adjustment through the couple’s parenting behaviors and interactions.

A meta-analysis conducted by Risdal and Singer (2004) found that parents of children with disabilities reported decreased marital adjustment compared to parents of neurotypical children, but the effect size was nonsignificant. Further, child disability was associated with increased marital hardship, with a small effect size (Risdal & Singer, 2004). Risdal and Singer (2004) found that the divorce rate was 5.97% higher among families of children with disabilities compared to controls. Despite these small effect sizes, the findings still reveal some areas of concern among this population (Risdal & Singer, 2004).

Another study on parents of children with craniofacial anomaly revealed that 47% of the couples that remained married reported that their child with a disability strengthened their marriage; 13% of nondivorced couples felt that having a child with a disability worsened their relationship (St. John et al., 2003). The divorce rate was 6.8% for parents of children with disabilities, with 41% of divorced couples stating that their child’s disability had damaged their relationship and 31% reporting that their child’s disability was partially responsible for their divorce (St. John et al., 2003). These findings suggest that there are various ways in which couples adapt and respond to having a child with a disability (Risdal & Singer, 2004; Sobsey, 2004; St. John et al., 2003). However, this variability does not diminish the consistent finding that these parents can experience high rates of stress, which can overwhelm some marriages (Risdal & Singer, 2004).
How a couple raising a child with ASD copes can partially determine which couples adjust to the increased caregiving demands and which struggle to stay afloat (Sim et al., 2017). A bidirectional relationship exists between a couple's ability to cope with their child’s disability and their marital satisfaction, whereby they affect each other (Dahlquist et al., 1996; Negash et al., 2015; Sim et al., 2017). Negash et al. (2015) found that parents of children with disabilities who reframed their child’s condition as less negative experienced more marital satisfaction and sexual satisfaction than parents who did not engage in cognitive reframing as a coping mechanism. Similarly, this study also discovered that parents who employed less effective coping strategies were less satisfied in their marriages. Negash et al. (2015) found that the coping mechanisms parents of children with disabilities use may promote or decrease resiliency in the couple dyad.

**Marital Satisfaction in Autism Spectrum Disorder Families**

Parents of children with ASD are more likely to be divorced than parents of neurotypical children (Hartley et al., 2010). Despite the divorce rate decreasing after the age of 8 in families of children without disabilities, Hartley et al. (2010) found that the divorce rate remains high for parents of children with ASD until the child reaches adulthood. Parents of typically developing children are at higher risk for divorce during their child’s childhood, before adolescence, due to the increased caregiving responsibilities associated with having a young child and the subsequent reduction in attention to their partner’s needs (Hartley et al., 2010; Higgins et al., 2005). As a result, the incidence of divorce is lower among parents of neurotypical children who can endure these years (Hartley et al., 2010). Parents of children with ASD continue experiencing significant stressors and caregiving demands throughout their child’s development, into
adulthood (Abbeduto et al., 2004; Hartley et al., 2010; Seltzer et al., 2010; Smith et al., 2010). As such, they experience a longer period of divorce vulnerability that continues into their child’s adulthood (Hartley et al., 2010). Given that children with ASD may not be able to live independently as adults, they are more likely to continue co-habiting with their parents, which is associated with high levels of daily stress among parents (Hartley et al., 2010; Seltzer et al., 2000), and continued marital difficulties.

According to Hartley et al. (2016), of all the developmental disabilities, ASD may be one of the most taxing on parents. Parents of children with ASD report lower levels of subjective well-being compared to parents of typically-developing children and parents of children with other disabilities (Abbeduto et al., 2004; Bromley et al., 2004; Cuzzocrea et al., 2016; Dabrowska & Pisula, 2010; Eisenhower et al., 2009; Estes et al., 2009; Hartley et al., 2010; Hayes & Watson, 2013; Landon et al., 2018; Pisula & Porebowicz-Dorsmann, 2017; Rao & Beidel, 2009). A variety of variables has been found to play a role in these parents’ reduced well-being, including the child’s age and gender, the severity of ASD symptoms, the chronicity of ASD, behavior problems, financial stress, time poverty, caregiver burden, coping mechanisms, social support, parent’s marital status, marital satisfaction, and stigma (Abbeduto et al., 2004; Estes et al., 2009; Huang et al., 2014; Gray & Holden, 1992; Hartley et al., 2010; Landon et al., 2018; Lecavalier et al., 2006; McAuliffe et al., 2017; Sim et al., 2007).

Given ASD’s strong genetic basis, parents of children with ASD are more likely to possess the broader autism phenotype, which is marked by social deficits, pragmatic language challenges, and rigidity (Sasson et al., 2013). Further, these parents are at a greater risk for psychiatric disorders (Abbeduto et al., 2004). Similarly, they are more
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likely to be raising several children with disabilities or ASD (Gerdts & Bernier, 2011; Hartley et al., 2010). As a result, not only are these parents exposed to the demands and stress of having a child or multiple children with ASD and having potential mental health issues themselves or possessing the broader autism phenotype, but some parents also have fewer resources to manage these stressors, which likely increases family dysfunction and risk of divorce (Hartley et al., 2010).

Characteristics of the child with ASD may play a role in predicting marital dissolution (Hartley et al., 2010). Several studies have shown an association between the severity of ASD symptoms, parental stress, and marital satisfaction, such that the parents of children with ASD who exhibit more behavior problems tend to have increased parental stress and decreased relationship satisfaction (Brobst et al., 2009; Goetz et al., 2019; Hartley et al., 2010, 2012, 2016; Robinson & Neece, 2015). In families of children with developmental delays, Baker et al. (2002, 2005) found that child behavior problems contributed significantly more to parental stress than the child’s cognitive delay. Similarly, Rao and Beidel (2009) indicated that greater cognitive functioning among children with ASD did not buffer parental stress. Therefore, the severity of child behavior problems, as opposed to the child’s cognitive functioning, might be more indicative of parental stress, marital conflict, and divorce (Hartley et al., 2010). Child behavior difficulties, having multiple children with ASD/other disabilities, parents’ ability to manage life stressors, parents’ increased risk of psychiatric symptoms, and parental possession of the broader autism phenotype may all affect a marriage (Hartley et al., 2010).
In a study involving daily experiences across 14 days, parents of children with ASD reported poorer day-to-day couple exchanges than parents of typically developing children, namely less positive couple interactions, less time spent together, and decreased feelings of closeness (Hartley et al., 2017a). These results are likely attributed to the time poverty these parents face because of increased child-rearing demands (Smith et al., 2010), which may limit the amount of time the couple spends together (Hartley et al., 2017a). Due to the couple’s reduced amount of time spent with each other, they may spend time problem solving instead of intimately connecting, thus decreasing partner closeness (Hartley et al., 2017a).

For both mothers and fathers of children with ASD, experiencing more negative marital interactions (i.e., marital conflict, criticism, expression of anger) was predictive of more significant parental stress the following day (Hartley et al., 2016). A day with fewer positive marital interactions (e.g., joking, engaging in intimate behaviors, or engaging in something enjoyable) also predicted more significant parenting stress for mothers the following day (Hartley et al., 2016). Spillover effects are bidirectional. A day with more significant parenting stress predicted fewer positive marital interactions (Hartley et al., 2016). Thus, it is possible that experiencing an increase in parental stress decreases mothers’ emotional resources, leaving mothers drained of energy to joke, be intimate with their partner, or do something fun (Hartley et al., 2016, 2017a).

In another study conducted by Hartley et al. (2017b), parents of children with ASD reported experiencing more recurrent and severe marital discord than parents of typically developing children. Findings from observed couple conflict interactions studied by Hartley et al. (2017b) discovered that parents of children with ASD possess
both strengths and weaknesses regarding marital discord. Some of the weaknesses include being less engaged, less cooperative, and having a less balanced interaction compared to parents of children without disabilities (Hartley et al., 2017b). Yet, upon controlling for marital satisfaction, these differences were not significant and were found to be the result of a lower overall score on marital satisfaction compared to parents of neurotypical children (Hartley et al., 2017b). Regarding strengths during marital discord, parents of children with ASD were observed to possess more positive affect and sensitivity towards their partner than parents of neurotypical children (Hartley et al., 2017b).

Mothers of Children with ASD

Among parents of children with ASD, mothers reported greater levels of parenting responsibility, stress, subjective burden, perceived stigma, depression, and illnesses than fathers (Dabrowska & Pisula, 2010; Gray, 2002; Hastings et al., 2005; Herring et al., 2006; Padden & James, 2017; Picardi et al., 2018; Sharpley et al., 1997). Mothers are also more likely to use more coping supports than fathers (Padden & James, 2016). Mothers of children with ASD have also been found to have more positive perceptions of their child with ASD than fathers (Hastings et al., 2005). Mothers of children with ASD are prone to poorer emotional well-being and increased stress levels when compared to mothers of neurotypical children and children with other disabilities (Benson, 2017; Dabrowska & Pisula, 2010; Hastings et al., 2005; Padden & James, 2017; Pisula & Porebowicz-Dorsmann, 2017; Safe et al., 2012; Zablotsky et al., 2013). The more problematic the behaviors of a child with ASD, the greater the maternal distress and
depression and the lower the family adaptability (Abbeduto et al., 2004; Estes et al., 2009; Hastings et al., 2005; Orsmond et al., 2007).

Alon (2019) identified four specific characteristics of ASD that may negatively impact mothers. First, given that ASD does not have prominent physical features that are characteristic of the disability, children with ASD tend to look neurotypical, thus their ASD is unlikely to be detected by the public (Alon, 2019; Broady et al., 2017). A discrepancy may exist between children with ASD’s typical physical appearance and their atypical behaviors, given the socio-emotional, cognitive, sensory, and behavioral challenges these children may face (Broady et al., 2017; Ryan, 2010). This discrepancy, along with the child’s potentially unpredictable or socially undesirable behaviors, may lead to observers interpreting these behaviors as “bad parents with naughty children” rather than as symptoms of a developmental disability (Farrugia, 2009, p.1016). Therefore, mothers of children with ASD may feel anxiety, stress, and blame related to managing a child with ASD in public (Alon, 2019). These negative emotional experiences may lead mothers to avoid public settings with their children to avoid stigma (Alon, 2019; Broady et al., 2017; Farrugia, 2009; Gray, 2002; Green, 2003; O’Nions et al., 2018; Ryan, 2010). Avoidance of social interactions limits children’s socialization and inhibits mothers from receiving social support and compassion from others (Alon, 2019). The second characteristic of ASD that Alon (2019) found to impact mothers of children with ASD negatively pertains to the core features of ASD. ASD is characterized by a difficulty with communication and social reciprocity, and repetitive and fixated behaviors, which may not be as tolerated by society, and thus may limit the support mothers receive (Alon, 2019; American Psychiatric Association, 2013; Ludlow et al.,
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2011; Ooi et al., 2016; Safe et al., 2012). Research has consistently stated that parents of children with ASD often feel lonely and isolated from others (Alon, 2019; Dunn et al., 2001; Ludlow et al., 2011; Woodgate et al., 2008), with several parents reporting having lost half of their friends due to the stigmatization of ASD (Farrugia, 2009). Third, Alon (2019) found that parents of children with ASD often report having a negative outlook regarding their child with ASD (Abbeduto et al., 2004; Green, 2003; Myers et al., 2009). These three negative experiences, along with the parenting stress and internalized feelings of guilt and embarrassment, as well as stigma and perceived judgment and rejection from others (Broady et al., 2017; Gray, 2002), may further lead to increased parenting stress and lack of perceived social support in these parents (Alon, 2019). A study conducted by Duarte et al. (2005) also found that a particular source of stress for mothers of children with ASD was their child’s lack of socio-emotional reciprocity, specifically the lack of affect expression and little interest in others.

Given that familial functioning is significantly related to mothers’ well-being (Johnson et al., 2011), a body of literature examining mothers of children with ASD is growing. Compared to mothers of children without disabilities and mothers of children with other disabilities, mothers of children with ASD are at a greater risk for high parenting stress, subjective burden, and less favorable mental health outcomes (Herring et al., 2006; Montes & Halterman, 2007; Pisula, 2006; Yamada et al., 2007; Zablotsky et al., 2013). Stressors mothers of children with ASD have identified include the limited continuity of care with professionals following the child’s diagnosis, little communication between the different providers involved in caring for the child (e.g.,
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healthcare, education, and social services), and the lack of access to professional services (Osborne & Reed, 2008).

Research has indicated that parents of children with ASD are at a greater risk for experiencing serious psychological distress (Bromley et al., 2004). Several factors associated with increased risk of psychological distress for this population have been identified, such as the severity of the child’s behavioral problems, child age, and amount of social support received by the parents (Brobst et al., 2009; Bromley et al., 2004; Dunn et al., 2001; Estes et al., 2009; Hastings, 2002; Herring et al., 2006; Huang et al., 2014; Lyons et al., 2009; Rivard et al., 2014; Safe et al., 2012; Sharpley et al., 1997). Specific parental characteristics including age, gender, hardiness, coping strategies, spousal’s stress, perceived self-efficacy, motivation to socialize, received social support, and level of understanding parents perceive their immediate family members to have on their child’s problems have also been found to play a role in the experience of parental distress (Bitsika et al., 2013; Duarte et al., 2005; Dunn et al., 2001; Gill & Harris, 1991; Hastings, 2002; Hastings & Brown, 2002; Lyons et al., 2009; Safe et al., 2012; Sharpley et al., 1997; Weiss, 2002). Parenting stress is also related to the lifelong course of ASD, the stigmatization within the family and the overall community that contributes to isolation, and the limited access to affordable and effective healthcare (Safe et al., 2012; Sharpley et al., 1997; Woodgate et al., 2008).

Through a series of in-depth interviews with mothers of children with ASD, Safe et al. (2012) identified four themes of challenges experienced by this population: (1) “a paradox of emotions”; (2) “the frustration of finding the right support”; (3) “mother as
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therapist”; and (4) “something’s got to give” (p. 297). A summary of the themes is provided here to provide context for the importance of this study.

“A Paradox of Emotions.” The mothers in this sample experienced “a paradox of emotions”, in which they valued their child while simultaneously wishing for a “normal life” for their child (Safe et al., 2012, p. 297) and family (Woodgate et al., 2008). They experienced grief associated with the ambiguous loss of normalcy, changed their expectations for their child’s life, and altered their concept of what it means to live a valuable life (Safe et al., 2012). Mothers also attempted to cope by changing their perspective on their child’s diagnosis and trying to view it favorably but doing so was usually ineffective (Safe et al., 2012). Mothers reported being routinely met with a lack of understanding about ASD from others (Sharpley et al., 1997), indifference regarding the diagnosis, insensitivity regarding meeting their child’s distinct needs, and, at times, rejection or stigma (Safe et al., 2012). Mothers reported that their extended families often misunderstood the child’s condition, which diminished their likelihood of seeking support from them (Broady et al., 2017; Ryan, 2010; Safe et al., 2012; Sharpley et al., 1997; Woodgate et al., 2008).

