

PARENTAL ATTACHMENT AND CHILD ADJUSTMENT:
THE ROLE OF PARENTING STRESS AND SELF-COMPASSION
A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE
DOCTOR OF PHILOSOPHY
BY
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BALL STATE UNIVERSITY

MUNCIE, INDIANA

JULY 2017

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Dedication

For my husband, Dustin

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Parental Attachment and Child Adjustment: The Role of Parenting Stress and Self-Compassion

Socioemotional adjustment in children is significantly influenced and partially determined by the quality of parental caregiving behaviors (Bowlby, 1969; George & Solomon, 1996). In turn, this quality of care may be impacted by parental attachment orientations, which formulate, in effect, internal working models of caregiving (Gilbert, 2005), and may play an essential role in the appraisal and experience of stressors related to parenting (Jarvis & Creasey, 1991). When parents are securely attached, they may be better equipped to respond to the demands of parenting with consistency and caring (Nygren, Carstensen, Ludvigsson, & Frostell, 2012). In conjunction, the relative amount of compassion or criticism one holds towards the self during instances of pain or failure has been associated with attachment orientations (Neff & Beretvas, 2013), signifying that this variable may be related to the experience of parenting stress and serve to indirectly impact child adjustment as well. However, research investigating the link between parenting stress and self-compassion, as well as distinguishing the potential mediating effects of parenting stress and self-compassion in the association between parental attachment and child adjustment, is scarce. Given this paucity, the purpose of the present study is to more clearly delineate the links between these variables to better understand the means by which parental psychological factors such as attachment, parenting stress, and self-compassion contribute to child adjustment.

Attachment Theory

Drawing from the seminal work of Bowlby (1969, 1988), attachment theory has provided a propagative framework for studying and understanding relationships. At its core, attachment theory assumes that humans are born with an innate biological and psychological system that motivates them to seek proximity to individuals equipped to provide protection (*attachment*

figures) during times of need. The development and functioning of this system is highly influenced by early experiences with caregivers, where the provision of accessible and responsive care, especially during times of need, facilitates individual differences in *attachment security*. In Bowlby's (1969) conception, when attachment figures, or caregivers, are consistently caring and responsive, *internal working models* are generated that represent the world as safe, others as reliable and protective, and the self as worthy and capable of environmental exploration and engagement with others. Additionally, the experience of attentive caregiving facilitates the development of an adequate self-soothing, or emotional regulation, system, by which one is able to internalize and draw upon experiences of care and compassion during times of pain or suffering (Gilbert, 2005). In contrast, if experiences with caregivers are characterized by inaccessibility, unresponsiveness, and/or inconsistency during times of need, a sense of attachment security is not attained, negative working models are formed, and an adequate self-soothing system is not developed, with emotional regulation strategies related to anxiety and avoidance being adopted as means of self-protection (Mikulincer & Shaver, 2005).

Within the literature, these emotional regulation strategies have been termed *secondary attachment strategies*, because they are initially formulated when the primary attachment strategy of proximity seeking to an attachment figure fails to relieve distress or cannot be enacted (Mikulincer, Shaver, & Pereg, 2003). According to Mikulincer et al. (2003), secondary strategies involve the *hyperactivation* or *deactivation* of the attachment system. Hyperactivation is described as intense, frantic efforts to achieve proximity to attachment figures and ensure attention and support, while deactivation refers to the inhibition of proximity-seeking behaviors through the evasion and disregard of threats that may activate the attachment system (Mikulincer & Shaver, 2005). People who tend to employ hyperactivation strategies compulsively seek

proximity and are hypersensitive to signals of abandonment or rejection, while those who have a proclivity towards deactivation strategies tend to maximize distance from others and experience unease with closeness (Mikulincer et al., 2003). Thus, these affect regulation strategies emerge from internal working models related to insecure attachment and come to represent an individual's prototypic means of responding to distress or threats, especially in close relationships.

Bowlby (1988) further assumed that although the attachment system is most critical in early life, internal working models developed in infancy and childhood are highly stable and carried forward into adolescent and adult relationships where they serve as a guide for one's expectations, perceptions, and behaviors. Given this, empirical study of attachment theory in adolescents and adults has focused upon individual *attachment styles*. These are defined as systematic patterns of relational expectations, emotions, and behaviors that result from internalization of a particular history of interactions with attachment figures and subsequent reliance upon specific attachment-related strategies of affect regulation (Fraley & Shaver, 2000; Shaver & Mikulincer, 2002).

Recent work has revealed that attachment styles appear to be best conceptualized dimensionally, or continuously, as opposed to categorically, with *attachment anxiety* and *attachment avoidance* representing the two dimensions by which attachment style can be measured (Brennan, Clark, & Shaver, 1998). In this conceptualization, congruent with the theories of Bowlby (1969) and Ainsworth et al. (1978), attachment anxiety is described as the extent to which an individual utilizes hyperactivating strategies, while attachment avoidance reflects the degree to which an individual relies upon deactivating strategies. Within this framework, any individual's attachment style may be characterized by the presence or lack of

anxiety or avoidance in the context of intimate relationships. As such, attachment security is said to be present in an individual when both anxiety and avoidance dimensions are assessed to be low (Brennan et al., 1998). To this end, attachment theory provides an extensively researched and particularly germane framework for conceptualizing and positioning the present study.

