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Effects of a Mindfulness-Based Intervention on Psychological Outcomes Including Self-Compassion, Mental Health, and Behavioral Outcomes in Parents of Children with Autism Spectrum Disorder

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Effects of a Mindfulness-Based Intervention on Psychological Outcomes Including
Self-Compassion, Mental Health, and Behavioral Outcomes in Parents of Children
with Autism Spectrum Disorder

by

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Bachelor of Science
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2019

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We the undersigned committee
hereby approve the attached doctoral research project,

“Effects of a Mindfulness-Based Intervention on Psychological Outcomes Including
Self-Compassion, Mental Health, and Behavioral Outcomes in Parents of Children
with Autism Spectrum Disorder”

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Abstract

Title: Effects of a Mindfulness-Based Intervention on Psychological Outcomes Including Self-Compassion, Mental Health, and Behavioral Outcomes in Parents of Children with Autism Spectrum Disorder

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The present study utilized a brief mindfulness-based intervention to examine the relationship between psychological/behavioral factors, such as mindfulness and self-compassion, in improving parental stress, psychological well-being, and behavioral outcomes in parents of children with Autism Spectrum Disorder (ASD). Four parents of children with ASD engaged in a 3-session mindfulness-based intervention that included psychoeducation on mindfulness and self-compassion skills, experiential exercises, and implementation of mindfulness and self-compassion skills in parenting vignettes. Measurements included the Five Facet Mindfulness Questionnaire (FFMQ), Self-Compassion Scale (SCS), Parental Stress Index-4 Short Form (PSI-4 SF), Patient Health Questionnaire-9 (PHQ-9), Acceptance and Action Questionnaire-II (AAQ-II), and behavioral mindfulness and self-compassion. Using an A-B single subject design, results supported gradual increases in psychological/behavioral mindfulness and self-compassion scores in parents of children with ASD after receiving mindfulness and self-compassion training. Additionally, there were no overall improvements in total parental stress as a result of the mindfulness-based intervention; however, results indicated mild improvements in psychological health, and, thus, well-being.

Keywords: parents of children with autism spectrum disorder, mindfulness, self-compassion, parental stress, psychological well-being, behavioral outcomes

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“Live in the present, launch yourself on every wave, find eternity in each moment.”

-Henry David Thoreau

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Chapter 1

Introduction

Research indicates that general parenting stress is significantly influenced by child characteristics (e.g., difficult temperament), which can lead to psychological distress in parents and complications in parent-child interactions (McBride et al., 2002). Compared to parents of neurotypical children, parents of children with autism spectrum disorder (ASD) are at an even higher risk for psychological distress due to the notable difficulties in their children's behaviors including social, emotional and interpersonal difficulties (Pottie & Ingram, 2008). Significant parental stressors are likely to lead to increased mental health difficulties and reduced psychological well-being in parents of children with ASD (Hayes & Watson, 2013; Bluth et. al., 2013; Jones et al., 2018). Behavioral parent training focuses on effective behavior change in both the parents and children with ASD, which is highly effective in treating ASD symptoms (Iadarola et al., 2018). However, these intensive treatment programs are very child focused and may not provide adequate time to focus on parental mental health (Rayan & Ahmad, 2017). Although behavioral parent training interventions are effective in treating children with ASD, parents may further benefit from additional support, such as mindfulness-based interventions (MBIs). MBIs can help to increase present-focused parenting, non-judgmental and self-compassionate responses to stressors, and overall mental health resiliency that may positively affect children's treatment outcomes as well.

MBIs can help to reduce psychological distress in parents of children with ASD through the development of a range of skills. Although mindfulness has been

shown to improve psychological well-being in parents of children with ASD, little is known about the relationship between mindfulness, self-compassion, and mental health/behavioral outcomes in parents of children with ASD. There also appears to be an absence of research regarding the specific focus on self-compassion and mindfulness-based skills in parents of children with ASD. This study focused on exploring mindfulness, self-compassion, and mental health/behavioral outcomes in parents of children with ASD utilizing an MBI. The following literature review includes information regarding both nonclinical and clinical populations to provide a comprehensive overview of the previous research conducted.

Chapter 2

Review of the Literature

Children with Autism Spectrum Disorder (ASD)

The Centers for Disease Control and Prevention (CDC) has estimated that precisely 1 in 54 children are diagnosed with ASD in the United States as of 2016 (CDC, 2020; Maenner et al., 2016). ASD is a developmental disability characterized by persistent deficits in social communication and interaction across multiple environmental contexts (American Psychiatric Association, 2013). This manifests in multiple deficits, notably, social-emotional reciprocity; nonverbal communicative behaviors used for social interactions; and developing, maintaining, and understanding relationships. ASD is also characterized by restricted, repetitive patterns of behavior, interests, or activities that are manifested by at least two major physiological and/or behavioral patterns. These patterns include stereotypical or repetitive motor behaviors; insistence on sameness, inflexible adherence to routines, and/or ritualized patterns or verbal/nonverbal behaviors; highly restricted, fixated interests that are abnormal in intensity or focus; and/or hyper or hypo-reactivity to sensory input or unusual interests in sensory aspects of the environment. For ASD to be diagnosed, these symptoms must be present in the early developmental period; cause clinically significant impairment in social, occupational, or other important areas of functioning; and not be better explained by an intellectual disability or global developmental delay.

Parental Effects of Having a Child with ASD

Parents of children with ASD report higher levels of psychological distress due to their children's significant cognitive, language, and interpersonal impairments, as well as difficult behavioral patterns (Pottie & Ingram, 2008). The severity of ASD symptoms in children and self-criticism experienced by parents are two of the strongest predictors of psychological distress (Neff & Faso, 2015; Rayan & Ahmad, 2016; Bohadana et al., 2019). Other sources of psychological distress in parents of children with ASD include difficulties in the parent-child relationship, marital dissatisfaction, limited social and professional support, and societal stigma (Dardas & Ahmad, 2013; Zeedyk et al., 2014). Higher levels of psychological distress in parents of children with ASD are associated with increased stress, depression, anxiety, and burnout, as well as a reduction in quality of life and overall well-being (Hayes & Watson, 2013; Bluth et. al., 2013; Jones et al., 2018).

The psychological effects in parents of children with ASD can be explained by the General Stress Model (Hayes & Watson, 2013). This model conceptualizes the development of stress as the interaction between the parent and their environment. When environmental stressors are perceived to have overwhelmed parents' internal/external resources, they will engage in coping mechanisms to restore psychological functioning. If the coping mechanism is maladaptive or insufficient to the demands of the stressor, the outcome is psychological distress. In contrast, if the coping mechanism is adaptive and sufficient to the demands of the stressor, the outcome is psychological well-being.

The psychological distress that emerges from the intense demands of parenting a child with ASD may result in a tendency to use maladaptive coping strategies (Rayan & Ahmad, 2017; Dunn et al., 2001). It is important for parents of children with ASD to learn how to effectively respond and cope with stressful situations in healthier ways to reduce psychological distress and improve well-being (Rayan & Ahmad, 2017; Bluth, 2013). Intervention programs would benefit from providing additional training in adaptive coping strategies to enhance psychological well-being in parents of children with ASD (Rayan & Ahmad, 2017; Hayes & Watson, 2013).

Behavioral Parent Training Treatment Effects

Behavioral parent training has been recognized as one of the most effective treatments for reducing behavioral problems in children with ASD (Iadarola et al., 2018). Parent training typically focuses on teaching parents practical behavioral and communication skills to improve skill development in children, manage child behaviors, promote behavioral compliance in children, and enhance parent-child interactions (Iadarola et al., 2018; Singh et al., 2006; Bearss et al., 2015). Although the goal of behavioral parent training is to help parents develop skills that are pertinent to the needs of children with ASD, these interventions may unintentionally disregard the impact that a child with ASD places on parents' psychological well-being (Coyne & Wilson, 2004). Some behavioral parent training programs have been shown to improve parental stress associated with raising a child with ASD; however, these improvements are mainly related to the reduction in difficult child behaviors rather than the development of adaptive coping strategies in parents (Iadarola et al., 2018).

Psychological distress in parents of children with ASD is likely to make it difficult for parents to implement behavioral strategies to improve problematic behaviors in children (Osborne et al., 2008). This is likely to only exacerbate difficult child behaviors and, thus, parental distress as well (Osborne et al., 2008). In contrast, interventions that focus on the psychological needs of parents of children with ASD can help to achieve treatment objectives by improving parental behaviors and enhancing psychological well-being in parents and children (Singh et al., 2006). Parents of children with ASD would likely benefit from additional support that could provide different ways of responding to experienced stressors and optimize psychological well-being, such as MBIs (Osborne et al., 2008; Jones et al., 2018).

Whittingham (2014) systematically reviewed the literature on the efficacy of MBIs for parents of children with disabilities. Most notably, results indicated that MBIs could help parents of children with disabilities develop mindful parenting skills. For instance, mindfully responding to the developmental needs of children and the contextual contingencies within the parent-child relationship, in spite of significant parental stress. In addition, MBIs for parents of children with disabilities were associated with reductions in stress and psychopathology in parents, as well as aggression and Attention Deficit Hyperactivity Disorder (ADHD) symptoms in children. Mindfulness may be a preventative and supplementary intervention for the behavioral/emotional difficulties in both parents and children with disabilities.

Mindfulness and Self-Compassion

Benefits of Mindfulness

Mindfulness is defined as “the awareness that arises from paying attention, on purpose, in the present moment and non-judgmentally” (Kabat-Zinn, 1994, p. 4). Self-compassion is considered to be the foundation of mindfulness as mindfulness focuses on the acceptance of the present moment experience and self-compassion focuses on the acceptance of the experiencer (Germer & Neff, 2015, p. 47). Mindfulness and self-compassion help to reduce rumination, self-criticism, overidentification, disassociation, negative emotions, and suffering that are associated with psychological distress (Neff, 2003). Mindfulness and self-compassion also help to improve awareness of experiences, acceptance of the present moment, and compassion towards the self and others (MacBeth & Gumley, 2012; Neff, 2003).

Studies have revealed that mindfulness was significantly related to higher self-compassion, life satisfaction, happiness, and psychological well-being (Hollis-Walker & Colosimo, 2011; Neff & Germer, 2013). Mindfulness interventions are also linked to significant reductions in depression, anxiety, stress, and avoidance (Neff & Germer, 2013). Mindfulness and self-compassion likely help to cultivate a compassionate attitude, protect against negative feelings, and facilitate psychological well-being (Hollis-Walker & Colosimo, 2011). Therefore, mindfulness-based interventions (MBI) can effectively teach mindfulness and self-compassion skills to help individuals cope with daily stressors and enhance psychological well-being (Hollis-Walker & Colosimo, 2011; Neff & Germer, 2013).

Benefits of Self-Compassion

Self-compassion is defined as being open to suffering and adopting a non-judgmental attitude towards the self, rather than avoiding or disconnecting from negative experiences (Neff, 2003; Neff, 2015). Neff (2003) proposed that self-compassion is comprised of two dimensions (the positive and negative dimensions) with six individual components. The positive dimension of self-compassion consists of self-kindness, common humanity, and mindfulness, while the negative dimension consists of self-judgment, isolation, and overidentification. The positive dimension of self-compassion corresponds with psychological well-being and the negative dimension of self-compassion corresponds with psychological distress. Self-compassion is cultivated by extending kindness towards the self with an understanding that suffering is a universal experience and that all beings deserve love, kindness, and compassion. Self-compassion provides emotional safety; helps individuals perceive themselves clearly without self-criticism towards their thoughts, emotions, and/or behaviors; and improves mental health and behavioral outcomes.

