## Photocopy and Use Authorization

In presenting this thesis in partial fulfillment of the requirements for an advanced degree at Idaho State University, I agree that the Library shall make it freely available for inspection. I further state that permission for extensive copying of my thesis for scholarly purposes may be granted by the Dean of the Graduate School, Dean of my academic division, or by the University Librarian. It is understood that any copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Signature _____

Date _____

Parent Involvement in Autism Spectrum Disorder Interventions: The Effects of Parent Internalizing Disorders and Self-Care Behaviors

By

Samantha Johnston

A thesis

submitted in partial fulfillment

of the requirements for the degree of

Master of Science in the Department of Psychology

Idaho State University

Summer 2022

To the Graduate Faculty:

The members of the committee appointed to examine the thesis of Sam Johnston find it satisfactory and recommend that it be accepted.

_____

Robert Rieske,
Major Advisor

_____

Samuel Peer,
Committee Member

_____

Fredi Giesler,
Graduate Faculty Representative

October 7, 2021

Samantha Johnston
Psychology
MS 8112

RE: Study Number IRB-FY2021-149: Parental Involvement in Autism Spectrum Disorder Interventions: The Impact of Internalizing Disorders and Self-Care Behaviors

Dear Ms. Johnston:

I agree that this study qualifies as exempt from review under the following guideline: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.
This letter is your approval, please, keep this document in a safe place.

Notify the HSC of any adverse events. Serious, unexpected adverse events must be reported in writing within 10 business days.

You are granted permission to conduct your study effective immediately. The study is not subject to renewal.

Please note that any changes to the study as approved must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. Contact Tom Bailey (208-282-2179; fax 208-282-4723; email: humsubj@isu.edu) if you have any questions or require further information.

Sincerely,

Ralph Baergen, PhD, MPH, CIP
Human Subjects Chair

Table of Contents

List of Tables

## Abstract

The present study investigates the relationship between parent internalizing disorders and self-care behaviors with parental involvement in autism spectrum disorder (ASD) interventions. It is well known that parents of children with ASD experience significant amounts of stress and internalizing disorders at higher rates than the general population. Little is known of the self-care behaviors that these parents engage in.. Additionally, it has been shown that parental involvement in ASD interventions leads to better developmental outcomes. For this study, data was collected from 84 participants through a Qualtrics survey. After conducting a sequential multiple regression, a relationship was found between self-care behaviors and parent involvement; however, no relationship was found between internalizing disorders and parent involvement after conducting correlation analyses. The findings of this study can provide clinical implications for this population, such that parents may receive more support and encouragement to engage in self-care behaviors through their child's ASD interventions.


Keywords: parent involvement, autism spectrum disorder, internalizing disorders, self-care behaviors

## Introduction

Characterized by persistent deficits in communication and social interaction along with repetitive and stereotyped behaviors and interests (American Psychiatric Association, 2013), autism spectrum disorder (ASD) not only affects those with the disorder but also those involved in the lives of individuals who have ASD. Parents and caretakers are often those most involved in the lives of children who have been diagnosed with ASD and as such, they are frequently left to take on many roles including the role of interventionist in their child's life. While a child diagnosed with ASD may receive services from licensed clinicians, parents are frequently expected to carry out interventions in their child's everyday life to facilitate rapid skill growth (Steiner et al., 2012). Parents may be encouraged to assist with the acquisition of adaptive behaviors and daily living skills to resolve lapses in their child's development such as skills associated with eating, toileting, social interaction, and appropriate behavior (Ruble et al., 2018). In a meta-analysis, Pickles and colleagues (2016) found a decrease in severity of autism symptomology as a result of parent-mediated social communication therapy. This treatment effect was present nearly six years after treatment endpoint, which suggests that parental involvement within their child's ASD interventions can provide long-term and beneficial outcomes. Though parental support with ASD intervention is encouraged, the level of assistance a parent provides varies vastly amongst parents. Several factors such as the presence of internalizing disorders and the engagement in self-care behaviors may help to understand how parents engage and become involved in their child's ASD intervention. While the frequency of internalizing disorders with this population has been highly noted throughout the literature (Myers & Johnson, 2008; Schnabel et al., 2020; Wenzel et al., 2019), the relationship between

internalizing disorders, self-care behaviors, and parental involvement is unknown. The current study aims to better understand the relationship between these variables.

**Internalizing disorders**

Distressing emotions often influence the presentation of internalizing disorders as they typically involve emotions including sadness, fear, and loneliness. These distressing emotions may lead to symptoms of depression and anxiety, the epitome of internalizing disorders, which affects a variety of populations with differing intensities. In a recent meta-analysis, Schnabel and colleagues (2020) found that anxiety and depression were the most common psychopathological disorders among parents of children diagnosed with ASD with prevalence rates of 31% and 33% respectively. Comparatively, both proportions are significantly higher than the estimated global prevalence of depression at 4.4% and anxiety at 3.6% of the general population (World Health Organization, 2017). Furthermore, parents with children diagnosed with ASD more readily endorse clinical rates of depression and stress compared to parents with typically developing children and parents of children with other disabilities (Myers & Johnson, 2008; Wenzel et al., 2020). This highlights the increased prevalence of internalizing disorders in a population that experiences stress at chronic levels (Cachia et al., 2016).

These experiences of anxiety, depression, and related stress can lead to substantial effects in the lives of parents of children with ASD. In a study conducted by Rodriguez and colleagues (2019), parenting stress was found to be a positive predictor of increased internalizing problems like depression, inattention, withdrawal, and avoidance in children with ASD. Similarly, parenting stress was also found to be correlated to externalizing behavior problems in the child such as hyperactivity, impulsivity, and aggression (Rodriguez et al., 2019). Stress associated with the child's symptomology alters the responses of parents through means that increase the

severity of the symptoms the child experiences and displays (Rodriguez et al., 2019; Schnabel et al., 2020). Parenting stress has also been shown to reduce the effectiveness of early teaching interventions which likewise affects the child's well-being (Osborne et al., 2008). Similarly, depression has a large impact on the lives of parents of children with autism spectrum disorder. Parents often experience poorer parental functioning (Scherer et al., 2019), strained interaction with the child (Vernhet et al., 2019), limited social interaction (Chafouleas et al., 2020), and disengaged parenting behavior (Scherer et al., 2019) in conjunction with depressive symptoms. These overarching effects of internalizing symptoms may lead parents to experience intense exhaustion related to their parental role.

When parents begin to exhibit extreme exhaustion, they may become emotionally detached from their children and exhibit disinterest in parenting itself (Mikolajczak et al., 2020). This phenomenon is often referred to as "burnout", which is frequently defined by chronic physical and mental fatigue, as well as chronic stress, and is highly correlated with abated stamina and decreased interest (Ardic, 2020). Burnout may also reduce the motivation for parenting, which can affect the child's well-being as well as treatment implementation from the parent. Although burnout, internalizing disorders, and stress can have a debilitating effect on parents of children with ASD, engagement in certain behaviors can promote health and might encourage a different mindset.

**Self-care**

Self-care is a multidimensional process of purposeful engagement in behaviors that promote health and enhance well-being (Doriociak et al., 2017). Previous research has taken the approach of examining specific self-care behaviors which focus on emotional or psychological well-being and often include physical, psychological, spiritual, social, and recreational activities

(Dorociak et al., 2017). In some literature, this concept is referred to as health-promoting self-care and is described as actions that are taken to improve health, increase well-being, and sustain functioning (Acton, 2002). These actions can include getting enough rest, eating nutritious meals, and exercising frequently. In the vast literature of self-care behaviors, research concerning self-care behaviors of parents of children with ASD is limited. Current research in respect to self-care behaviors related to this group of individuals is focused on parents of children with developmental disabilities (DD). While this is not tailored specifically towards ASD, important information has been gathered from this data that may help to bridge the gap in the literature.

In a recent study, Chafouleas and colleagues (2020) attempted to reduce the critical gap in the understanding of health-promoting self-care behaviors among parents/caregivers supporting a child with DD. Specifically they addressed the successes and challenges of being a parent of a child with DD and how they relate to health-promoting self-care behaviors. A semi-structured interview was used to help identify patterns of self-care practices and to highlight the perceived barriers that parents encounter. The interview included 10 questions related to typical daily activities, general knowledge of health and well-being, an assessment of self-care behaviors, the self-care needs of parents, and technologies to support self-care. Self-care behaviors varied amongst the 15 participants and while some participants endorsed receiving a yearly screening at the doctor's office and buying produce as their primary strategies for promoting their self-care, others described social support networks such as talking with friends and family, attending support groups, or going to church. This study demonstrated that parents frequently have concerns with finding enough time to engage in and access self-care activities while balancing financial challenges. Results of this study concluded that the type of self-care a parent engages in depends upon the individual.

While the previous study specifically addressed self-care of parents of children with DD, prior research has focused on self-care behaviors in similar populations. Due to the lack of research examining self-care behaviors in parents, comparisons with other related caregiving populations can aid in the understanding of the self-care behaviors that parents of children with ASD may engage in. For example, caregivers of those with Alzheimer's and dementia experience many comparable strains to parents of those with ASD including high levels of anxiety and depression. In a systematic review, Sallin and colleagues (2015) reported an aggregated prevalence for depression among caregivers of those with Alzheimer's disease of 33.9% and an aggregated prevalence for anxiety of 43.6%. These descriptive statistics are comparable to prevalence rates of depression and anxiety in parents of children with ASD. The stressors between these populations are similarly analogous as caregivers of patients with Alzheimer's and dementia frequently experience behavioral disturbances, functional impairment of daily living, and stress related to the duties of being a caregiver (Richardson et al., 2013; Sallin et al., 2015). These similarities allow for analogies to be made between the self-care behaviors caregivers of those with Alzheimer's and dementia engage in and the self-care practices of parents of child with ASD.

Caregivers of those with Alzheimer's and dementia report low levels of self-care and frequently have difficulties engaging in these behaviors due to the duties presented with their role. In a study conducted by Wang and colleagues (2018), they found that these caregivers do not engage in regular physical exams, do not take their own prescribed medication, and often do not engage in social activities. The limited engagement associated with these various self-care behaviors were linked to difficulties such as sticking to a schedule and planning different social events as availability is often compromised. These individuals may find it easier to discontinue

to engage in social activities rather than making efforts to maintain contact with others or connect with them (Wang et al., 2018). Other factors that influence the engagement in self-care behaviors include the illness trajectory of the individual with Alzheimer's and dementia such that when the decline of the individual is rapid, the caretaker is less likely to engage in self-care (Furlong & Wuest, 2008). Self-care worthiness can also impact how caregivers take part in self-care meaning that as the individual with Alzheimer's is unable to validate the engagement in self-care, caregivers will often forego these behaviors as they may believe they are not worthy of this time for themselves. This may be especially salient when the caregiver is a spouse to the individual with Alzheimer's or dementia. The relationship before the onset of the disease could have promoted these behaviors by encouraging the other to take a break or to engage in an activity that they enjoyed when the spouse appeared to be experiencing negative or stressful emotions (Furlong & Wuest, 2008); however, when Alzheimer's is present, these individuals are not as apt to provide validation, thus decreasing the validation of the engagement in self-care behaviors.