Parental Attachment and Child Adjustment

As stated, attachment styles are likely intricately intertwined with the caregiving system and a parent's ability to provide quality care to children (Gilbert, 2005), which subsequently influences child socioemotional adjustment (Bowlby, 1969; George & Solomon, 1996; vanIjzendoorn, 1995). In general, Cowan, Cohn, Cowan, and Pearson (1996) found that parental attachment histories showed consistent associations with parenting style, as observed during children's preschool years. These attachment histories were also found to function as moderate to strong predictors of children's externalizing and internalizing behaviors in elementary school. More specifically, children have been found to be at increased risk for internalizing and externalizing behavior, as well as lower academic achievement if their parents have insecure working models of attachment to their parents or partners (Cowan, Cowan, & Mehta, 2009). In contrast, children who have experienced at least one securely attached parent in infancy have been found to be more empathic and have fewer difficulties in social relationships and thought processes in preadolescence when compared to children of two insecurely attached parents (Kouvo & Silven, 2010). Parental attachment anxiety may be particularly salient in child adjustment, as both maternal and paternal attachment anxiety have been specifically implicated in children's internalizing and externalizing behaviors (Al-Yagon, 2008; Marchand, Schedler, & Wagstaff, 2004). In sum, parents' developmental histories related to attachment appear to significantly influence childrearing quality and, in turn, child development.

Parenting Stress

Attachment orientation may be a potentially significant factor in the appraisal and experience of parenting stress as well. Simply put, parenting stress can be defined as the aversive psychological effects deriving from the demands of parenthood (Deater-Deckard, 1998). More specifically, parenting stress involves a perceived incongruence between the demands of parenting and parental resources (e.g., parenting skills, perceived competence, emotional support) to meet such demands (Abidin, 1992; Deater-Deckard, 2004). Within models of parenting, the parent's personality and psychological resources are regarded as most important—more so than child individual characteristics or contextual stress and support—in determining parental functioning (Abidin, 1992; Belsky, 1984). As such, understanding individual differences in parental appraisals of stressors is particularly important to apprehending conceptions of parenting stress, as these differences in the stress reaction are likely vital to understanding individual differences in parents' psychosocial adjustment (Deater-Deckard, 1998). In particular, parental developmental history has been found to be more prominent as a direct predictor of parenting behavior than originally conceived, with internal working models of the self as a parent, created out of the individual's attachment history, being thought to influence the appraisal of threats and subsequent levels of parenting stress (Abidin, 1992).

Parenting Stress and Attachment

Though scarcely studied in relation to parenting stress, studies of parental attachment and parenting experiences have shown a consistent connection between insecure attachment and parenting difficulties, with the specific findings of these studies being mixed. For one, Nygren, et al. (2012) found significant associations between perceptions of greater parenting stress and attachment anxiety, but did not find evidence supporting a similar association between parenting

stress and attachment avoidance. Similarly, Vasquez, Durik, and Hyde (2002) found parents with fearful attachment styles to experience greater difficulty in family and work domains, with parents with dismissing and preoccupied attachment styles being found to experience greater difficulty than parents with secure attachment, but less difficulty than those with fearful attachment styles. Contrary to this, however, Rholes, Simpson, and Friedman (2006) found parents with more avoidant attachment styles to experience greater stress following the birth of a child and to perceive parenting as less satisfying and personally meaningful. Other studies have found that individuals with more avoidant or anxious ambivalent attachment experience higher parenting stress one year after childbirth (Trillingsgaard, Elkklit, Shevlin, & Maimburg, 2011). They also anticipate being easily irritated by children, approve of stricter disciplinary practices, and generally hold more negative models of parenthood and parent-child relationships, with individuals with avoidant attachment reporting comparatively less desire to have children (Rholes, Simpson, Blakely, Lanigan, & Allen, 1997). Thus, though results delineating the relationship between different insecure attachment styles and parenting stress are varied and at times contradictory, these studies congregate around the finding that secure attachment orientations appear to be related to the experience of lower levels of parenting stress.

Parenting Stress and Child Adjustment

Parenting stress also has come to be identified as an important determinant of parenting behavior and child adjustment (Abidin, 1992). To be sure, although parenting is a highly gratifying and meaningful experience for many, it also is inevitably wrought with challenges. Parents are confronted with a myriad of extrafamilial, interpersonal, and child stressors that can negatively impact parenting practices and child behaviors (Webster-Stratton, 1990). Even the daily stressful events encountered by parents have been correlated with children's emotional and

behavioral problems (Banez & Compas, 1990), with minor parenting hassles being positively associated with child behavior problems (Creasey & Reese, 1996) and predictive of child, parent, and family functioning (Crnic & Greenberg, 1990). Within the literature, higher levels of parenting stress have been consistently associated with negative child outcomes, such as higher instances of internalizing and externalizing difficulties (Anthony et al., 2005), conduct disorders, social aggression, attention problems, (Abidin, Jenkins, & McGaughey, 1992), disruptive behaviors (Barry, Dunlap, Cotton, Lochman, & Wells, 2005; Eyberg, Boggs, & Rodriguez, 1992), anxious and depressive symptoms (Rodriguez, 2011), preadolescent psychopathology (Mesman & Koot, 2000), decreased social competence (Ostberg & Hagekull, 2013), and decreased pretend play and self-assertion among toddlers (Creasey & Jarvis, 1994). Of even more concern, parenting stress in conjunction with anger expression has been found to positively correlate with child abuse potential (Rodriguez & Green, 1997). Even when parenting stress is compared to other predictors, such as child health, child temperament, and parent-child relationships, parenting stress has emerged as the most powerful predictor of child behavior problems (Goldberg et al., 1997).