Studies examining the relationship between self-compassion, psychopathology, and psychological health have indicated that self-compassion was strongly associated with happiness, optimism, positive affect, and reflective wisdom; moderately related to affective wisdom; and positively related to cognitive wisdom (Neff et al., 2006). Higher self-compassion was also associated with significantly lower levels of psychological distress, which likely suggests that self-compassion can help to

significantly reduce depression and anxiety, increase resiliency to stress, and enhance psychological well-being (Macbeth & Gumley, 2012).

Compassion-based intervention (CBI) studies demonstrate significant improvements in self-compassion, compassion towards others, mindfulness, empathy, positive emotions/thoughts, and self-acceptance (Shonin et al., 2015; Galante et al., 2014; Shahar et al., 2014). CBIs, such as kindness-based meditations, are also associated with significant improvements in cognitive control, positive appraisals of stimuli, affective learning, quality of life, and interpersonal relationships (Shonin et al., 2015; Galante et al., 2014). Lastly, kindness-based and loving kindness meditations significantly reduce depression, anxiety, anger, stress, asociality, anhedonia, and self-criticism (Shonin et al., 2015; Galante et al., 2014; Shahar et al., 2014). This suggested that CBIs are likely to be beneficial in preventing and treating psychological distress and enhancing psychological well-being (Shonin et al., 2015).

Benefits of Mindfulness and Self-Compassion in Parents of Children with ASD

Some mothers who have attended traditional behavioral parent training programs have asserted that behavior support plans are too technical, procedural, and demanding, ultimately causing increased levels of stress in parents and negative parent-child interactions (Raulston et al., 2019). Mindfulness in parents of children with ASD can help to promote valued behaviors that are not fixed on the antecedent and contingent management skills traditionally taught in parent behavioral training programs (Singh et al., 2006; Greco & Eifert, 2004). MBIs tend to align better with parental values and are associated with improved responsiveness, communication, and

problem-solving skills in parents of children with ASD (Corti et al., 2018; Bögels et al., 2010). An increase in valued behaviors in parents of children with ASD was related to significant improvements in parental stress, psychological distress, parent-child interactions, subjective happiness, marital satisfaction, and overall health (Corti et al., 2018; Singh et al., 2006; Blackledge & Hayes, 2006; Bögels, et al., 2010). Behaving in accordance with one's values is also likely to help parents comply with treatment guidelines even in difficult parenting situations.

Mindfulness can help parents of children with ASD consider non-judgmental ways to perceive situations and better respond to children in compassionate and accepting ways (Ferraioli & Harris, 2012; Bögels et al., 2010). Mindfulness can be cultivated through regularly practiced exercises that promote non-judgmental attention to what is occurring in the present moment (Bluth et al., 2013; Bögels et al., 2010). This can be utilized to optimize skill implementation in parent training programs, emotional reactivity to stressors, and psychological well-being in both parents and children. Therefore, mindfulness can positively influence the psychological well-being of parents of children with ASD in both direct and indirect ways, including reduced parental stress and problem behaviors in children, respectively (Neff & Faso, 2015; Bazzano et al., 2015; Singh et al., 2006; Bluth et al., 2013).

Studies that have evaluated the effects of MBIs on mindfulness and psychological well-being in parents of children with ASD have also shown to significantly increase mindfulness and the positive reappraisal of stress in parents (Ferraioli & Harris, 2012; Bazzano et al., 2015; Benn et al., 2012; Rayan & Ahmad,

2016). This increase in mindfulness was connected to significant improvements in parental stress, general health, quality of life, and overall well-being (Ferraioli & Harris, 2012; Bazzano et al., 2015; Benn et al., 2012; Rayan & Ahmad, 2016; Jones et al., 2018; Hwang et al., 2015). Additionally, mindfulness significantly improved parental psychological and social functioning as evidenced by greater self-compassion, empathetic concern, and forgiveness of others (Benn et al., 2012; Rayan & Ahmad, 2016). MBIs also helped to develop internal coping resources, psychological resilience, and non-judgmental acceptance of the present moment experience, which was likely to enhance the parent-child relationship and parental psychological well-being (Bazzano et al., 2015; Rayan & Ahmad, 2016).

MBIs have also been shown to significantly reduce problematic behaviors in children with ASD due to the significant improvements in parental behaviors (e.g., over-reactivity, awareness, mindful parenting, self-compassion), parent-child interactions, and satisfaction with parenting skills (Hwang et al., 2015; Singh et al., 2006; Singh et al., 2014; Ridderinkhof et al., 2018; Raulston et al., 2019). MBIs in parents significantly reduce noncompliant, disruptive, aggressive, and self-injurious behaviors in children with ASD (Singh et al., 2006; Singh et al., 2014). Additionally, MBIs significantly improve children's thought difficulties, anxiety, and social communication (Ridderinkhof et al., 2018; Hwang et al., 2015). The non-judgmental acceptance cultivated by mindfulness appears to support both parent and child needs, as well as develop harmony in the parent-child relationship even when their needs are in conflict with one another (Singh, 2006). Thus, teaching mindfulness-based practices

to parents can help to improve the mental and behavioral health in both parents and children with ASD, especially when parents consistently engage in mindfulness practice in their daily lives (Singh et al., 2014; Hwang et al., 2015).

In parents of children with ASD, most research has focused on the negative aspects of parenting a child with ASD rather than understanding the positive adaptations in parental psychological adjustment, such as self-compassion promoted by mindfulness (Bohadana et al., 2019). Self-compassion is an internal coping resource for parents of children with ASD as studies have shown it is associated with greater emotional resources, healthier coping, resiliency, and positive mental health outcomes (Robinson et al., 2018; Neff & Faso, 2015). Compassionate parents of children with ASD are more likely to have reduced judgement and unhelpful behaviors in parenting; implement more helpful rules and restrictions to encourage healthy child development; and provide enhanced kindness and support towards children's well-being (Neff, 2003). Compassionate parents of children with ASD are also more likely to live by their values and balance taking care of both themselves and their children (Neff, 2003). Therefore, the presence of self-compassion in parents of children with ASD may mediate the relationship between parental stressors, coping strategies, and overall psychological well-being (Bohadana et al., 2019).

Studies examining the relationship between self-compassion and psychological well-being in parents of children with ASD indicated that self-compassion was associated with a significant reduction in psychological distress (e.g., stress, depression) and negative perceptions of parenting and children's difficult behaviors,

even after controlling for specific stressors (e.g., having a child with ASD, finances, high parental burden; Neff & Faso, 2015; Robinson et al., 2018; Bohadana et al., 2019). Self-compassion was also related to an increase in self-efficacy, emotional resiliency, quality of life, life satisfaction, and positive parent-child interactions (Neff & Faso, 2015; Bohadana et al., 2019). Overall, self-compassion was likely to reduce symptoms of shame, self-criticism, grief, and depressive rumination, as well as welcome understanding and acceptance of the self and children during difficult parental situations (Neff & Faso, 2015).

Consequently, self-compassion was likely to cultivate a sense of meaning through the challenges of raising a child with ASD; foster hope through inner support, confidence, and optimism for the future; and provide support and comfort towards oneself to encourage goal achievement (Neff & Faso, 2015). Self-compassion may offer resiliency against the additional challenges experienced by parents raising a child with ASD, such as self-criticism, isolation, and less opportunity for self-care (e.g., mindfulness; Robinson et al., 2018). How parents relate to themselves and their children during stressful situations appears to be of greater importance to parental well-being than the specific difficulties that they experience due to having a child with ASD (Neff & Faso, 2015). Therefore, mindfulness can help foster feelings of self-compassion so that parents can better engage with stressors associated with having a child with ASD. In turn, greater mindfulness and self-compassion are likely to reduce parental stress, improve behaviors in parents and children, and enhance psychological well-being, overall.

Chapter 3

Rationale for Study

Parents of children with ASD experience an increased amount of psychological distress due to the significant stressors associated with having a child with ASD. These parental stressors impact various areas of their lives, including maladaptive coping skills, difficulties implementing behavior training protocols, and mental health and behavioral outcomes in both parents and children. Due to the limited time and focus on parental stress in traditional parent behavioral training programs, it is beneficial for parents of children with ASD to learn adaptive forms of coping that are timely and effective. More specifically, mindfulness-based and self-compassion interventions have been shown to reduce symptoms of psychological distress and enhance psychological well-being in parents of children with ASD. Previous research has shown the connection between mindfulness and self-compassion such as acceptance of the present moment and compassion towards the self and others. However, there is little research on the mediation between mindfulness and self-compassion and their impacts on psychological distress and well-being in parents of children with ASD.

The purpose of this study was to examine the role of mindfulness and self-compassion in relation to the mental health including parental stress, psychological well-being, and behavioral outcomes in parents of children with ASD. It also determined the relationship between mindfulness and self-compassion and, thus, their combined role in reducing parental stress to improve psychological well-being and behavioral outcomes in parents. This study contributed to the literature on the

relationships between factors such as mindfulness, self-compassion, parental stress, psychological well-being, and behavioral outcomes. The results of this study also contributed to a better understanding of adaptive coping skills to enhance the mental health and behavioral outcomes in parents of children with ASD.

Chapter 4

Aims and Hypotheses

Based on the reviewed literature, the following are the goals and hypotheses of the present study:

1. Mindfulness training will increase mindfulness as measured by increased average scores within the moderate range of 3.0 or higher on the Five Facet Mindfulness Questionnaire (FFMQ) and a behavioral mindfulness score of 80% or greater at Follow-Up.
2. Mindfulness training will increase self-compassion as measured by increased average scores within the moderate range of 3.0 or higher on the Self-Compassion Scale (SCS) and a behavioral self-compassion score of 80% or greater at Follow-Up.
3. Mindfulness training will reduce parental stress as measured by a reduction in total scores below the clinically significant cutoff score at the 90th percentile on the Parenting Stress Index-4 Short Form (PSI-4 SF) at Follow-Up.
4. Mindfulness training will improve psychological well-being as measured by decreased total scores below the clinically significant cutoff scores of 10-14 on the Patient Health Questionnaire-9 (PHQ-9) and the 24-28 on the Acceptance and Action Questionnaire-II (AAQ-II) at Follow-Up.

Chapter 5

Methods

Procedure for Participant Recruitment

Parents of children with ASD were recruited for participation directly on site at a local autism treatment center and throughout the local community, a non-probability convenience sampling method. Recruitment and instrument materials were provided via the study investigator and distributed to parents of children with ASD during their children's social skills program at the local autism treatment center, as well as on a local autism organization's social media forum. Treatment was advertised specifically to help reduce parental stress and enhance parental psychological well-being. They were also informed that no identifying information would be collected as part of this study.

Participants

Data of participants was collected from four parents of children with ASD from a local autism treatment center whose children were engaging in the social skills program and the local community via a local autism organization's social media forum. In order to qualify for entry into the study, parents were required to be the primary caretaker of at least one child below 18 years of age, whom has been diagnosed with ASD by a professional according to the Diagnostic and Statistical Manual-V (DSM-V).

Measures

Measures of parental stress were utilized in this study to measure psychological distress associated with having a child with ASD. Mindfulness, self-compassion, and their respective behaviors assessed the impact of the MBI on the non-judgmental awareness of the internal/external present moment experiences associated with greater psychological well-being. In turn, psychological health and flexibility were used to measure psychological well-being in response the MBI intervention in parents of children with ASD.

Demographic Information

A demographic form was created for the study. It included basic characteristics such as age, gender, race/ethnicity, relationship status, parenting status, education level, yearly household income, number of children, and of those children how many were formally diagnosed with ASD.