“Frustration of Finding the Right Support.” The mothers in Safe et al.’s (2012, p. 298) study also identified finding the proper support as a stressor. Mothers reported on the usefulness of obtaining practical and emotional support from mothers of other children with ASD. However, they shared that having their support system be based on their child’s diagnosis meant their whole lives would be focused on ASD (Safe et al., 2012). Mothers expressed a desire to develop friendships with parents of neurotypical children, but these parents misunderstood ASD and tried to distance themselves from
their family; this further compounded the frequent feelings of social exclusion reported by mothers of children with ASD and reduced socializing opportunities for their child (Safe et al., 2012). Mothers added that receiving support from the child’s school staff was another stressor. Although mothers reported feeling supported by their child’s therapist(s), they also felt encumbered and stressed by the financial and time constraints of therapy (Safe et al., 2012).

The financial cost and substantial amount of time required for children with ASD to obtain specialized schooling or a variety of therapies has affected parents of children with ASD’s, usually mother’s, ability to maintain employment (Cidav et al., 2012; Myers et al., 2009). Mothers often have to work part-time, resign from their jobs, and decline promotions and furthering their education to “be with [their] child all the time” (Koydemir-Ozden & Tosun, 2010, p. 61; Cidav et al., 2012; Fletcher et al., 2012; Hock et al., 2012; Marsack-Topolewski et al., 2021; Matthews et al., 2011). Children with ASD benefit from structure and predictable routines and often have difficulty with sudden changes (Karst et al., 2014). Thus, if parents of children with ASD work, having consistent schedules with minimal changes and having flexible employers is key to help parents maintain employment (Karst et al., 2014; Matthews et al., 2011), which can be challenging to find. Therefore, the demand for mothers to stay home and take care of their child not only impedes them from having their desired career, but it also results in fathers, or the working parents, being the sole breadwinners of the family and usually having to take on extra work shifts to produce sufficient income for the family (Hock et al., 2012; Myers et al., 2009). A significant portion of an ASD family’s finances is spent on expensive treatments and specialized programs/schools; financial strain increases
stress and anxiety levels. It is not surprising that a significant correlation has been found between socioeconomic status and depression, such that mothers with a higher income report fewer depressive symptoms (Abbeduto et al., 2004; Ormond et al., 2007).

“Mother as Therapist.” Safe et al. (2012) identified the theme of: “mother as therapist” to encompass several tasks (p. 298). Mothers felt like they had to take on additional roles; they reported having to learn therapeutic techniques and implement them at home, like a therapist (Safe et al., 2012). They claimed to need more time to prepare activities and transitions for their child, anticipate, and simultaneously minimize the emotional turmoil or confusion experienced by their child when transitioning between tasks (Safe et al., 2012). Not only did mothers report having to act as therapists with their children, but they also reported having to serve as advocates to family members, friends, and their child’s school staff about ASD and their child (Safe et al., 2012). These mothers reported a dichotomy of loving their child as they are while taking on a therapist role to improve their child’s developmental trajectories and behavior management, and placing these greater demands on themselves compounded feelings of daily stress (Safe et al., 2012).

“Something’s Got to Give.” Given the significant number of demands and stressors experienced by mothers of children with ASD, it is not surprising that one of the identified themes in Safe et al.’s (2012) study was that mothers believed that “something’s got to give” (p. 299). Mothers reported that their numerous demands negatively affected various parts of their lives (Safe et al., 2012). Mothers specified that prioritizing their child with ASD did not negatively impact their relationship with their child but compromised their ability to maintain other valuable relationships (Joosten &
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Safe, 2014; Safe et al., 2012). In addition, mothers could not fathom engaging in valued activities for their own pleasure or respite when they were already having difficulty meeting caregiving demands and household duties (Safe et al., 2012). When mothers did have free time, they usually wanted to relax and decompress (Safe et al., 2012).

The lifestyle imbalance described by Safe et al.’s (2012) study, in which mothers had minimal time to themselves, their valued activities, and other individuals they cared about, is a significant risk factor for these mothers’ mental and physical health. Parents’ health is affected, often due to the demands of caring for a child with ASD or due to parents disregarding their health for their child’s, leading to sleep deprivation, fatigue, insomnia, low energy levels, and worsening of pre-existing conditions (Fletcher et al., 2012; Matthews et al., 2011; Myers et al., 2009; Safe et al., 2012). The competing demands and managing of several roles, along with the emotional and physical toll experienced by these mothers, reinforces the need for this population to be provided with more practical support (Safe et al., 2012). Since most of the effort and care these mothers dedicated to their children occurred behind closed doors, this may partially explain their limited support and lack of rest (Safe et al., 2012). These mothers reported high levels of loneliness (Safe et al., 2012), which is a strong predictor of maternal anxiety and depression (Alon, 2019; Altiere & von Kluge, 2009; Benson & Kersh, 2011; Bishop et al., 2007; Boyd, 2002; Ekas et al., 2010; McGrew & Keyes, 2014; Pottie et al., 2008; Pozo et al., 2014). Furthermore, mothers of children with ASD are at an increased risk for decreased marital satisfaction and burnout given that they tend to spend more time balancing multiple roles in caring for their family unit and child with ASD, compared to
fathers (Brobst et al., 2009; Goetz et al., 2019; Hartley et al., 2010, 2012, 2016; Morgan, 1988; Robinson & Neece, 2015).
Chapter 3: Study Purpose and Rationale

According to Family System Theory, the family is a system, inclusive of a variety of relationships, or subsystems, between each family member (Goldenberg et al., 2017). Family dysfunction is most likely to occur when the family has difficulty adapting and adjusting to stress (Goldenberg et al., 2017). Having a child with ASD can serve as a stressor on the family unit. Parents, siblings, and extended family members are affected, and it can change the overall functioning of the family unit (Morgan, 1988; Sanders & Morgan, 1997).

The experience of external stress (stress outside the relationship) has been linked to lower relationship satisfaction (Neff & Karney, 2009). The experience of stress can increase negative interactions in the relationship (Neff & Karney, 2009). For example, when spouses are stressed or under pressure, they might withdraw from their partner, contribute less to housework, and engage in fewer recreational activities (Neff & Karney, 2009; Repetti, 1989). Additionally, couples under stress tend to increase their negative perceptions of their partner; if partners are experiencing more negative exchanges with each other, they are likely to engage in more pessimistic interpretations and perceptions of their spouse and their relationship (Neff & Karney, 2004). Partners most vulnerable to stress-spillover effects experience the most significant decreases in marital satisfaction over time (Neff & Karney, 2009). Thus, external stress factors can negatively impact the partner’s experience of their relationship and lead to decreased relationship satisfaction (Neff & Karney, 2009), thus weakening the family system.

The demands associated with parenting a child with special needs, the parent’s health, the parent-child interaction, and the child’s psychosocial adjustment contribute to
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parenting stress and can challenge the family system (Deater-Deckard, 1998). Child-rearing difficulties may deplete a parent’s emotional resources, leading to higher levels of couple conflict and decreased marital satisfaction within the marriage subsystem (Hartley et al., 2017b), which also negatively affects the family unit. Furthermore, just as an increase in problematic child behavior can increase couple conflict, so too can couple’s conflict increase a child’s maladaptive behavior (Hartley et al., 2017b).

A child’s characteristics, in addition to other parental life stressors, contribute to parental stress and impact a parent’s personal resources and the family system’s resources and vice versa (Perry, 2004). The parent’s received level of support also plays a role in perceived parental stress and the quality of resources a parent has at their disposal (Perry, 2004). The three variables, stress, resources, and support, affect parental outcomes. Per Perry’s (2004) model, the impact of stressors on parental outcomes is mediated and/or moderated by the influence of the resources and supports accessible to the parent.

Parental employment, education, income, relationship satisfaction, and communication have been identified as within-family resources that reduce stress (Perry, 2004). External resources include informal and formal social supports (i.e., extended family members, friends, neighbors, religious organizations, respite care, parent support groups, therapists; Perry, 2004). External resources are significant predictors of parental well-being, especially informal social supports (Benson, 2006; Boyd, 2002; Dunn et al., 2001; Gill & Harris, 1991; Marsack & Samuel 2017; Wolf et al., 1989; Zablotsky et al., 2013). Parents of children with ASD who receive more support have improved functioning, coping, and a reduction in stress and depression, especially if the child’s
symptoms are less severe (Benson, 2006) and the support received is informal (Boyd, 2002).

Families can either adapt or maladapt if they cannot balance their stressors with familial abilities, resources, and coping to meet overall expectations and demands (Ramisch, 2012). When families cannot adapt to their current life circumstances, psychological distress can ensue (Ramisch, 2012). Most families, however, are resilient in adapting to having a child with ASD, with many families reporting becoming a stronger family unit due to the disability (Altiere & von Kluge, 2009; Marshall & Long, 2010; McGrew & Keyes, 2014; Myers et al., 2009; Waizbard-Bartov et al., 2019). Thus, one of the primary goals in this study was to emphasize that mothers of children with ASD need more support in managing various aspects of their daily lives, including those not directly related to their child with ASD, but that indirectly affect their child with ASD.

Generally, parents of children with ASD not only have higher rates of divorce (Hartley et al., 2010), but they also have lower levels of relationship satisfaction than parents of children without disabilities (Gau et al., 2012; Hartley et al., 2010, 2017a, 2017b; Myers et al., 2009). However, other research has found no significant group differences in divorce rates compared to the general population (Freedman et al., 2012). Ramisch (2012) discussed that identifying a couple’s strengths and resources and using them to their advantage is the most helpful intervention aimed at helping couples raise a child with ASD.

This study emphasized the role of social support, perceived social support effectiveness, maternal stress, and marital satisfaction among mothers of children with ASD.
ASD. The rationale for studying these factors stems from the mother's well-being, the family, and the need to develop more robust interventions catering to marital and social support instead of only focusing on the child with ASD. No studies on parents of children with ASD have focused solely on formal supports; however, several studies have been published on the sole use and benefits of informal supports (Altiere & von Kluge, 2009; Benson, 2012; Ekas et al., 2010; Papageorgiou et al., 2010; Picardi et al., 2018; Sharpley et al., 1997; Weiss et al., 2013; Zablotsky et al., 2013). Few studies have examined the use and impact of both informal and formal supports (Boyd, 2002; Dunn et al., 2001; Marsack & Samuel, 2017; McGrew & Keys, 2014; Shepherd et al., 2020; Weiss, 2002). The few studies that have included formal supports tended to generalize the construct as professional support, with even fewer studies specifying types of formal support (see Marsack & Samuel, 2017; Shepherd et al., 2020). To our knowledge, no other study had investigated the relationship between various formal support types and marital satisfaction. Therefore, the purpose of this study was to address the gap in the literature regarding the effects of both formal and informal social supports on mothers of children with ASD’s marital satisfaction and maternal stress. For example, mothers may have less time to maintain social interactions with friends, leading to reduced support from their friends and greater reliance on support from their significant other. To help mothers experience more effective social support and satisfaction in their marriages, researchers must focus on enhancing factors that contribute to marital satisfaction instead of only addressing the negative aspects of the relationship that have led to overwhelm and dissatisfaction.
Objectives and Hypotheses

Based on the findings from the literature, the following objectives and hypotheses were proposed:

**Objective 1:** To explore which social supports mothers of children with ASD are currently accessing the most (i.e., national organizations for caregivers of children with ASD, state organizations for caregivers of children with ASD, community supports for caregivers [regardless of disability], paid caregivers/babysitters/respite care, parent’s therapist, child’s therapist, social groups/recreational, religious organization, general practitioner, child’s school staff, spouse/significant other, immediate family, extended family, friends, neighbors, and parents of other children with ASD/other disabilities). In a New Zealand-based study, Shepherd et al. (2020) found that across formal social supports, the ministry of social development (a government agency providing financial support to families with disabilities), respite care, district health boards (a national agency that provides funding for healthcare), and general practitioners were utilized the most and private therapists were the second least used formal support. Across informal social supports, parents reported utilizing their spouse the most, followed by immediate family, social media, friends, and relatives (Picardi et al., 2018; Shepherd et al., 2010). However, many qualitative studies have found a pattern of low social support from family and friends (Broady et al., 2017; Farrugia, 2009; Matthews et al., 2011; Myers et al., 2009; Picardi et al., 2018; Ryan, 2002; Safe et al., 2012; Weiss, 2002; Woodgate et al., 2008). Other studies have found great emotional support from family (Altiere & von Kluge, 2009; Koydemir-Ozden & Tosun, 2010; Ludlow et al., 2011; Matthews et al., 2011; Myers et al., 2009; Sharpley et al., 1997).
Hypothesis 1. Across formal supports, mothers of children with ASD will report using general practitioner the most frequently.

Hypothesis 2. Across informal supports, mothers of children with ASD will report using their spouse/significant other the most frequently, followed by immediate family.

Objective 2: To assess which social supports mothers of children with ASD are finding the most effective and most understanding of their child’s difficulties and needs (i.e., national organizations for caregivers of children with ASD, state organizations for caregivers of children with ASD, community supports for caregivers (regardless of disability), paid caregivers/babysitters/respite care, parent’s therapist, child’s therapist, social groups/recreational, religious organization, general practitioner, child’s school staff, spouse/significant other, immediate family, extended family, friends, neighbors, and parents of other children with ASD/other disabilities). Prior research has found a significant relationship between receiving social support and perceived satisfaction with said social support (Doron & Sharabany, 2013; Dunn et al., 2001), as well as social support buffering the impact of stress (Gallagher & Whiteley, 2012; Gill & Harris, 1991; Wolf et al., 1989; Zablotsky et al., 2013). A meta-analysis conducted by Boyd (2002) concluded that informal social supports were more effective in reducing stress than formal supports; Shepherd et al. (2020) corroborated these findings, except for private therapists. Studies assessing only informal supports of mothers of children with ASD concluded that mother’s perceived support from their partner, other family members, friends, and neighbors was associated with decreased levels of depression, anxiety, negative affect, and parenting stress (Boyd, 2002; Ekas et al., 2010). Similarly, Weiss et
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al. (2013) found that informal social support mediated the relationship between stress overload and resilience for mothers of children with ASD. A study conducted by Bitsika et al. (2013) found that parents who believed their family supports understood their child with ASD’s difficulties and needs were less anxious, depressed, and had greater perceived parenting efficacy. Thus, receiving support by someone the parent perceives as understanding ASD (Bitsika et al., 2013) and the perceived availability of this support (Gill & Harris, 1991) may be what impacts the effectiveness of the perceived social support. Furthermore, parents of children with ASD reported feeling a lack of support from family members who do not understand their child’s condition (Woodgate et al., 2008).

**Hypothesis 3.** A significant positive relationship will exist between received social support and the average effectiveness of social support.

**Hypothesis 4.** Mothers will report significantly greater effectiveness for informal supports compared to formal supports.

**Hypothesis 5.** Mothers will rate their spouse/significant other as the most effective form of support.

**Hypothesis 6.** Mothers will report significantly greater effectiveness of spouse/significant other compared to the average effectiveness of all other social support types combined.