Another comparison that can be made to aid in the understanding of the self-care behaviors that parents of children with ASD engage in is recognizing the behaviors of social workers. Social workers and parents of children with ASD experience many comparable strains including high levels of anxiety and depression (Coyle et al., 2005). Social workers also often experience heavy caseloads and complex and demanding cases which may be similar to the experiences of parents of children with ASD as they often have to deal with the complex diagnosis of their own child (Siefert et al., 1991). Likewise, it is highly noted throughout the literature that social workers encounter burnout throughout their careers (Ben-Zur & Michael, 2007; Evans et al., 2006; Kim & Stoner, 2008; Siefert et al., 1991; Soderfeldt et al., 1995) which

is comparable to the burnout that parents of children with ASD may experience. These similarities allow for analogies to be made between the self-care behaviors social workers engage in and the self-care practices of parents of child with ASD.

Social workers tend to report minimal and infrequent levels of self-care engagement (Miller et al., 2017; Miller et al., 2019) which is correlated with a lack of social and professional support (Ben-Zur & Michael, 2007) socioeconomic status (Bloomquist et al., 2015), and overall health (Miller et al., 2017). These barriers are comparable to those that parents of children with ASD frequently experience, such that parents are often inhibited by finances and have limited time to seek out support. In a study conducted by Miller and colleagues (2017), financial stability was found to be a significant predictor of engagement in self-care behaviors of social workers. Finances are often understood as means to access self-care, which demonstrates the limited ability to retain a positive view of self-care with this associated stressor. This study also considered overall health as a barrier to engaging in self-care and noted that self-care is often viewed as participation in physical activities such as running, going to the gym, or other forms of physical exercise. Thus, those who are healthier may engage in self-care practices at a higher rate than those who describe their health as poor. Social support acted as a mediator of self-care engagement, in that those who were a part of professional organizations or who were married were more likely to engage in self-care. Bloomquist and colleagues (2015), found that social workers infrequently engage in activities like yoga, journaling, or negotiating one's own needs, which may have been correlated with cost or time restraints. As mentioned before, this is not a direct comparison; however, the information presented can be synthesized to develop an understanding of the self-care behaviors parents of children with ASD may engage in and how they may benefit from these behaviors.

Knowledge concerning the benefits and effects of self-care behaviors with parents of children with ASD are similarly restricted in the literature. As such, knowledge pertaining to the benefits of self-care behaviors of parents with children with autism spectrum disorder can be gleaned from research regarding specific self-care practices with similar populations. Neece (2013), conducted a study exploring the effects of mindfulness-based stress reduction with parents of children with a developmental disability. Mindfulness-based stress reduction (MBSR) is a practice of formal mindfulness exercises including meditation and breathing which was implemented as a treatment within this study. Many benefits of this self-care practice were discovered including reductions in parental stress, decreases in depression, reductions in child behavior problems, and improvements in a range of mental health issues parents experience. Parents who engaged in MBSR reported a greater ability to cope with both short-term and long-term stressful situations which may have improved their parenting experience. Similarly, alternative benefits of this self-care practice were suggested by Neece, including the ability of the parent to slow down, notice impulses before acting, and listen to their children more intently. However, as this study implemented this specific self-care strategy, information regarding self-care chosen and applied by the parents themselves cannot be implied from this research. As suggested previously, parents of children with ASD may engage in this sort of self-care irregularly as this is related to practices like yoga, in which similar populations have reported infrequent engagement. These rudimentary findings can provide overarching evidence of the benefits of self-care behaviors. Alternatively, parent training such as improving parenting skills may be thought of as a form of self-care in that with the implementation of this intervention, children may engage in fewer disruptive behaviors which in turn may improve the mental health of the parent (Iida et al., 2018).

With consideration of these populations, caregivers of individuals with Alzheimer's, social workers, and parents of children with developmental disorders, one can gather important information about the engagement and benefits of self-care behaviors that parents of children with ASD may engage in. These populations share many of the same strains and stressors as parents of children with ASD and as such, the information presented may be characteristic of the population of interest. While the benefits of these behaviors may be understood from these comparable populations, many studies focus on the implementation and the teaching of self-care behaviors (Gockel & Deng, 2016; Neece, 2013) instead of exploring the benefits of self-care behaviors instigated by the individuals themselves. This information may be descriptive of parents of children with autism spectrum disorder; however, to gather a more thorough knowledge base, data directly assessing this population is necessary. With the knowledge presented, one may assume that parents of children with ASD engage in these specific behaviors to achieve self-care which possibly influences the presence of internalizing disorders as well as how involved parents may be in their child's intervention.

**Parent Involvement**

Individuals with autism spectrum disorder often require a multitude of intense interventions to aid with skill development and functionality. When these interventions are implemented at a young age and include parental involvement, they can be extremely effective for children with ASD (Steiner et al., 2011). Common interventions include applied behavioral analysis (ABA), assistive technology, occupational therapy (OT), social skills training, and speech therapy. Parent's involvement varies widely across these programs and is inclusive of many different forms such as formal involvement within the intervention, child program involvement, training involvement, and agency involvement (Solish et al., 2015). These different

modes of engagement often equate to parent education, parent training, parents as collaborators, and home-based parent training within the interventions that the child receives (Burrel & Borrego, 2012). Many benefits are associated with parental involvement in their child's ASD intervention including becoming more knowledgeable about the child's diagnosis, an improvement of parenting skills, and creating a positive relationship with the child (Rojas-Torres et al., 2020). One of the most common forms of parental participation is a parent education model which teaches parents of children with ASD strategies to manage difficult behaviors, increase knowledge regarding ASD, and helps parents to learn techniques to work with their child so that intervention can continue in the absence of a professional (Steiner et al., 2011). Parents learn how to implement interventions themselves through these models and begin to develop goals and treatment plans, therefore becoming a "co-therapist" or a collaborator within their child's treatment. Through this model, parents may learn techniques like differential reinforcement of alternative behaviors which they can implement at home with their child (Burrell & Borrego, 2012). When these techniques are implemented, they consequently enhance the generalization of the effects of the child's intervention, which is a common key component in most ASD interventions (Bagaiolo et al., 2019). The skills children with ASD learn through interventions are often only apparent when in the presence of the interventionist or in the setting where the intervention took place. The "co-therapist" role that parents hold within this model helps to generalize the skills their child has learned to other settings. Thus, parent education models can increase a child's rate of progress and use of skills in multiple contexts.

Parent involvement is not limited to the aforementioned method of parent education models. Other evidence-based interventions like Parent-Child Interaction Therapy (PCIT) can facilitate the participation and involvement of parents as well. PCIT is a behavioral intervention

that targets the parent-child relationship, where both the parent and child engage in treatment at the same time. PCIT involves parental coaching where skills are taught through in-vivo sessions in which the parent is alone in session and immediate feedback is provided through a covert listening device (Burrell & Borrego, 2012). Parents may use the skills learned through PCIT in everyday activities where a professional is not present thus, generalizing the progress made by the child. Other methods of intervention that focus on the involvement of the parent include parent-mediated interventions and parent-child play based interventions in which parents are trained in providing applied behavioral analysis or pivotal response training with a focus on interaction and play between the parent and the child (Rojas-Torres, et al., 2020). Parental involvement can also consist of other approaches including parents observing the therapist and gathering skills and techniques from the sessions to implement without the therapist present. Similarly, parents may watch videotaped sessions of interventions implemented with their child as means of learning skills (Burrell & Borrego, 2012). Methods such as these have a focus on the parent learning skills to apply without the presence of a professional. These methods of involvement can be difficult for parents to engage in given the amount of stress and commitments they may have including the copious number of interventions and therapies their child is partaking in (Solish et al., 2015). Intensity of the intervention can also become a barrier to parental involvement. For example, ABA interventions frequently recommend up to 40 hours of intervention a week (Lovaas, 1987), which can be taxing to both the child and parent (Smith & Eikeseth, 2011). Previous research has suggested a broader understanding of parental involvement in the lives of children with ASD such as attending education planning meetings, workshops, receiving training about ASD, making phone calls to programs or school, observing or volunteering in the child's classroom, and participating in the evaluation of the child's

progress (Solish et al., 2015). All of these strategies can also provide parents with many benefits and advances in their child's life as well as their own.

Parental involvement can facilitate further progress in treatment which may alleviate stress associated with their child's maladaptive behaviors or other issues addressed by interventions (Steiner et al., 2011). Much of the research analyzing internalizing disorders and stress view these variables as outcomes of parental involvement in their child's treatment, stating that parents who are involved in their child's interventions often experience a decrease in internalizing symptoms as a result of the progress made by their child (Solish & Perry, 2008). While this is an important relationship to understand, it is equally important to understand how internalizing disorders affect the involvement of parents in their child's ASD intervention, especially when considering the focus of most interventions is on the child and not on the mental health and internalizing symptoms of the parent (Rojas-Torres et al., 2020). In a study conducted by Solish and Perry (2008), the effects of stress were taken into consideration in regard to parental involvement. These researchers were unable to observe a relationship between stress and parental involvement, which suggests that decreasing a parent's stress levels may not alter their ability or willingness to become involved in their child's intervention. This finding indicates that related stress may not affect parents' involvement; however, severity of stress was not considered by the researchers in this study which impacts the understanding of the present relationship between stress and parental involvement. Schiltz and colleagues (2018) addressed the gap in the knowledge of the effects of internalizing symptoms on parental involvement by delving deeper into the relationship. This study found that when parents experience heightened parental stress and depression, they become less involved in their parental duties and the likelihood of engaging in activities with their child decreases. Involvement in treatment may be

similarly influenced by internalizing symptoms such that greater internalizing symptoms may lead parents to be less involved in their child's treatment and related activities.

A comparable pattern of research can be found when looking at self-care behaviors and parental involvement. As previously mentioned, parent training may act as a form of self-care in that it can improve parent's positive appraisal coping strategies and decrease escape and avoidance coping skills (Iida et al., 2018). Like research regarding internalizing disorders, research involving parental involvement and self-care behaviors considers the improvements of self-care based on the involvement of parents and while this is an important relationship to recognize, the impact of self-care behaviors on parental involvement are still not well understood. Overall, the relationship between these variables is not recognized as it should be to provide beneficial outcomes to parents and children.

**Purpose of Study and Hypotheses**

The current study aims to examine the relationship between internalizing disorders, engagement in self-care, and parental involvement in the interventions of their children with autism spectrum disorder. While previous research has delved into the prevalence of depression and anxiety in parents of children with ASD, there is limited literature concerning how these internalizing disorders affect parental involvement in their child's ASD intervention. The literature regarding the presentation of internalizing disorders and involvement in such parents often focuses on the improvements of depression or anxiety after the parent becomes involved in the intervention. The present study will instead examine internalizing disorders as a predictor of parental involvement. Similarly, the self-care behaviors of parents with children who have an ASD diagnosis is not reported in the literature and as such one can only make speculations about these behaviors based on similar groups. Consequently, the current study will assess the self-care

behaviors of this specific population in an attempt to understand how they may affect the rate at which parents become involved in their child's intervention. Specifically, the present study will examine the following hypotheses and research questions:

***$H_1$:*** The presence of internalizing disorders will predict parental involvement such that parents of children diagnosed with ASD who present with an internalizing disorder will exhibit less involvement in their child's treatment than those without an internalizing disorder.

***$H_2$:*** Intensity of internalizing disorders will predict parental involvement in their child's treatment such that parents of children diagnosed with ASD who experience a higher intensity of internalizing disorders will exhibit less involvement in their child's treatment.

***$H_3$:*** Interference of internalizing disorders will be predictive of parental involvement in ASD interventions such that parents who experience greater interference of internalizing disorders in their lives will be less involved than parents who experience less interference from internalizing disorders.