Self-Compassion

One protective factor that may affect parental appraisals of the demands of parenting and subsequent experiences of parenting stress is an individual's attitude towards the self during times of duress, or one's level of self-compassion. Originating from Eastern philosophical thought, and specifically Buddhist philosophy, self-compassion can be simply conceptualized as compassion directed toward the self (Germer & Neff, 2013). More specifically, self-compassion has been operationalized and validated in the West as encompassing three components: self-kindness, common humanity, and mindfulness (Neff, 2003a; Neff, 2003b). Self-kindness is

described as offering kindness to the self rather than judgment or criticism during periods of failure or suffering, while common humanity refers to perceiving one's experiences as common to the human condition rather than isolating, and mindfulness is designated as the ability to observe and note painful thoughts and feelings rather than over-identify with them (Neff, 2003a; Neff, 2003b).

Self-compassion can further be conceptualized within an evolutionary paradigm. According to Gilbert (1989, 2005), compassion may be understood as a product of the mammalian evolved caregiving system that positions the self to respond to the protective and survival needs of others. Because humans can respond to both external and internal cues as if they are synonymous, self-compassion occurs when the self responds to internal cues of threat with socially evolved caregiving abilities, including the desire to care for the well-being of another, distress sensitivity and recognition, sympathy, distress tolerance, empathy, non-judgment, and emotional warmth (Gilbert & Procter, 2006). Within this conceptualization, self-compassion is also highly connected to evolved physiological affect regulation systems. When the self is approached with the caregiving mentality of self-compassion, affiliative emotions are activated, such as connectedness and soothing. Conversely, when internal stimuli are approached with self-criticism, the threat-focused physiological system is activated, cuing emotions such as anger, anxiety, and disgust (Gilbert, 1989, 2005, 2014). It is thought that this threat-focused affect regulation system is dominant in people with high shame and self-criticism and that the soothing-focused affect regulation system is inadequately accessible (Gilbert, 2009).

Self-Compassion and Attachment

Building upon these conceptualizations, it has been argued that attachment theory may be implicated in the development of self-compassion (Gilbert, 2005; Gilbert & Procter, 2006; Neff

& Beretvas, 2013). A central premise of attachment theory is that experiences of a caregiver as accessible and responsive in times of need facilitates the development of attachment security (Bowlby, 1969). If a caregiver is consistently caring and responsive, these experiences generate the development of internal working models that represent others as safe and supportive and the self as worthy of love and connectedness. Additionally, the provision of these positive caregiving experiences also facilitates the development of an adequate self-soothing, or emotional regulation, system, by which one is able to internalize and draw upon experiences of care and compassion during times of pain or suffering (Gilbert, 2005). However, if one's experiences of a caregiver are characterized by inaccessibility, unresponsiveness, and/or inconsistency during times of need, emotional regulation strategies related to anxiety and avoidance are developed as means of self-protection, secure attachment does not result, and an adequate self-soothing system is not developed (Gilbert, 2005).

As such, safe, supportive environments, and the experience of caring and supportive relationships with caregivers are thought to nurture individual self-compassion, as individuals with internalized representations of soothing and responsive caregiving behavior are better able to access and direct such responses towards the self. In contrast, individuals raised in threatening, insecure environments and who experience critical and/or dismissive relationships with caregivers are likely to develop high levels of self-criticism that stem from perceiving others as sources of threat and striving to avoid criticism and rejection from others (Gilbert & Procter, 2006).

Indeed, a few studies have established a relationship between attachment orientation and self-compassion. Secure attachment has been found to correlate with higher levels of self-compassion, while preoccupied and fearful attachment have evidenced an association with lower

levels of self-compassion, and dismissive attachment has been found to lack a relationship with self-compassion (Neff & Beretvas, 2013). Additionally, in a study of self-compassion and psychological resilience among adolescents and young adults, Neff and McGehee (2010) found maternal support to be associated with significantly greater self-compassion, while maternal criticism was correlated with less self-compassion. In sum, these authors concluded that self-compassion may be viewed as an internal manifestation of the parent-child relationship and that one means by which parents may impact their children's functioning is by cultivating self-compassionate or self-critical inner dialogues. Though a small body of work, these studies support self-compassion as a viable mechanism in the attachment and caregiving process that may facilitate salubrious child adjustment. Parents high in self-compassion may benefit from the emotional regulation and emotion-focused coping properties of self-compassion, perhaps allowing them to invest their time and energy as parents more judiciously, deal with the stressors of parenting more effectively, and facilitate healthier child adjustment.