**Hypothesis 7.** There will be significant differences among support types’ rating on perceived understanding of the child’s difficulties and needs. First, the average understanding rating of child’s therapist will be significantly greater than the average understanding rating of parent’s therapist. Second, the average
understanding rating of child's therapist will be significantly greater than the average understanding rating of general practitioner. Third, the average understanding rating of school staff will be significantly greater than the average understanding rating of general practitioner. Fourth, the average understanding rating of spouse/significant other will be significantly greater than the average understanding rating of immediate family. Fifth, parents of other children with disabilities will be rated as significantly more understanding than friends. Sixth, the average understanding rating of spouse/significant other will be significantly greater than the average understanding rating of parents of other children with ASD/other disabilities.

Objective 3: To examine the relationship between maternal overall received social support and marital satisfaction. In an Australian study examining moderators of stress in parents of children with ASD, Dunn et al. (2001) found a significant positive correlation between marital conflict and failure to obtain social support. Similarly, several studies have reported a significant correlation between perceived social support and marital adjustment (Benson & Kersh, 2011; Ekas et al., 2015; Hsiao, 2013; McGrew & Keys, 2014). Doron and Sharabany (2013) added that when parents receive social support from others outside the couple dyad, the couple is more likely to support each other and experience greater marital satisfaction. Therefore, it was expected that greater overall perceived social support would be correlated with fewer relationship problems and more marital satisfaction.

Hypothesis 8. There will be a positive relationship between overall received social support and marital satisfaction.
Objective 4: To examine whether there is a relationship between the type of support received and marital satisfaction. Limited research has been done on the relationship between social support and marital satisfaction (Benson & Kersh, 2011; Ekas et al., 2015; McGrew & Keys, 2014). There is a gap in the literature regarding which specific types of social support influence marital functioning the most. Many studies have reported that maternal marital adjustment is significantly correlated to perceived social support (Alon, 2009; Benson & Kersh, 2011; Dunn et al., 2001). Ekas et al. (2015) reported that greater levels of perceived spousal support predicted greater marital adjustment. Adding to this research, Sim et al. (2017, p. 3563) found a significant positive association between relationship satisfaction and couples raising a child with ASD who engage in dyadic coping (i.e., discussing difficult experiences with each other, which produces a “joint coping response”). Similarly, social support has been identified as a negative predictor of maternal depressive symptoms and a positive predictor of maternal health (Benson & Kersh, 2011). Doron and Sharabany (2013) reported a significant association between the frequency and quality of informal support received and marital closeness experienced by parents of children with ASD.

Hypothesis 9. There will be a positive relationship between informal social support and marital satisfaction.

Hypothesis 10. There will be a positive relationship between received spouse/significant other support and marital satisfaction.

Hypothesis 11. There will be a positive relationship between the perceived effectiveness of spouse/significant other support and marital satisfaction.
Hypothesis 12. There will be a positive relationship between the average effectiveness of informal social supports and marital satisfaction.

Hypothesis 13. There will be a positive relationship between the overall average effectiveness of received social support and marital satisfaction.

Objective 5: To examine whether there is a relationship between social supports and maternal stress. Research has consistently suggested that it “takes a village” to raise a child with ASD. The literature has consistently stated that parents who receive greater social support have lower stress levels (Bristol & Schopler, 1983; Broderick & Blewitt, 2015; Bromley et al., 2004; Ekas et al., 2010; Ostberg & Hagekull, 2000; Samadi & McConkey, 2014; Wayment & Brookshire, 2018; Zablotsky et al., 2013). For example, mothers who use adaptive coping strategies, have emotional social supports, and neighborhood supports also have lower levels of stress and greater overall emotional well-being (Zablotsky et al., 2013). Social support is associated with lower parenting stress and improved mental health and reduced marital discord.

Hypothesis 14. There will be a negative relationship between overall received social support and maternal stress.

Hypothesis 15. There will be a negative relationship between the perceived effectiveness of social supports and maternal stress.

Objective 6: To examine the relationship between marital satisfaction and maternal stress. A myriad of studies has shown the association between parental stress and marital satisfaction in families of children with ASD (Brobst et al., 2009; Goetz et al., 2019; Hartley et al., 2012; 2016; Ramisch et al., 2014; Robinson & Neece, 2015). Marital satisfaction can predict lower parental stress in families with children with
developmental disabilities (Kersh et al., 2006). High chronic stress levels have also been shown to negatively impact marital satisfaction (Lavee et al., 1996).

**Hypothesis 16.** There will be a negative relationship between marital satisfaction and maternal stress.

**Hypothesis 17.** There will be a relationship between maternal stress, overall received social support and marital satisfaction.

**Hypothesis 18.** There will be a relationship between maternal stress, average social support effectiveness, and marital satisfaction.

**Objective 7:** To examine the influence of both mother and child characteristics on social support usage, perceived social support effectiveness, maternal stress, and marital satisfaction. A few studies have found an association between parents, and mothers specifically, of females with ASD reporting greater use of informal supports than families of males with ASD (Bromley et al., 2004; Papageorgiou et al., 2010). Additionally, parents of younger children reported greater support from co-workers than parents of older children (Papageorgiou et al., 2010).

Several studies have also reported an association between ASD severity, parental stress, and marital satisfaction, whereby parents of children with more severe behavioral problems and more severe ASD reported more significant parental stress and decreased marital satisfaction (Brobst et al., 2009; Goetz et al., 2019; Hartley et al., 2012; 2016; Robinson & Neece, 2015). Children’s ASD severity can serve as a stressor associated with poorer parent outcomes (Weiss et al., 2013). Furthermore, if parents believe their child is difficult, they are more likely to experience greater levels of stress (Delvecchio et al., 2019; Ueda et al., 2020).
Doron and Sharabany's (2013) research on an Israeli sample of parents of children with ASD found that the older the child with ASD, the poorer the parent’s health and the less closeness they felt in the marital relationship. A significant association between marital satisfaction with parental education and family income has also been found, such that families with higher income also reported greater relationship adjustment (Benson & Kersh, 2011). Additionally, Bromley et al. (2004) reported a significant relationship between high levels of stress, low levels of family support, and greater child behavioral problems.

**Hypothesis 19.** There will be a relationship between education, income, and marital satisfaction.

**Hypothesis 20.** Mothers of older children with ASD will report less marital satisfaction.

**Hypothesis 21.** Mothers of older children with ASD will report greater levels of stress.

**Hypothesis 22.** Mothers of younger children with ASD will report greater use of informal social support than mothers of older children with ASD.

**Hypothesis 23.** Mothers of females with ASD will report greater informal social support than mothers of males with ASD.

**Hypothesis 24.** Mothers of a child with greater ASD severity will report greater received informal social support than mothers of children with less severity.
Chapter 4: Method and Procedures

Participants

The participants in this study were mothers of children diagnosed with ASD. The principal investigator conducted a nationwide online survey using Qualtrics research software. Participants were recruited, via convenience sampling, through various sources throughout the United States. Participants were first introduced and provided access to this study through ASD parenting support groups within social media sites (i.e., Facebook), ASD support centers, and organizations list-serves (i.e., University of Miami-Nova Southeastern University Center for Autism & Related Disabilities, University of Central Florida Center for Autism & Related Disabilities, The Parker Foundation, and Organization for Autism Research), outpatient clinics list-serves (i.e., Behavioral Initiatives), and educational services/schools via flyers or via list-serves (i.e., Scott Center for Autism, Full Spectrum Miami). After permission to post the present study on list-serves or Facebook groups was granted by an administrator/director of a center or Facebook group, the primary investigator posted the survey link on list-serves or Facebook groups, and participants completed the survey. Snowball sampling was also used, as participants were encouraged to contact other mothers of children with ASD to participate in the study.

Criteria for inclusion in the study were: (1) mother is above the age of 18 and has a child ages 0 to 18, (2) mother reported the child to have autism spectrum disorder diagnosed by a health care provider, (3) signing of consent forms by mother, (4) mother is currently in a domestic partnership/marriage, (5) mother currently resides in the United States with her significant other, and the child with ASD, and (6) mother can understand
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English. Mothers self-reported that their child had an ASD diagnosis; no further confirmation of their child’s diagnosis was used to assess for participation in the study. Exclusion criteria included (1) mother raising the child with ASD in a single-parent household and (2) mother not being in a committed relationship.

The link to the online survey on Qualtrics was disseminated across various ASD support groups, list-serves, online websites, and through word-of-mouth. The final sample size included 151 mothers of a child diagnosed with ASD.

Research Design

This study used a cross-sectional research design, and data was collected through an online survey using Qualtrics. Various assessment measures were included in the survey, namely the Revised Dyadic Adjustment Scale, the Parental Stress Scale, and a researcher-adapted measurement on social support usage and effectiveness of social support. The researcher created a demographic questionnaire to collect data about mothers of children with ASD and their families. The researcher acquired approval from the Florida Institute of Technology Institutional Review Board before collecting data.

Setting

Surveys were administered using an online survey platform. Participants could respond to the survey in any setting where they had access to a smartphone, tablet, or computer. Therefore, participants were not limited to location or setting to initiate a survey response. However, access to Wi-Fi, wireless mobile connection, or other internet connection sources was necessary for survey access and completion.

Participants were given the opportunity to enter their email address upon completing the survey, to enter a drawing to win 1 of 4 $50 Amazon gift cards, which the
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principal investigator personally financed. Through a randomized generator application, four participants were selected to win the gift cards and were sent an email with the online gift card.

If the participant had multiple children with ASD that fit the study’s age range, the oldest child living at home was selected as the target child, given that this was when parenting stress associated with ASD began.

Participants completed questionnaires about demographics, the target child’s characteristics, use of social supports and perceived effectiveness of said social supports, their marital relationship, and parental stress. Participants required 10-20 minutes to complete the entire survey. RDAS and PSS data were inputted into analysis, with the total scores for each of these measures being calculated following each measure’s distinct calculation process, as depicted by the scale authors. Similarly, Perceived Social Support Effectiveness ratings were calculated for each support type by averaging the sum of the three items assessing for social support effectiveness to create a distinct average social support effectiveness rating for each support type.

Measures

Demographics Questionnaire

This study used a researcher-developed demographics questionnaire to understand family socio-demographics, maternal characteristics, and child characteristics. The demographics questionnaire included the following items: mother’s present marital status, current living arrangements, number of children with disabilities living in the household, the total number of children living in the household, annual combined family income, mother’s highest level of education attained, mother’s occupation, mother’s
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ethnicity, and race, and mother’s age range. Child characteristics included the following: child’s gender (male, female, non-binary/third gender, or prefer not to say), child’s age range, and child’s autism severity.

ASD Diagnosis

Mothers of children with ASD were asked the question, “Has your child been formally diagnosed by a doctor or healthcare provider with Autism or ASD, Asperger Syndrome, or Pervasive Developmental Disorder-Not Otherwise Specified?” to be included in the study. Given the study’s recruitment and data collection method, the researcher could not confirm a diagnosis of ASD and thus relied on parental reports. Additionally, mothers were asked to rate the “perceived” severity of their child’s ASD (mild/moderate/severe).

Marital Satisfaction

Marital satisfaction was measured using the Revised Dyadic Adjustment Scale (RDAS; Busby et al., 1995) to assess marriage and marital adjustment quality. The RDAS is a shorter and revised version of the Dyadic Adjustment Scale (DAS; Spanier, 1989) and is commonly used to measure marital quality. The RDAS is a self-report measure, comprised of 14 items, and is grouped into three dimensions (consensus – the degree to which the respondent agrees with their partner on decision-making, values, and affection; satisfaction – the degree to which the respondent is satisfied with the stability and conflict of the relationship; and cohesion – the degree to which the respondent and partner engage in shared activities and discussion). Respondents were asked to rate specific properties of their relationship on a 5- or 6-point Likert scale. The total score ranges from 0 to 69, which are derived by summing the scores of each dimension,
reflecting overall marital satisfaction and adjustment. Higher scores suggest greater relationship satisfaction and stability in the relationship, and lower scores suggest greater relationship distress. The RDAS has a cut-off score of 48, whereby scores of 48 and greater indicate non-distress, and scores of 47 and below indicate relationship distress. The RDAS is a reliable and valid measure (Busby et al., 1995; Crane et al., 2000).

**Parental Stress**

Maternal stress was measured using the Parental Stress Scale (PSS; Berry & Jones, 1995), a self-report scale comprised of 18 items associated with parental stress and satisfaction in the parent-child relationship. The PSS is suitable for use with a wide age range of children. It has been used to measure parenting stress in parents of foster children, typically developing children, children with behavior problems, intellectual and physical disabilities, physical ailments, and psychological disorders (Letiecq et al., 2007; Louie & Cromer, 2014). Participants respond using a Likert-type scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*), with some items being reversely scored. Possible scores on the scale range from 18-90, with higher scores indicating greater parental stress. The PSS has high internal consistency (Cronbach’s alpha = .82) and test-retest reliability (Cronbach’s alpha = .85). The PSS has also been used cross-culturally and internationally (Berry & Jones, 1995; Louie et al., 2018).

**Social Support & Perceived Social Support Effectiveness**

Formal and informal social support usage and effectiveness were assessed in the present study. Mother’s social support was evaluated by their current use of nine formal and six informal social supports and their perceived social support effectiveness. Since no instrument was available that assessed multiple forms of formal support, types of formal
supports were selected based on prior research conducted by Marsack and Samuel (2017) and Shepherd et al. (2020). Nine formal supports, outlined in Table 3, and six informal supports, outlined in Table 4, were measured. For sources of support being utilized, mothers were presented with a checklist containing all fifteen sources of support. They were asked to report if they were currently using these supports by selecting either “yes” or “no.” If “no” was selected, mothers were not asked further questions about social support. If “yes” was selected, mothers were asked to rate the support’s effectiveness, using a Likert-type scale ranging from 1 (Very strongly disagree) to 7 (Very strongly agree) on how much they agreed with the statement “… has been a significant source of support for me”, “… has a good understanding of my child’s difficulties and needs”, and “… has reduced my parenting distress” (Sharpley, 1997; Shepherd et al., 2020). The average effectiveness of the type of social support was calculated by averaging the participant’s responses on the three support effectiveness items outlined above; average effectiveness ratings ranged from 3 to 7, with a greater effectiveness rating indicating greater effectiveness of said support type. Types of questions used to assess the use of social support and its effectiveness came from Shepherd et al.’s (2020) and Sharpley et al.’s (1997) research on the social supports used by parents of children with ASD.

Data Analysis

Data was downloaded and analyzed using IBM-SPSS version 28. Descriptive statistics (frequencies, means, and standard deviations) were computed for variables of interest. Frequency distributions were used to summarize demographic characteristics and social support type usage. Analyses of Variances (ANOVA’s) were utilized to assess the relationship between several variables. Paired-samples t-tests were used to evaluate the
relationship between two variables across the same sample. Independent samples $t$-tests were used to assess the relationship between the means of two different samples. Bivariate and point-biserial correlations were used to assess the relationship between two variables of interest.
Chapter 5: Results

Description of Sample

Mother Characteristics

Most mothers were between 35-44 years of age \(n = 82, 54.3\%\); See Table 1). Most mothers identified as being White/Caucasian \(n = 94, 62.3\%\), Hispanic/Latino \(n = 27, 17.9\%\), or Multiethnic \(n = 15, 9.9\%\). Most mothers were currently married \(n = 136, 90.1\%\). With respect to mother’s education level, 31.1\% had a bachelor’s degree, 23.8\% had a college/trade school diploma/certificate, 22.5\% had a master’s degree, 11.3\% had a high school diploma or equivalent degree, 10.6\% had a doctorate degree, and 0.7\% had less than a high school diploma. Most mothers reported being employed full-time \(n = 59, 39.1\%\), being a home-maker \(n = 50, 33.1\%\), or being employed part-time \(n = 29, 19.2\%\). The annual combined family income of the families varied from less than $10,000 to more than $150,000, with most mothers reporting an income of more than $150,000 \(n = 36, 23.8\%\).