***$H_4$:*** Engagement in self-care behaviors will be predictive of parental involvement such that parents of children with ASD who engage in higher levels of self-care will exhibit more involvement in their child's intervention after accounting for the effects of internalizing disorders and any potential covariates.

## Methodology

### Participants

A power analysis for a sequential multiple regression analysis ($\alpha = 0.05$, power = 0.80) using the G*power statistical software (Faul, et al., 2007) indicated that approximately 77 participants were needed in total to obtain a medium to large effect size; to account for missing

data, 85 participants was projected to be collected. Previous studies examining similar topics have reported medium to large effect sizes (Acton, 2002; Osborn et al, 2008) and were used to estimate the current effect size. For example, Osborn and colleagues (2008) investigated how parenting stress reduced the effectiveness of early teaching interventions for children with ASD and reported an eta squared of .14. Similarly, Acton (2002) investigated health-promoting self-care in family caregivers, which was expected to be similar to the effects being investigated in the current study and reported an $R^2$ of .26.

The current study consisted of 84 parents ($M_{age}$ = 34.8, *SD* = 4.7) of children with autism spectrum disorder between 2 and 10 years of age ($M_{age}$ = 5.54, *SD* = .79) who were receiving therapy services (e.g., applied behavior analysis, occupational therapy, speech therapy) at the time of the survey. Participants were recruited through social media posts and advertisements on Facebook targeting autism parenting groups. Participants were excluded if they could not read and understand English or resided outside of the United States. The majority of participants identified as female (84.5%), followed by 14.3% identified as male, and 1.2% of participants identified as nonbinary/gender fluid. The majority of parent respondents identified as white (84.5%). The remaining participants identified as non-white/multiracial (15.5%). In regards to child demographics, 25% of parents reported their child as female and 75% reported their child as male. When reporting child ethnicity, 79.8% of parents identified their child's ethnicity as white and 20.2% identified their child as non-white/multiracial. Further demographic characteristics are presented in Table 1.

**Table 1**
*Participant Demographics*

| | *n* | *%* | *M* | *SD* | Observed Range |
|---|---|---|---|---|---|
| Parent Age | | | 34.8 | 4.7 | 26-44 |

| | | | | | |
|---|---|---|---|---|---|
| Parent Gender | | | | | |
| Female | 71 | 84.5 | | | |
| Male | 12 | 14.3 | | | |
| Non-Binary | 1 | 1.2 | | | |
| Parent Ethnicity | | | | | |
| White | 71 | 84.5 | | | |
| Hispanic or Latino | 6 | 7.1 | | | |
| Black or African American | 8 | 9.5 | | | |
| American Indian or Alaska Native | 1 | 1.2 | | | |
| Other | 1 | 1.2 | | | |
| Child Age | | | 5.5 | 2.3 | 2-10 |
| Child Gender | | | | | |
| Male | 63 | 75.0 | | | |
| Female | 21 | 25.0 | | | |
| Child Ethnicity | | | | | |
| White | 67 | 79.8 | | | |
| Hispanic or Latino | 8 | 9.5 | | | |
| Black or African American | 7 | 8.3 | | | |
| American Indian or Alaska Native | 1 | 1.2 | | | |
| Asian | 3 | 3.6 | | | |
| Other | 1 | 1.2 | | | |

Note. Categories in Parent and Child Ethnicity are not mutually exclusive groups; therefore, percentages total more than 100%

Although this study was open to a national sample, participants were predominantly from the western region of the US and with only one participant from the northeastern portion of the country (see Table 2). Regarding HPSA, these scores represent health professional shortage areas with higher scores representing higher priority for professionals in that area and scores range

from 1-26. An average score of 13.2 was reported for this sample which suggests that participants in this study are in areas where need for health professionals is high.

**Table 2**
*Participant Geographic Location and HPSA Scores*

| Region | *n* | % | *M* | *SD* | Observed Range |
|---|---|---|---|---|---|
| 1. Northeast | 1 | 1.2 | | | |
| 2. Midwest | 13 | 15.5 | | | |
| 3. South | 21 | 25.0 | | | |
| 4. West | 48 | 57.1 | | | |
| HPSA Score | | | 13.2 | 3.8 | 3-21 |

Regarding intervention services, participants endorsed speech therapy services more often than any other intervention service (81%). In regards to "other" interventions, participants reported various services that their child was engaged in ranging from school-based services and ASD specific classrooms to feeding therapy, general counseling, social skills training as well as specialized ASD classes for karate, swimming, and tutoring. The modal response was two meaning most families (32.1%) reported being involved with two therapies followed by three therapies (29.8%) (see Table 3).

**Table 3**
*Participant Reported Interventions*

| | *n* | *%* |
|---|---|---|
| ABA-Based | 39 | 46.4 |
| Occupational Therapy | 59 | 70.2 |
| Speech Therapy | 68 | 81 |
| Physical Therapy | 24 | 28.6 |
| Non-ABA Behavioral Intervention | 26 | 31 |

| | | |
|---|---|---|
| Early Childhood Program | 14 | 16.7 |
| Parent Training Program | 12 | 14.3 |
| Other | 18 | 21.4 |

## Measures

**Parent Involvement Survey for Autism Treatment-Version 2 (PISAT-2).** The Parental Involvement Survey for Autism Treatment, version 2 was used to assess the outcome variable of parental involvement in ASD interventions (Tiura, 2019). This is a self-administered measure intended to assess parent's involvement within the clinic site, home support, outside enrichment, coordinating services, as well as advocacy and research. This 15-item measure is answered on a Likert-scale ranging from "1" (strongly agree) to "5" (strongly disagree). The PISAT-2 reports a Cronbach's alpha of .78 in a sample of parents and caregivers of children receiving treatment (Tiura, 2019). A total score was used to represent parental involvement with scores ranging from 15 to 75.

**Patient Health Questionnaire-9 (PHQ-9).** Parent depression was assessed using the Patient Health Questionnaire-9 (Kroenke et al., 2001). The PHQ is the nine-item self-administered version of the PRIME-MD diagnostic instrument for common mental disorders. The PHQ-9 is the depression module which scores each of the DSM-IV criteria as "0" (not at all) to "3" (nearly every day). The PHQ-9 demonstrated a Cronbach's alpha of .87 in a psychiatric sample (Beard et al., 2016). A total score will be used to determine the intensity of internalizing disorders with scores ranging from 0 to 27 within parents of children with autism spectrum disorder. A cutoff score of 10 was be used to detect the presence of moderate depression as cited by Kroenke and colleagues (2001).

**Generalized Anxiety Disorder-7 (GAD-7).** The GAD-7 was used to assess parent anxiety (Spitzer et al., 2006). This is a self-administered measure intended to detect generalized anxiety disorder with seven questions answered on a Likert-scale of 0-3 where 0 is "not at all" and 3 is "nearly every day". The GAD-7 demonstrated a Cronbach's alpha of .92 in a sample of adult patients (Spitzer et al., 2006). A total score from the GAD-7 will be used to determine the intensity of internalizing disorders within parents of children with autism spectrum disorder with scores ranging from 0 to 21. A cutoff score of 10 was used to detect the presence of moderate anxiety as cited by Spitzer and colleagues (2006). Interference of internalizing disorders was also a predictor variable within this study and was assessed by averaging the interference score from the PHQ-9 and the GAD-7 with scores ranging from 1 to 4.

**Mindful Self-Care Scale (MSCS).** The MSCS was used to assess parent self-care behaviors (Cook-Cottone & Guyker, 2018). The mindful self-care scale is a self-administered measure that can be a useful tool in studying, promoting, and enhancing a positive experience of the body and psychological well-being. This measure is consistent of 33 questions included in six subcategories comprising of physical care, supportive relationship, mindful awareness, self-compassion and purpose, mindful relaxation, and supportive structure items. Questions are answered on a Likert-scale ranging from "1" (never) to "6" (regularly). The MCSC boasts a Cronbach's alpha of .89 in a sample of graduate and undergraduate students (Cook-Cottone & Guyker, 2018). A total score was used to assess the predictor variable of self-care behaviors with a range of 33 to 165.

**Autism Spectrum Rating Scale (ASRS).** It was hypothesized that the severity of autism symptoms would covary with parental involvement, therefore a measure of autism severity was a necessary addition to our analyses. The covariate of autism severity was assessed using the

Autism Spectrum Rating Scale (Goldstein & Naglieri, 2009). The ASRS is a measure that assess the severity of autism in a child. There are two full-length forms of the ASRS, which are geared towards children aged 2-5 and 6-18 with parent/teacher report options. The ASRS-2-5 and the ASRS-6-18 full-length form contain 70 and 71 items respectively of which are answered on a 5-point Likert-scale (never, rarely, occasionally, frequently, very frequently). These full-length forms offer the most complete assessment information, including the Total Score, the ASRS Scales, the DSM Scales, and the Treatment Scales. The ASRS-2-5 parent rating form and the ASRS-6-18 parent rating form has demonstrated an internal consistency of .97 in a normative sample (Goldstein & Naglieri, 2009). This measure was used to estimate the severity of autism symptoms. As symptoms of autism vary by age, the T-score based on the Total score was calculated to better account for the severity of symptoms. A standardized T-score was used as opposed to a total score as it can be easily compared to other domains and across participants and will account for the age of the child.

**Procedure**

Participants completed an online survey through Qualtrics. Before beginning the survey, informed consent was obtained from the participants. The survey was inclusive of questions regarding inclusion and exclusion criteria such as the ability to understand English, if they had a child with autism spectrum disorder, if their child was between the ages of 2-10, and if their child was receiving intervention services. Additionally, participants were also asked how many children they had with an autism spectrum disorder diagnosis within the age range. If participants had multiple children with autism spectrum disorder within the age range, a random number generator was utilized within the survey that selected a child at random and parents finished the survey for that one child. Demographic questions were also included that concerned

the race and ethnicity of the child and parent, the relationship to the child (e.g., biological, foster, or adoptive mother/father), age and gender of the child and parent, and current zip code, which was utilized to determine a health professional shortage area (HPSA) score. Upon completion of the study, participants were referred to another survey where they had the option to provide their email address in order to receive a $10 Amazon gift card. After completing the survey, participants were directed towards resources including the Autistic Self Advocacy Network (ASAN), Association for Science in Autism Treatment (ASAT), Autism Now, and the Organization for Autism Research, which provide information surrounding autism research and interventions, offer community-based solutions for families, and provide guides for parents throughout the lives of their children.

## Results

The Statistical Package for the Social Sciences (SPSS) program was used for all statistical analyses (IBM Corporation, 2017, version 25.0). First descriptive statistics were completed to better contextualize the collected sample. Second, preliminary analyses were completed to assess for potential covariates and assumptions for planned analyses. Finally, the planned analyses testing the study hypotheses were completed.

Prior to conducting the planned analyses, the dataset was reviewed in order to ensure that item values were present and valid (i.e., within the constraints of the measure's scoring criteria). All included participants had less than 10% of missing data for any given measure. Participants that did not complete any of the given measures were excluded from the final sample. One measure in particular, the PISAT, had two items in which participants could choose N/A; their score was based on the average of all remaining items. No other provisions were needed in order to handle missing data. Means of included variables are summarized in Table 4.