The Current Study

Despite its potentially valuable contribution within interpersonal and developmental milieus, self-compassion has received little empirical attention in this line of research. To date, this author is aware of only one study by Moreira, Gouveia, Carona, Silva, and Canavarro (2014) investigating the mediating role of self-compassion and parenting stress in the relationship between maternal attachment and children's quality of life. Moreira et al. (2014) generated a serial multiple mediator model with a sample of Portuguese mother-child dyads in which they found mothers' attachment to their own mothers to be indirectly correlated with child self-reports of quality of life via the mechanisms of self-compassion and parenting stress. More specifically, they found higher levels of attachment-related anxiety and avoidance among mothers to be

associated with decreased children's quality of life, as mediated by lower levels of maternal self-compassion and higher levels of parenting stress.

Although this study is valuable in being the first to explore self-compassion in relation to attachment, parenting stress, and child quality of life, it is also limited. In particular, the results of Moreira et al.'s (2014) study are confined to a Portuguese population and cannot be confidently applied to a U.S. population. For one, although attachment theory appears to be universally valid across cultures (vanIjzendoorn & Sagi-Schwartz, 2008), there is also evidence that attachment patterns may vary according to region, acculturation, collectivism, and ethnicity (Agishtein & Brumbaugh, 2013). Additionally, cross-cultural studies on parenting stress have reported distinct types and different levels of parenting stress across cultures (Krulik et al., 1999; Solis & Abidin, 1991). Finally, though self-compassion has been seldom studied cross-culturally, there are also indications that average levels of individual self-compassion may vary according to culturally prescribed interpretations of autonomy and connectedness (Neff, Pisitsungkagarn, & Hsieh, 2008).

Beyond this, the use of a regression-based multiple mediator model may obscure important relationships between the variables of attachment, parenting stress, self-compassion, and child adjustment that may be more fully captured by path analytic procedures. In addition, although child quality of life is an important subjective perception of physical, psychological, and social functioning often studied in conjunction with chronic illness (e.g., Danckaerts et al., 2010), measures of this construct do not primarily seek to assess child psychological and adaptive functioning. Given this, the construct of child adjustment, as defined by the presence or lack of internalizing and externalizing behavioral problems and level of adaptive functioning (Achenbach & Rescorla, 2001), may be a more fruitful outcome for study with demonstrated

predictive value for adult psychiatric disorders and functioning (e.g., Caspi, Moffitt, Newman, & Silva, 1996).

Research Questions and Hypotheses

Given the current state of the literature, the present study seeks to address the limitations of Moreira et al.'s study (2014) and extend upon these findings through exploring the links between parental attachment-related anxiety and avoidance and child adjustment via the mechanisms of self-compassion and parenting stress in a United States population. This leads to the current research questions: 1) What are the relationships between parental attachment-related anxiety and avoidance, child adjustment, parental self-compassion, and parenting stress within a United States population? and 2) Do levels of parental self-compassion and parenting stress mediate the relationship between parental attachment-related anxiety and avoidance and child adjustment? Given these research questions, the following constitute the hypotheses for this study:

1. Higher levels of parental attachment-related anxiety and avoidance will be associated with lower levels of child adjustment.
2. Higher levels of parental attachment-related anxiety and avoidance will be associated with lower levels of parental self-compassion.
3. Higher levels of parental attachment-related anxiety and avoidance will be associated with higher levels of parenting stress.
4. Higher levels of parental self-compassion will be associated with lower levels of parenting stress.
5. Higher levels of parental self-compassion will be associated with higher levels of child adjustment.

6. Higher levels of parenting stress will be associated with lower levels of child adjustment.
7. Higher parenting stress and lower levels of parental self-compassion will mediate the relationship between higher levels of parental attachment-related anxiety/avoidance and lower levels of child adjustment.

To examine these hypotheses, two models will be tested. Figure 1 depicts a model of the hypothesized associations between parental attachment-related anxiety and avoidance and child adjustment, as partially mediated by self-compassion and parenting stress, while Figure 2 portrays these same associations, as fully mediated by self-compassion and parenting stress.

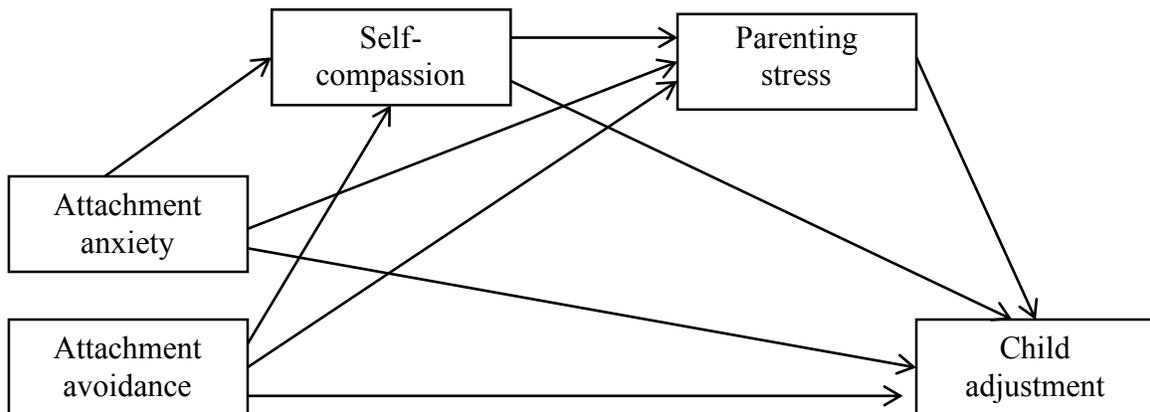


Figure 1. The proposed model of associations between parental attachment anxiety/avoidance and child adjustment as partially mediated by parenting stress and parental self-compassion.