Child Characteristics

Most children with ASD were male \(n = 104, 68.9\%\), and ages ranged from 0 to 18, with most children under the age of 7 \(n = 63, 41.7\%;\) See Table 2). Most children with ASD were rated by their mothers as having moderate ASD \(n = 71, 47.0\%\) or mild ASD \(n = 64, 42.4\%\). The number of children living in the household ranged from one to five, with most households \(n = 67, 44\%\) having two children. Furthermore, most mothers reported having only one child with a disability living in their household \(n = 115, 76.2\%\).
Description of Variables of Interest

Descriptive statistics of the variables of interest can be found in Table 5; the mean score for marital satisfaction was 44.91 (SD = 11.23), with a range from 8 to 66. While the average RDAS score was below the clinical cut-off, suggesting relationship distress, most mothers (n = 78) reported relationship satisfaction (M = 53.22, SD = 4.97). The mean score for parental stress was 47.59 (SD = 9.86). On average, mothers used 6.37 forms of social support (SD = 2.84). The mean usage of formal supports was 3.22 (SD = 1.83), suggesting that mothers of children with ASD used approximately 3.22 types of formal supports on average. Similarly, the mean usage of informal supports was 3.15 (SD = 1.60), suggesting that mothers of children with ASD also used approximately 3.15 types of informal supports on average.

Statistical Analyses

Objective 1: Types of Supports

On average, mothers reported using 36% of the different types of formal supports listed and 53% of the different types of informal supports listed. Table 3 and Table 4 demonstrate the number of social supports utilized by mothers of children with ASD at the time of this study. In the formal social support category, mothers reported using their child’s therapist (n = 90, 59.6%) the most, followed by general practitioner (n = 89, 58.9%), and child’s school staff (n = 80, 53.0%). The least used formal social support was a religious organization (n = 29, 19.2%). Therefore, hypothesis 1 was not supported; mothers of children with ASD endorsed using their child’s therapist more frequently than a general practitioner.
In the informal social support category, spouse/significant other was the most utilized \((n = 132, 87.4\%)\), followed by immediate family \((n = 90, 59.6\%)\), and friends \((n = 80, 57.0\%)\). The least used informal social support was neighbors \((n = 39, 25.8\%)\). Hypothesis 2 was supported; mothers of children with ASD did report using their spouse/significant other the most, followed by immediate family.

**Objective 2: Perceived Effectiveness of Social Supports**

A point-biserial correlation was calculated to determine if there was a significant positive relationship between received social support and the average effectiveness of social support. Total received social support \((M = 6.37, SD = 2.84)\) was significantly correlated with the average effectiveness of social support \((M = 5.54, SD = .82)\), \(r_{pb} = .22, p = .003\), supporting hypothesis 3. Thus, the more social supports a mother of a child with ASD endorsed using, the greater she rated the overall effectiveness of social supports.

A paired-samples \(t\)-test was conducted to examine if the average effectiveness of informal supports was greater than the average effectiveness of formal supports. Results from 138 participants who endorsed using both informal and formal supports showed that the effectiveness for informal supports was rated significantly higher than the effectiveness for formal supports. The average effectiveness ratings of informal support \((M = 5.71, SD = .83)\) were significantly greater than average effectiveness ratings for formal supports \((M = 5.38, SD = 1.06, t (137) = 3.74, p < .001, \text{ one-tailed})\), with the difference to have a 95% CI [0.15, 0.50]. The difference presented a medium-sized effect, Cohen’s \(d = 0.32\). Hypothesis 4 was supported; the average effectiveness of informal supports was greater than the average effectiveness of formal supports. Thus, for mothers of children with ASD, informal social supports are significantly more effective than...
formal social supports, which is consistent with prior research (Boyd, 2002; Shepherd et al., 2020).

To assess which social support type mothers of children with ASD found most effective, descriptive statistics and paired-samples $t$-tests were conducted. Mean effectiveness ratings for support types are displayed in Table 6. Across all social support types, parents of other children with ASD/other disabilities were deemed the most effective form of support ($M = 6.16, SD = 0.74$), thus rejecting hypothesis 5. Despite being used by only 53.0% of the sample, the mothers who used parents of other children with ASD/other disabilities as a form of social support found this support group highly beneficial. They viewed parents of other children with ASD/other disabilities as highly effective in supporting them, having a good understanding of their child’s difficulties and needs, and helping reduce their parenting stress. Interestingly, general practitioners were rated as being the least effective support type across all supports. Despite the use of a general practitioner being the fourth most accessed support type ($n = 89$), and religious organization being the least accessed ($n = 29$), mothers rated the use of a religious organization as more effective ($M = 5.23, SD = 1.52$) than a general practitioner ($M = 4.87, SD = 1.57$).

Across all formal supports, respite care was rated as the most effective formal support ($M = 6.01, SD = 0.74$); however, it was only used by 31 mothers. Thus, despite fewer mothers utilizing this form of social support, the mothers who did use respite care at the time of the study found it highly effective. Additionally, the child’s therapist was rated as the second most effective formal support type ($M = 5.85, SD = 1.18$) and was the most used formal support type.
Across all informal support types, significant other/spouse other was rated as the second most effective form of social support ($M = 6.01$, $SD = 1.05$), with most mothers accessing this social support at the time of the study. The third most effective informal social support type was friends ($M = 5.53$, $SD = 1.15$), a commonly utilized form of social support by mothers of children with ASD.

To assess if spouse/significant other support was significantly more effective than all other support types combined, a paired-samples $t$-test was run comparing the average effectiveness of spouse/significant other ratings and the average effectiveness of all social support ratings combined, excluding significant other. It was predicted that mothers would report greater effectiveness of spouse/significant other support than all other forms of social support. Results from 130 mothers who endorsed using both spouse/significant other support and at least one other support type showed that the average effectiveness rating for spouse/significant other support was significantly higher than the average effectiveness rating for all other support types. The average effectiveness rating for spouse/significant other support ($M = 6.01$, $SD = 1.05$) was significantly greater than the average effectiveness rating for all other support types ($M = 5.41$, $SD = .95$), $t(129) = 4.77$, $p < .001$, one-sided, with the difference to have a 95% CI [.35, .85]. The difference presented a medium-sized effect, Cohen’s $d = 0.42$.

However, given that there was no significant difference in average effectiveness ratings between parents of other children with ASD/other disabilities and spouse/significant other, an additional analysis was conducted to examine if parents of other children with ASD/other disabilities was also significantly more effective than all other support types combined. Results from 79 mothers who endorsed using both parents
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of other children with ASD/other disabilities and at least one other support type depicted that the average effectiveness rating for parents of other children with ASD/other disabilities \((M = 6.15, SD = .74)\) was significantly greater than the average effectiveness rating for all other support types \((M = 5.44, SD = .91)\), \(t (78) = 5.17, p < .001\), one-sided, with the difference to have a 95% CI \([.44, 1.0]\). The difference presented a medium-sized effect, Cohen’s \(d = .58\). Not only do the effectiveness ratings between spouse/significant other and parents of other children with ASD/other disabilities not significantly differ, but they are also significantly more effective than all other support types combined, a key finding in this study. Thus, hypothesis 6 was partially supported; both spouse/significant other support and parents of other children with ASD/other disabilities were significantly more effective than all other social support types combined.

Given that social support effectiveness was measured by calculating the average score of three items, one item was examined more closely to assess for the perceived understanding of the social support (i.e., “… has a good understanding of my child’s difficulties and needs”). To determine which social supports mothers of children with ASD found the most understanding of their child’s difficulties and needs, several paired-samples \(t\)-tests were conducted. Several significant differences in the perceived level of understanding were found, as predicted in hypothesis 7. The average understanding rating of child’s therapist \((M = 6.61, SD = .50)\) was significantly greater than the average understanding rating of parent’s therapist \((M = 5.83, SD = 1.38)\), \(t (17) = 2.44, p = .026\), two-tailed, with the difference to have a 95% CI \([.11, 1.45]\). The difference presented a medium effect size, Cohen’s \(d = 0.58\). Thus, mothers of children with ASD perceived their child’s therapist as more understanding of their child’s difficulties and needs than
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their own therapist. The average understanding rating of child’s therapist \((M = 6.13, SD = 1.18)\) was also significantly greater than the average understanding rating of general practitioner \((M = 5.04, SD = 1.81)\), \(t(53) = 4.28, p < .001\), two-tailed, with the difference to have a 95\% CI \([.58, 1.61]\). The difference presented a medium effect size, Cohen’s \(d = 0.58\). Mothers significantly reported greater perceived understanding of their child’s difficulties and needs for their child’s therapist, compared to their general practitioner, despite more mothers using a general practitioner than a child’s therapist. Similarly, mothers significantly reported greater perceived understanding of their child’s difficulties and needs for school staff \((M = 6.02, SD = 1.14)\) compared to general practitioner \((M = 5.16, SD = 1.69)\), \(t(55) = 3.71, p < .001\), two-tailed, with the difference to have a 95\% CI \([.39, 1.32]\). The difference presented a small effect size, Cohen’s \(d = 0.49\). Therefore, mothers viewed school staff as significantly more understanding of their child’s difficulties and needs than their general practitioner.

The average understanding rating of spouse/significant other \((M = 6.24, SD = 1.05)\) was significantly greater than the average understanding rating of immediate family \((M = 5.23, SD = 1.46)\), \(t(85) = 6.65, p < .001\), two-tailed, with the difference to have a 95\% CI \([.71, 1.31]\). The difference presented a medium effect size, Cohen’s \(d = 0.72\). Mothers of children with ASD rated their spouse/significant other as having a greater understanding of their child than their immediate family, consistent with prior research conducted by Sharpley et al. (1997) and Woodgate et al. (2008). Parents of other children with disabilities \((M = 6.57, SD = .70)\) were rated as being significantly more understanding than friends \((M = 5.33, SD = 1.42)\), \(t(57) = 6.91, p < .001\), two-tailed, with the difference to have a 95\% CI \([.88, 1.60]\). The difference presented a large effect size,
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Cohen’s $d = 0.91$. While there may be some overlap as mothers of children with ASD may have multiple friends who are also parents of children with disabilities, mothers felt significantly more understood by parents of children with disabilities than their friends. No significant difference was observed in mother’s ratings of perceived understanding between spouse/significant other ($M = 6.11, SD = 1.13$) and parents of other children with ASD/other disabilities ($M = 6.36, SD = 1.09$), $t(72) = 1.46, p = .148$, two-tailed. Despite there being many mothers who indicated the use of both their spouse/significant other and parents of other children with ASD/other disabilities ($n = 73$) as a form of support, neither was significantly more understanding than the other, indicating a similar level of understanding between the two.

**Objective 3: Total Social Support & Marital Satisfaction**

A correlation was conducted to examine if there was a significant positive relationship between overall received social support and marital satisfaction of mothers of children with ASD. Marital satisfaction ($M = 44.91, SD = 11.23$) was significantly correlated with overall received social support ($M = 6.37, SD = 2.84$), $r = .194, p = .009$, one-tailed, supporting hypothesis 8. Thus, there is a positive relationship between the average sum of all social support types and marital satisfaction. Therefore, mothers who receive support from a greater variety of sources are more satisfied in their marriages and vice versa.

**Objective 4: Type of Social Support & Marital Satisfaction**

A bivariate correlation was utilized to examine if there was a significant positive relationship between the use of more informal social supports and greater marital satisfaction for mothers of children with ASD. The use of informal social supports ($n = 73$)
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144) was significantly correlated with marital satisfaction ($M = 44.91, SD = 11.23$), $r = .25, p < .001$, supporting hypothesis 9. Therefore, mothers of children with ASD who received support from a greater number of informal social supports were more likely to be satisfied in their current relationship than mothers who received support from fewer informal social supports. The use of formal supports ($n = 144$) was not significantly correlated with marital satisfaction ($M = 44.91, SD = 11.23$), $r = .08, p = .159$. In other words, there was no significant relationship between the greater use of formal supports and the mother’s marital satisfaction.

A point-biserial correlation was calculated to examine if there was a significant positive relationship between the use of spouse/significant other support and marital satisfaction. Across the entire sample, 132 mothers reported using their spouse/significant other as a form of social support, whereas 19 mothers reported not using their spouse/significant other as a form of social support. Use of spouse/significant other as a form of social support was significantly correlated with marital satisfaction ($M = 44.91, SD = 11.23$), $r_{pb} = .42, p < .001$, one-tailed, supporting hypothesis 10. That is, mothers of children with ASD who used their spouse/significant other as a form of support were more likely to be satisfied in their current relationship than mothers of children with ASD who did not use their spouse/significant other as a form of social support.

Another point-biserial correlation was calculated to examine if there was a relationship between other specific forms of support and marital satisfaction. The use of parents of other children with ASD/other disabilities ($n = 80$) as a form of social support was significantly correlated with marital satisfaction ($M = 44.91, SD = 11.23$), $r = .17, p = .034$. No other forms of informal support were significantly correlated with marital
satisfaction. Social groups/recreational ($n = 63$) was the only form of formal support that was significantly correlated with marital satisfaction, $r = .17, p = .042$.

A bivariate correlation was run to assess if there was a significant positive relationship between average effectiveness ratings for mothers who endorsed using their spouse/significant other as a form of social support ($n = 132$) and their marital satisfaction scores. Marital satisfaction ($M = 44.91, SD = 11.23$) was significantly correlated with the average effectiveness of spouse/significant other support ($M = 6.01, SD = 1.05$), $r = .58, p < .001$, supporting hypothesis 11. This positive relationship reveals that the more effective mothers perceive their spouse/significant other to be in giving support, the more satisfied mothers are in their marriages, and vice versa.

A correlation was conducted to examine if there was a significant positive relationship between the average effectiveness of informal social support and marital satisfaction of mothers of children with ASD. A significant correlation was found between marital satisfaction ($M = 44.91, SD = 11.23$) and average effectiveness of informal support ($M = 5.71, SD = .83$), $r = .43, p < .001$, one-tailed, supporting hypothesis 12. This finding suggests that the more effective and supportive informal supports are, the greater the mother’s marital satisfaction, and vice versa. Prior studies have also produced similar results, highlighting the importance of informal supports on marriages (Boyd, 2002).

A correlation was conducted to examine if there was a significant positive relationship between the overall average effectiveness of social support received and marital satisfaction of mothers of children with ASD. Marital satisfaction ($M = 44.91, SD = 11.23$) was significantly correlated with average effectiveness of total support ($M =
5.54, $SD = .82$), $r = .34$, $p < .001$, one-tailed, supporting hypothesis 13. Therefore, mothers who feel supported (i.e., receive more efficacious support) will be more satisfied in their marriages, and vice versa. This finding is consistent with prior research highlighting the importance of perceived social support and relationship adjustment (Benson & Kersh, 2011; Ekas et al., 2015; Hsiao, 2013; McGrew & Keys, 2014).