**Descriptive Statistics**

Using a clinical cut-off score of 10 to assess for the presence of internalizing disorders on the PHQ-9 and the GAD-7, 47.6% of participants reported clinical symptomology suggesting the presence of an internalizing disorder. Specifically, 36.9% of this sample reported a score of 10 or higher on the PHQ-9 suggesting that they have clinical symptomology related to depression. Regarding the GAD-7, 36.9% of this sample reported a score of 10 or higher in which they reported symptoms that equate to clinical anxiety symptomology. In this sample, participants reported a mean of 7.9 for internalizing intensity with a standard deviation of 4.8 where intensity was based on the total score from the PHQ-9 and the GAD-7 with a range of 0 to 20. Participants reported a mean of 7.9 for depression intensity (*SD* = 5.1) and a mean of 7.9 for anxiety intensity (*SD* = 5.4). Internalizing interference was used to measure how internalizing symptomology interfered with the participants' daily lives in which participants reported a mean of 2.1 (*SD* = 0.7) with scores ranging from 1 ("not difficult") to 4 ("extremely difficult"). Participants reported an average of 2.1 for interference of depression (*SD* = 0.8) and an average of 2.1 for interference of anxiety (*SD* = 0.8).

**Table 4**

Variable Statistics

| Measurement Variable | *M* | *SD* | Observed Ranges | Skewness | Kurtosis |
|---|---|---|---|---|---|
| Internalizing Intensity Total | 7.9 | 4.8 | .00-20.00 | .35 | -.77 |
| PHQ-9 Depression Intensity | 7.9 | 5.1 | .00-22.00 | .53 | -.51 |
| GAD-7 Anxiety Intensity | 7.9 | 5.4 | .00-21.00 | .43 | -.66 |
| Internalizing Interference Total | 2.1 | .7 | 1.00-4.00 | .69 | .61 |

| | | | | | |
|---|---|---|---|---|---|
| PHQ-9 Depression Interference | 2.1 | .8 | 1.00-4.00 | .75 | .77 |
| GAD-7 Anxiety Interference | 2.1 | .8 | 1.00-4.00 | .69 | .46 |
| MSCS Total | 100.7 | 16.7 | 68.00-136.00 | .19 | -.37 |
| ASRS Total t-score | 71.5 | 6.1 | 54.00-85.00 | -.41 | .26 |
| PISAT Total | 36.1 | 6.6 | 22.5-50.36 | .139 | -.474 |

The ASRS Total t-score was used to assess for autism severity in which participants reported an average score of 71.5 (*SD* = 6.1). Participant's t-scores ranged from 54 to 85 on this measure which represents a range from subclinical to clinical presentation of autism spectrum disorder symptoms. This sample represents a range of individuals who align with our target sample, such that there is a range of severity endorsed which can increase the ability to generalize these findings across the spectrum. Regarding self-care, participants reported an average of 100.7 on the MSCS (*SD* = 16.7) with an observed range of 68 to 136. Lastly, participants reported a mean total score of 36.1 for parental involvement on the PISAT (*SD* = 6.6). Participants reported scores ranging from 22.5-50.36 where lower scores suggests more involvement in their child's intervention.

**Preliminary Analyses**

Variables were assessed for normality, linearity, and homoscedasticity when appropriate through the examination of distribution histograms, normal probability plots, and detrended probability plots. Additionally, a correlation matrix was used to demonstrate the correlation coefficients between all variables (see Table 5). The dataset was also assessed for

multicollinearity to evaluate for highly correlated variables which assisted in deciding which variables were chosen to be included in the sequential multiple regression model.

Before addressing the hypotheses of the current study, the identified variables (i.e., intensity of internalizing disorders, intensity of depression, intensity of anxiety, interference of internalizing disorders, interference of depression, interference of anxiety, and parent involvement) were assessed for normality through distribution histograms. According to histograms, statistical tests of normality, and assessment of skewness and kurtosis statistics of each variable, all of the previously mentioned variables met the assumption of normality. Normality was assessed through histograms for the relationship between the outcome variable, parent involvement, and the two levels of the dichotomous variable, presence of internalizing disorders for the point-biserial correlation. The continuous variable of parent involvement was normally distributed across both groups of the dichotomous variable. The relationships between parent involvement and the presence of anxiety and depression were individually assessed for normality using histograms in which the continuous variable was normally distributed across the two dichotomous variables. For this reason, untransformed original measures were used in all analyses.

The relationship between the variables involved in the first, second, and third hypotheses were assessed for linearity. Scatterplots were used to assess for linear relationships which showed no clear linear relationships between the previously mentioned variables; further, no non-linear relationships were apparent. Regarding the sequential regression, the relationship between parent involvement and the predictor variables was collectively linear. The assumption of homoscedasticity for this analysis was assessed using a scatterplot in which it was apparent

**Table 5**

*Correlations for Study Variables*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Parent Involvement | -- | | | | | | | | | | | | | |
| 2. Internalizing Presence | .01 | -- | | | | | | | | | | | | |
| 3. Depression Presence | .01 | .80** | -- | | | | | | | | | | | |
| 4. Anxiety Presence | .07 | .80** | .54** | -- | | | | | | | | | | |
| 5. Internalizing Intensity | .04 | .85** | .79** | .79** | -- | | | | | | | | | |
| 6. Depression Intensity | .04 | .79** | .85** | .60** | .92** | -- | | | | | | | | |
| 7. Anxiety Intensity | .03 | .77** | .58** | .85** | .92** | .69** | -- | | | | | | | |
| 8. Internalizing Interference | -.04 | .58** | .58** | .54** | .70** | .64** | .65** | -- | | | | | | |
| 9. Depression Interference | -.08 | .48** | .51** | .41** | .58** | .59** | .48** | .91** | -- | | | | | |
| 10. Anxiety Interference | .02 | .59** | .55** | .58** | .71** | .58** | .70** | .91** | .66** | -- | | | | |
| 11. HPSA | .07 | -.14 | -.03 | -.09 | -.10 | -.10 | -.09 | -.17 | -.20 | -.11 | -- | | | |
| 12. Child Ethnicity | -.09 | .01 | -.11 | .08 | .02 | -.07 | .11 | -.21 | -.25* | -.14 | -.00 | -- | | |
| 13. Parent Ethnicity | .03 | .01 | -.01 | -.01 | -.01 | -.02 | -.01 | -.25* | -.23* | -.23* | -.18 | .69** | -- | |
| 14. Child Gender | -.10 | -.11 | -.16 | -.04 | -.05 | -.10 | .01 | -.08 | -.12 | -.03 | .13 | .09 | -.13 | -- |
| 15. ASRS Total T-Score | -.10 | .09 | .16 | .05 | .17 | .14 | .17 | .25* | .10 | .34** | -.08 | .17 | .04 | .18 |

*$p < .05$ **$p < .01$

that the residuals were relatively equal for all values of the predicted outcome variable. Multicollinearity was also assessed for the sequential multiple regression in which the VIF values did not exceed 10 and the condition index values did not exceed 30, suggesting that multicollinearity was not an issue for this analysis. Lastly, the assumption of normally distributed residuals for the sequential multiple regression was assessed with a histogram in which the standardized residuals appeared to be approximately normally distributed. P-P plots were also analyzed to assess normality, in which they appeared to be normal.

After assessing for multicollinearity for the sequential multiple regression, it was clear that the variables thought to be covariates were not correlated with parent involvement (see Table 5). This included the age of the child, autism severity, gender of child, gender of parent, race and ethnicity, and HPSA score. For this reason, these variables were not included in the regression model.

**Planned Analyses**

The first hypothesis was analyzed with a point-biserial correlation analysis in which presence of anxiety or depression were predictor variables and parental involvement was the outcome variable. The second and third hypothesis were analyzed with correlation analyses where intensity of internalizing symptoms (total of PHQ-9 and GAD-7) and interference rating of internalizing disorders (average of PHQ-9 and GAD-7 interference score) were predictor variables respectively and parental involvement was the outcome variable for both analyses. Hypothesis four was analyzed with sequential multiple regression where internalizing disorders, and parental self-care were predictor variables and parental involvement was the outcome variable.

Regarding the sequential multiple regression, the presence, intensity, and interference of internalizing disorders were entered at the first step and self-care was entered into the model last. This analysis assessed how the presence, intensity, and interference of internalizing disorders and self-care behaviors affected parental involvement.

*Pearson Correlations*

A point-biserial correlation analysis was used to assess the relationship between the presence of internalizing disorders and parent involvement. There was no statistically significant correlation between the presence of internalizing disorders and parent involvement, $r(82) = .01$, $p = .957$. As an exploratory post-hoc analysis, depression and anxiety were analyzed separately; there was not a significant correlation between the presence of depression and parent involvement, $r(82) = .01$, $p = .947$, or between the presence of anxiety and parent involvement, $r(82) = .01$, $p = .549$. These results did not support our first hypothesis.

For the second hypothesis, the relationship between intensity of internalizing disorders and parent involvement was assessed with a Pearson's zero-order correlation. This analysis showed no significant correlation between the two variables, $r(82) = .04$, $p = .732$. As an exploratory post-hoc analysis, depression and anxiety were again analyzed separately; there was no significant correlation between the intensity of depression and parent involvement, $r(82) = .04$, $p = .726$, or between the intensity of anxiety and parent involvement, $r(82) = .03$, $p = .778$. This finding did not support our initial hypothesis.

Lastly, the third hypothesis was also analyzed using a Pearson's zero-order correlation for the relationship between interference of internalizing disorders and parent involvement which showed a non-significant negative correlation, $r(80) = -.04$, $p = .715$. In addition, an exploratory post-hoc analysis separately analyzing depression and anxiety was again completed; the

relationship between the interference of depression and parent involvement showed a non-significant negative correlation, $r(78) = -.08$, $p = .503$, and the relationship between the interference of anxiety and parent involvement similarly showed a non-significant correlation, $r(78) = .02$, $p = .890$. Our third hypothesis was not supported by these findings.

*Sequential Multiple Regression*

A sequential multiple regression was used to determine if the addition of internalizing disorders and then self-care improved the prediction of parent involvement. As is apparent in the correlation matrix (see Table 5), there were no significant correlations found between the predicted covariates. Because there were no significant correlations found, these variables were not included within the sequential multiple regression. See Table 6 for full details on each regression model. The first step in our model was the addition of internalizing disorders (presence, intensity, and interference) to the predictor of parent involvement (Step 1). The first step was not significant with an $R^2$ of .03, $F(3, 78) = .00$, $p = .478$; adjusted $R^2 = -.01$; ($f^2 = .03$). The full model added self-care in Step 2 and significantly predicted parent involvement (Step 2: $R^2 = .16$, $F(1, 77) = 3.76$, $p < .001$; adjusted $R^2 = .12$; $R^2$ change= .13; ($f^2 = .19$).