Mindfulness

The Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006) is a 39-item validated self-report measure that assess five subscales of mindfulness, including Observation of Sensation, Feeling, and Thought; Noting and Describing Experience with Words; Non-judgement of Experience; Non-Reactivity to Experience; and Acting with Awareness. The FFMQ has been shown to have good internal consistency and expected correlations with several other psychological variables. Items are rated on a 5-point scale from 1 (*never or very rarely true*) to 5 (*very often or always true*). Examples of items on these scales include, “I criticize myself for having irrational or

inappropriate emotions” and “In difficult situation, I can pause without immediately reacting”.

Self-Compassion

The Self-Compassion Scale (SCS; Neff, 2003) is a 26-item validated self-report measure that assesses self-kindness, self-judgement, common humanity, isolation, mindfulness, and overidentification. The SCS has been shown to have high internal consistency and test-retest reliability during a 3-week interval. It uses a 5-point Likert-type scale of 1 (*almost never*) to 5 (*almost always*) on items such as, “I am disapproving and judgmental about my own flaws and inadequacies” and “I try to be loving towards myself when I’m feeling emotional pain”.

Parental Stress

The Parenting Stress Index-4 Short Form (PSI-4 SF) is a self-report measure assessing parenting stress in parents of children 3 months to 10 years of age. The PSI-SF contains 36 items that relate to parental internal/external experiences and is comprised of Parental Distress (PD), Parent-Child Dysfunctional Interaction (P-CDI), and Difficult Child (CD) constructs. Items are rated on a 5-point Likert scale and includes statements such as, “Since having a child I feel that I am almost never able to do things I like to do” (Parental Distress), “Most times I feel that my child does not like me and does not want to be close to me” (Parent-Child Dysfunctional Interaction), and “My child seems to cry or fuss more often than most children” (Difficult Child).

Psychological Well-Being

Psychological health. The Patient Health Questionnaire-9 (PHQ-9) is a brief, self-report measure from the complete PHQ that assesses the presence of psychological distress, specifically depressive symptoms (Kroenke et al., 2001). The PHQ-9 has a Cronbach's alpha of 0.89, demonstrating good reliability and validity (Kroenke et al., 2001). The PHQ-9 contains nine items and incorporates the DSM-V depression diagnostic criteria and other depressive symptomology. Items are rated on a 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*). Total scores can range from 0 to 27 to measure depression severity, (0-4) minimal depression, (5-9) mild depression, (10-14) moderate depression, (15-19) moderately severe depression, and (20-27) severe depression.

Psychological flexibility. The Acceptance and Action Questionnaire-II (AAQ-II) assesses people's willingness to accept their undesirable thoughts and feelings while acting in a way that is congruent with their values in order to enhance psychological well-being (Bond et al., 2011). The AAQ-II has been found to be internally consistent and has good convergent and discriminant validity (Bond et al., 2011). The AAQ-II contains seven items and is rated on a 7-point Likert scale ranging from 1 (*never true*) to 7 (*always true*). Lower scores on the AAQ-II reflect greater psychological flexibility, less avoidance, and the ability to act more effectively in the presence of stressful thoughts or feelings.

Behavioral Measures

Behavioral mindfulness. Behavioral mindfulness was measured in five behavioral steps, specifically in parenting situations for difficult child behaviors. Mindfulness steps included: 1) pausing without reaction, 2) taking deep breaths for approximately 30 seconds, 3) noticing thoughts, emotions, and bodily sensations, 4) non-judgmentally accept the present moment experience, and 5) mindfully react to the yours and/or the child's needs. Each completed step by the parent was given one point, for a possible total of five points. Total scores were then be calculated as a percentage (completed steps/total steps).

Behavioral self-compassion. Behavioral self-compassion was also measured in five behavioral steps, specifically in relation to parenting abilities during difficult parenting situations. Self-compassion steps included: 1) pausing without reaction, 2) taking deep breaths for approximately 30 seconds, 3) noticing judgmental thought(s), 4) thanking the mind for the thought(s), and 5) provide a positive self-affirmation. Each completed step by the parent was given one point, for a possible total of five points. Total scores were then calculated as a percentage (completed steps/total steps).

Satisfaction Measure

Participant satisfaction was measured using an adjusted version of the Group Satisfaction Scale (GSS) specific to the intervention and its facilitator. This scale measures how satisfied participants were with the treatment they received, as well as how participants believe the treatment could be improved. The GSS contains 10 questions that are rated on a 5-point Likert scale ranging from 1 (Completely False) to

5 (Completely True), two questions on a 5-point Likert scale ranging from 1 (Poor) to 5 (Excellent), one dichotomous (i.e., Yes/No) question, and one open-ended question for additional comments. Lower scores on the GSS reflect lower treatment satisfactions and higher scores reflect greater treatment satisfaction. In addition, satisfaction was also measured through discussion during the follow-up session; specifically, questions pertained to the likes/dislikes and helpfulness of the intervention, as well as suggestions of improvement for future interventions.

Procedure

At baseline, participants completed the demographics questionnaire, the primary outcome measures (i.e., PSI-4 SF, PHQ-9, AAQ-II), and the manipulation measures (i.e. FFMQ, SCS). Parents individually engaged in a three-session mindfulness-based intervention via Mend. This MBI included psychoeducation on mindfulness principles/skills, acceptance of the present moment, and self-compassion; experiential exercises, including body scan, mindful breathing, and loving-kindness meditation; and implementation of mindfulness and self-compassion skills in contrived parenting situations (refer to Appendix B). After each session, participants completed the primary outcome measures. Each session was approximately 45 to 60-minutes long and included an orientation to the current skill, an experiential exercise, behavioral training of the skill, implementation of the skill in a practice vignette, and homework that was reviewed the following session. Participants had access to the practice mindfulness exercise via email after each respective session, of which they had access to use throughout the intervention. Participants were encouraged to engage

in ongoing practice of the skills learned throughout the program and then implemented these experiences in example parenting vignettes during the discussion period of the sessions. These vignettes included a personal difficulty identified at baseline that was presented at session one and at follow-up, a fabricated vignette similar to the personal experience that was presented at session two, and a new (generalizable) vignette that was presented at session three. After session two, participants were asked to complete the manipulation measures as a mid-treatment check-in. At follow-up, participants completed the primary outcome and manipulations measures, as well as the satisfaction measure.

All procedures were approved by the Florida Institute of Technology Institutional Review Board prior to this study's commencement. In addition, permission to recruit was granted by the local autism treatment center and local autism organization's social media forum in order to maximize the number of participants and assess parents of children with ASD. The informed consent provided more detailed information about the purpose of the study, including the estimated time requirement and intervention details. Participants were also given the names and emails of the study investigators, Victoria Follette, Ph.D. and Natalia Velásquez, M.S., for questions before, during, and after the completion of the study. Moreover, participants were told that they may withdraw from the study at any time without consequence. A list of resources was also provided to the parents of children with ASD at the completion of the intervention, as well as a \$25 Visa gift card.

Design/Plan of Analysis

This study used an A-B single-subject design in order to demonstrate pre- and post-intervention effects. It examined the variables regarding psychological distress related to having a child with ASD, including mindfulness, self-compassion, parental stress, and psychological well-being. Simple frequencies regarding demographic information were calculated. Additionally, parental stress and psychological well-being, as measured by the PSI-SF and PHQ-9/AAQ-II, respectively, were assessed in relation to psychological/behavioral mindfulness and self-compassion, as measured by the FFMQ, SCS, and behavioral scores. A visual analysis was conducted to assess whether mindfulness and self-compassion meaningfully improved parental stress, psychological well-being, and behavioral outcomes in parents of children with ASD.

Chapter 6

Results

Descriptive Frequencies

Descriptive frequencies of the sample demographic variables are displayed in Table 1. As noted, the majority of the sample were Caucasian (n=3) females (n=4) between the ages of 30-40 (n=2) and 40-50 (n=2). Three participants identified as married and coparenting their children with their partners and one participant identified as widowed and a single parent. All participants reported college (i.e., associates/bachelor's) as their highest education level (n=4), as well as indicated yearly household incomes of \$20,000-40,000 (n=1), \$80,000-100,000 (n=1), and \$100,000+ (n=2). Notably, two of the participants reported a total of two children and the other participants indicated a total of three children (n=1) and four children (n=1). Of the total children, two of the participants reported that one of their children was diagnosed with ASD and the other participants indicated that two of their children were diagnosed with ASD (n=2).

Participant 1 is a 39-year-old, married, coparenting, Caucasian woman who reported College (associates/bachelor's) as her highest level of education and a yearly household income of \$100,000 or more. She indicated that she has three children, one of whom is formally diagnosed with ASD.

Participant 2 is a 31-year-old, married, coparenting, Caucasian woman who reported College (associates/bachelor's) as her highest level of education and a yearly

household income of \$80,000 to \$100,000. She indicated that she has four children, two of whom are formally diagnosed with ASD.

Participant 3 is a 46-year-old, widowed, single parenting, Hispanic/Latinx woman who reported College (associates/bachelor's) as her highest level of education and a yearly household income of \$20,000 to \$40,000. She indicated that she has two children, one of whom is formally diagnosed with ASD. It should be noted that Participant 3 was unable to maintain consistency within the intervention timeline (i.e. four days between each session) due to childcare difficulties between Session 2 and 3.

Participant 4 is a 45-year-old, married, coparenting, Caucasian woman who reported College (associates/bachelor's) as her highest level of education and a yearly household income of \$100,000 or more. She indicated that she has two children, both of whom are formally diagnosed with ASD.

Hypothesis 1

It was hypothesized that mindfulness training would increase mindfulness as measured by increased average scores within the moderate range of 3.0 or higher on the Five Facet Mindfulness Questionnaire (FFMQ) and a behavioral mindfulness score of 80% or greater at Follow-Up. Average mindfulness scores were calculated to determine low mindfulness (1.0-2.5), moderate mindfulness (2.5-3.5), and high mindfulness (3.5-5.0) on the FFMQ. It should also be noted that each participant was given a behavioral mindfulness score of 0/5 (0%) at baseline, as they had not learned the five behavioral mindfulness steps at that time. Figure 1 shows mindfulness scores

on the FFMQ at Baseline, Session 2, and Follow-Up, and Figure 3 shows behavioral mindfulness scores at Baseline, Session 1, Session 2, and Follow-Up.

Throughout the intervention, all participants showed a steady increase in mindfulness scores on both psychological and behavioral mindfulness measures. At baseline, Participant 1, 3, and 4 reported low-moderate mindfulness scores (i.e., between 2.5-3.0) and Participant 2 indicated a low mindfulness score (i.e., below 2.5) on the FFMQ. As the intervention progressed, mindfulness scores for all participants showed a visual increase on the FFMQ, as each participant reported a mindfulness score of 3.0 or higher at Follow-Up. It should be noted that because the FFMQ is a more stable variable, it may not be as sensitive to short term interventions.

In addition, Participant 3 reported a behavioral mindfulness score of 2/5 (40%) and Participants 1, 2, and 4 reported behavioral mindfulness scores of 3/5 (60%) during the practice parenting vignette at Session 1. As mindfulness skills were provided and practiced, each participant's behavioral mindfulness scores gradually increased overtime, as each participant reported a behavioral mindfulness score of 4/5 (80%) or higher at Follow-Up. This suggests that the intervention was successful in teaching foundational mindfulness skills.

Hypothesis 2

It was also hypothesized that mindfulness training would increase self-compassion as measured by increased average scores within the moderate range of 3.0 or higher on the Self-Compassion Scale (SCS) and a behavioral self-compassion score of 80% or greater at Follow-Up. Average self-compassion scores on the SCS were

calculated to determine low self-compassion (1.0-2.5), moderate self-compassion (2.5-3.5), and high self-compassion (3.5-5.0). It should also be noted that each participant was given a behavioral self-compassion score of 0/5 (0%) at baseline and self-compassion was only measured at Session 3 and Follow-Up, as self-compassion concepts were introduced at that time. Figure 2 shows self-compassion scores on the SCS at Baseline, Session 2, and Follow-Up, and Figure 3 shows behavioral self-compassion scores at Baseline, Session 3, and Follow-Up.