Mothers who receive support from others outside their romantic relationship are more likely to support their partner (Doron & Sharabany, 2013).

**Objective 5: Social Support & Maternal Stress**

A one-tailed bivariate correlation was conducted to examine if there was a significant negative relationship between overall received social support and maternal stress. Overall received social support ($M = 6.37$, $SD = 2.84$) was not significantly correlated with maternal stress ($M = 47.59$, $SD = 9.86$), $r = -.097$, $p = .118$, one-tailed, thus hypothesis 14 was not supported. This finding suggests that the overall number of social supports used does not have a significant relationship with maternal stress level, meaning the quantity of support received neither reduces nor increases maternal stress.

A correlation was conducted to examine if there was a significant negative relationship between the overall average effectiveness of social support received and maternal stress. Maternal stress ($M = 47.59$, $SD = 9.86$) was significantly correlated with average effectiveness of total support ($M = 5.54$, $SD = .82$), $r = -.36$, $p < .001$, one-tailed, supporting hypothesis 15. Therefore, mothers who feel supported (i.e., receive more efficacious support) feel less stressed, and similarly, the less mothers feel supported, the greater their stress.
Objective 6: Marital Satisfaction & Maternal Stress

A one-tailed bivariate correlation was conducted to examine if there was a significant negative relationship between marital satisfaction and maternal stress. The analysis indicated a significant negative relationship between marital satisfaction ($M = 44.91, SD = 11.23$) and maternal stress ($M = 47.59, SD = 9.86$), $r = -.35, p < .001$, supporting hypothesis 16. This finding indicates that the greater marital satisfaction mothers of children with ASD experience, the lower their maternal stress, and vice versa.

As seen in Table 7, a 2 (Total Social Support Received: High vs. Low) x 2 (Maternal Stress: High vs. Low) factorial ANOVA was conducted to examine the effects of total social support received and maternal stress on mothers of children with ASD’s marital satisfaction. Total social support received and maternal stress, both continuous variables, were split at the median to produce categorical variables that distinguished between the above-median and below-median participants. In other words, participants’ total social support received was divided into high and low categories (group 1: total social support received of 6 or above; group 2: total social support received of 5 and below). Similarly, maternal stress was divided into high and low categories (group 1: maternal stress of 48.00 or above on the PSS; group 2: maternal stress below 48.00 on the PSS). Levene’s test of equality of error variances suggested the homogeneity of variance assumption was fulfilled, $F (3, 147) = .922, p = .432$. There was a significant main effect for maternal stress, $F (1, 147) = 9.848, p = .002$, partial $\eta^2 = .063$, suggesting a statistically significant difference in mean marital satisfaction scores between mothers with high maternal stress and mothers with low maternal stress. Thus, mothers who reported high levels of parenting stress were less satisfied in their marriages ($M = 42.12$)
than mothers who reported low levels of parenting stress ($M = 47.82$). The main effect for total social support received was not significant, $F (1, 147) = 1.034, p = .311$, partial $\eta^2 = .007$. The ANOVA revealed that the interaction effect of total social support received and maternal stress was not significant, $F (1, 147) = .471, p = .493$, partial $\eta^2 = .003$. No significant interaction was found between total social support received and maternal stress on marital satisfaction, so hypothesis 17 was not supported.

A 2 (Average Social Support Effectiveness: High vs. Low) x 2 (Maternal Stress: High vs. Low) factorial ANOVA was conducted to examine the effects of average social support effectiveness and maternal stress on mothers of children with ASD’s marital satisfaction (see Table 8). A median split was conducted for average social support effectiveness and maternal stress variables. Participants’ perceived social support effectiveness was divided into high and low categories (group 1: perceived social support effectiveness of 5.646 or above; group 2: perceived social support effectiveness below 5.646). Maternal stress was divided into high and low categories (group 1: maternal stress of 48.00 or above on the PSS; group 2: maternal stress below 48.00 on the PSS). Levene’s test of equality of error variances suggested that the homogeneity of variance assumption was fulfilled, $F (3, 147) = 1.162, p = .326$. There was a significant main effect for maternal stress, $F (1, 147) = 5.336, p = .022$, partial $\eta^2 = .035$, suggesting a significant difference in mean marital satisfaction scores between mothers with high maternal stress and mothers with low maternal stress. Thus, mothers who reported high levels of parenting stress were less satisfied in their marriages ($M = 42.12$) than mothers who reported low levels of parenting stress ($M = 47.82$). Similarly, there was a significant main effect for effectiveness of social support received, $F (1, 147) = 6.384, p = .013,$
Therefore, mothers who perceived their social support as being highly effective were more satisfied in their marriages ($M = 47.87$) than mothers who perceived their social support to be less effective ($M = 41.92$). Furthermore, the ANOVA revealed that the interaction effect of social support effectiveness and maternal stress was not significant, $F(1, 147) = .266, p = .607$, partial $\eta^2 = .002$. No significant interaction was found between social support effectiveness and maternal stress on marital satisfaction, so hypothesis 18 was not supported.

**Objective 7: Effects of Demographic Variables on Variables of Interest**

**Mother Demographics.** As seen in Table 7, a factorial ANOVA was conducted to compare the main effects of mother’s income and mother’s education and the interaction between income and education on marital satisfaction. Mother’s income was divided into 3 groups (group 1: combined annual family income of less than $10,000 - $19,000 [$n = 8$]; group 2: combined annual family income between $20,000 - $80,000 [$n = 48$]; and group 3: combined annual family income between $80,000 - $150,000 or more [$n = 95$]). These groups were determined by researching the tax rates for married couples, filing jointly in the United States, with married couples earning between $0 - $19,900 having 10% of taxable income; married couples, filing jointly earning between $19,900 - $81,050 having 12% of taxable income; and married couples, filing jointly earning between $81,050 to $172,750 having 22% taxable income (Internal Revenue Service, 2020). Mother’s education was divided into four groups (group 1: less than a high school diploma, high school diploma/equivalent degree [$n = 18$]; group 2: college/trade school diploma/certificate [$n = 36$]; group 3: bachelor’s degree [$n = 47$]; group 4: master’s degree and doctorate degree [$n = 50$]). Thus, a 3 (income) x 4 (education) factorial
ANOVA was conducted to examine the effects of income and education on mother’s marital satisfaction. Levene’s test of equality of error variances suggested that the homogeneity of variances assumption was fulfilled, $F (9, 141) = 1.78, p = .077$. The main effect for income was not significant, $F (2, 141) = 1.478, p = .232$, partial $\eta^2 = .02$. Similarly, the main effect for education produced an $F$ ratio of $F (3, 141) = 1.441, p = .233$, partial $\eta^2 = .03$, demonstrating that the effect for education was not significant; education did not have a significant effect on marital satisfaction. Furthermore, the ANOVA revealed that the interaction effect of income and education was not significant, $F (4, 141) = 1.986, p = .100$, partial $\eta^2 = .05$. No significant relationship between education, income and marital satisfaction was found, so hypothesis 17 was not supported.

**Child Demographics.** A one-way ANOVA was conducted to examine whether a child’s age affected maternal marital satisfaction. Participants were divided into three groups by their child’s age (group 1: children under age 7 [$n = 63$]; group 2: children between ages 8-12 [$n = 52$]; group 3: children between ages 13-18 [$n = 36$]). It was predicted that mothers with older children would report less marital satisfaction. Said ANOVA was conducted, and the assumption of homogeneity of variance was met (Levene’s statistics = .429, $p = .652$). ANOVA results showed no overall significant mean difference among the three group means of marital satisfaction, $F (2, 148) = .30, p = .744$, with $\eta^2 = .004$, suggesting that child’s age explained 0.4% of the variance on marital satisfaction. Hypothesis 18 was not supported, as child age did not significantly affect mother’s marital satisfaction.
A one-way ANOVA was conducted to examine whether a child’s age affected maternal stress. Participants were divided into three groups by their child’s age (group 1: children under age 7 \(n = 63\); group 2: children between ages 8-12 \(n = 52\); group 3: children between ages 13-18 \(n = 36\)). It was predicted that mothers with older children would report greater stress levels. The assumption of homogeneity of variance was met, Levene’s statistics = 1.416, \(p = .246\). ANOVA results showed no overall significant mean difference among the three group means of maternal stress, \(F(2, 148) = .349, p = .706, \eta^2 = .005\), suggesting that child’s age explained 0.5% of the variance on use of maternal stress. Ultimately, hypothesis 19 was not supported; child age did not significantly affect maternal stress.

A one-way ANOVA was conducted to examine whether a child’s age affected received informal social support. Participants were divided into three groups by their child’s age (group 1: children under age 7 \(n = 63\); group 2: children between ages 8-12 \(n = 52\); group 3: children between ages 13-18 \(n = 36\)). It was predicted that mothers with younger children would report greater use of informal social support. The assumption of homogeneity of variance was met (Levene’s statistics = 1.408, \(p = .248\)). ANOVA results showed that there was no overall significant mean difference among the three group means of the use of informal social support, \(F(2, 148) = .797, p = .453, \eta^2 = .011\), suggesting that child’s age explains 1.1% of the variance on use of informal social support. Hypothesis 20 was not supported; child age was not significantly associated with maternal use of informal support.

An independent samples \(t\)-test was performed to compare mean received informal support levels between mothers of female children with ASD and mothers of male
children with ASD. Assumption tests suggested that there were no outliers in maternal informal support usage for mothers of female and male children with ASD, and informal support usage was normally distributed. Levene’s test suggested that maternal informal support usage variances for mothers of females and males were statistically equivalent, $F(147) = .022, p = .883$. The mean sum of total informal support received of mothers of females with ASD ($M = 3.40, SD = 1.54$) and mothers of males with ASD ($M = 3.07, SD = 1.62$) was examined using an independent samples $t$-test. Results from 149 participants (45 mothers of female children, 104 mothers of male children) showed that there was no significant difference between the two on maternal informal support usage, $t(147) = -1.17, p = .123$, with the difference to have a 95% CI [-0.23, 0.90], rejecting hypothesis 11. The effect size for this analysis (Cohen’s $d = .21$) presented a small-sized effect. Thus, hypothesis 21 was not supported; mothers of females with ASD and mothers of males with ASD did not differ significantly in their use of informal social supports.

A one-way ANOVA was conducted to examine whether a child’s ASD severity affected maternal received informal social support. Participants were divided into three groups by their child’s ASD severity (group 1: mild presentation [$n = 64$]; group 2: moderate presentation [$n = 71$]; group 3: severe presentation [$n = 16$]). It was predicted that mothers with a child with severe ASD symptoms would report greater use of informal social support compared to mothers with a child with less severe symptoms. The assumption of homogeneity of variance was met (Levene’s statistics = 0.235, $p = .791$). ANOVA results showed that there was no significant mean difference among the three group means of the use of informal social support, $F(2, 148) = 1.246, p = .244$, with $\eta^2 =$
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.019, suggesting that child’s ASD severity explained 1.9% of the variance on use of informal social support. Therefore, hypothesis 22 was not supported.
Impact of Study

Instead of solely addressing the negative factors contributing to marital dissatisfaction and high stress among this population, it is imperative to study the factors associated with marital well-being and increased adjustment. By focusing on couples' strengths, researchers can create effective, strength-based family and marital interventions for families of children with ASD. The purpose of this study was to examine the relationship between received social supports, perceived effectiveness of social supports, maternal stress, and marital satisfaction among mothers of children with ASD. Social support is crucial to helping parents of children with ASD cope with stressors, and as such, finding ways to increase parent access to effective social supports is imperative.

Overall, mothers of children with ASD reported greater use of informal supports than formal supports, which was consistent with prior research (Shepherd et al., 2020). Mothers found informal supports significantly more effective than formal supports, also consistent with the literature (Boyd, 2002; Bromley et al., 2004; Dunn et al., 2001; Gill & Harris, 1991; Ruiz-Robledillo et al., 2014; Shepherd et al., 2020; Wayment & Brookshire, 2018; Weiss et al., 2013; Zablotsky et al., 2013). Consistent with prior research (Doron & Sharabany, 2013; Dunn et al., 2001), receiving social support was correlated with the effectiveness of social support, suggesting that if mothers find a support effective, they will likely continue to use it.

One key finding from this study was the effectiveness of parents of other children with ASD/other disabilities as a form of social support, designating it the most effective support type. Receiving support from someone who can directly relate to the challenges...
and joys of having a child with a disability, be it another parent, or one’s spouse, is highly
effective for mothers of children with ASD. It can be assumed that mothers of children
with ASD feel more relatability and greater understanding from parents of other children
with disabilities, discuss resources, share coping tools or behavior management
strategies, and bond over their shared difficulties and enjoyments. This finding has
significant implications for various reasons: (1) there was no significant difference in the
average effectiveness between parents of other children with ASD/other disabilities and
spouse/significant other; (2) both parents of other children with ASD/other disabilities
and spouse/significant other are significantly more effective than all other support types
combined; and (3) both parents of other children with ASD/other disabilities and
spouse/significant other were similar in their level of understanding of the nuances of the
child. Thus, mothers are most likely to benefit from utilizing these social supports if they
deem them effective.

Furthermore, this research has allowed us to identify an alternative form of
informal support that is highly effective when spouses/significant others are not present.
Single mothers may greatly benefit from entering a romantic relationship with someone
who understands ASD or by seeking support from other parents of children with
ASD/other disabilities. This finding furthers the narrative that parents of children with
ASD greatly benefit from parent support groups (Marsack & Samuel, 2017).

A second pertinent finding is that parents of other children with ASD/other
disabilities were not only deemed as an effective support type but were also significantly
associated with marital satisfaction. The only other informal support type associated with
marital satisfaction was the use of spouse/significant other. Once again, the importance of
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using parents of other children with ASD/other disabilities as a form of support for this population is evident.

A third pertinent finding is that general practitioners were rated the least effective support type across all supports. Despite being one of the most utilized and crucial support types, mothers of children with ASD did not feel supported or understood by their general practitioners. General practitioners and primary care providers are essential to healthcare and are intended to provide support, education, and treatment. Within the realm of ASD, medical providers are often the first to recommend that children receive neuro-developmental evaluations to assess for ASD. Yet, there is an apparent discrepancy wherein mothers of children with ASD are not receiving adequate care, support, and knowledge about ASD from their medical providers, despite their reported use of medical providers. General practitioners may benefit from additional training on neurodevelopmental disorders to better serve these populations. Given that child's therapist was rated as the formal support type with the highest level of understanding of the needs and difficulties of the child, it would be advisable for the child's therapist to communicate about these with the child's medical provider. This interdisciplinary consultation between the child's therapist and the medical provider will further promote their understanding of ASD and their shared patient.

Fourth, respite care was rated as the most effective formal support type. This finding is consistent with prior research assessing the impact of COVID-19 on parents of children with ASD; parents reported desperately needing respite care (Manning et al., 2021). Since this study was conducted during the COVID-19 crisis, it is not surprising that these findings were consistent across both studies. Prior studies conducted before the
COVID-19 pandemic also found a strong need for respite (Lindly et al., 2016; Safe et al., 2012).