In order to assess effect sizes while controlling for all other variables entered at the corresponding step, semi-partial correlations were examined for all variables. At Step 1, there was a small negative effect size ($r = -.08$) between parent involvement and internalizing presence, small positive effect size ($r = .16$) between internalizing intensity and parental involvement, and a small negative effect size ($r = -.14$) between internalizing interference and parental involvement. In regards to the second step of the sequential regression, there was a small negative effect size ($r = -.09$) between internalizing presence and parent involvement , a small positive effect size ($r = .10$) between internalizing intensity and parent involvement, and

**Table 6**
Sequential regression analysis ( n= 82)

| | | $\Delta R^2$ | Cohen's $f^2$ | *B* | *SE b* | β | p-value | Semi-Partial Correlation |
|---|---|---|---|---|---|---|---|---|
| Step 1 | | | .03 | | | | .478 | |
| | Constant | | | 2.45 | 0.16 | | | |
| | Internalizing Presence | | | -0.12 | 0.18 | -.15 | .489 | -.08 |
| | Internalizing Intensity | | | 0.03 | 0.02 | .34 | .158 | .16 |
| | Internalizing Interference | | | -0.12 | 0.10 | -.20 | .216 | -.14 |
| Step 2 | | .13 | .19 | | | | <.001 | |
| | Constant | | | 3.56 | 0.35 | | | |
| | Internalizing Presence | | | -0.14 | 0.17 | -.16 | .419 | -.09 |
| | Internalizing Intensity | | | 0.02 | 0.02 | .21 | .347 | .10 |
| | Internalizing Interference | | | -0.11 | 0.09 | -.18 | .232 | -.13 |
| | MSCS | | | -0.01 | 0.00 | -.39 | <.001 | -.37 |

Note. $R^2$ = .03 for Step 1.

small negative effect size (*r*= -.13) between internalizing interference and parent involvement. Finally, there was a significant medium negative effect size (*r*= -.36) between self-care and parent involvement as hypothesized. As self-care increased, parent involvement also increased which suggests that the more parents engage in self-care behaviors the more involved they are in their child's ASD intervention.

## Discussion

This current study examined the relationships between the presence, intensity, and interference of parent internalizing disorders, as well as parent self-care, and parent involvement in their child's ASD interventions. While previous research has indicated that parents of children with ASD experience internalizing disorders at rates significantly higher than the general population, there is limited research regarding how these internalizing problems affect parental involvement. Further, the self-care behaviors of this population and the relationship between self-care behaviors and parental involvement has not yet been studied. When parents become involved in their child's ASD interventions, children often experience better developmental outcomes than if they do not become involved. Understanding the relationship between the self-care behaviors of this population and experiences of internalizing disorders can provide important knowledge regarding the involvement of parents in their child's ASD interventions.

The findings of this study supported our fourth hypothesis such that parents who engage in higher levels of self-care are more involved in their child's ASD interventions after controlling for other effects. These results provide information regarding this unstudied area which can further our understanding of this population; however, the originally proposed covariates (e.g., age of the child, autism severity, gender of child, gender of parent, race and ethnicity, and HPSA) of the analysis were not correlated with parental involvement and were not included

within the analysis. This suggested that the variables thought to have a relationship with the outcome variable did not covary with parental involvement. Similarly, the first model of the regression analysis showed that presence, intensity, and interference of internalizing disorders did not significantly predict parent involvement while controlling for each variable respectively. Only the second model provided significant results at the last step with a $\beta$ = -.39, indicating that parents who reported higher levels of self-care with a lower total score, were more involved in their child's interventions.

Our first, second, and third hypotheses were not supported by the findings of this study. Regarding the first hypothesis, the correlation between the presence of internalizing disorders and parent involvement were not significant. Post-hoc analyses endorsed similar results, such that depression and anxiety were not individually correlated with parent involvement. These results indicate that the presence of these internalizing disorders, collectively and individually, do not have a relationship with parent involvement. The findings from this study similarly suggest that intensity of internalizing disorders does not have a relationship between parent involvement. Comparably, intensity of depression and anxiety did not support a relationship with parent involvement as was shown through post-hoc analyses. Results for the third hypothesis proposed no relationship between interference of internalizing disorders and parent involvement with post-hoc analyses. Overall, these results suggest that internalizing disorders collectively and individually do not impact parent involvement. While these findings were surprising given the rate at which this population endorses internalizing disorders, these analyses suggest that depression and anxiety do not hold a relationship with parent involvement.

Beyond these initial hypotheses, post-hoc correlations were conducted which represented relationships between variables that were not originally considered. For example, there was a

significant relationship between child ethnicity and depression interference at $p < .05$ with a small correlation. Specifically, when children were identified as white, parents reported higher rates of depression interference. This suggests that individuals who identify their child's ethnicity as white may experience higher rates of depression intensity. Similarly, there was a significant relationship between parent ethnicity and overall internalizing interference as well as the individual interference of depression and anxiety again with each correlation at $p < .05$, where both suggested a small correlation. Participants who identified themselves as white reported higher internalizing interference scores, which may suggest that those who are white experience interference from internalizing disorders at higher rates than individuals who are not white. Regarding interference of anxiety and depression separately, similar conclusions can be made such that individuals who identified their ethnicity as white reported higher levels of interference from these specific internalizing disorders.

Additionally, a significant relationship was also found between ASRS Total t-score and internalizing interference ($p < .05$) with a small correlation. This correlation implies a relationship between the severity of ASD symptoms and interference from internalizing disorders parents experience such that those who have children with more severe symptomology have higher rates of internalizing interference. The strongest post-hoc correlation was the relationship discovered between the ASRS Total t-score and the interference of anxiety, with $p < .01$, suggesting a moderate correlation. This suggests that there is a significant relationship between the interference of anxiety and the severity of autism symptoms, such that parents who have children that present with higher severity of symptoms of autism experience more interference from anxiety themselves. These post-hoc analyses provide further information about

this population which can be helpful to strengthen our knowledge base and to guide future research.

**Limitations**

There are some important limitations to our study that must be considered along with these findings. One such limitation of this study is the method of data collection that occurred. Recruitment for this study included advertisements through Facebook, posts on Facebook parenting pages, and Reddit. Collecting data through these means may have impacted the quality and accuracy of the findings. At various points in collection, data had to be monitored to understand the accuracy of responding to filter out bots. Attention checks, open-ended questions, and IP addresses were diligently examined, but still proved to be difficult to understand the validity of the respondent. Although it is believed that all respondents were genuine, it is impossible to verify that all participants were parents of children with ASD. Therefore, future studies on this topic may want to include in-person or video conferencing data collection or other methods to ensure validity of the data.

The inclusion criteria of having a child with ASD was not validated through this study. While the ASRS was used, the purpose of this assessment was to understand the severity of autism symptoms and not to validate ASD diagnoses. The validity of the child's ASD diagnosis was not captured through this study which may have impacted the accuracy and scope of the findings. Similarly, it was unclear who provided diagnoses for these children or what sort of testing was completed in order to do so. This could have affected how accurate parents were in reporting their child's diagnosis and characteristics that are associated with ASD. Parent's knowledge regarding ASD may have also been skewed given the mode of diagnosis which could have similarly affected their reports regarding their child's symptoms.

While this study required participants to report the types of services they received, no information was gathered regarding access to services or available resources to access services. This limitation may be especially salient for those who live in rural communities who may not have equal access to those who live in more urban areas. As such, parents who have limited access to various ASD services may have restricted opportunities to be involved in their child's interventions. Along the same vein, other family factors and dynamics were not considered in regards to parent involvement. This study did not consider familial support, number of children in the household, or number of children in the household who have special needs. These factors may influence the involvement of parents in their child's ASD interventions. As such the relationship between these variables is unknown.

Another limitation of this study involved the inclusion criteria of participants. Participants in this study had to have at least one child with ASD between the ages of 2-10. This age range was intended to understand the earlier years of interventions for children with ASD and how parents were able to adjust and manage these services when considering their own internalizing disorders and self-care behaviors; however, this limited the generalizability to the full range of children and adolescents who receive ASD services and their parents. Parents of children with ASD are often involved in their child's intervention for many years beyond the age of 10 to varying degrees based on their child's program and severity. While this study targeted the earlier age range of those who receive services, we were unable to capture the overall experiences of parents of children with ASD and their involvement in their child's interventions.

The sequential multiple regression provided promising results; however, it is important to note that the original covariates were not included within the analysis as there was no relationship between the variables (e.g., age of the child, autism severity, gender of child, gender

of parent, race and ethnicity, and HPSA) and the outcome of parent involvement. While there was no correlation between these variables and the outcome, they still may affect how involved parents are within their child's ASD treatment. This limitation may have skewed the interpretation of this study such that these variables may impact parent involvement to a lesser, but still meaningful degree.

Lastly, this study was limited by the interpretation of internalizing disorders and symptomology. For the purposes of this study, we only included depression and anxiety when considering internalizing problems; however, it is well known that internalizing issues may involve various symptoms. For example, stress and burnout are often classified as internalizing problems that individuals experience, particularly parents of children with developmental disabilities. The current study did not measure for other internalizing issues that may have affected parent involvement in their child's ASD interventions.

**Future Directions**

Given these limitation, future directions may be formulated to further the understanding of this population and the various factors that affect their participation in their child's ASD interventions. Future research should consider other internalizing symptomology and issues that may affect parent involvement. This may include measuring the presence, intensity, and interference of burnout and stress that might impact this population. It was apparent that anxiety and depression did not have any significant correlation to parent involvement. As such, other factors should be considered to develop a broader understanding of the impacts of internalizing symptomology within this population. Previous research has demonstrated that parents of children with ASD experience rates of depression and anxiety at higher levels than the general population; however, there is limited research regarding other internalizing problems this

population may experience. This should be further explored by future research to understand to what extent these individuals experience these various issues. With the inclusion of these other factors, it is important to consider how they may correlate or covary with parent involvement and other independent variables included within this study. Similar analyses may be appropriate to understand the relationship between these variables and parent involvement.

While some variables within this study demonstrated a relationship, there may be other confounding variables that could provide more information to further our understanding. For example, the relationship between self-care and parent involvement could be impacted by the income received within the family. It could also be affected by the amount of time parents have to engage in self-care behaviors. These confounding factors warrant further investigation to truly understand their impacts on the relationships found within this study.

As previously mentioned, the accuracy of responding could not be verified which could have impacted the quality of the data collected. Future studies on this topic may gather data through other means such as in-person or video conferencing data collection or other methods to ensure validity of the data. Means such as these may also allow for data to be gathered regarding the validity of an ASD diagnosis in which participants may be asked open ended questions about the diagnosis and the process that occurred. Similarly, information may also be gathered regarding family dynamics. Future research may also benefit from examining the relationships found in the post-hoc correlation analyses. The relationships found in this study were not expected and warrant further investigation.

## Conclusion

The current study indicated that there was a relationship between self-care and parent involvement in their child's ASD interventions which is beneficial knowledge regarding this

population. Prior research has not investigated the relationship between these variables and more broadly, the self-care behaviors that this population engages in. While our analyses suggested that there was no significant relationship between internalizing disorders and parent involvement, this finding is still meaningful and can help to propel future research as other internalizing symptomology may be involved in the involvement of parents in their child's ASD interventions. Other internalizing issues such as burnout and stress may hold a relationship with parental involvement which were not addressed in the current study. Post-hoc analyses also proved to be informative as there many significant correlations between the variables included within this study. These correlations were meaningful but warrant further investigation to understand the relationship more deeply. Future research may also investigate how internalizing disorders are affected by variables such as autism symptoms and severity and address the other limitations presented within this study.

These results can provide a knowledge base in regards to this population which may prove to be beneficial not only for parents themselves, but intervention and service providers who work with these families. With this, potential clinical implementations may include focusing on the self-care behaviors and habits that parents engage in through their child's interventions. If ASD intervention providers supported the self-care behaviors of parents, they may see more involvement from parents and in turn, better outcomes for the child. While addressing internalizing disorders may seem advantageous to aid in the involvement of parents, this study suggested that presence, intensity, and interference of anxiety and depression do not impact parent involvement; however, it may be beneficial investigate the relationship between parent involvement and other various internalizing problems.