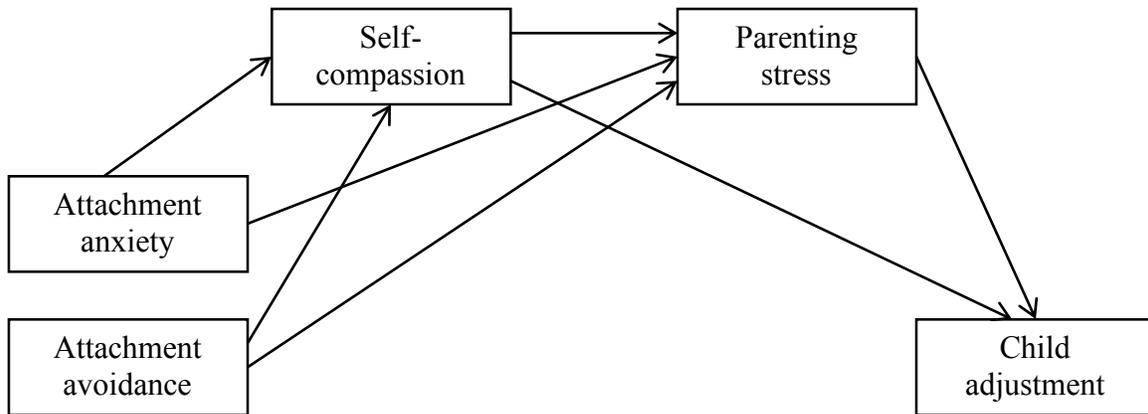


Figure 2. The proposed model of associations between parental attachment anxiety/avoidance and child adjustment as fully mediated by parenting stress and parental self-compassion.

Beyond the gaps in research that pursuing study in this area will fill, elucidating the mechanisms by which parental attachment is theorized to impact child adjustment may build upon attachment theory in important ways. As is evident, attachment theory is foundationally driven by the notion that parental characteristics and behaviors impact child adjustment; however, the means by which this process occurs is unclear. Thus, exploration of the mechanisms of parenting stress and self-compassion may serve to at least partially illuminate *how* parental attachment dimensions affect parenting behavior and child development. Furthermore, and perhaps of upmost value, understanding the relationships among parental attachment, parenting stress, self-compassion, and child adjustment within a U.S. population has the potential to aid practitioners in developing more effective parenting interventions that may positively shape childhood adjustment and create functional, thriving families.

Method

Participants

The sample included 165 mothers of elementary school-aged children (grades Kindergarten through fifth) recruited online via snowball sampling on social media websites, (Facebook, Twitter, and Reddit) and email sent through a Midwestern university's

communication center to all faculty, staff, and students. A total of 250 parents initiated the study and 201 (80.4%) completed the questionnaires. Forty-nine participants were excluded due to only completing the demographics questionnaire or failing to complete any of the questionnaires. In addition, 36 fathers were excluded from the study due to their low number. The intended sample size was determined based on recommendations by Kline (2011), who suggested a sample size of no less than 100 participants to yield an interpretable model derived from path analysis.

Participants were selected based on the following inclusion criteria: 1) being the biological or adoptive mother of a child in grades Kindergarten through fifth grade, 2) the absence of a chronic health condition or developmental delay (i.e., autism spectrum disorder) in both mothers and children being reported upon, and 3) married and/or living with a partner and the child being reported upon. The mean age of mothers was 36.64 years old ($SD = 6.33$; range 22 – 54). The majority identified as Caucasian ($n = 145$; 88.4%), 4.3% identified as Asian ($n = 7$), 3% as Hispanic ($n = 5$), 3% as Biracial ($n = 5$), and 1.2% as African-American ($n = 2$). The majority of participants were also of American nationality ($n = 135$; 82.8%), 6.1% were Canadian ($n = 10$), 4.9% were of various European nationalities ($n = 8$), 1.8% were Indian ($n = 3$), .6% were Australian ($n = 1$), and the remaining 3.7% did not report a nationality ($n = 6$). Most mothers identified as heterosexual ($n = 148$; 93.7%), 3.8% identified as bisexual ($n = 6$), 1.3% as pansexual ($n = 2$), .6% as lesbian ($n = 1$), and .6% as other ($n = 1$). The majority of mothers were married ($n = 151$; 91.5%), while 8.5% were partnered ($n = 14$), with the mean length of marriage or partnership being 12.36 years ($SD = 5.96$; range 1 – 30). The majority of the sample were also highly educated, with 48.5% having a post-graduate degree ($n = 79$), 27.6% having a Bachelor's degree ($n = 45$), 17.8% attending some college ($n = 29$), 4.3% having an Associate's degree or equivalent ($n = 7$), and 1.8% having a high school diploma or equivalent (n

= 3). Finally, 24.5% of mothers reported an annual household income of \$50,000 to \$74,999 ($n = 40$), 22.7% an income of \$100,000 to \$150,000 ($n = 37$), 17.8% an income of more than \$150,000 ($n = 29$), 16% an income of \$75,000 to \$99,999 ($n = 26$), 8% an income of \$40,000 to \$49,999 ($n = 13$), and 11% an income of less than \$40,000 ($n = 18$).