Throughout the intervention, all participants demonstrated a gradual increase in self-compassion scores on both psychological and behavioral self-compassion measures. At baseline, Participant 1 and 3 reported low-moderate self-compassion scores (i.e., between 2.5-3.0) and Participant 2 and 4 indicated low self-compassion scores (i.e., below 2.5) on the SCS. As the intervention progressed, self-compassion scores for Participant 1, 3, and 4 showed a visual increase on the SCS, as each of the latter participants reported a self-compassion score of 3.0 or higher at Follow-Up. In contrast, Participant 2 consistently reported low-moderate self-compassion scores at Session 2 and Follow-Up after the initial increase. It should also be noted that the SCS is a more stable variable; therefore, it may not be as sensitive to short term interventions.

In addition, Participant 3 reported a behavioral self-compassion score of 3/5 (60%), Participant 2 reported a behavioral self-compassion score of 4/5 (80%), and Participants 1 and 4 reported behavioral self-compassion scores of 5/5 (100%) during the practice parenting vignette at Session 3. As self-compassion skills were discussed

and implemented across sessions, each participant's behavioral self-compassion gradually increased overtime, as each participant reported a behavioral mindfulness score of 4/5 (80%) or higher at Follow-Up. However, Participant 1 indicated a one-point reduction in behavioral self-compassion at Follow-Up after the initial score of 5/5 (100%), while the other participants maintained their initial scores from Session 3 to Follow-Up. This suggests that the intervention was successful in teaching basic self-compassion skills.

Hypothesis 3

The third hypothesis of this study proposed that mindfulness training would reduce total parental stress as measured by a reduction in total scores below the clinically significant cutoff score at the 90th percentile on the Parenting Stress Index-4 Short Form (PSI-4 SF) at Follow-Up. Clinically significant stress percentiles are 90-100; high stress percentiles are 81-90; and typical stress percentiles are 15-80. Total raw scores were calculated at each session to determine changes in parental stress based on the cutoff and percentile scores. It should also be noted that high scores and percentile ranks are to be expected in parents of children with ASD due to the increased parenting demands and its respective stressors. Figure 4 shows parental stress across time per subscale, specifically Parental Distress (PD), Parent-Child Dysfunctional Interaction (P-CDI), and Difficult Child (DC), on the PSI-4 SF. The PSI-4 SF's Total Stress indicates the overall level of stress a person is feeling in their role as a parent. PD suggests the extent to which parents feel competent, restricted, conflicted, supported, and/or depressed in their role as a parent; P-CDI suggests the

extent to which parents feel satisfied with their child and their interactions with them; and DC suggests how a parent perceives their child to be, whether the child is easy or difficult to take care of.

Throughout the intervention, all participants demonstrated a slow, gradual decline in total parental stress on the PSI-4 SF; however, only Participant 1 remained below the clinically significant cutoff from Baseline to Follow-Up (i.e., gravitating between typical and high stress percentiles). At baseline, Participant 2, 3, and 4 reported clinically significant parental stress on the PSI-4 SF. As the intervention progressed, total parental stress scores for Participant 3 moderately reduced below the 90th percentile cutoff into the high stress percentile range. In contrast, total parental stress in Participants 2 and 4 consistently remained within the clinically significant range despite slight reductions, overall. This suggests that the intervention was not successful in reducing total parental stress through mindfulness and self-compassion.

When looking at PSI-4 SF subscales, most participants showed a mild reduction in one subscale (i.e., PD, P-CDI), of which are more expected to reduce in relation to the mindfulness training. Participants 1 and 3 reported the greatest reduction in PD, as evidenced by score reductions into the typical and high stress percentiles, respectively. Participant 4 reported the most change in P-CDI; although she initially indicated P-CDI in the high stress percentile range, scores reduced into the typical stress percentile range at Follow-Up. However, Participant 2 reported no meaningful change in any of the PSI-4 SF subscales. This suggests that the mindfulness intervention was more successful in reducing specific parental stress

measures, such as parental emotional distress and parent-child dysfunctional interactions more than others (i.e., child difficult behaviors).

Hypothesis 4

Lastly, it was hypothesized that mindfulness training would improve psychological well-being as measured by decreased total scores below the moderate depression cutoff scores of 10-14 on the Patient Health Questionnaire-9 (PHQ-9) and 24-28 (i.e., psychological avoidance) on the Acceptance and Action Questionnaire-II (AAQ-II) at Follow-Up. Total raw scores were calculated at each session to determine changes in psychological well-being based on the latter cutoff scores. Figure 5 shows parental psychological well-being across time using the PHQ-9 and AAQ-II measures.

Throughout the intervention, most participants demonstrated a steady improvement in psychological well-being as evidenced by decreased scores on the PHQ-9, with only one participant showing gradual change on the AAQ-II. At baseline, Participants 2, 3, and 4 reported moderate emotional distress on the PHQ-9. As the intervention progressed, emotional distress scores on the PHQ-9 for Participant 2 and 4 reduced into the non-distressed range, indicating slight improvement in psychological health and, thus, well-being. However, Participant 3 consistently reported moderate depression scores after initial reduction. It should also be noted that Participant 1 remained in the non-clinically significant range (i.e., mild depression) on the PHQ-9 at baseline, which continued to reduce into the minimal depression range at Follow-Up. This suggests that the intervention mildly improved psychological well-

being in parents of children with ASD through the use of mindfulness and self-compassion.

Furthermore, only one participant displayed a modest enhancement in psychological well-being as evidenced by improvements in psychological flexibility on the AAQ-II. Participants 1, 2, and 3 reported slightly elevated scores on the AAQ-II at baseline, indicating psychological avoidance. Participant 4 indicated psychological flexibility scores on the AAQ-II at baseline (i.e., less than 24), which converted into a significant level of psychological avoidance at Follow-Up. As mindfulness and self-compassion skills were implemented across sessions, psychological avoidance scores on the AAQ-II for Participant 3 mildly reduced into the non-clinical range at Follow-Up. However, Participant 1 indicated psychological flexibility at Session 3, of which reappeared as psychological avoidance in the significant range at Follow-Up. Similarly, Participant 2 remained in the significant range for psychological avoidance from Baseline to Follow-Up. This suggests that the mindfulness intervention was minimally successful in improving psychological flexibility, and thus well-being, in parents of children with ASD.

Participant Satisfaction

Participant satisfaction was measured using an adjusted version of the Group Satisfaction Scale (GSS) specific to the intervention and its facilitator. All participants reported “Completely True” on questions regarding the intervention information/practice being well organized, focusing on the right issues, and easy to understand. All participants also indicated “Completely True” on questions related to

the facilitator caring about them as a person, collaborating with and encouraging participants to achieve their goals, and positively reinforcing participants when they did something well. Most participants expressed “Completely True” on questions about learning what they had hoped to learn in the intervention and the facilitator understating the participant and their needs; however, Participant 4 reported “Mostly True” on the latter questions. Overall ratings of the facilitator and the intervention were rated in the “Excellent” range by all participants. Lastly, all participants indicated that they would recommend this intervention to others.

Chapter 7

Discussion

Parents of children with Autism Spectrum Disorder (ASD) show an increased amount of emotional distress above and beyond ordinary parental stress due to the additional challenges of raising a child with ASD. Significant parental stress is related to reduced psychological well-being in parents of children with ASD, which tends to be exacerbated by unhelpful coping mechanisms and time limitations in typical parent behavioral training programs for emotional support. Thus, it is very important that parents of children with ASD are provided with adaptive coping skills, such as mindfulness and self-compassion, to help reduce parental stress and enhance psychological well-being, overall. While mindfulness-based interventions (MBIs) have been shown to be successful in reducing parental stress and enhancing psychological well-being in parents of children with ASD, research on the effects of mindfulness through the development of self-compassion has been minimal in parents of children with ASD.

Parent Demographics

Participants in the current study were recruited using a non-probability convenience sampling method at a local autism treatment center and on a local autism organization's social media forum. The majority of the sample were married, Caucasian females between the ages of 30-50 years old; however, there was some marital and ethnic diversity. All participants reported College (i.e., associates/bachelor's) as their highest education level, with one participant indicating

a yearly household income in the poverty range and the rest of the participants reporting in the middle to upper-middle socioeconomic ranges. Two of the participants reported a total of two children and the other participants indicated a total of three and four children. Of the total children, two of the participants reported that one of their children was diagnosed with ASD and the other participants indicated that two of their children were diagnosed with ASD.

Intervention Effects on Mindfulness and Self-Compassion

Consistent with previous research, psychological and behavioral results illustrated gradual increases in mindfulness and self-compassion scores in parents of children with ASD after receiving mindfulness and self-compassion training. These results support previous findings as mindfulness and self-compassion are often considered valued-driven coping mechanisms that are both efficient and effective for mental health and behavioral outcomes in parents of children with ASD. Notably, significant increases in mindfulness and self-compassion skills takes time and consistent practice; thus, it is not surprising that the current intervention only shows mild increases in mindfulness and self-compassion scores across time and participants. Therefore, the participants (i.e. Participant 1 and 4) who more consistently and intentionally practiced mindfulness and self-compassion skills throughout the intervention appeared to have the greatest increases in psychological/behavioral mindfulness and self-compassion scores from Baseline to Follow-Up. It should also be noted that the behavioral observations of participants during discussions with the facilitator conveyed an increase in each participants' ability to use the intervention

skills in their daily lives, as well as express more compassionate language towards themselves in both the parenting role and in general. Additionally, participants indicated that mindfulness/self-compassion skills helped them to better understand their child's needs and react in parental situations, which ultimately helped to improve their children's reciprocal reactions. Thus, it is likely that a longer mindfulness-based intervention would have shown greater differences in mindfulness and self-compassion skills across time due to the gradual developmental nature of the latter skills, as well as the mild sensitivity to change of the mindfulness and self-compassion questionnaires (i.e., FFMQ, SCS) in a short-term intervention.

Intervention Effects on Parental Stress and Psychological Well-Being

Current analyses found no overall improvements in total parental stress as a result of the mindfulness-based intervention; however, specific parental stress subscales (i.e., Parental Distress, Parent-Child Dysfunctional Interactions) showed greater reductions in participants as compared to total parental stress. This is likely related to the intervention's concentration on using mindfulness and self-compassion skills to improve the psychological, emotional, and behavioral outcomes in parents of children with ASD, rather than using the latter skills to improve Difficult Child behaviors (i.e., the last subscale on the parental stress measure). While a goal of the study was to reduce parental stress in responding to the needs of a child with ASD, this brief intervention did not have the desired effect. However, parents noted the intervention to be helpful and that a longer intervention would likely detect clinical changes in stress. Confounding variables during this study should also be noted as

these additional stressors likely affected the severity of overall stress during this study, specifically the Coronavirus (COVID-19) pandemic, children kept at home from autism programs and school due to COVID-19, and the 2020 presidential election.

Although these results do not show the same reductions that have been observed in the literature, there was some general improvement in psychological well-being. Specifically, the effects of mindfulness and self-compassion training showed an increase in psychological well-being as evidenced by mild improvements in psychological health, although not in psychological flexibility. In addition, many participants indicated “feeling much better” and “being more prepared to handle emotions in parenting situations, whether that is allowing myself to take a break or telling myself that ‘I am doing the best that I can in this moment’”. This suggests that participants were able to use mindfulness and self-compassion skills to help alleviate their emotional distress in stressful parenting situations. Hence, the ability to change how one copes with a situation is the goal of mindfulness, even though the situation can’t be changed itself.