Overall, these results provide meaningful information regarding this population especially when considering self-care behaviors and their influence over parent involvement. It is important to recognize the findings from the post-hoc correlations when considering future research regarding this topic and what these relationships mean. These correlations provided meaningful information that was not found in other analyses regarding internalizing disorders and other variables involved in this study. While these disorders were not found to influence parent involvement, they are still meaningfully involved in these individuals lives and cannot be disregarded. Future research can address the limitations of this study and support these exploratory findings even further.

## References

Acton, J. (2002). Health-promoting self-care in family caregivers. *Western Journal of Nursing Research, 24*(1), 73-86. https://doi.org/10.1177%2F01939450222045716

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Ardic, A. (2020). Relationship between parental burnout level and perceived social support levels of parents of children with autism spectrum disorder. *International Journal of Educational Methodology, 6*(4), 533-543. doi: 10.12973/ijem.6.3.533

Bagaiolo, L. F., Cunha, G. R., Nogueira, M. L. M., Braido, M., Bordini, D., Sasaki, T. N. D., & Pacífi co, C. R. (2019). Implementing a community-based parent training behavioral intervention for Autism Spectrum Disorder. *Psicologia: Teoria e Prática, 21*(3), 456-472. http://dx.doi.org/10.5935/1980-6906/psicologia.v21n3p456-47

Ben-Zur, H. & Michael, K. (2007). Burnout, social support, and coping at work among social workers, psychologists, and nurses: the role of challenge/control appraisals. *Social Work in Health Care, 45*(4), 63-82. https://doi.org/10.1300/J010v45n04_04

Bloomquist, K., Wood, L., Friedmeyer-Trainor, K. & Kim, H. (2015). Self-care and professional quality of life: predictive factors among MSW practitioners. *Advances in Social Work, 16*(2), 292-311. https://doi.org/10.18060/18760

Burrell, T. & Borrego, J. (2012). Parent's involvement in ASD treatment: what is their role? *Cognitive and Behavioral Practice, 19*, 423-432. https://doi.org/10.1016/j.cbrpa.2011.04.003

Cachia, R., Anderson, A. & Moore, D. (2016). Mindfulness, stress and well-being in parents of children with autism spectrum disorder: a systematic review. *Journal of Child and Family Studies 25*, 1-14. DOI 10.1007/s10826-015-0193-8

Chafouleas, S., Iovino, E. & Koriakin, T. (2020). Caregivers of children with developmental disabilities: exploring perceptions of health-promoting self-care. *Journal of Developmental and Physical Disabilities, 32*, 893-913.

Cook-Cottone, C. & Guyker, W. (2018). The development and validation of the mindful self-care scale (MSCS): an assessment of practices that support positive embodiment. *Mindfulness, 9*, 161-175. DOI 10.1007/s12671-017-0759-1

Coyle, D., Edwards, D., Hannigan, B., Fothergill, A. & Burnard, P. (2005). A systematic review of stress among mental health social workers. *International Social Work, 48*(2), 201-211. https://doi.org/10.1177%2F0020872805050492

Depression and Other Common Mental Disorders: Global Health Estimates. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.

Dorociak, K., Rupert, P., Bryant, F. & Zahniser, E. (2017). Development of a self-care assessment for psychologists. *Journal of Counseling Psychology 64*(3), 325-334. https://psycnet.apa.org/doi/10.1037/cou0000206

Evans, S., Huxley, P., Gately, C., Webber, M., Mears, A., Pajak, S., Medina, J., Kendall, T. & Katona, C. (2006). Mental health, burnout and job satisfaction among mental health social workers in England and Wales. *British Journal of Psychiatry, 188*, 75-80.

Faul, F., Erdfelder, E., Lang, A. & Buchner, A. (2007). G*power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191.

Furlong, K. & Wuest, J. (2008). Self-care behaviors of spouses caring for significant others with Alzheimer's disease: the emergence of self-care worthiness as a salient condition. *Qualitative Health Research, 18*(12), 1662-1672.

Gockel, A. & Deng, X. (2015). Mindfulness training as social work pedagogy: exploring benefits, challenges, and issues for consideration in integrating mindfulness into social work education. *Journal of Relgion & Spirituality in Social Work: Social Thought, 35*(3), 222-244. https://doi.org/10.1080/15426432.2016.1187106

Goldstein & Naglieri. (2009). *ASRS-Product-Overview.*

IBM Corporation. (2020). Released 2020. IBM SPSS Statistics for Mac, Version 25.0. Armonk, NY: IBM Corp

Iida, N., Wada, Y., Yamashita, T., Aoyama, M., Hirai, K. & Narumoto, J. (2018). Effectiveness of parent training in improving stress-coping capability, anxiety, and depression in mothers raising children with autism spectrum disorder. *Neuropsychiatric Disease and Treatment, 14*, 3355-3362. doi: https://dx.doi.org/10.2147%2FNDT.S188387

Kim, H. & Stoner, M. (2008). Burnout and turnover intention among social workers: effects of role stress, job autonomy and social support. *Administration in Social Work, 32*(3), 5-25.

Kroenke, K., Spitzer, R. & Williams, J. (2001). Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*, 606-613. doi: 10.1046/j.1525-1497.2001.016009606.x

Lovaas, I. O. (1987). Behavioral treatment and normal educational and intellectual functioning in young autistic children. *Journal of Counseling and Clinical Psychology, 55*(1), 3-9. https://psycnet.apa.org/doi/10.1037/0022-006X.55.1.3

Mikolajczak, M., Gross, J. Stinglhamber, F., Lindahl Norberg, A. & Roskam, I. (2020). Is parental burnout distinct from job burnout and depressive symptoms? *Clinical Psychological Science 8*(4), 673-689. https://doi.org/10.1177%2F2167702620917447

Miller, J., Lianekhammy, J., Pope, N., Lee, J. & Grise-Owens, E. (2017). Self-care among healthcare social workers: an exploratory study. *Social Work in Health Care, 56*(10), 865-883. https://doi.org/10.1080/00981389.2017.1371100

Myers, S. & Plauche Johnson, C. (2008). Management of children with autism spectrum disorders. *Pediatrics, 121*(4), 828-830.

Neece, C. (2014). Mindfulness-based stress reduction for parents of young children with developmental delays: implications for parental mental health and child behavior problems. *Journal of Applied Research in Intellectual Disabilities, 27*, 174-186. https://doi.org/10.1111/jar.12064

Osborne, L., McHugh, L., Saunders, J. & Reed, P. (2008). Parenting stress reduces the effectiveness of early teaching interventions for autistic spectrum disorders. *Journal of Autism and Developmental Disorders, 38*, 1092-1103. DOI 10.1007/s10803-007-0497-7

Pickles, A., Le Couteur, A., Leadbitter, K., Salomone, E., Cole-Fletcher, R., Tobin, H., Gammer, I., Lower, J., Vamvakas, G., Byford, S., Aldred, C., Slonims, V., McConachie, H., Howlin, P., Parr, J., Charman, T. & Green, J. (2016). Parent-mediated social communication therapy for young children with autism (PACT): long-term follow-up of a randomized controlled trial. *Lancet, 388*, 2501-2509. https://doi.org/10.1016/S0140-6736(16)31229-6

Sallim, A., Sayampanathan, A., Cuttilan, A., & Ho, R. (2015). Prevalence of mental health disorders among caregivers of patients with Alzheimer disease. *JAMDA, 16*, 1034-1041. http://dx.doi.org/10.1016/j.jamda.2015.09.007

Spitzer, R., Kroenke, K., Williams, J. & Lowe, B. (2006). A brief measure for assessing generalized anxiety disorder. *Arch Intern Med, 166,* 1092-1097.

Steiner, A., Koegel, L., Koegel, R. & Ence, W. (2012). Issues and theoretical constructs regarding parent education for autism spectrum disorder. *Journal of Autism and Developmental Disorders, 42,* 1218-1227.

Richardson, T., Lee, S., Berg-Weger, M., & Grossberg, G. (2013). Caregiver health: health of caregivers of Alzheimer's and other dementia patients. *Current Psychiatric Reports, 15*(7), 367.

Rodriguez, G., Hartley, S. & Bolt, D. (2019). Transactional relations between parenting stress and child autism symptoms and behavior problems. *Journal of Autism and Developmental Disorders, 49,* 1887-1898. https://doi.org/10.1007/s10803-018-3845-x

Rojas-Torres, L., Alonso-Esteban, Y. & Alcantud-Marin, F. (2020). Early intervention with parents of children with autism spectrum disorders: a review of programs. *Children, 7*(12), 294. https://doi.org/10.3390/children7120294

Ruble, L., Murray, D., McGrew, J., Brevorrt, K. & Wong, V. (2018). A preliminary study of activation, stress, and self-management of parents of children with autism spectrum disorder. *Journal of Child and Family Studies, 27*, 825-834.

Scherer, N., Verhey, I. & Kuper, H. (2019). Depression and anxiety in parents of children with intellectual and developmental disabilities: a systematic review and meta-analysis. *Plos One 14*(7). https://doi.org/10.1371/journal.pone.0219888

Schiltz, H., McVey, A., Magnus, B., Dolan, B., Willar, K., Pleiss, S., Karst, J., Carson, A., Caiozzo, C., Vogt, E. & Vaughan Van Hecke, A. (2018). Examining the links between challenging behaviors in youth with ASD and parental stress, mental health, and involvement: applying an adaptation of the family stress model to families of youth with ASD. *Journal of Autism and Developmental Disorders, 48,* 1169-1180.

Schnabel, A., Youssef, G., Hallford, D., Hartley, E., McGillivray, J., Stewart, M., Forbes, D. & Austin, D. (2020). Psychopathology in parents of children with autism spectrum disorder: a systematic review and meta-analysis of prevalence. *Autism 24*(1), 26-40. https://doi.org/10.1177%2F1362361319844636

Siefert, K., Jayaratne, S. & Chess, W. (1991). Job satisfaction, burnout, and turnover in health care social workers. *Health and Social Work, 16*(3), 193-202. https://doi.org/10.1093/hsw/16.3.193

Smith, T. & Eikeseth, S. (2011). O. Ivar Lovass: pioneer of applied behavior analysis and intervention for children with autism. *Journal of Autism and Developmental Disorders, 41*, 375-378. DOI 10.1007/s10803-010-1162-0

Soderfeldt, M., Soderfeldt, B. & Warg, L. (1995). Burnout in social work. *Social Work, 40*(5), 638-646. https://doi.org/10.1093/sw/40.5.638

Solish, A. & Perry, A. (2008). Parents' involvement in their children's behavioral intervention programs: parent and therapist perspectives. *Research in Autism Spectrum Disorders, 2*, 728-738. https://doi.org/10.1016/j.rasd.2008.03.001

Solish, A., Perry, A. & Shine, R. (2015). The parent involvement questionnaire: measuring parents' involvement in behavioural intervention for their children with an autism spectrum disorder. *Journal on Developmental Disabilities, 21*(1).

Steiner, A., Koegel, L., Koegel, R. & Ence, W. (2012). Issues and theoretical constructs regarding parent education for autism spectrum disorders. *Journal of Autism and Developmental Disorders, 42*, 1218-1227.

Tiura, M. *Parent involvement in the treatment of autism spectrum disorder: validation of a parent involvement survey* (Publication No. 13896434) [Doctoral dissertation, University of California, Berkeley]. ProQuest Dissertation Publishing.

Vernhet, C., Dellapiazza, F., Blanc, N., Cousson-Gelie, F., Miot, S., Roeyers, H. & Baghadadli, A. (2019). Coping strategies of parents of children with autism spectrum disorder: a systematic review. *European Child & Adolescent Psychiatry 28*, 747-758.