Spouse/significant other was the most accessed informal support type and was deemed the second most understanding of the child’s difficulties and needs. It was also rated as the second most effective form of social support. Marital relationships are the foundation of a family. It is apparent that married mothers of children with ASD frequently use their spouse as a form of support and trust their understanding of their shared child. Using their spouse/significant other as a form of social support was significantly associated with marital satisfaction. Likewise, mothers who were more satisfied in their marriages used their spouses more for support. Similarly, the greater the perceived effectiveness of their significant other, the greater the marital satisfaction. These results highlighted the need to promote understanding and a supportive, meaningful, and rewarding alliance between parents of children with ASD experiencing marital difficulties.

Mothers of children with ASD rated their significant other as having a greater understanding of their child than their immediate family, consistent with prior research conducted by Bitsika et al. (2013) and Woodgate et al. (2008). Finding ways to increase the understanding of ASD and the child is imperative, especially within the child's extended family. Immediate family was commonly used as a support type in this study. However, given that immediate or extended family members may not understand ASD, as reported in several studies (Broady et al., 2017; Matthews et al., 2011; Myers et al., 2009; Ryan, 2010; Safe et al., 2012; Woodgate et al., 2008), this limits the ability for mothers to be adequately supported by their families and receive respite. As such,
community-based interventions targeting immediate and extended families or alternative
caregivers, like grandparents, of children with ASD is recommended to promote greater
understanding of their family member and greater delivery of support to the child’s
parents.

A positive relationship was found between the average sum of all social support
types and marital satisfaction. Mothers who received more support were more satisfied in
their marriages and vice versa. Prior research has found that personal and family
resources and supports can mediate the relationship between parenting stress and parental
outcomes (Perry, 2004). Similarly, the use of informal supports among parents of
children with ASD has been found to predict favorable mental health (Boyd, 2002; Perry,
2004; Ramisch, 2012). As was hypothesized in this study, greater use of informal
supports was significantly associated with marital satisfaction. Formal support was not
significantly correlated with marital satisfaction. Similarly, the more effective the support
is perceived, the greater the marital satisfaction. This finding is consistent with prior
research that concluded that parents who received more support from their relationships
offered more support to their spouse, thus having less relationship conflict and more
relationship satisfaction (Doron & Sharabany, 2013). Prior research has also emphasized
the importance of husbands supporting wives, with husbands’ support predicting both
husbands’ and wives’ marital satisfaction (Burgess & Wallin, 1953), further emphasizing
the importance of spouse/significant other support in this study on mothers.

Contrary to our hypothesis, a significant negative relationship between overall
received support and maternal stress was not found. However, a significant negative
relationship was found between the overall average effectiveness of social support
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received and maternal stress. This finding suggested that it is not the quantity of support received that matters, but the quality of support received.

In support of our hypothesis, a significant negative relationship between marital satisfaction and maternal stress was confirmed. Several researchers have steadily reported this (Gerstein et al., 2009; Hartley et al., 2012, 2016, 2017a; Kersh et al., 2006; Lavee et al., 1996; Robinson & Neece, 2015). Couples with higher levels of stress are more likely to report lower marital satisfaction than couples with lower levels of stress, who are more likely to report greater marital satisfaction (Neff & Karney, 2009).

A significant main effect was found despite the absence of an interaction between maternal stress, total social support received, and marital satisfaction. Mothers who reported higher maternal stress levels reported less satisfaction in their marriages. Similarly, mothers who reported lower maternal stress levels reported more satisfaction in their marriages. Regarding social support effectiveness, mothers of children with ASD who perceived their social supports as effective were more satisfied in their marriages than mothers who perceived their social supports as being less effective.

Lastly, no interaction between income, education, and marital satisfaction was found. Prior research found relationships between having higher income and greater marital satisfaction (Benson & Kersh, 2011; Bromley et al., 2004; Perrone & Washington, 2001). However, results from this study did not replicate this finding, possibly due to the lack of variability in participants.
Limitations and Areas for Future Research

Study Design

Several limitations were identified throughout the current study, including its cross-sectional design, which limits the ability to make causal and directional inferences and limits the ability to study how variables may change over time, as seen in a longitudinal study. For example, the cross-sectional design of this study impedes the ability to make an inference on which social supports reduce parenting stress the most and increase marital satisfaction the most. Similarly, it is impossible to infer potential changes in marital satisfaction before or after the mother had a child with ASD and throughout different developmental periods of their child’s life. Furthermore, the variables measured in this study, and their relationships to each other, were only collected and analyzed at a single time point. Therefore, their temporal stability is unknown. Thus, no causal conclusions can be drawn from this study. Future studies using a longitudinal design to measure how marital satisfaction and parental stress change over time are encouraged.

The use of an online survey also limited the number of mothers who could participate in the study. Similarly, recruiting participants through several email list-serves and social media may have excluded mothers of children with ASD who lack internet access, do not use ASD parenting support groups on Facebook, and are not connected to ASD support centers or schools. Furthermore, the survey was only available in English; thus, mothers who could not understand English were not given the opportunity to partake in the study, which also limited the generalizability of the findings. Similarly, this
study was limited to mothers living in the United States, which impeded comparing data across countries.

Participants

Another limitation is participation in this study being exclusively restricted to mothers. This certainly limits valuable information and insight from an equally important member of the family and marital relationship. Fathers’ marital satisfaction, parental stress, social support usage, and perceived social support effectiveness may differ from mothers’ marital satisfaction. Fathers’ perspective warrants more research. It would be valuable to assess how mothers and fathers are different and similar regarding the study’s variables and observe their interaction effect. Evaluating mothers and fathers across various time points would have allowed us to discover how gender differences, appraisals of stress, marital satisfaction, use of social support, and effectiveness of social support may change throughout the child’s developmental trajectory.

Excluding mothers who were not currently in a romantic relationship and living with their significant other was another limitation. From an empirical perspective, studying divorced mothers can provide fruitful data on the cause of divorce or specific factors that contributed to the low marital satisfaction that led to divorce. From a clinical viewpoint, this information could be used to develop clinical interventions for parents of children with ASD with low marital satisfaction, to increase intimacy and quality of the relationship, and ultimately prevent relationship termination. Furthermore, not studying single mothers limits the ability to study single-parent households, which are undoubtedly in need of more support and services.
Not having a control or comparison group limits our ability to understand if the relationships observed in this study were distinct to mothers of children with ASD. Efforts should go into recruiting a more diverse sample and including a comparison group, such as fathers of children with ASD, mothers of typically developing children, or mothers of children with another disability.

Overall, the sample was homogeneous and not representative. Thus, generalizability of findings is limited. Consistent with various studies on parents of children with ASD (Altiere, & von Kluge, 2009; Benson, 2012; Hartley et al., 2017; Katz & Gottman, 1993; Marsack & Samuel, 2017; Shepherd et al., 2020), the sample consisted predominantly of White/Caucasian, well-educated and employed mothers, with an annual combined family income of more than $150,000. Their overrepresentation may have biased the data findings. For example, it may be more difficult to obtain access to formal supports such as an individual therapist for themselves, a child therapist, and a general practitioner for parents belonging to a lower socioeconomic group or certain ethnicity/race. Similarly, the use of school staff as social support may depend greatly on class sizes and resources available at their child’s school, which can also be more challenging to obtain for parents living in rural areas, having a lower socioeconomic status, or belonging to a particular ethnicity/race.

**Measures**

First, not verifying the child’s ASD diagnosis and ASD severity level poses an overreliance on the mother’s report, which is a limitation to the sample's integrity. Second, although frequently used in research settings, the Parental Stress Scale does not have an established clinical cut-off score to define clinically significant parental stress.
levels, limiting the findings' strength and the number of inferences that could be made. Third, the social support measures were selected based on prior research (see Marsack & Samuel, 2017; Shepherd et al., 2020), and participants were not provided with the ability to add any other type of support they may receive. This fixed question format may have reduced the accrual of other valuable qualitative data. In addition, the generalizability of this study internationally may be limited, as some formal support types included in this study might not be accessible in other countries. However, our formal support types were similar to those in Marsack and Samuel’s (2007) study in Australia and Shepherd et al.’s (2020) study in New Zealand.

Some support types were vague, such as the child’s therapist. Often, children with ASD receive treatment from various therapeutic modalities, such as applied behavioral analysis, feeding therapy, occupational therapy, physical therapy, and speech therapy. Similarly, respite care was described as a “paid caregivers/babysitter,” and specifying the descriptor to “any type of support that helps parents to have a break from a person with a disability” (Shepherd et al., 2020, p. 1341) would have been more all-encompassing, as it could have included the use of a family member or husband offering the mother respite. Thus, future studies may wish to be more specific in delineating the support type to obtain more nuanced data.

Conclusion

One of this study’s aims was to further the narrative that families of children with ASD require more understanding, care, and support. Evidence from this study emphasizes the importance of providing mothers of children with ASD with adequate informal supports. Access to effective informal supports is not only associated with
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increased marital satisfaction and decreased stress but is also helpful to maternal and paternal well-being, the child with ASD’s well-being, and the overall family system. Interventions targeting increasing informal supports and their effectiveness through training or group interventions are needed to help this population better.

The results from this study have been able to identify critical targets for support and intervention among mothers of children with ASD, namely, parents of other children with ASD/other developmental disorders and spouse/significant other. As such, ASD treatment centers, ASD support centers, schools, and outpatient clinics are highly encouraged to provide parents of children with ASD/other disabilities support groups, which will not only give the parents helpful knowledge but will also serve as an opportunity to socialize and develop meaningful and relatable relationships to other parents and increase support and cohesion with their significant other. Such interventions might improve the marital relationship and both parents’ and possibly children’s outcomes. Future research should employ a parent support group intervention while assessing parents multiple times throughout its duration. Upon its completion, it should evaluate potential changes in marital satisfaction, parental stress levels, and child functioning to infer causal relationships. From a clinical standpoint, child therapists, who are a commonly used form of formal support, are encouraged to assess if parents of children with ASD are struggling in their marriage and offer referrals for couple’s counseling wherein parents can be assisted in identifying their strengths and resources accessible to them that can help them in their marriage and parenting.

In addition, ASD treatment centers, ASD support centers, schools, and outpatient clinics should offer didactic trainings for extended family members of children with
MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS

ASD. These trainings and interventions may strengthen relationships between family members and their understanding of the child with ASD. In turn, these may make the parents of the child with ASD feel more supported, receive adequate support, and respite, and have family members learn behavior management tools and empathy for the child and parents. Furthermore, these extended family interventions will likely promote healthier self-esteem and self-acceptance within the child, as they are better understood within the family system.

Families of children with ASD experience stigma and a reduction of social networks. It is necessary to raise awareness among the larger community on the needs and realities of families with ASD to promote greater understanding and support-giving.
MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS

References


MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS

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https://www.apa.org/topics/divorce-child-custody#:~:text=They%20are%20also%20good%20for,subsequent%20marriages%20is%20even%20higher


MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS


MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS

https://doi.org/10.1177/1088357608323699


https://doi.org/10.1177/1362361304047224


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MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS


MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS


# Table 1

Frequency Distributions: Mothers’ Demographics \((N = 151)\)

<table>
<thead>
<tr>
<th>Mothers’ demographics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mothers’ age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>3</td>
<td>2.0%</td>
</tr>
<tr>
<td>25-34</td>
<td>27</td>
<td>17.9%</td>
</tr>
<tr>
<td>35-44</td>
<td>82</td>
<td>54.3%</td>
</tr>
<tr>
<td>45-54</td>
<td>34</td>
<td>22.5%</td>
</tr>
<tr>
<td>55-64</td>
<td>4</td>
<td>2.7%</td>
</tr>
<tr>
<td>65-74</td>
<td>1</td>
<td>0.7%</td>
</tr>
<tr>
<td>Mother’s race and ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>94</td>
<td>62.3%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>27</td>
<td>17.9%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>10</td>
<td>6.6%</td>
</tr>
<tr>
<td>Native American/American Indian</td>
<td>2</td>
<td>1.3%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1</td>
<td>0.7%</td>
</tr>
<tr>
<td>Multiethnic</td>
<td>15</td>
<td>9.9%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.32%</td>
</tr>
<tr>
<td>Mothers’ present marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>136</td>
<td>90.1%</td>
</tr>
<tr>
<td>Living with someone</td>
<td>13</td>
<td>8.6%</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>0.7%</td>
</tr>
<tr>
<td>Separated</td>
<td>1</td>
<td>0.7%</td>
</tr>
<tr>
<td>Mothers’ educational level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than a high school diploma</td>
<td>1</td>
<td>0.7%</td>
</tr>
<tr>
<td>Educational Level</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>High school diploma or equivalent degree</td>
<td>17</td>
<td>11.3%</td>
</tr>
<tr>
<td>College/trade school diploma/certificate</td>
<td>36</td>
<td>23.8%</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>47</td>
<td>31.1%</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>34</td>
<td>22.5%</td>
</tr>
<tr>
<td>Doctorate degree</td>
<td>16</td>
<td>10.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mother’s Employment Status</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed full-time</td>
<td>59</td>
<td>39.1%</td>
</tr>
<tr>
<td>Employed part-time</td>
<td>29</td>
<td>19.2%</td>
</tr>
<tr>
<td>Seeking opportunities</td>
<td>4</td>
<td>2.7%</td>
</tr>
<tr>
<td>Home-maker</td>
<td>50</td>
<td>33.1%</td>
</tr>
<tr>
<td>Student</td>
<td>5</td>
<td>3.3%</td>
</tr>
<tr>
<td>Military</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Retired</td>
<td>1</td>
<td>0.7%</td>
</tr>
<tr>
<td>Prefer to not say</td>
<td>3</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Combined Family Income</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $10,000</td>
<td>2</td>
<td>1.3%</td>
</tr>
<tr>
<td>$10,000 to $19,000</td>
<td>6</td>
<td>4.0%</td>
</tr>
<tr>
<td>$20,000 to $29,999</td>
<td>6</td>
<td>4.0%</td>
</tr>
<tr>
<td>$30,000 to $39,999</td>
<td>7</td>
<td>4.6%</td>
</tr>
<tr>
<td>$40,000 to $49,999</td>
<td>9</td>
<td>6.0%</td>
</tr>
<tr>
<td>$50,000 to $59,999</td>
<td>11</td>
<td>7.3%</td>
</tr>
<tr>
<td>$60,000 to $69,999</td>
<td>11</td>
<td>7.3%</td>
</tr>
<tr>
<td>$70,000 to $79,999</td>
<td>4</td>
<td>2.7%</td>
</tr>
<tr>
<td>$80,000 to $89,999</td>
<td>18</td>
<td>11.9%</td>
</tr>
<tr>
<td>$90,000 to $99,999</td>
<td>10</td>
<td>6.6%</td>
</tr>
<tr>
<td>$100,000 to $149,999</td>
<td>31</td>
<td>20.5%</td>
</tr>
<tr>
<td>Income Level</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>More than $150,000</td>
<td>36</td>
<td>23.8%</td>
</tr>
</tbody>
</table>
Table 2