Participant Satisfaction

During the Follow-Up session, participants were asked for feedback regarding what they liked/disliked about the intervention, what they did/did not find helpful about the intervention, any additional learning/practice opportunities they would have wanted to receive, and any other recommendations they had to make the intervention better for future participants. Participants reported liking the psychoeducation and experiential pieces of the intervention, in that they were able to learn more about how

to use mindfulness in the parenting role and practice it “in an open and safe space”. With this, many participants indicated that they appreciated the information being tailored specifically to parents with an understanding that their children “are still part of the equation”, especially through the practice of the behavioral steps in parental vignettes. Participants also stated that they liked the brevity of the intervention (i.e., sessions, meditations, overall length of treatment) because “I did not have to commit to an intensive treatment with the little time that I have”.

In addition, participants expressed that being given each sessions’ notes, meditations, and homework helped them to be fully present during sessions knowing that they would have the resources to use afterwards. Similarly, participants reported that being provided the behavioral mindfulness/self-compassion steps and meditation practices was also helpful, as they did not have to search for ways to practice or incorporate the skills into their everyday lives. Participants felt as though each session was well-organized and focused on a specific topic that was easy to grasp and then utilize in a variety of ways. Participants also indicated that they found the facilitator’s reflective listening, validation, encouragement, and passion helpful to the intervention because they felt that the facilitator was invested in “my success and well-being”.

In contrast, one participant reported a desire for the intervention to have shorter sessions that occurred more frequently “in order to keep information fresh in my mind” or have sessions once per week so that “I could have had more time to practice each lesson more thoroughly”. Participants also indicated that they would have appreciated more reminders (i.e., texts) to complete questionnaires and practice

homework assignments/meditations. Additionally, one participant expressed that they would have liked to learn more about self-affirmations and how to counteract unhelpful thoughts as a follow-up to the self-compassion session.

To help improve the intervention, one participant recommended that the intervention begin with more psychoeducation on the characteristics of children with ASD and how mindfulness applies to this specific population, as well as more opportunities to practice meditation throughout the intervention. Participants reported a desire to be able to ask questions about and discuss the questionnaires, as “some questions were difficult to understand how they were related to me and, thus, I didn’t know how to answer them correctly”. One participant also expressed that they would recommend more structured homework, so that the skills could be more easily practiced. Another participant recommended that the vignettes be more specific to her parent-child interactions, so that the skills practice was more applicable to her life. Lastly, participants recommended this intervention be in a group format so that parents could provide support to each other, as well as have the opportunity for more follow-up sessions to “help keep me on track”.

Limitations

Several limitations are present within the current study. This is a visual analysis and, thus, statistical significance cannot be directly inferred. Similarly, it is typically recommended that A-B single subject designs have least three baseline points to use as a “control”, whereas this study only had one baseline measure and no control group. Moreover, the self-report measure was an effective approach to measure

change in each dependent variable. However, it is possible that inaccurate self-reporting may have occurred, especially due to the reported misunderstanding of questions and the length of the surveys. It should also be noted that Participant 3 was unable to maintain consistency within the intervention timeline (i.e. four days between each session), which may have affected this participant's results, especially compared to those of others.

Furthermore, the intervention had to be condensed due to time restrictions, which may have affected the amount of time participants had to practice their mindfulness/self-compassion skills and, thus, may have influenced the amount of change in the dependent variables. The intervention was also required to be via a telehealth platform due to COVID-19, of which may have affected how present and engaged participants were as they had more access to the internet, email, and phone calls/messages, as well as their children at times. Lastly, rather than the study taking a double-blind or interrater approach, the intervention was facilitated by the researcher; therefore, results could have been impacted by the researcher's allegiance to the protocol.

Future Directions

Directions for future research should include whether a long-term mindfulness intervention would be more appropriate for increasing mindfulness and self-compassion, as well as reducing parental stress and enhancing psychological well-being, in parents of children with ASD. Future interventions should also include weekly sessions either once per week or biweekly 30-minute sessions for three or

more weeks in order to enhance practice of the mindfulness and self-compassion skills. Furthermore, a group intervention format may also be beneficial so that participants may be able to provide and receive additional support from other participants in similar life situations. Lastly, the current research uses a single-subject visual analysis to identify relationships between the manipulation and outcomes variables; therefore, future directions for research may expand on the current research to begin looking into potential statistical significance of the current relationships.

Conclusion

Despite the abundance of literature on the challenges experienced by parents of children with ASD, the inclusion of mindfulness-based practices in typical behavioral parent training programs remains relatively unexplored. Thus, there are still a number of gaps in the literature on adaptive coping mechanisms, such as mindfulness and self-compassion, for parents of children with ASD to help reduce parental stress and enhance psychological well-being despite the additional challenges in parenting a child with ASD.

Results from this present study showed mild increases in mindfulness and self-compassion as a result of a mindfulness-based intervention, as well as gradual improvements in parental stress and psychological well-being via slight reductions in emotional distress. This study expanded on the current research that has identified mindfulness and self-compassion as helpful coping mechanisms, as it looked at how mindfulness and self-compassion can benefit parents of children with ASD using a brief mindfulness intervention. The results especially highlighted that providing basic

mindfulness/self-compassion psychoeducation and experiential exercises can enhance parent's ability to use mindfulness and self-compassion in parental situations, as well as gradually help to improve parental stress and psychological well-being over time.

Thus, mindfulness and self-compassion can better help parents of children with ASD live in the present moment; notice their cognitive, emotional, and behavioral reactions in parental situations; and choose to act in a mindful and compassionate way for the benefit of their overall well-being.

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Appendix A

Demographics Questionnaire

1. What is your age?
2. What best describes your gender identity?
 - a. Male
 - b. Female
 - c. Transgender Male
 - d. Transgender Female
 - e. Non-binary
 - f. Prefer to self-describe
 - g. Other not listed
3. What best describes your ethnicity?
 - a. African American/Black
 - b. Asian
 - c. Hispanic/Latino
 - d. Middle Eastern
 - e. Native Hawaiian/Pacific Islander
 - f. Native American/Alaska Native
 - g. Caucasian
 - h. Other (please fill)
 - i. Prefer not to say
4. What is your current relationship status?
 - a. Single/Never Married
 - b. Married
 - c. Separated/Divorced
 - d. Widowed
 - e. Prefer not to say
5. Do you consider yourself a single parent?
 - a. Yes
 - b. No
 - c. Prefer not to say
6. What is the highest education you've received?
 - a. None at all
 - b. High School
 - c. College
 - d. Technical Degree
 - e. Graduate/Professional Degree

7. On average, what is your yearly household income?
 - a. \$20,000-40,000
 - b. \$40,000-60,000
 - c. \$60,000-80,000
 - d. \$80,000-100,000
 - e. \$100,000+

8. How many children do you have?
 - a. 1
 - b. 2
 - c. 3
 - d. 4
 - e. 5+

9. Of those children, how many of them have been formally diagnosed with autism spectrum disorder (ASD)?
 - a. 1
 - b. 2
 - c. 3
 - d. 4
 - e. 5+

Five Facet Mindfulness Questionnaire (FFMQ)

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

| Never or Very Rarely True | Rarely True | Sometimes True | Often True | Very Often or Always True |
|--|------------------------|---------------------------|-----------------------|--------------------------------------|
| 1 | 2 | 3 | 4 | 5 |

- _____ 1. When I'm walking, I deliberately notice the sensations of my body moving.
- _____ 2. I'm good at finding words to describe my feelings.
- _____ 3. I criticize myself for having irrational or inappropriate emotions.
- _____ 4. I perceive my feelings and emotions without having to react to them.
- _____ 5. When I do things, my mind wanders off and I'm easily distracted.
- _____ 6. When I take a shower or bath, I stay alert to the sensations of water on my body.
- _____ 7. I can easily put my beliefs, opinions, and expectations into words.
- _____ 8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.
- _____ 9. I watch my feelings without getting lost in them.
- _____ 10. I tell myself I shouldn't be feeling the way I'm feeling.
- _____ 11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.
- _____ 12. It's hard for me to find the words to describe what I'm thinking.
- _____ 13. I am easily distracted.

- _____ 14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.
- _____ 15. I pay attention to sensations, such as the wind in my hair or sun on my face.
- _____ 16. I have trouble thinking of the right words to express how I feel about things.
- _____ 17. I make judgments about whether my thoughts are good or bad.
- _____ 18. I find it difficult to stay focused on what's happening in the present.
- _____ 19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.
- _____ 20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.
- _____ 21. In difficult situations, I can pause without immediately reacting.
- _____ 22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.
- _____ 23. It seems I am "running on automatic" without much awareness of what I'm doing.
- _____ 24. When I have distressing thoughts or images, I feel calm soon after.
- _____ 25. I tell myself that I shouldn't be thinking the way I'm thinking.
- _____ 26. I notice the smells and aromas of things.
- _____ 27. Even when I'm feeling terribly upset, I can find a way to put it into words.
- _____ 28. I rush through activities without being really attentive to them.

- _____ 29. When I have distressing thoughts or images I am able just to notice them without reacting.
- _____ 30. I think some of my emotions are bad or inappropriate and I shouldn't feel them.
- _____ 31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.
- _____ 32. My natural tendency is to put my experiences into words.
- _____ 33. When I have distressing thoughts or images, I just notice them and let them go.
- _____ 34. I do jobs or tasks automatically without being aware of what I'm doing.
- _____ 35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.
- _____ 36. I pay attention to how my emotions affect my thoughts and behavior.
- _____ 37. I can usually describe how I feel at the moment in considerable detail.
- _____ 38. I find myself doing things without paying attention.
- _____ 39. I disapprove of myself when I have irrational ideas.

Self-Compassion Scale (SCS)

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

| Almost Never | | | | Almost Always |
|-------------------------|---|---|---|--------------------------|
| 1 | 2 | 3 | 4 | 5 |

- _____ 1. I'm disapproving and judgmental about my own flaws and inadequacies.
- _____ 2. When I'm feeling down, I tend to obsess and fixate on everything that's wrong.
- _____ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
- _____ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
- _____ 5. I try to be loving towards myself when I'm feeling emotional pain.
- _____ 6. When I fail at something important to me, I become consumed by feelings of inadequacy.
- _____ 7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
- _____ 8. When times are really difficult, I tend to be tough on myself.
- _____ 9. When something upsets me, I try to keep my emotions in balance.
- _____ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

- _____ 11. I'm intolerant and impatient towards those aspects of my personality I don't like.
- _____ 12. When I'm going through a very hard time, I give myself the caring and tenderness I need.
- _____ 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
- _____ 14. When something painful happens, I try to take a balanced view of the situation.
- _____ 15. I try to see my failings as part of the human condition.
- _____ 16. When I see aspects of myself that I don't like, I get down on myself.
- _____ 17. When I fail at something important to me, I try to keep things in perspective.
- _____ 18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.
- _____ 19. I'm kind to myself when I'm experiencing suffering.
- _____ 20. When something upsets me, I get carried away with my feelings.
- _____ 21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
- _____ 22. When I'm feeling down, I try to approach my feelings with curiosity and openness.
- _____ 23. I'm tolerant of my own flaws and inadequacies.
- _____ 24. When something painful happens, I tend to blow the incident out of

proportion.

_____ 25. When I fail at something that's important to me, I tend to feel alone in my

failure.

_____ 26. I try to be understanding and patient towards those aspects of my

personality I don't like.