Wang, X., Liu, S., Robinson, K., Shawler, C., & Zhou, L. (2019). The impact of dementia caregiving on self-care management of caregivers and facilitators: a qualitative study. *Psychogeriatrics, 19*, 23-31.

Wenzel, K., Townsend, J., Hawkings, B. & Russell, B. (2020). Changes in family leisure functioning following a family camp for children with autism spectrum disorder. *Therapeutic Recreation Journal*, *9*(1), 17-31. https://doi.org/10.18666/TRJ-2020-V54-I1-9418

# Appendix A

## Qualifying questions

Are you able to read and understand the English language?

- ○ Yes
- ○ No

Do you have a child with Autism Spectrum disorder?

- ○ Yes
- ○ No

Is your child with autism spectrum disorder between the ages of 2-10?

- ○ Yes
- ○ No

Is this child currently receiving therapy services such as applied behavioral analysis, occupational therapy, physical therapy, speech therapy, etc.?

- ○ Yes
- ○ No

## PISAT-2

I sit in during my child's therapy sessions

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I sit in during my child's therapy sessions

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I sit in during my child's therapy sessions

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I sit in during my child's therapy sessions

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I reward my child every time he/she successfully performs new skills he/she has learned in therapy

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I maintain explicit and concrete behavior rules at home

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

My child participates in sports or performing arts (music, art, acting, etc.)

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I schedule playdates for my child with other children who are NOT on the Autism Spectrum

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I schedule playdates for my child with other children who are on the Autism Spectrum

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

My child's tutor/behavior tech is in regular contact with my child's other health service providers (pediatrician, speech and language pathologist, etc.)

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

All of my child's health service providers collaboratively plan ahead for my child's future (transitions to elementary, middle school, high school, and beyond)

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I regularly update my child's health service providers and teachers about how he/she gets along with peers

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I read scientific research to learn about ASD

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I participate in activities run by Autism advocacy groups (e.g. Autism Speaks)

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I attend a support group for parents of children with ASD

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

## PHQ-9

Over the **last 2 weeks**, how often have you been bothered by any of the following problems?

| | Not at all 0 | Several days 1 | More than half the days 2 | Nearly every day 3 |
|---|---|---|---|---|
| 1. Little interest or pleasure in doing things | ○ | ○ | ○ | ○ |
| 2. Feeling down, depressed, or hopeless | ○ | ○ | ○ | ○ |
| 3. Trouble falling or staying asleep, or sleeping too much | ○ | ○ | ○ | ○ |
| 4. Feeling tired or having little energy | ○ | ○ | ○ | ○ |
| 5. Poor appetite or overeating | ○ | ○ | ○ | ○ |

| | Not at all 0 | Several days 1 | More than half the days 2 | Nearly every day 3 |
|---|---|---|---|---|
| 6. Feeling bad about yourself, or that you are a failure or have let yourself or your family down | ○ | ○ | ○ | ○ |
| 7. Trouble concentrating on things, such as reading the newspaper or watching television | ○ | ○ | ○ | ○ |
| 8. Moving or speaking so slowly that other people could have noticed? Or the opposite, being so fidgety or restless that you have been moving around a lot more than usual | ○ | ○ | ○ | ○ |
| 9. Thoughts that you would be better off dead or hurting yourself in some way | ○ | ○ | ○ | ○ |

If you checked off any problem, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

| Not difficult at all | Somewhat difficult | Very difficult | Extremely difficult |
|---|---|---|---|
| ○ | ○ | ○ | ○ |

## GAD-7

Over the last 2 weeks, how often have you been bothered by the following problems?

| | Not at all 0 | Several days 1 | Over half of the days 2 | Nearly every day 3 |
|---|---|---|---|---|
| 1. Feeling nervous, anxious, or on edge | ○ | ○ | ○ | ○ |
| 2. Not being able to stop or control worrying | ○ | ○ | ○ | ○ |
| 3. Worrying too much about different things | ○ | ○ | ○ | ○ |
| 4. Trouble relaxing | ○ | ○ | ○ | ○ |

| | Not at all 0 | Several days 1 | Over half of the days 2 | Nearly every day 3 |
|---|---|---|---|---|
| 5. Being so restless that it's hard to sit still | ○ | ○ | ○ | ○ |
| 6. Becoming easily annoyed or irritable | ○ | ○ | ○ | ○ |
| 7. Feeling afraid as if something awful might happen | ○ | ○ | ○ | ○ |

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

| Not difficult at all | Somewhat difficult | Very difficult | Extremely difficult |
|---|---|---|---|
| ○ | ○ | ○ | ○ |

## Mindfulness Self-Care Scale

Check the box that reflects the frequency of your behavior (how much or how often) within the past week (7 days):

| | Never (0 days) | Rarely (1 day) | Sometimes (2 to 3 days) | Often (4 to 5 days) | Regularly (6 to 7 days) |
|---|---|---|---|---|---|
| I did something intellectual (using my mind) to help me relax (e.g., read a book, write) | ○ | ○ | ○ | ○ | ○ |
| I did something interpersonal to relax (e.g., connected with friends) | ○ | ○ | ○ | ○ | ○ |
| I did something creative to relax (e.g., drew, played an instrument, wrote creatively, sang, organized) | ○ | ○ | ○ | ○ | ○ |
| I listened to relax (e.g., to music, a podcast, radio show, rainforest sounds) | ○ | ○ | ○ | ○ | ○ |
| I sought out images to relax (e.g., art, film, window shopping, nature) | ○ | ○ | ○ | ○ | ○ |
| I sought out smells to relax (e.g., lotions, nature, candles/incense, smells of baking) | ○ | ○ | ○ | ○ | ○ |

Check the box that reflects the frequency of your behavior (how much or how often) within the past week (7 days):

| | Never (0 days) | Rarely (1 day) | Sometimes (2 to 3 days) | Often (4 to 5 days) | Regularly (6 to 7 days) |
|---|---|---|---|---|---|
| I drank at least 6 to 8 cups of water | ○ | ○ | ○ | ○ | ○ |
| I ate a variety of nutritious foods (e.g., vegetables, protein, fruits, and grains) | ○ | ○ | ○ | ○ | ○ |
| I planned my meals and snacks | ○ | ○ | ○ | ○ | ○ |
| I exercised at least 30 to 60 minutes | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| I took part in sports, dance or other scheduled physical activities (e.g., sports teams, dance classes) | ○ | ○ | ○ | ○ | ○ |
| I did sedentary activities instead of exercising (e.g., watched tv, worked on the computer) | ○ | ○ | ○ | ○ | ○ |
| I planned/scheduled my exercise for the day | ○ | ○ | ○ | ○ | ○ |
| I practiced yoga or another mind/body practice (e.g., Tae Kwan Do, Tai Chi) | ○ | ○ | ○ | ○ | ○ |

Check the box that reflects the frequency of your behavior (how much or how often) within the past week (7 days):

| | Never (0 days) | Rarely (1 day) | Sometimes (2 to 3 days) | Often (4 to 5 days) | Regularly (6 to 7 days) |
|---|---|---|---|---|---|
| I kindly acknowledged my own challenges and difficulties | ○ | ○ | ○ | ○ | ○ |
| I engaged in supportive and comforting self-talk (e.g., "My effort is valuable and meaningful") | ○ | ○ | ○ | ○ | ○ |
| I reminded myself that failure and challenge are part of the human experience | ○ | ○ | ○ | ○ | ○ |
| I gave myself permission to feel my feelings (e.g., allowed myself to cry) | ○ | ○ | ○ | ○ | ○ |
| I experienced meaning and/or a larger purpose in my work/school life (e.g., for a cause) | ○ | ○ | ○ | ○ | ○ |
| I experienced meaning and/or a larger purpose in my private/personal life (e.g., for a cause) | ○ | ○ | ○ | ○ | ○ |

Check the box that reflects the frequency of your behavior (how much or how often) within the past week (7 days):

| | Never (0 days) | Rarely (1 day) | Sometimes (2 to 3 days) | Often ( 4 to 5 days) | Regularly (6 to 7 days) |
|---|---|---|---|---|---|
| I spent time with people who are good to me (e.g., support, encourage, and believe in me) | ○ | ○ | ○ | ○ | ○ |
| I felt supported by people in my life | ○ | ○ | ○ | ○ | ○ |
| I felt that I had someone who would listen to me if I became upset (e.g., friend, counselor, group) | ○ | ○ | ○ | ○ | ○ |
| I felt confident that people in my life would respect my choice if I said "no" | ○ | ○ | ○ | ○ | ○ |
| I scheduled/planned time to be with people who are special to me | ○ | ○ | ○ | ○ | ○ |

Check the box that reflects the frequency of your behavior (how much or how often) within the past week (7 days):

| | Never (0 days) | Rarely (1 day) | Sometimes (2 to 3 days) | Often (4 to 5 days) | Regularly (6 to 7 days) |
|---|---|---|---|---|---|
| I maintained a manageable schedule | ○ | ○ | ○ | ○ | ○ |
| I kept my work/schoolwork area organized to support my work/school tasks | ○ | ○ | ○ | ○ | ○ |
| I maintained a balance between the demands of others and what is important to me | ○ | ○ | ○ | ○ | ○ |
| I maintained a comforting and pleasing living environment | ○ | ○ | ○ | ○ | ○ |

Check the box that reflects the frequency of your behavior (how much or how often) within the past week (7 days):

| | Never (0 days) | Rarely (1 day) | Sometimes (2 to 3 days) | Often (4 to 5 days) | Regularly (6 to 7 days) |
|---|---|---|---|---|---|
| I had a calm awareness of my thoughts | ○ | ○ | ○ | ○ | ○ |
| I had a calm awareness of my feelings | ○ | ○ | ○ | ○ | ○ |
| I had a calm awareness of my body | ○ | ○ | ○ | ○ | ○ |
| I carefully selected which of my thoughts and feelings I used to guide my actions | ○ | ○ | ○ | ○ | ○ |

Check the box that reflects the frequency of your behavior (how much or how often) within the past week (7 days):

| | Never (0 days) | Rarely (1 day) | Sometimes (2 to 3 days) | Often (4 to 5 days) | Regularly (6 to 7 days) |
|---|---|---|---|---|---|
| I engaged in a variety of self-care activities | ○ | ○ | ○ | ○ | ○ |
| I planned my self-care | ○ | ○ | ○ | ○ | ○ |
| I explored new ways to bring self-care into my life | ○ | ○ | ○ | ○ | ○ |