*Frequency Distributions: Child and Family Characteristics (N = 151)*

<table>
<thead>
<tr>
<th>Child and family characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender of child with ASD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>45</td>
<td>29.9%</td>
</tr>
<tr>
<td>Male</td>
<td>104</td>
<td>68.9%</td>
</tr>
<tr>
<td>Non-binary/Third gender</td>
<td>2</td>
<td>1.3%</td>
</tr>
<tr>
<td>Age of child with ASD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under age 7</td>
<td>63</td>
<td>41.7%</td>
</tr>
<tr>
<td>Between ages 8 and 12</td>
<td>52</td>
<td>34.4%</td>
</tr>
<tr>
<td>Between ages 13 and 18</td>
<td>36</td>
<td>23.8%</td>
</tr>
<tr>
<td>Severity of child’s ASD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>64</td>
<td>42.4%</td>
</tr>
<tr>
<td>Moderate</td>
<td>71</td>
<td>47.0%</td>
</tr>
<tr>
<td>Severe</td>
<td>16</td>
<td>10.6%</td>
</tr>
<tr>
<td>Total number of children living in household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>49</td>
<td>32.5%</td>
</tr>
<tr>
<td>Two</td>
<td>67</td>
<td>44.4%</td>
</tr>
<tr>
<td>Three</td>
<td>22</td>
<td>14.6%</td>
</tr>
<tr>
<td>Four</td>
<td>10</td>
<td>6.6%</td>
</tr>
<tr>
<td>Five</td>
<td>3</td>
<td>2.0%</td>
</tr>
<tr>
<td>Total number of children with disabilities living in household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>115</td>
<td>76.2%</td>
</tr>
<tr>
<td>Two</td>
<td>30</td>
<td>19.9%</td>
</tr>
<tr>
<td>Three</td>
<td>5</td>
<td>3.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Four</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Five</td>
<td>1</td>
<td>0.7%</td>
</tr>
</tbody>
</table>
Table 3

*Frequency Distributions: Use of Formal Supports (N = 151)*

<table>
<thead>
<tr>
<th>Type of formal social support</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>National/State organizations for caregivers of children with ASD</td>
<td>31</td>
<td>20.5%</td>
</tr>
<tr>
<td>Community supports for caregivers (regardless of disability)</td>
<td>43</td>
<td>28.5%</td>
</tr>
<tr>
<td>Respite care (paid caregivers/babysitters)</td>
<td>31</td>
<td>20.5%</td>
</tr>
<tr>
<td>Parent’s therapist</td>
<td>30</td>
<td>19.9%</td>
</tr>
<tr>
<td>Child’s therapist</td>
<td>90</td>
<td>59.6%</td>
</tr>
<tr>
<td>Social groups/recreational</td>
<td>63</td>
<td>41.7%</td>
</tr>
<tr>
<td>Religious organization</td>
<td>29</td>
<td>19.2%</td>
</tr>
<tr>
<td>General practitioner</td>
<td>89</td>
<td>58.9%</td>
</tr>
<tr>
<td>School staff</td>
<td>80</td>
<td>53.0%</td>
</tr>
</tbody>
</table>
### Table 4

*Frequency Distributions: Use of Informal Supports (N = 151)*

<table>
<thead>
<tr>
<th>Type of informal social support</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spouse/significant other</td>
<td>132</td>
<td>87.4%</td>
</tr>
<tr>
<td>Immediate family (mother’s parents/siblings)</td>
<td>90</td>
<td>59.6%</td>
</tr>
<tr>
<td>Extended family (mother’s uncles, aunts, grandparents, cousins, in-laws)</td>
<td>49</td>
<td>32.5%</td>
</tr>
<tr>
<td>Friends</td>
<td>86</td>
<td>57.0%</td>
</tr>
<tr>
<td>Neighbors</td>
<td>39</td>
<td>25.8%</td>
</tr>
<tr>
<td>Parents of other children with ASD/other disabilities</td>
<td>80</td>
<td>53.0%</td>
</tr>
</tbody>
</table>
### Table 5

*Mean Marital Satisfaction and Parental Stress Scores for Mothers*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDAS</td>
<td>44.91</td>
<td>11.23</td>
<td>8.00</td>
<td>66.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied Mothers</td>
<td>53.22</td>
<td>4.97</td>
<td>48.00</td>
<td>66.00</td>
</tr>
<tr>
<td>(RDAS &gt; 48)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissatisfied Mothers</td>
<td>36.04</td>
<td>9.05</td>
<td>8.00</td>
<td>47.00</td>
</tr>
<tr>
<td>(RDAS ≤ 47)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSS</td>
<td>47.59</td>
<td>9.86</td>
<td>23.00</td>
<td>73.00</td>
</tr>
</tbody>
</table>
Table 6

*Descriptive Statistics for Perceived Social Support Effectiveness*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal Supports</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National/State organizations for caregivers of children with ASD</td>
<td>5.57</td>
<td>1.30</td>
</tr>
<tr>
<td>Community support groups for caregivers (regardless of disability)</td>
<td>5.25</td>
<td>1.38</td>
</tr>
<tr>
<td>Respite care (paid caregivers/babysitters)</td>
<td>6.01</td>
<td>0.74</td>
</tr>
<tr>
<td>Parent’s therapist</td>
<td>5.54</td>
<td>1.18</td>
</tr>
<tr>
<td>Child’s therapist</td>
<td>5.85</td>
<td>1.18</td>
</tr>
<tr>
<td>Social groups/recreational</td>
<td>5.32</td>
<td>1.25</td>
</tr>
<tr>
<td>Religious organization</td>
<td>5.23</td>
<td>1.52</td>
</tr>
<tr>
<td>General practitioner</td>
<td>4.87</td>
<td>1.57</td>
</tr>
<tr>
<td>School staff</td>
<td>5.72</td>
<td>1.16</td>
</tr>
<tr>
<td><strong>Informal Supports</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse/significant other</td>
<td>6.01</td>
<td>1.05</td>
</tr>
<tr>
<td>Immediate family (mother’s parents/siblings)</td>
<td>5.51</td>
<td>1.16</td>
</tr>
<tr>
<td>Extended family (mother’s uncles, aunts, grandparents, cousins, in-laws)</td>
<td>5.33</td>
<td>1.47</td>
</tr>
<tr>
<td>Friends</td>
<td>5.53</td>
<td>1.15</td>
</tr>
<tr>
<td>Neighbors</td>
<td>5.29</td>
<td>1.12</td>
</tr>
<tr>
<td>Parents of other children with ASD/other disabilities</td>
<td>6.16</td>
<td>0.74</td>
</tr>
</tbody>
</table>
Table 7

*Factorial ANOVA Results of the Effects of Total Social Support Received and Maternal Stress on Marital Satisfaction*

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>1,418.46</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal Stress</td>
<td>1,172.33</td>
<td>1</td>
<td>1,172.33</td>
<td>9.848*</td>
</tr>
<tr>
<td>Total Social Support Received</td>
<td>123.04</td>
<td>1</td>
<td>123.04</td>
<td>1.034</td>
</tr>
<tr>
<td>Maternal Stress * Total Social Support Received</td>
<td>56.12</td>
<td>1</td>
<td>56.12</td>
<td>.471</td>
</tr>
<tr>
<td>Within</td>
<td>17,499.43</td>
<td>147</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>323,524.00</td>
<td>151</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .01, **p < .001
### Table 8

*Factorial ANOVA Results of the Effects of Average Social Support Effectiveness and Maternal Stress on Marital Satisfaction*

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>1,987.12</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal Stress</td>
<td>614.57</td>
<td>1</td>
<td>614.57</td>
<td>5.336*</td>
</tr>
<tr>
<td>Average Social Support Effectiveness</td>
<td>735.29</td>
<td>1</td>
<td>735.29</td>
<td>6.384*</td>
</tr>
<tr>
<td>Maternal Stress * Average Social Support Effectiveness</td>
<td>30.60</td>
<td>1</td>
<td>30.60</td>
<td>.266</td>
</tr>
<tr>
<td>Within</td>
<td>16,930.76</td>
<td>147</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>323,524.00</td>
<td>151</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .01, **p < .001
Table 9

Factorial ANOVA Results of the Effects of Income and Education on Marital Satisfaction

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2,366.39</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>347.04</td>
<td>2</td>
<td>173.52</td>
<td>1.48</td>
</tr>
<tr>
<td>Education</td>
<td>507.62</td>
<td>3</td>
<td>169.21</td>
<td>1.441</td>
</tr>
<tr>
<td>Income * Education</td>
<td>932.56</td>
<td>4</td>
<td>233.14</td>
<td>1.986</td>
</tr>
<tr>
<td>Within</td>
<td>16,551.49</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18,917.89</td>
<td>150</td>
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</tr>
</tbody>
</table>

* *p < .01, **p < .001
Appendix A: Qualtrics Survey

Marital Satisfaction, Parental Stress, and Perceived Social Support of Mothers of Children with ASD

Start of Block: Mother Demographics

Q1 Are you the mother of a child who is under the age of 18 and has been formally diagnosed by a doctor or healthcare provider with Autism, Autism Spectrum Disorder, Asperger syndrome, or Pervasive Developmental Disorder - Not Otherwise Specified?
   Yes (1)
   No (2)

Q2 What is your present marital status?
   Married (1)
   Living with someone (2)
   Widowed (3)
   Divorced (4)
   Separated (5)
   Single, never married (6)

Q3 Are you currently living with your significant other?
   Yes (1)
   No (2)

Q4 How many children currently live in your household?
Q5 How many children with disabilities currently live in your household?

________________________________________________________________

Q6 What is your annual, combined family income? (You and your spouse combined)

Less than $10,000 (1)
$10,000 - $19,999 (2)
$20,000 - $29,999 (3)
$30,000 - $39,999 (4)
$40,000 - $49,999 (5)
$50,000 - $59,999 (6)
$60,000 - $69,999 (7)
$70,000 - $79,999 (8)
$80,000 - $89,999 (9)
$90,000 - $99,999 (10)
$100,000 - $149,999 (11)
More than $150,000 (12)

Q7 What is your highest level of education completed?

Less than a high school diploma (1)
High school diploma or equivalent degree (2)
College/trade school diploma/certificate (3)
Bachelor's degree (4)
Master's degree (5)
Doctorate degree (6)
Q8 What is your occupation?
   Employed full-time (1)
   Employed part-time (2)
   Seeking opportunities (3)
   Home-maker (4)
   Student (5)
   Military (6)
   Retired (7)
   Prefer to not say (8)

Q9 What would best describe you? Select all that apply.
   □ White/Caucasian (1)
   □ Hispanic/Latino (2)
   □ Black/African American (3)
   □ Native American/American Indian (4)
   □ Asian/Pacific Islander (5)
   □ Other, please specify (6)
Q10 What is your age?
   Under 18 (1)
   18 - 24 (2)
   25 - 34 (3)
   35 - 44 (4)
   45 - 54 (5)
   55 - 64 (6)
   65 - 74 (7)
   75 - 84 (8)
   85 or older (9)

Q11 Are you currently living in the United States?
   Yes (1)
   No (2)

End of Block: Mother Demographics
Start of Block: Child Demographics

Q12 If you have multiple children with Autism Spectrum Disorder (ASD) living in your home, please answer the following survey with the oldest child in mind. What is your child's gender?
   Male (1)
   Female (2)
   Non-binary / third gender (3)
   Prefer not to say (4)

Q13 What is your child's age?
   Under age 7 (1)
   Between ages 8 and 12 (2)
   Between ages 13 and 18 (3)

Q14 How would you describe your child's autism or ASD?
   Mild (1)
   Moderate (2)
   Severe (3)

End of Block: Child Demographics
| National/state organizations for caregivers of children with Autism Spectrum Disorders | Yes (1) | No (2) |
| Community support groups for caregivers (regardless of disability) | Yes (1) | No (2) |
| Respite care (paid caregivers/babysitters) | Yes (1) | No (2) |
| Parent's therapist | Yes (1) | No (2) |
| Child's therapist | Yes (1) | No (2) |
| Social groups/recreational | Yes (1) | No (2) |
| Religious organization | Yes (1) | No (2) |
| General practitioner | Yes (1) | No (2) |
| School staff | Yes (1) | No (2) |
Start of Block: Efficacy: National Organizations

Please indicate below, how much you agree with the following statement. National/state organization for caregivers of children with Autism Spectrum Disorders has been a significant source of support for me.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

Please indicate below, how much you agree with the following statement. National/state organization for caregivers of children with Autism Spectrum Disorders has a good understanding of my child's difficulties and needs.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

End of Block: Efficacy: National Organizations
MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS

Start of Block: Efficacy: Community supports

Please indicate below, how much you agree with the following statement. Community support group for caregivers (regardless of disability) has been a significant source of support for me.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

Please indicate below, how much you agree with the following statement. Community support group for caregivers (regardless of disability) has a good understanding of my child's difficulties and needs.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

End of Block: Efficacy: Community supports
Start of Block: Efficacy: Respite Care

Please indicate below, how much you agree with the following statement. Respite care (paid caregivers/babysitters) has been a significant source of support for me.

Strongly agree (1)
Agree (2)
Somewhat agree (3)
Neither agree nor disagree (4)
Somewhat disagree (5)
Disagree (6)
Strongly disagree (7)

Please indicate below, how much you agree with the following statement. Paid caregivers/babysitters (i.e., respite care) has a good understanding of my child's difficulties and needs.

Strongly agree (1)
Agree (2)
Somewhat agree (3)
Neither agree nor disagree (4)
Somewhat disagree (5)
Disagree (6)
Strongly disagree (7)

End of Block: Effectiveness: Respite Care
Start of Block: Effectiveness: Parent therapist

Please indicate below, how much you agree with the following statement. My therapist has been a significant source of support for me.

   Strongly agree (1)
   Agree (2)
   Somewhat agree (3)
   Neither agree nor disagree (4)
   Somewhat disagree (5)
   Disagree (6)
   Strongly disagree (7)

Please indicate below, how much you agree with the following statement. My therapist has a good understanding of my child's difficulties and needs.

   Strongly agree (1)
   Agree (2)
   Somewhat agree (3)
   Neither agree nor disagree (4)
   Somewhat disagree (5)
   Disagree (6)
   Strongly disagree (7)

End of Block: Effectiveness: Parent therapist
Start of Block: Effectiveness: Child Therapist

Please indicate below, how much you agree with the following statement. My child's therapist has been a significant source of support for me.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

---

Please indicate below, how much you agree with the following statement. My child's therapist has a good understanding of my child's difficulties and needs.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

---

End of Block: Effectiveness: Child Therapist
MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS

Start of Block: Effectiveness: Social groups/rec

Please indicate below, how much you agree with the following statement. Social/recreational group has been a significant source of support for me.

Strongly agree (1)
Agree (2)
Somewhat agree (3)
Neither agree nor disagree (4)
Somewhat disagree (5)
Disagree (6)
Strongly disagree (7)

Please indicate below, how much you agree with the following statement. Social/recreational group has a good understanding of my child's difficulties and needs.

Strongly agree (1)
Somewhat agree (2)
Neither agree nor disagree (3)
Somewhat disagree (4)
Strongly disagree (5)

End of Block: Effectiveness: Social groups/rec
Start of Block: Effectiveness: Religious Organization

Please indicate below, how much you agree with the following statement. My religious organization has been a significant source of support for me.