Parenting Stress Index-Short Form (PSI-SF)

Read each statement carefully. For each statement, please focus on the child you are most concerned about and circle the response that best represents your opinions. Answer all questions about that same child.

| Strongly Agree | Agree | Not Sure | Disagree | Strongly Disagree |
|-----------------------|--------------|-----------------|-----------------|--------------------------|
| 1 | 2 | 3 | 4 | 5 |

- _____ 1. I often have the feeling that I cannot handle things very well.
- _____ 2. I find myself giving up more of my life to meet my children's needs than I ever expected.
- _____ 3. I feel trapped by my responsibilities as a parent.
- _____ 4. Since having this child, I have been unable to do new and different things.
- _____ 5. Since having this child, I feel that I am almost never able to do things that I like to do.
- _____ 6. I am unhappy with the last purchase of clothing I made for myself.
- _____ 7. There are quite a few things that bother me about my life.
- _____ 8. Having a child has caused me more problems that I expected in my relationship with my spouse/parenting partner.
- _____ 9. I feel alone and without friends.
- _____ 10. When I go to a party, I usually expect not to enjoy myself.
- _____ 11. I am not as interested in people as I used to be.
- _____ 12. I don't enjoy things as I used to.
- _____ 13. My child rarely does things for me that make me feel good.
- _____ 14. When I do things for my child, I get the feeling that my efforts are not

appreciated very much.

- _____ 15. My child smiles at me much less than I expected.
- _____ 16. Sometimes I feel my child doesn't like me and doesn't want to be close to me.
- _____ 17. My child is very emotional and gets upset easily.
- _____ 18. My child doesn't seem to learn as quickly as most children.
- _____ 19. My child doesn't seem to smile as much as most children.
- _____ 20. My child is not able to do as much as I expected.
- _____ 21. It takes a long time and it is very hard for my child to get used to new things.
- _____ 22. I feel that I am (Choose a response from the choices below)
1. A very good parent
 2. A better-than-average parent
 3. An average parent
 4. A person who has some trouble being a parent
 5. Not very good at being a parent
- _____ 23. I expected to have closer and warmer feelings for my child than I do, and this bothers me.
- _____ 24. Sometimes my child does things that bother me just to be mean.
- _____ 25. My child seems to cry or fuss more often than most children.
- _____ 26. My child generally wakes up in a bad mood.
- _____ 27. I feel that my child is very moody and easily upset.

- _____ 28. Compared to the average child, my child has a great deal of difficulty in getting used to changes in schedules or changes around the house.
- _____ 30. When playing, my child doesn't often giggle or laugh.
- _____ 31. My child's sleeping or eating schedule was much harder to establish than I expected.
- _____ 32. I have found that getting my child to do something or stop doing something is: (Choose a response from the choices below)
1. Much harder than I expected
 2. Somewhat harder than I expected
 3. About as hard as I expected
 4. Somewhat easier than I expected
 5. Much easier than I expected
- _____ 33. Think carefully and count the number of things which your child does that bothers you. For example, dawdles, refuses to listen, overactive, cries, interrupts, fights, whines, etc. (Choose a response from the choices below)
1. 1-3
 2. 4-5
 3. 6-7
 4. 8-9
 5. 10+
- _____ 34. There are some things my child does that really bother me a lot.
- _____ 35. My child's behavior is more of a problem than I expected.

_____ 36. My child makes more demands on me than most children.

The Patient Health Questionnaire – 9 (PHQ-9)

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

| Not at all | Several days | More than half the days | Nearly every day |
|------------|--------------|-------------------------|------------------|
| 0 | 1 | 2 | 3 |

- _____ 1. Little interest or pleasure in doing things.
- _____ 2. Feeling down or depressed.
- _____ 3. Trouble falling or staying asleep.
- _____ 4. Feeling tired or having little energy.
- _____ 5. Poor appetite or overeating.
- _____ 6. Feeling bad about yourself – or that you are a failure or have let 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 you would be better off dead, or of hurting yourself.
- _____ 10. If you checked off any of the problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with people?
- a) Not difficult at all
 - b) Somewhat difficult

c) Very difficult

d) Extremely difficult

Acceptance and Action Questionnaire – II (AAQ-II)

Please rate how true each of the following statements is for you.

| Never true | Very seldom true | Seldom true | Sometimes true | Frequently true | Almost always true | Always true |
|------------|------------------|-------------|----------------|-----------------|--------------------|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

_____ 1. My painful experiences and memories make it difficult for me to live a life that I would value.

_____ 2. I am afraid of my feelings.

_____ 3. I worry about not being able to control my worries and feelings.

_____ 4. My painful memories prevent me from having a fulfilling life.

_____ 5. Emotions cause problems in my life.

_____ 6. It seems like most people are handling their lives better than I am.

_____ 7. Worry gets in the way of my success.

Intervention Satisfaction Scale

| | | | | |
|-------------------------|---------------------|-------------------------------|--------------------|------------------------|
| Completely False | Mostly False | Neither True nor False | Mostly True | Completely True |
| 1 | 2 | 3 | 4 | 5 |

1. The intervention was well organized.
2. The facilitator cared about me as a person.
3. The facilitator and I worked together to achieve goals.
4. The facilitator noticed and told me when I did something well.
5. I was able to participate and express myself in the intervention.
6. The facilitator encouraged me to achieve my goals.
7. The focus of the intervention was on the right issues.
8. The facilitator understood me and my needs.
9. I learned what I was hoping to learn.
10. The intervention information/practice was easy to understand.

| | | | | |
|-------------|-------------|-------------|------------------|------------------|
| Poor | Fair | Good | Very Good | Excellent |
| 1 | 2 | 3 | 4 | 5 |

11. Overall rating of the facilitator.
12. Overall rating of the intervention.
13. Would you recommend this intervention to others?
 - a) Yes
 - b) No

14. Additional Comments (for example, any suggestions you have for how the intervention might be improved): _____

Appendix B

Table 1
Session Outline of Mindfulness-Based Intervention

| Session | Content | Homework |
|---------|---|---|
| 0 | Baseline | |
| 1 | Introduction to mindfulness principles; psychoeducation on parental stress and core mindfulness skills (i.e. observe, describe, participate); body scan exercise; implementation of skills in a personal difficulty | Practice observe, describe, participate skills; describe experiences and reactions in a journal to discuss the following session Optional: Practice guided body scan exercise once per day |
| 2 | Discuss non-judgmental acceptance of thoughts, emotions, and bodily sensations; avoidance versus awareness; mindful breathing exercise; implementation of skills in a vignette similar to the personal experience | Identify thoughts (e.g., judgements), emotions (e.g., frustration), and bodily sensations (e.g., heavy breathing; at least one related to your child) and practice non-judgmentally observing and letting them go; describe experiences and reactions in a journal to discuss the following session Optional: Practice guided mindful breathing exercise once per day |
| 3 | Discuss bringing acceptance and self-compassion into parenting; loving-kindness meditation exercise; implementation of skills in a new (generalizable) vignette | Identify negative self-talk in the parenting role; practice sharing compassionate intentions and self-affirmations towards yourself; describe experiences and reactions in a journal to discuss the following session Optional: Practice guided loving-kindness meditation once per day |
| 4 | Follow-Up | |

Body Scan Script

Begin by making yourself comfortable. Sit in a chair and allow your back to be straight, but not stiff, with your feet on the ground. You could also do this practice standing or if you prefer, you can lie down and have your head supported. Your hands could be resting gently in your lap or at your side. Allow your eyes to close, or to remain open with a soft gaze.

Take several long, slow, deep breaths. Breathing in fully and exhaling slowly. Breathe in through your nose and out through your nose or mouth. Feel your stomach expand on an inhale and relax and let go as you exhale.

Begin to let go of noises around you. Begin to shift your attention from outside to inside yourself. If you are distracted by sounds in the room, simply notice this and bring your focus back to your breathing.

Now slowly bring your attention down to your feet. Begin observing sensations in your feet. You might want to wiggle your toes a little, feeling your toes against your socks or shoes. Just notice, without judgment. You might imagine sending your breath down to your feet, as if the breath is traveling through the nose to the lungs and through the abdomen all the way down to your feet. And then back up again out through your nose and lungs. Perhaps you don't feel anything at all. That is fine, too. Just allow yourself to feel the sensation of not feeling anything.

When you are ready, allow your feet to dissolve in your mind's eye and move your attention up to your ankles, calves, knees and thighs. Observe the sensations you are experiencing throughout your legs. Breathe into and breathe out of the legs. If your mind begins to wander during this exercise, gently notice this without judgment and bring your mind back to noticing the sensations in your legs. If you notice any discomfort, pain or stiffness, don't judge this. Just simply notice it. Observe how all sensations rise and fall, shift and change moment to moment. Notice how no sensation is permanent. Just observe and allow the sensations to be in the moment, just as they are. Breathe into and out from the legs.

Then on the next out breath, allow the legs to dissolve in your mind. And move to the sensations in your lower back and pelvis. Softening and releasing as you breathe in and out. Slowly move your attention up to your mid back and upper back. Become curious about the sensations here. You may become aware of sensations in the muscle, temperature or points of contact with furniture or the bed. With each outbreath, you may let go of tension you are carrying. And then very gently shift your focus to your stomach and all the internal organs here. Perhaps you notice the feeling of clothing, the process of digestion or the belly rising or falling with each breath. If you notice opinions arising about these areas, gently let these go and return to noticing sensations.

As you continue to breathe, bring your awareness to the chest and heart region and just notice your heartbeat. Observe how the chest rises during the inhale and how the chest falls during the exhale. Let go of any judgments that may arise. On the next outbreath, shift the focus to your hands and fingertips. See if you can channel your breathing into and out of this area as if you are breathing into and out from your hands. If your mind wanders, gently bring it back to the sensations in your hands.

And then, on the next outbreath, shift the focus and bring your awareness up into your arms. Observe the sensations or lack of sensations that may be occurring there. You might notice some difference between the left arm and the right arm – no need to judge this. As you exhale, you may experience the arm soften and release tensions. Continue to breathe and shift focus to the neck, shoulder and throat region. This is an area where we often have tension. Be with the sensations here. It could be tightness, rigidity or holding. You may notice the shoulders moving along with the breath. Let go of any thoughts or stories you are telling about this area. As you breathe, you may feel tension rolling off your shoulders.

On the next outbreath, shift your focus and direct your attention to the scalp, head and face. Observe all of the sensations occurring there. Notice the movement of the air as you breathe into or out of the nostrils or mouth. As you exhale, you might notice the softening of any tension you may be holding.

And now, let your attention to expand out to include the entire body as a whole. Bring into your awareness the top of your head down to the bottom of your toes. Feel the gentle rhythm of the breath as it moves through the body.

As you come to the end of this practice, take a full, deep breath, taking in all the energy of this practice. Exhale fully. And when you are ready, open your eyes and return your attention to the present moment. As you become fully alert and awake, consider setting the intention that this practice of building awareness will benefit everyone you come in contact with today.

Script written by Shilagh Mirgain, PhD, for UW Cultivating Well-Being: A Neuroscientific Approach

Mindful Breathing Script

Start by settling into a comfortable position and allow your eyes to close or keep them open with a softened gaze. Begin by taking several long slow deep breaths breathing in fully and exhaling fully. Breathe in through your nose and out through your nose or mouth. Allow your breath to find its own natural rhythm. Bring your full attention to noticing each in-breath as it enters your nostrils, travels down to your lungs and causes your belly to expand. And notice each out-breath as your belly contracts and air moves up through the lungs back up through the nostrils or mouth. Invite your full attention to flow with your breath.