## ASRS: 2-5 Matrix

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 1. smile appropriately? | ○ | ○ | ○ | ○ | ○ |
| 2. become bothered by some fabrics or tags in clothes? | ○ | ○ | ○ | ○ | ○ |
| 3. understand how someone else felt? | ○ | ○ | ○ | ○ | ○ |
| 4. play with others? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 5. look at others when talking with them? | ○ | ○ | ○ | ○ | ○ |
| 6. ask questions that were off topic? | ○ | ○ | ○ | ○ | ○ |
| 7. point to objects when asked to? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 8. insist on doing things the same way each time? | ○ | ○ | ○ | ○ | ○ |
| 9. need things to happen just as expected? | ○ | ○ | ○ | ○ | ○ |
| 10. have a strong reaction to any change in routine? | ○ | ○ | ○ | ○ | ○ |
| 11. line up objects in a row? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 12. overreact to common smells? | ○ | ○ | ○ | ○ | ○ |
| 13. look at others when interacting with them? | ○ | ○ | ○ | ○ | ○ |
| 14. understand the point of view of others? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 15. have trouble talking with other children? | ○ | ○ | ○ | ○ | ○ |
| 16. share fun activities with others? | ○ | ○ | ○ | ○ | ○ |
| 17. appear disorganized? | ○ | ○ | ○ | ○ | ○ |
| 18. use make believe play? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 19. care about what other people think or feel? | ○ | ○ | ○ | ○ | ○ |
| 20. become upset if routines were changed? | ○ | ○ | ○ | ○ | ○ |
| 21. respond when spoken to by adults? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 22. use language that was immature for his/her age? | ○ | ○ | ○ | ○ | ○ |
| 23. avoid looking at an adult when there was a problem? | ○ | ○ | ○ | ○ | ○ |
| 24. choose to play alone? | ○ | ○ | ○ | ○ | ○ |
| 25. listen when spoken to? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 26. talk too much about things that other children don't care about? | ○ | ○ | ○ | ○ | ○ |
| 27. focus too much on details? | ○ | ○ | ○ | ○ | ○ |
| 28. start conversations with others? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 29. keep a conversation going? | ○ | ○ | ○ | ○ | ○ |
| 30. play next to, but not with, other children? | ○ | ○ | ○ | ○ | ○ |
| 31. get into trouble with adults? | ○ | ○ | ○ | ○ | ○ |
| 32. fail to complete a task? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 33. have social problems with adults? | ○ | ○ | ○ | ○ | ○ |
| 34. have problems waiting his/her turn? | ○ | ○ | ○ | ○ | ○ |
| 35. play with toys appropriately? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 36. show little emotion? | ○ | ○ | ○ | ○ | ○ |
| 37. learn simple tasks but then forget them quickly? | ○ | ○ | ○ | ○ | ○ |
| 38. notice social cues? | ○ | ○ | ○ | ○ | ○ |
| 39. become fascinated with parts of objects? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 40. respond when spoken to by other children? | ○ | ○ | ○ | ○ | ○ |
| 41. talk too much about things that adults don't care about? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 43. avoid looking at people who spoke to him/her? | ○ | ○ | ○ | ○ | ○ |
| 44. have trouble taking with adults? | ○ | ○ | ○ | ○ | ○ |
| 45. resist being touched or held? | ○ | ○ | ○ | ○ | ○ |
| 46. overreact to loud noises? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 47. focus on one subject for too much time? | ○ | ○ | ○ | ○ | ○ |
| 48. insist on keeping certain objects with him/her at all times? | ○ | ○ | ○ | ○ | ○ |
| 49. seek the company of other children? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 50. show an interest in the ideas of others? | ○ | ○ | ○ | ○ | ○ |
| 51. have social problems with children of the same age? | ○ | ○ | ○ | ○ | ○ |
| 52. understand age-appropriate humor or jokes? | ○ | ○ | ○ | ○ | ○ |
| 53. repeat certain words or phrases out of context? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 54. share his/her enjoyment with others? | ○ | ○ | ○ | ○ | ○ |
| 55. have problems paying attention to fun tasks? | ○ | ○ | ○ | ○ | ○ |
| 56. insist on certain routines? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 57. follow instructions that he/she understood? | ○ | ○ | ○ | ○ | ○ |
| 58. interrupt or intrude on others? | ○ | ○ | ○ | ○ | ○ |
| 59. reverse pronouns (e.g., you for me)? | ○ | ○ | ○ | ○ | ○ |
| 60. become obsessed with details? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 61. show good peer interactions? | ○ | ○ | ○ | ○ | ○ |
| 62. appear fidgety when asked to sit still? | ○ | ○ | ○ | ○ | ○ |
| 63. become distracted? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 64. flap his/her hands when excited? | ○ | ○ | ○ | ○ | ○ |
| 65. twirl, spin, or bang objects? | ○ | ○ | ○ | ○ | ○ |
| 66. smell, taste, or eat inedible objects? | ○ | ○ | ○ | ○ | ○ |
| 67. fail to make his/her needs known? | ○ | ○ | ○ | ○ | ○ |

| | Never 0 | Rarely 1 | Occasionally 2 | Frequently 3 | Very Frequently 4 |
|---|---|---|---|---|---|
| 68. hurt him/herself (e.g., banged own head) when upset? | ○ | ○ | ○ | ○ | ○ |
| 69. overreact to touch? | ○ | ○ | ○ | ○ | ○ |
| 70. repeat or echo what others said? | ○ | ○ | ○ | ○ | ○ |

## ASRS: 6-18 Matrix

During the past four weeks, how often did the child...

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 1. appear disorganized? | ○ | ○ | ○ | ○ | ○ |
| 2. become bothered by some fabrics or tags in clothes? | ○ | ○ | ○ | ○ | ○ |
| 3. seek the company of other children? | ○ | ○ | ○ | ○ | ○ |
| 4. show little emotion? | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 5. follow instructions that he/she understood? | ○ | ○ | ○ | ○ | ○ |
| 6. argue and fight with other children? | ○ | ○ | ○ | ○ | ○ |
| 7. have problems waiting his/her turn? | ○ | ○ | ○ | ○ | ○ |
| 8. share fun activities with others? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 9. look at others when talking with them? | ○ | ○ | ○ | ○ | ○ |
| 10. engage in tasks that require sustained effort? | ○ | ○ | ○ | ○ | ○ |
| 11. avoid looking at people who spoke to him/her? | ○ | ○ | ○ | ○ | ○ |
| 12. play with toys appropriately? | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 13. have a strong reaction to any change in routine? | ○ | ○ | ○ | ○ | ○ |
| 14. have trouble talking with other children? | ○ | ○ | ○ | ○ | ○ |
| 15. understand the point of view of others? | ○ | ○ | ○ | ○ | ○ |
| 16. learn simple tasks but then forget them quickly? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 17. use language that was immature for his/her age? | ○ | ○ | ○ | ○ | ○ |
| 18. get into trouble with adults? | ○ | ○ | ○ | ○ | ○ |
| 19. have social problems with children of the same age? | ○ | ○ | ○ | ○ | ○ |
| 20. use an odd way of speaking? | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 21. repeat certain words or phrases out of context? | ○ | ○ | ○ | ○ | ○ |
| 22. become obsessed with details? | ○ | ○ | ○ | ○ | ○ |
| 23. keep a conversation going? | ○ | ○ | ○ | ○ | ○ |
| 24. insist on doing things the same way each time? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 25. overreact to touch? | ○ | ○ | ○ | ○ | ○ |
| 26. repeat or echo what others said? | ○ | ○ | ○ | ○ | ○ |
| 27. smell, taste, or eat inedible objects? | ○ | ○ | ○ | ○ | ○ |
| 28. understand how someone else felt? | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 29. overreact to common smells? | ○ | ○ | ○ | ○ | ○ |
| 30. become distracted? | ○ | ○ | ○ | ○ | ○ |
| 31. play with others? | ○ | ○ | ○ | ○ | ○ |
| 32. notice social cues? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 33. respond when spoken to by adults? | ○ | ○ | ○ | ○ | ○ |
| 34. avoid looking at an adult when there was a problem? | ○ | ○ | ○ | ○ | ○ |
| 35. have problems paying attention when doing homework or chores? | ○ | ○ | ○ | ○ | ○ |
| 36. make careless mistakes in school work? | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 37. talk too much about things that adults don't care about? | ○ | ○ | ○ | ○ | ○ |
| 38. resist being touched or held? | ○ | ○ | ○ | ○ | ○ |
| 39. care about what other people think or feel? | ○ | ○ | ○ | ○ | ○ |
| 40. focus too much on details? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 41. not understand why others don't like him/her? | ○ | ○ | ○ | ○ | ○ |
| 42. share his/her enjoyment with others? | ○ | ○ | ○ | ○ | ○ |
| 43. show an interest in the ideas of others? | ○ | ○ | ○ | ○ | ○ |
| 44. leave homework or chores unfinished? | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 45. understand age-appropriate humor or jokes? | ○ | ○ | ○ | ○ | ○ |
| 46. flap his/her hands when excited? | ○ | ○ | ○ | ○ | ○ |
| 47. listen when spoken to? | ○ | ○ | ○ | ○ | ○ |
| 48. focus on one subject for too much time? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 49. need things to happen just as expected? | ○ | ○ | ○ | ○ | ○ |
| 50. talk too much about things that other children don't care about? | ○ | ○ | ○ | ○ | ○ |
| 51. insist on certain routines? | ○ | ○ | ○ | ○ | ○ |
| 52. have problems paying attention to fun tasks? | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 53. become fascinated with parts of objects? | ○ | ○ | ○ | ○ | ○ |
| 54. line up objects in a row? | ○ | ○ | ○ | ○ | ○ |
| 55. smile appropriately? | ○ | ○ | ○ | ○ | ○ |
| 56. start conversations with others? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 57. fail to complete tasks? | ○ | ○ | ○ | ○ | ○ |
| 58. ask questions that were off-topic? | ○ | ○ | ○ | ○ | ○ |
| 59. have trouble talking with adults? | ○ | ○ | ○ | ○ | ○ |
| 60. interrupt or intrude on others? | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 61. look at others when interacting with them? | ○ | ○ | ○ | ○ | ○ |
| 62. overreact to loud noises? | ○ | ○ | ○ | ○ | ○ |
| 63. become upset if routines were changed? | ○ | ○ | ○ | ○ | ○ |
| 64. choose to play alone? | ○ | ○ | ○ | ○ | ○ |

During the past four weeks, how often did the child...

| | Never | Rarely | Occasionally | Frequently | Very Frequently |
|---|---|---|---|---|---|
| 65. insist on keeping certain objects with him/her at all times | ○ | ○ | ○ | ○ | ○ |
| 66. have social problems with adults? | ○ | ○ | ○ | ○ | ○ |
| 67. twirl, spin, or bang objects? | ○ | ○ | ○ | ○ | ○ |
| 68. reverse pronouns (e.g., you for me)? | ○ | ○ | ○ | ○ | ○ |
| 69. show good peer interactions? | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| 70. respond when spoken to by other children? | ○ | ○ | ○ | ○ | ○ |
| 71. appear fidgety when asked to sit still? | ○ | ○ | ○ | ○ | ○ |

## Demographic

What is your child's ethnicity/race? (Check all that apply)

- [ ] Hispanic or Latino
- [ ] Not Hispanic or Latino
- [ ] White
- [ ] Black or African American
- [ ] American Indian or Alaska Native
- [ ] Asian
- [ ] Native Hawaiian or Pacific Islander
- [ ] Other

What is your relationship to your child?

- ○ Biological mother
- ○ Biological father
- ○ Adoptive mother
- ○ Adoptive father
- ○ Other, please specify:

Which ethnicity/race(s) do you identify with? (Check all that apply)

- [ ] Hispanic or Latino
- [ ] Not Hispanic or Latino
- [ ] White
- [ ] Black or African American
- [ ] American Indian or Alaska Native
- [ ] Asian
- [ ] Native Hawaiian or Pacific Islander
- [ ] Other

What is your age?

What is your gender?

- ○ Male
- ○ Female
- ○ Non-binary / third gender
- ○ Prefer not to say

What is your current zip code?

What is the age of your child?

What is the gender of your child?

- ○ Male
- ○ Female
- ○ Non-binary / third gender
- ○ Prefer not to say

What is your current zip code?