Strongly agree (1)
Agree (2)
Somewhat agree (3)
Neither agree nor disagree (4)
Somewhat disagree (5)
Disagree (6)
Strongly disagree (7)

Please indicate below, how much you agree with the following statement. My religious organization has a good understanding of my child's difficulties and needs.

Strongly agree (1)
Agree (2)
Somewhat agree (3)
Neither agree nor disagree (4)
Somewhat disagree (5)
Disagree (6)
Strongly disagree (7)

End of Block: Effectiveness: Religious Organization
End of Block: Effectiveness: General Practitioner
Start of Block: Effectiveness: Child's school

Please indicate below, how much you agree with the following statement. My child's school has been a significant source of support for me.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

Please indicate below, how much you agree with the following statement. My child's school has a good understanding of my child's difficulties and needs.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

End of Block: Effectiveness: Child's school
**Start of Block: Informal Social Support**

Q16 Please indicate with a yes or no if you are currently receiving social support from the following.

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spouse/significant other</td>
<td>Yes (1)</td>
<td>No (2)</td>
</tr>
<tr>
<td>Immediate family (your parents/siblings)</td>
<td>Yes (1)</td>
<td>No (2)</td>
</tr>
<tr>
<td>Extended family (your uncles/aunts/grandparents/cousins/in-laws)</td>
<td>Yes (1)</td>
<td>No (2)</td>
</tr>
<tr>
<td>Friends</td>
<td>Yes (1)</td>
<td>No (2)</td>
</tr>
<tr>
<td>Neighbors</td>
<td>Yes (1)</td>
<td>No (2)</td>
</tr>
<tr>
<td>Parents of other children with Autism Spectrum Disorders/other disabilities</td>
<td>Yes (1)</td>
<td>No (2)</td>
</tr>
</tbody>
</table>

**End of Block: Informal Social Support**
Start of Block: Effectiveness: Spouse

Please indicate below, how much you agree with the following statement. My spouse/significant other has been a significant source of support for me.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

Please indicate below, how much you agree with the following statement. My spouse/significant other has a good understanding of my child's difficulties and needs.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

End of Block: Effectiveness: Spouse
Start of Block: Effectiveness: Immediate Family

Please indicate below, how much you agree with the following statement. Immediate family has been a significant source of support for me.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

Please indicate below, how much you agree with the following statement. Immediate family has a good understanding of my child's difficulties and needs.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

End of Block: Effectiveness: Immediate Family
Start of Block: Effectiveness: Extended Family

Please indicate below, how much you agree with the following statement. Extended family has been a significant source of support for me.

   Strongly agree (1)
   Agree (2)
   Somewhat agree (3)
   Neither agree nor disagree (4)
   Somewhat disagree (5)
   Disagree (6)
   Strongly disagree (7)

Please indicate below, how much you agree with the following statement. Extended family has a good understanding of my child's difficulties and needs.

   Strongly agree (1)
   Agree (2)
   Somewhat agree (3)
   Neither agree nor disagree (4)
   Somewhat disagree (5)
   Disagree (6)
   Strongly disagree (7)

End of Block: Effectiveness: Extended Family
Start of Block: Effectiveness: Friends

Please indicate below, how much you agree with the following statement. Friend(s) has been a significant source of support for me.

Strongly agree (1)
Agree (2)
Somewhat agree (3)
Neither agree nor disagree (4)
Somewhat disagree (5)
Disagree (6)
Strongly disagree (7)

Please indicate below, how much you agree with the following statement. Friend(s) has a good understanding of my child's difficulties and needs.

Strongly agree (1)
Agree (2)
Somewhat agree (3)
Neither agree nor disagree (4)
Somewhat disagree (5)
Disagree (6)
Strongly disagree (7)

End of Block: Effectiveness: Friends

175
Start of Block: Effectiveness: Neighbors

Please indicate below, how much you agree with the following statement. Neighbor(s) has been a significant source of support for me.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

End of Block: Effectiveness: Neighbors
Start of Block: Effectiveness: Parents of other kids

Please indicate below, how much you agree with the following statement. Parents of other children with Autism Spectrum Disorder/other disabilities have been a significant source of support for me.

Strongly agree (1)
Agree (2)
Somewhat agree (3)
Neither agree nor disagree (4)
Somewhat disagree (5)
Disagree (6)
Strongly disagree (7)

Please indicate below, how much you agree with the following statement. Parents of other children with Autism Spectrum Disorder/other disabilities have a good understanding of my child's difficulties and needs.

Strongly agree (1)
Agree (2)
Somewhat agree (3)
Neither agree nor disagree (4)
Somewhat disagree (5)
Disagree (6)
Strongly disagree (7)

End of Block: Effectiveness: Parents of other kids
Start of Block: Parental Stress Scale (PSS)

Q17 The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following item.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree (1)</th>
<th>Disagree (2)</th>
<th>Undecided (3)</th>
<th>Agree (4)</th>
<th>Strongly agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am happy in my role as a parent</td>
<td></td>
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<tr>
<td>2. There is little or nothing I wouldn't do for my child(ren) if it was necessary</td>
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<tr>
<td>3. Caring for child(ren) sometimes takes more time and energy than I must give</td>
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<tr>
<td>4. I sometimes worry whether I am doing enough for my child(ren)</td>
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<td>5. I feel close to my child(ren)</td>
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<tr>
<td>6. I enjoy spending time with my child(ren)</td>
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<td>7. My child(ren) is an important source of</td>
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<tr>
<td>8. Having child(ren) gives me a more certain and optimistic view for the future</td>
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<tr>
<td>9. The major source of stress in my life is my child(ren)</td>
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<tr>
<td>10. Having child(ren) leaves little time and flexibility in my life</td>
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<tr>
<td>11. Having child(ren) has been a financial burden</td>
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<tr>
<td>12. It is difficult to balance different responsibilities because of my child(ren)</td>
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<tr>
<td>13. The behavior of my child(ren) is often embarrassing or stressful to me</td>
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<tr>
<td>14. If I had it to do over again, I might</td>
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</tbody>
</table>
decide not to have child(ren)

15. I feel overwhelmed by the responsibility of being a parent

16. Having child(ren) has meant having too few choices and too little control over my life

17. I am satisfied as a parent

18. I find my child(ren) enjoyable

End of Block: PSS
Start of Block: R-DAS

Q18

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

<table>
<thead>
<tr>
<th>Always agree (1)</th>
<th>Almost always agree (2)</th>
<th>Occasionally agree (3)</th>
<th>Frequently disagree (4)</th>
<th>Almost always disagree (5)</th>
<th>Always disagree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Religious matters</td>
<td></td>
<td></td>
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<tr>
<td>2. Demonstrations of affection</td>
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<tr>
<td>3. Making major decisions</td>
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<tr>
<td>4. Sex relations</td>
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<tr>
<td>5. Conventionality (correct or proper behavior)</td>
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<tr>
<td>6. Career decisions</td>
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</tbody>
</table>
Q19 Please answer the following.

<table>
<thead>
<tr>
<th></th>
<th>All the time (1)</th>
<th>Most of the time (2)</th>
<th>More often than not (3)</th>
<th>Occasionally (4)</th>
<th>Rarely (5)</th>
<th>Never (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. How often do you discuss or have you considered divorce, separation, or terminating your relationship?</td>
<td></td>
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<tr>
<td>8. How often do you and your partner quarrel?</td>
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<tr>
<td>9. Do you regret that you married (or lived together)?</td>
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<tr>
<td>10. How often do you and your mate &quot;get on each other's nerves?&quot;</td>
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</tr>
</tbody>
</table>
MOTHERS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS

Q20 Please answer the following.

<table>
<thead>
<tr>
<th>Question</th>
<th>Everyday (1)</th>
<th>Almost Everyday (2)</th>
<th>Occasionally (3)</th>
<th>Rarely (4)</th>
<th>Never (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Do you and your mate engage in outside interests together?</td>
<td></td>
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</tr>
</tbody>
</table>

Q21 How often would you say the following events occur between you and your mate?

<table>
<thead>
<tr>
<th>Question</th>
<th>Never (1)</th>
<th>Less than once a month (2)</th>
<th>Once or twice a week (3)</th>
<th>Once a day (4)</th>
<th>More often (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Have a stimulating exchange of ideas</td>
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<tr>
<td>13. Work together on a project</td>
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<tr>
<td>14. Calmly discuss something</td>
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</tbody>
</table>

End of Block: R-DAS
**Appendix B**

**RDAS-Revised Dyadic Adjustment Scale**

Most people have disagreements in their relationships. Please indicate below the extent of agreement or disagreement between you and your partner for each item.

<table>
<thead>
<tr>
<th></th>
<th>Always Agree (5)</th>
<th>Almost Always Agree (4)</th>
<th>Occasionally Agree (3)</th>
<th>Frequently Disagree (2)</th>
<th>Almost Always Disagree (1)</th>
<th>Always Disagree (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Religious matters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Demonstrations of affection</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Making major decisions</td>
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<td></td>
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<tr>
<td>4. Sex relations</td>
<td></td>
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<tr>
<td>5. Conventionality (correct or proper behavior)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6. Career decisions</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>All the Time (0)</th>
<th>Most of the time (1)</th>
<th>More often than not (2)</th>
<th>Occasionally (3)</th>
<th>Rarely (4)</th>
<th>Never (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. How often do you discuss or have you considered divorce, separation, or terminating your relationship?</td>
<td></td>
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<tr>
<td>8. How often do you and your partner quarrel?</td>
<td></td>
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<tr>
<td>9. Do you ever regret that you married (or lived together)?</td>
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</tr>
<tr>
<td>10. How often do you and your mate &quot;get on each other’s nerves&quot;?</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Every Day (4)</td>
<td>Almost Every Day (3)</td>
<td>Occasionally (2)</td>
<td>Rarely (1)</td>
<td>Never (0)</td>
<td></td>
</tr>
<tr>
<td>11. Do you and your mate engage in outside interests together?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Never (0)</td>
<td>Less than once a month (1)</td>
<td>Once or twice a month (2)</td>
<td>Once or twice a week (3)</td>
<td>Once a day (4)</td>
<td>More often (5)</td>
</tr>
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<td>---------------------------</td>
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</tr>
<tr>
<td>12. Have a stimulating exchange of ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Work together on a project</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Calmly discuss something</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For scoring</th>
<th>CON (1-6):</th>
<th>SAT (7-10):</th>
<th>COH (11-14):</th>
<th>TOT:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22</td>
<td>14</td>
<td>11</td>
<td>48</td>
</tr>
</tbody>
</table>
### RDAS Scoring Sheet

<table>
<thead>
<tr>
<th>Event</th>
<th>Always Agree</th>
<th>Almost Always Agree</th>
<th>Occasionally Agree</th>
<th>Frequently Disagree</th>
<th>Almost Always Disagree</th>
<th>Always Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Religious matters</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. Demonstrations of affection</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3. Making major decisions</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4. Sex relations</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5. Conventionality (correct or proper behavior)</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event</th>
<th>Always Agree</th>
<th>Almost Always Agree</th>
<th>Occasionally Agree</th>
<th>Frequently Disagree</th>
<th>Almost Always Disagree</th>
<th>Always Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Do you and your mate engage in outside interests together?</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

How often would you say the following events occur between you and your mate?

<table>
<thead>
<tr>
<th>Event</th>
<th>Never</th>
<th>Less than once a month</th>
<th>Once or twice a month</th>
<th>Once or twice a week</th>
<th>Once a day</th>
<th>More often</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Have a stimulating exchange of ideas</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. Work together on a project</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. Calmly discuss something</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
a) For each spouse, score their RDAS according to the values given above (lower = more distressed).

b) Add items 1-6: _____ (Consensus: 22 = the cutoff score to discriminate between distress/nondistress)

c) Add items 7-10: _____ (Satisfaction: 14 = the cutoff score)

d) Add items 11-14: _____ (Cohesion: 11 = the cutoff score)

e) Add all items: _____ (Total: 48 = the cutoff score)

f) List scores in appropriate box on each partner’s copy.

For additional information on each of the scales/subscales, the questions related to each are listed below:

Consensus: Items 3 & 6 = decision making, 1 & 5 = values, 2 & 4 = affection

Satisfaction: Items 7 & 9 = stability, 8 & 10 = conflict

Cohesion: Items 11 & 13 = activities, 12 & 14 = discussion
Appendix C

Parental Stress Scale

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items by placing the appropriate number in the space provided.

1 = Strongly disagree  2 = Disagree  3 = Undecided  4 = Agree  5 = Strongly agree

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am happy in my role as a parent</td>
</tr>
<tr>
<td>2</td>
<td>There is little or nothing I wouldn't do for my child(ren) if it was necessary.</td>
</tr>
<tr>
<td>3</td>
<td>Caring for my child(ren) sometimes takes more time and energy than I have to give.</td>
</tr>
<tr>
<td>4</td>
<td>I sometimes worry whether I am doing enough for my child(ren).</td>
</tr>
<tr>
<td>5</td>
<td>I feel close to my child(ren).</td>
</tr>
<tr>
<td>6</td>
<td>I enjoy spending time with my child(ren).</td>
</tr>
<tr>
<td>7</td>
<td>My child(ren) is an important source of affection for me.</td>
</tr>
<tr>
<td>8</td>
<td>Having child(ren) gives me a more certain and optimistic view for the future.</td>
</tr>
<tr>
<td>9</td>
<td>The major source of stress in my life is my child(ren).</td>
</tr>
<tr>
<td>10</td>
<td>Having child(ren) leaves little time and flexibility in my life.</td>
</tr>
<tr>
<td>11</td>
<td>Having child(ren) has been a financial burden.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>12</td>
<td>It is difficult to balance different responsibilities because of my child(ren).</td>
</tr>
<tr>
<td>13</td>
<td>The behaviour of my child(ren) is often embarrassing or stressful to me.</td>
</tr>
<tr>
<td>14</td>
<td>If I had it to do over again, I might decide not to have child(ren).</td>
</tr>
<tr>
<td>15</td>
<td>I feel overwhelmed by the responsibility of being a parent.</td>
</tr>
<tr>
<td>16</td>
<td>Having child(ren) has meant having too few choices and too little control over my life.</td>
</tr>
<tr>
<td>17</td>
<td>I am satisfied as a parent</td>
</tr>
<tr>
<td>18</td>
<td>I find my child(ren) enjoyable</td>
</tr>
</tbody>
</table>
PSS Scoring Sheet

To compute the parental stress score, items 1, 2, 5, 6, 7, 8, 17, and 18 should be reverse scored as follows: (1=5) (2=4) (3=3) (4=2) (5=1). The item scores are then summed.

Scoring the tool:
We want a low score to signify a low level of stress, and a high score to signify a high level of stress

- Overall possible scores on the scale range from 18 – 90.
- The higher the score, the higher the measured level of Parental stress

Use a simple table to show the before and after results to evidence whether an intervention has had a positive effect.

- Comparison of individuals before / after or longitudinal overall Parental Stress Scale scores.
- The comparison of before and after mean average scores for groups (parents/caregivers accessing the particular intervention/group sessions, service or provision)