Notice how the inhale is different from the exhale. You may experience the air as cool as it enters your nose and warm as you exhale. As you turn more deeply inward, begin to let go of noises around you. If you are distracted by sounds in the room, simply notice them and then bring your intention back to your breath. Simply breathe as you breathe, not striving to change anything about your breath. Don't try to control your breath in any way. Observe and accept your experience in this moment without judgment, paying attention to each inhale and exhale.

If your mind wanders to thoughts, plans or problems, simply notice your mind wandering. Watch the thought as it enters your awareness as neutrally as possible. Then practice letting go of the thought as if it were a leaf floating down a stream. In your mind, place each thought that arises on a leaf and watch as it floats out of sight down the stream. Then bring your attention back to your breath. Your breath is an anchor you can return to over and over again when you become distracted by thoughts.

Notice when your mind has wandered. Observe the types of thoughts that hook or distract you. Noticing is the richest part of learning. With this knowledge you can strengthen your ability to detach from thoughts and mindfully focus your awareness back on the qualities of your breath. Practice coming home to the breath with your full attention. Watching the gentle rise of your stomach on the in-breath and the relaxing, letting go on the out-breath. Allow yourself to be completely with your breath as it flows in and out.

You might become distracted by pain or discomfort in the body or twitching or itching sensations that draw your attention away from the breath. You may also notice feelings arising, perhaps sadness or happiness, frustration or contentment. Acknowledge whatever comes up including thoughts or stories about your experience. Simply notice where your mind went without judging it, pushing it away, clinging to it or wishing it were different and simply refocus your mind and guide your attention back to your breath.

Breathe in and breathe out. Follow the air all the way in and all the way out. Mindfully be present moment by moment with your breath. If your mind wanders away from

your breath, just notice without judging it – be it a thought, emotion, or sensation that hooks your attention and gently guide your awareness back to your breathing.

As this practice comes to an end, slowly allow your attention to expand and notice your entire body and then beyond your body to the room you are in. When you're ready, open your eyes and come back fully alert and awake. The breath is always with you as a refocusing tool to bring you back to the present moment. Set your intention to use this practice throughout your day to help cultivate and strengthen attention.

Script written by Shilagh Mirgain, PhD, for UW Cultivating Well-Being: A Neuroscientific Approach

Loving-Kindness (Metta) Meditation Script

As we begin this loving-kindness meditation, I invite you to begin by getting comfortable in your seated positions, whatever that may look like for you in this moment (pause). Allow your shoulders to relax and your hands to rest comfortably in your lap (pause).

If you feel comfortable, gently close your eyes or gaze softly off the tip of your nose towards the floor as you settle your awareness onto your body and your breathing (pause).

Begin to notice your breath and how it feels to breathe in this moment. Follow the air all the way in and all the way out of your body (pause). Notice how the air may feel cooler as it travels into your nostrils and fills your lungs (pause) and warmer as it travels out of your lungs, into your nostrils, and back into the world (pause). Connect with your breathing at your own pace for a few moments now (pause).

In this practice, we will be cultivating love and kindness for ourselves and others. Loving-kindness is a sharing of compassion with all beings, which is a natural capacity we all have within ourselves (pause).

We begin by cultivating loving-kindness towards ourselves by allowing our hearts to fill with feelings of self-compassion as you repeat these words to yourself after me:

May I be safe.
May I be happy.
May I be healthy.
May I be at peace.
(Pause)

Now, I invite you to share these feelings of loving-kindness by bringing someone who is dear to you into your mind's eye...this could be a beloved family member, a friend, a partner, a pet, a plant (pause). As you hold this person in your mind and close to your heart, extend these feelings of compassion as you repeat these words to yourself after me:

May you be safe.
May you be happy.
May you be healthy.
May you be at peace.
(Pause)

Now, I invite you to bring to mind a "neutral person". This may be someone whom you see regularly but do not know very well, such as a neighbor or a grocery store

clerk. Bring this person into your mind's eye now and extend these feelings of compassion as you repeat these words to yourself after me:

May you be safe.
May you be happy.
May you be healthy.
May you be at peace.
(Pause)

Now, if it is comfortable for you, I invite you to bring to mind someone with whom you've had a mildly difficult relationship. Perhaps this isn't someone with whom you would like to share compassion; however, see if it is possible for you to let go of some negative feelings in order to see this person as someone whom also suffers and may benefit from loving-kindness. Bring this person into your mind's eye now and extend these feelings of compassion as you repeat these words to yourself after me:

May you be safe.
May you be happy.
May you be healthy.
May you be at peace.
(Pause)

Now, I invite you to allow your awareness to open up to all beings...yourself, a dear one, a neutral person, a difficult person, and beyond to all beings in this world...humans, animals, plants...living in richness, poverty, war, peace, hunger, abundance. Bring awareness to all the joys and sorrow that all beings experience. Bring them into your mind's eye now and extend these feelings of compassion as you repeat these words to yourself after me:

May we be safe.
May we be happy.
May we be healthy.
May we be at peace.
(Pause)

Now, as this practice come to an end, I invite you to come back to yourself, remembering that you are an important being on this earth, and once again extend feelings of love, kindness, and compassion to yourself as you repeat these words to yourself after me:

May I be safe.
May I be happy.
May I be healthy.
May I be at peace.

(Pause)

As you bask in the energy of loving-kindness, I invite you to bring your attention back to your breathing. Begin to wiggle your fingers and toes. And when you're ready, you may open your eyes and come back to the room...remembering to hold these feelings of compassion for yourself and others as you continue in your life's journey.

Script written by Natalia Velásquez, for Florida Institute of Technology's Counseling and Psychological Services

Practice Vignette Examples

Example 1: You are with your child at the grocery store. In the checkout line, your child demands that you buy them a candy bar as they do every time you go to the store. You say no to your child, and they start crying in the checkout line. At this time, you are called to the register to pay for your groceries and your child begins to cry even louder. Your heart begins to race, your face becomes flush, and you begin to sweat. You are feeling angry, frustrated, and embarrassed. You are also thinking “Can you just stop crying!!!”, “Why does it have to be MY child!” and “I can’t do this, I am not a good parent!”.

Example 2: You want to go to your favorite restaurant with your family for your upcoming birthday and initially you are so excited to do something for yourself. However, every time you think about going, your mind automatically thinks “I can’t go because my child will just scream the whole time we are there”, “I wish I was better at calming my child down”, and “Others parents take their children to restaurants, why am I so terrible at being a parent”. You begin to feel sadness, resentment, and guilt.

Appendix C

Table 2
Descriptive Frequencies for Parents of Children with ASD Sample

| Variable | Frequency | Percent |
|--|-----------|---------|
| Age | | |
| 30-40 | 2 | 50% |
| 40-50 | 2 | 50% |
| Gender | | |
| Female | 4 | 100% |
| Male | 0 | 0% |
| Ethnicity | | |
| Hispanic/Latino | 1 | 25% |
| Caucasian | 3 | 75% |
| Relationship Status | | |
| Married | 3 | 75% |
| Widowed | 1 | 25% |
| Parenting Status | | |
| Co-Parent | 3 | 75% |
| Single Parent | 1 | 25% |
| Highest Education Level | | |
| College (Associates/Bachelor's) | 4 | 100% |
| Yearly Household Income | | |
| \$20,000-40,000 | 1 | 25% |
| \$40,000-60,000 | 0 | 0% |
| \$60,000-80,000 | 0 | 0% |
| \$80,000-100,000 | 1 | 25% |
| \$100,000 + | 2 | 50% |
| Total Number of Children | | |
| 1 | 0 | 0% |
| 2 | 2 | 50% |
| 3 | 1 | 25% |
| 4 | 1 | 25% |
| Number of Children Diagnosed with ASD | | |
| 1 | 2 | 50% |
| 2 | 2 | 50% |
| 3 | 0 | 0% |
| 4 | 0 | 0% |
| Total: | 4 | 100% |