The mean age of children being reported upon was 7.99 years old ($SD = 1.74$; range 6 – 12) with 55.8% being female ($n = 92$) and 44.2% being male ($n = 73$). The mean grade for children being reported upon was 2.32 with 22.3% being in the first grade ($n = 35$), 20.4% in Kindergarten ($n = 32$), 16.6% in third grade ($n = 26$), 15.9% in fifth grade ($n = 25$), 15.3% in fourth grade ($n = 24$), and 9.6% in second grade ($n = 15$). The majority of children were Caucasian ($n = 131$; 80.4%), 10.4% were Biracial ($n = 17$), 4.3% were Hispanic ($n = 7$), 3.7% were Asian ($n = 6$), and 1.2% were African-American ($n = 2$). The majority of children were also American ($n = 138$; 86.3%), 5.6% were Canadian ($n = 9$), 3.8% were of various European nationalities ($n = 6$), and a nationality was not reported for the remaining 4.4% ($n = 7$). Children had a mean number of 1.29 siblings ($SD = 1.04$; range 0 – 6). In regards to existing psychological diagnoses, 7.2% of children being reported upon were diagnosed with ADHD ($n = 12$), 4.2% were diagnosed with an anxiety disorder ($n = 7$), and 1.2% were diagnosed with a depressive disorder ($n = 2$). The majority of children did not use regularly prescribed psychopharmacological medications ($n = 153$; 95.6%), while 4.4% reported doing so ($n = 7$). Of those using regularly prescribed psychopharmacological medications, most were prescribed stimulants ($n = 6$; 85.7%). Sociodemographic data for the sample are summarized below in Table 1.

Table 1. Participant sociodemographic data

Mothers	<i>n</i>	%	Children	<i>n</i>	%
Ethnicity			Gender		
Caucasian	145	88.4	Female	92	55.8
Asian	7	4.3	Male	73	44.2
Hispanic	5	3	Grade		
Biracial	5	3	Kindergarten	32	20.4
African-American	2	1.2	First	35	22.3
Nationality			Second	15	9.6
American	135	82.8	Third	26	16.6
Canadian	10	6.1	Fourth	24	15.3
European	8	4.9	Fifth	25	15.9
Indian	3	1.8	Ethnicity		
Australian	1	0.6	Caucasian	131	80.4
Did not report	6	3.7	Biracial	17	10.4
Sexual orientation			Hispanic	7	4.3
Heterosexual	148	93.7	Asian	6	3.7
Bisexual	6	3.8	African-American	2	1.2
Pansexual	2	1.3	Nationality		
Lesbian	1	0.6	American	138	86.3
Other	1	0.6	Canadian	9	5.6
Relationship status			European	6	3.8
Married	151	91.5	Did not report	7	4.4
Partnered	14	8.5	Diagnoses		
Education			ADHD	12	7.2
Post-graduate degree	79	48.5	Anxiety disorder	7	4.2
Bachelor's degree	45	27.6	Depressive disorder	2	1.2
Some college	29	17.8	Medication		
Associate's degree	7	4.3	No	153	95.6
High school diploma	3	1.8	Yes	7	4.4
Annual household income				<i>M</i>	<i>SD</i>
Less than \$40,000	18	11	Mothers age (in years)	36.64	6.33
\$40,000 - \$49,999	13	8	Child age (in years)	7.99	1.74
\$50,000 - \$74,999	40	24.5	Number of siblings	1.29	1.04
\$75,000 - \$99,999	26	16			
\$100,000 - \$150,000	37	22.7			
More than \$150,000	29	17.8			

Of the 49 participants who were excluded from the study due to only completing the demographics questionnaire or failing to complete any of the questionnaires, 24 provided demographic information. Of these 24 participants, 11 reported having no children or a child outside of the specified grade range. Those who did not complete the study questionnaires were

similar to those who completed the questionnaires on some, but not all, demographic variables. Like the sample within the current study, those who did not complete study questionnaires had a mean age of 32.79 years, 92% identified as Caucasian, 100% were of American nationality, and 100% identified as heterosexual. However, compared to the sample utilized in the current study, those who did not complete the study questionnaires were somewhat less educated (29.2% with a post-graduate degree, 20.8% with a Bachelor's degree, 16.7% attending some college, 16.7% with a high school diploma or equivalent, and 8.3% with an Associate's degree or equivalent) and had somewhat lower annual household incomes (29.2% with an income of less than \$40,000, 29.2% an income of \$75,000 to \$99,999, 20.8% an income of \$100,000 to \$150,000, 7.4% an income of \$40,000 to \$49,999, 4.2% an income of \$50,000 to \$74,999, and 4.2% an income of over \$150,000).