Figure 1
Mindfulness Across Time

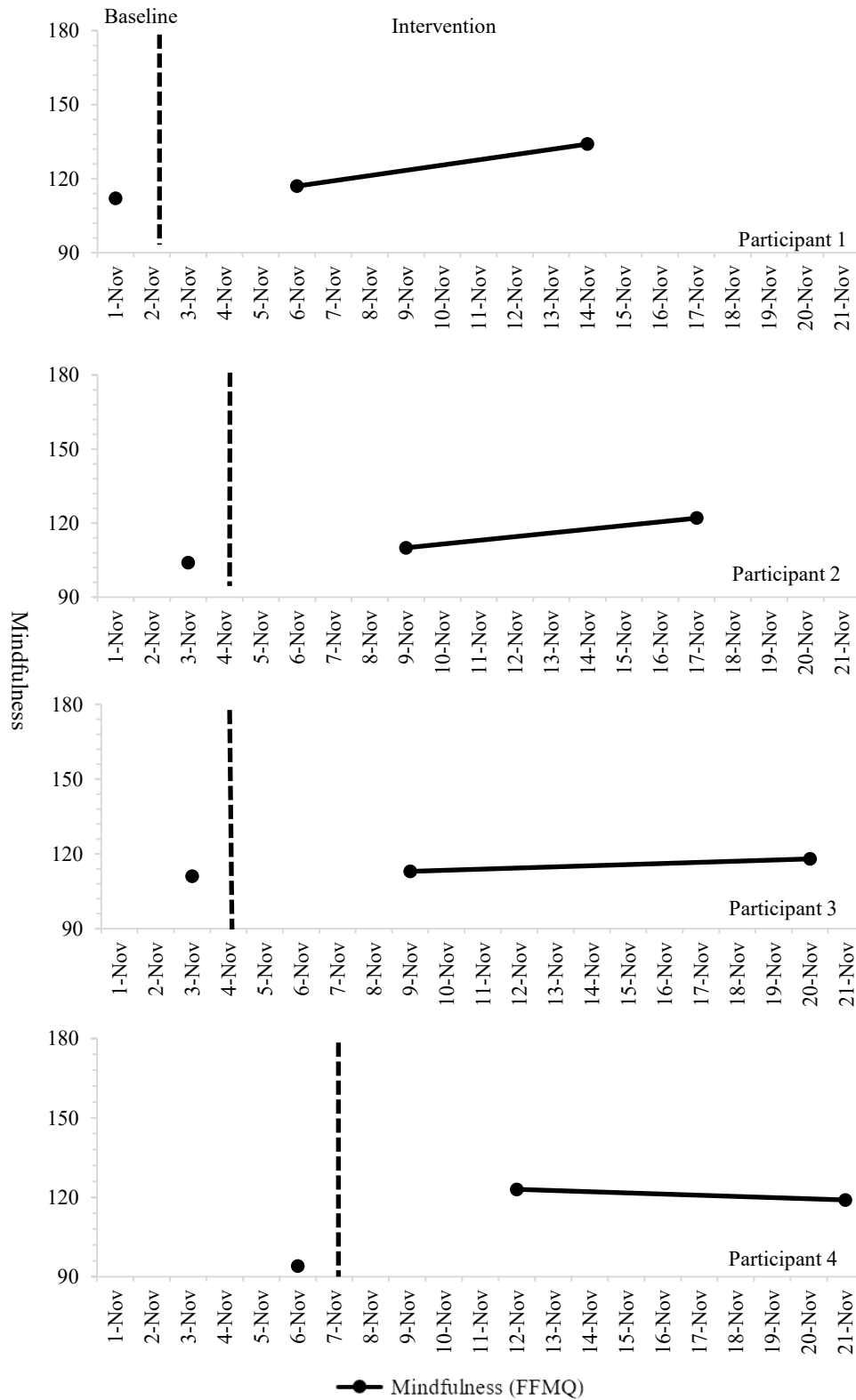


Figure 2
Self-Compassion Across Time

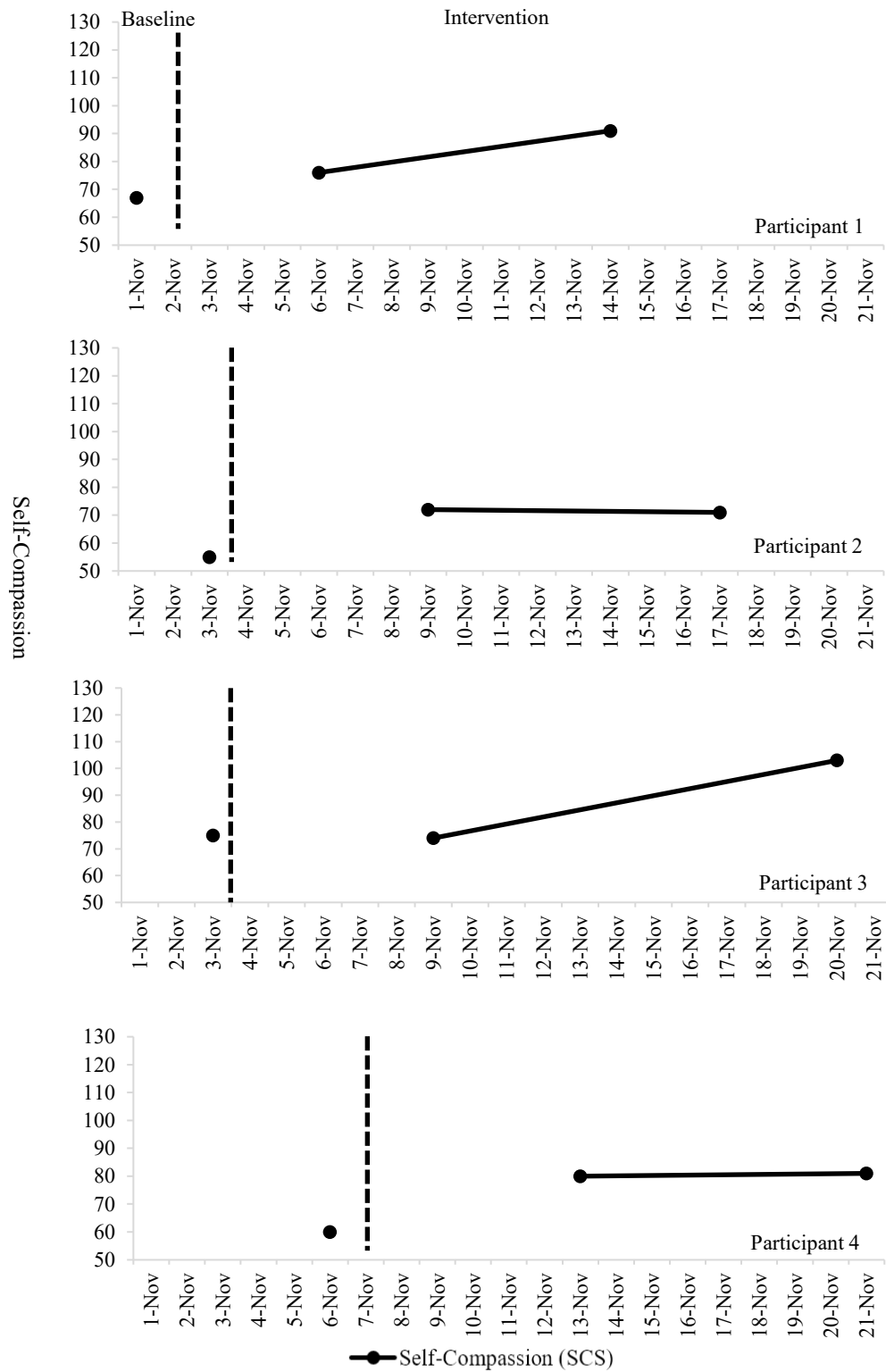


Figure 3
Behavioral Mindfulness/Self-Compassion Across Time

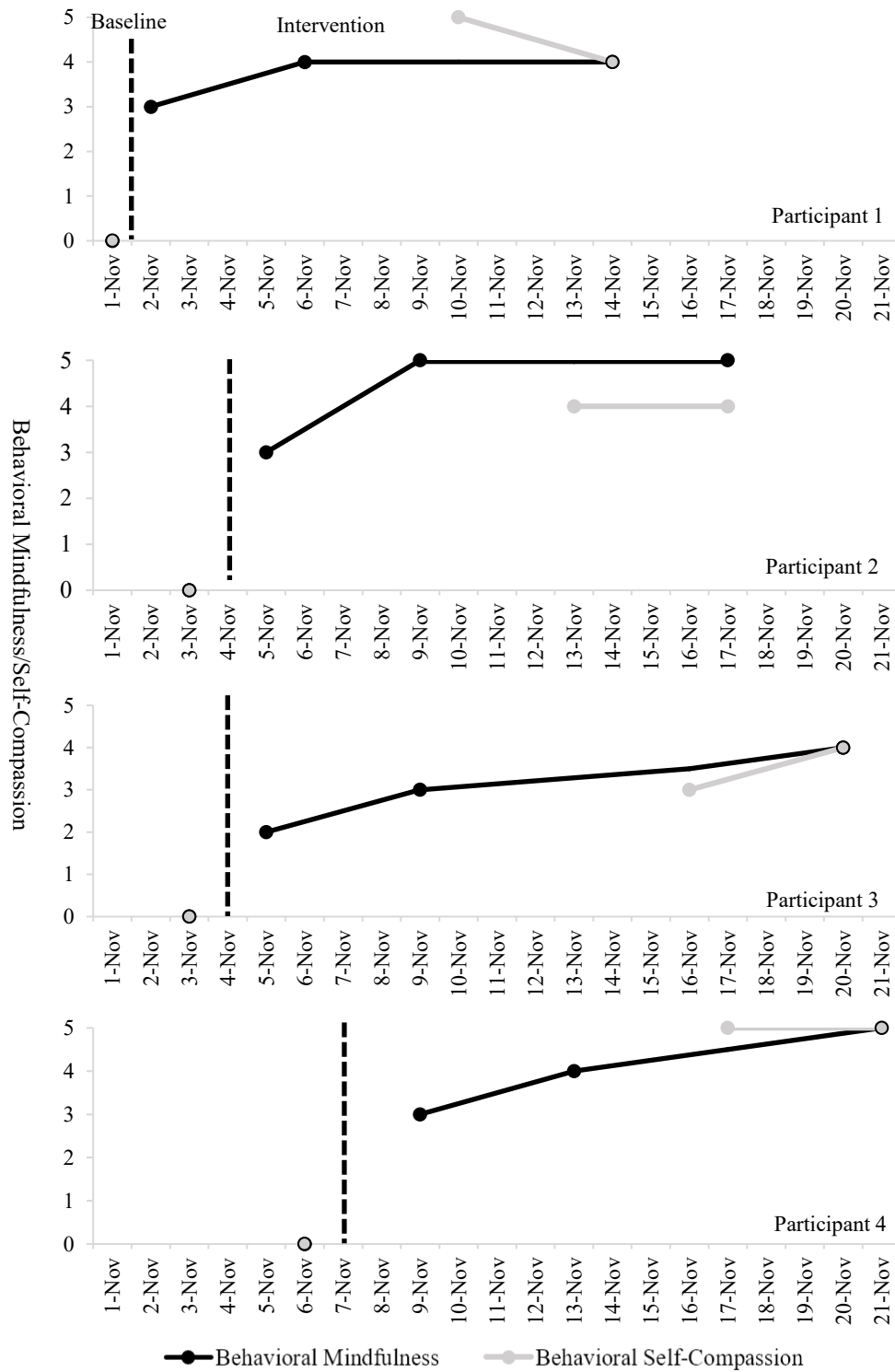


Figure 4
Parental Stress Across Time (Per Subscale)

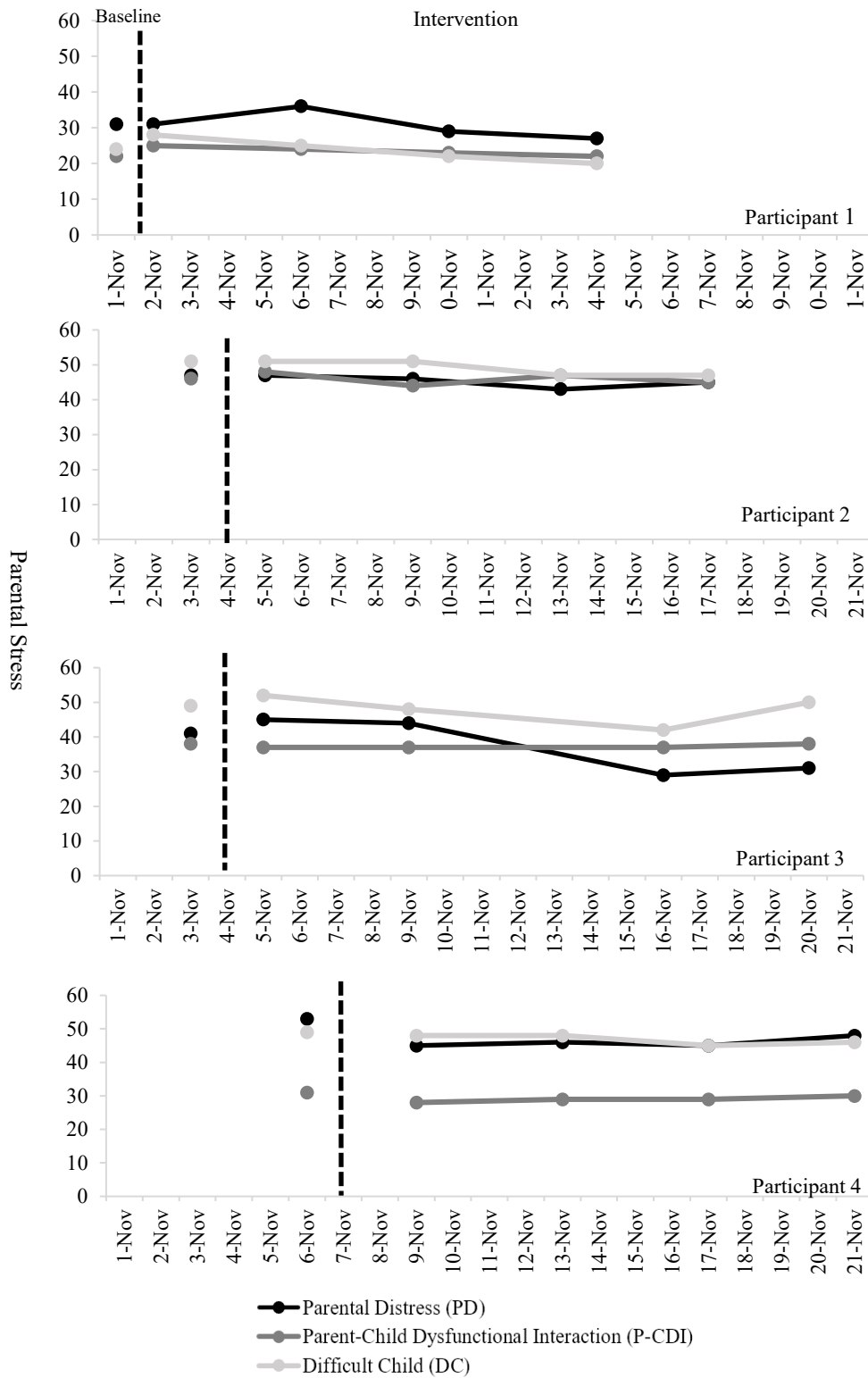


Figure 5
Psychological Well-Being Across Time