Procedure

As stated, a sample of mothers of children in grades Kindergarten through fifth grade was recruited online via snowball sampling on social media websites and email through a Midwestern university's communication center to all faculty, staff, and students. The researcher shared a post regarding the study on social media accounts, specifically Facebook, Twitter, and Reddit. On Facebook and Reddit, the study was also posted on various parenting group pages. The post included a brief description of the study, inclusion criteria, incentive information, an invitation to share the post with others, and a link to the *Qualtrics* website where the study was hosted. The email sent through the Midwestern university's communication center also included a brief description of the study, inclusion criteria, incentive information, and a link to *Qualtrics*. Participants were informed that they would be given the opportunity to enter a raffle to win one of ten \$20 Amazon.com gift cards upon completion of the study. When participants clicked on

the link, they were redirected to the *Qualtrics* website, where an informed consent form was presented, followed by a demographic questionnaire and the four study measures described below (ECR-R, SCS-SF, PSS, and CBCL). These measures were administered in a counter-balanced order to minimize ordering effects. If participants had more than one child within the Kindergarten through fifth grade range, they were asked to report upon their oldest child within this grade range on the CBCL. At the end of the study, participants were thanked and presented with a debriefing form about the nature of the study.

Instruments

Attachment. The Experiences in Close Relationships-Revised (ECR-R; Fraley, Waller, & Brennan, 2000) was used to measure maternal attachment-related anxiety and avoidance. It is a 36-item, self-report measure developed using an item response theory analysis of the Experiences in Close Relationships Scale (ECR; Brennan, Clark, & Shaver, 1998) that consists of two 18-item subscales: Anxiety and Avoidance. Anxiety is defined as the degree to which individuals are secure about the availability and responsiveness of romantic partners, while avoidance is defined as degree to which individuals are comfortable with intimacy and seek independence. Respondents are instructed to answer items based upon how one feels in emotionally intimate relationships, with specific emphasis on how one generally experiences relationships, not just what is occurring in a current relationship. Each item is rated on a seven-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). To obtain subscale scores for attachment-related anxiety and avoidance, negative items are reverse coded and the mean of items for each subscale is calculated, with higher scores indicating higher attachment anxiety and avoidance. A sample item from the anxiety subscale is “I’m afraid that I will lose my partner’s love,” and a sample item from the avoidance subscale is “I prefer not to show a partner how I

feel deep down.” Fraley et al. (2000) found that both the anxiety and avoidance subscales of the ECR-R showed good test-retest coefficients of .94 and .95, respectively. Additionally, the ECR-R has demonstrated good internal reliability with Cronbach’s alphas of .93 and .92 for the anxiety and avoidance subscales, respectively, and good construct (convergent and discriminant) validity (Fairchild & Finney, 2006). In particular, scores on the anxiety and avoidance subscales were found to positively correlate with a measure of loneliness and negatively correlate with a measure of social support. In the current study, the ECR-R demonstrated good internal reliability with Cronbach’s alphas of .95 and .93 for the anxiety and avoidance subscales, respectively.

Self-compassion. The Self-Compassion Scale-Short Form (SCS-SF; Raes, Pommier, Neff, & Van Gucht, 2011) was used to assess maternal levels of self-compassion. It is a 12-item self-report measure designed to evaluate the six components of self-compassion: Self-kindness (e.g., “I try to be understanding and patient towards those aspects of my personality that I don’t like”), Self-judgment (e.g., “I’m disapproving and judgmental about my own flaws and inadequacies”), Common Humanity (e.g., “I try to see my failings as part of the human condition”), Isolation (e.g., “When I’m feeling down, I tend to feel like most other people are probably happier than I am”), Mindfulness (e.g., “When something painful happens I try to take a balanced view of the situation”), and Over-identification (e.g., “When I’m feeling down I tend to obsess and fixate on everything that’s wrong”). Items are rated on a five-point Likert scale that ranges from 1 (*almost never*) to 5 (*almost always*). After reverse-coding negative items, a global measure of self-compassion is computed by calculating the mean of the 12 items, with higher scores denoting higher self-compassion. The SCS-SF has demonstrated adequate internal consistency ($r = .86$) and construct validity (Raes et al., 2011). Specifically, responses on the SCS-SF have evidenced high positive correlations with responses on the long form of the SCS (r

$\geq .97$). Scores on the SCS, in turn, have been found to negatively correlate with measures of self-criticism, depression, and anxiety, as well as positively correlate with measures of social connectedness, emotional intelligence, and life satisfaction (Neff, 2003b). In the present study, the SCS-SF revealed adequate internal consistency ($r = .88$).

Parenting stress. The Parental Stress Scale (PSS; Berry & Jones, 1999) was used to measure positive and negative aspects of parenting. It is an 18-item self-report scale that assesses positive and negative components of parenting, including emotional benefits (e.g., “I feel close to my child”), personal development (e.g., “Having a child gives me a more certain and optimistic view for the future”), demands on resources (e.g., “Having a child has been a financial burden”), and restrictions (e.g., “Having a child has meant having too few choices and too little control over my life”). Items are rated on a five-point Likert scale that ranges from 1 (*strongly disagree*) to 5 (*strongly agree*). After reverse-coding negative items, a parental stress score is calculated by summing all 18 items, with higher scores indicating higher levels of parenting stress. The PSS has demonstrated adequate internal reliability ($r = .88$) and construct validity (Berry & Jones). In particular, responses on the PSS have been positively related to responses on the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) at $r = .41$ and the Parenting Stress Index (PSI; Abidin, 1995) at $r = .75$. Furthermore, the PSS has shown discriminative capabilities in being able to differentiate between a clinical and nonclinical sample of mothers and children with an effect size of Cohen’s $d = .72$ (Berry & Jones). In the current study, the PSS demonstrated adequate internal reliability comparable to past studies ($r = .88$).

Child adjustment. The Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) was utilized to measure child adjustment. It is a 113-item scale completed by parents that

is designed to assess a broad spectrum of problems and adaptive functioning in children ages 6 – 18. Respondents indicate the degree or frequency of each behavior described in an item on a scale of 0 (*not true*), 1 (*somewhat or sometimes true*), or 2 (*very true or often true*). It has eight syndrome scales for anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior, and aggressive behavior. Anxious/depressed, withdrawn/depressed, and somatic complaints form an internalizing dimension, while rule-breaking behavior and aggressive behavior form an externalizing dimension. The summation of all eight syndrome scales yields a total problems score, with higher scores denoting greater problem behaviors. The CBCL has good psychometric properties, with an internal consistency coefficient for the total problems scale of .97 in the original U.S. sample (Achenbach & Rescorla, 2001) and evidence of good criterion and construct validity (Achenbach et al., 2008). Specifically, responses on the internalizing, externalizing, and total problems scales have been found to be significantly higher in clinically referred versus nonreferred children. Additionally, responses on the CBCL have been correlated with responses on measures assessing similar phenomena, such as the Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992) and the Conners' (1997) Parent and Teacher Rating Scales (Achenbach et al.). In the present study, the total problems scale showed good internal consistency with a Cronbach's alpha of .94.

Results

Data Analyses

Preliminary data analyses were conducted to explore data characteristics. Descriptive statistics were calculated for all demographic and study variables and Pearson's bivariate correlation coefficients were computed to assess associations between study variables. These

analyses were conducted using Statistical Package for the Social Sciences version 24.0 (SPSS; 2016).

To assess the aforementioned hypotheses, partial and full mediation model were estimated using path analytic procedures in R version 3.1.3 (R Core Team, 2015). Path analysis is a technique related to the more sophisticated method of Structural Equation Modeling (SEM) that identifies how well observed data fit a proposed model (Kline, 2011). SEM models with multiple indicators are often favored over path analytic models because they are less susceptible to measurement error (Kline); however, due to the lack of multiple indicators available for the study of several of the present variables and the pragmatic difficulty of obtaining an adequate sample size for such analyses, path analysis was chosen as a more feasible means of assessing the current hypotheses. Additionally, the reasonably sound psychometric characteristics of the instruments utilized lend support for the use of path analysis and lower the risk of obtaining inaccurate findings. Maximum Likelihood Estimation (MLE) was used to estimate the models, as it is a commonly used method of parameter estimation that is appropriate for use with normally distributed variables.

Figures 1 and 2 (presented above) depict the proposed models that were tested. Both models have two exogenous variables (attachment anxiety and avoidance) and three endogenous variables (self-compassion, parenting stress, and child adjustment). The first model is partially mediated, with attachment anxiety and avoidance impacting child adjustment partially through the mechanisms of self-compassion and parenting stress. The second model is fully mediated, with attachment anxiety and avoidance influencing child adjustment only through the mechanisms of self-compassion and parenting stress.

Prior to testing these models, statistical assumptions for the proper utilization of path analysis were checked. According to Streiner (2005), these assumptions are similar to those of multiple regression and include the stipulations that 1) relationships between variables need to be linear, 2) no unspecified interactions should exist between variables, 3) endogenous variables must be continuous and normally distributed, with skewedness and kurtosis coefficients below the cutoff of 1, and 4) covariances among disturbances should preferably be zero. Thus, the degree to which the obtained data met these assumptions was examined to ensure the appropriate usage of the proposed techniques.

With this, the directionality and significance of each parameter within the proposed models were examined in order to test this study's hypotheses. In particular, standardized parameter values, or beta weights, and p-values were evaluated to garner this information. In addition to assessing parameters, the models' fit with the obtained data was examined via the fit indices of the chi-square test, root mean square error of approximation (RMSEA), the comparative fit index (CFI), and the Tucker-Lewis index (TLI). While the chi-square test is a commonly reported fit statistic, it is sensitive to sample size and should be used in combination with other fit indices. Finally, the fit of partially and fully mediated models were compared using the chi-square difference statistic and Akaike Information Criterion (AIC). The chi-square difference statistic is recommended for nested models and involves testing the null hypothesis that both models fit identically in the population. Rejecting the null hypothesis suggests that one model has better fit than the other. The AIC reflects the amount of unexplained variation in the data not accounted for by the model with a penalty for model complexity. As such, smaller AIC values indicate superior model fit (Kline, 2011).

Descriptive Statistics

The means, standard deviations, observed ranges, and Cronbach's alphas for the study variables are presented in Table 2. All variables are presented in raw form, aside from data for the CBCL, which is presented in standardized form.

Table 2. Descriptive statistics and Cronbach's alphas

Variables	<i>M</i>	<i>SD</i>	Observed range	α
1. Attachment anxiety (ECR-R)	2.45	1.29	1 – 6	0.95
2. Attachment avoidance (ECR-R)	2.54	1.20	1 – 6	0.93
3. Self-compassion (SCS-SF)	3.36	0.76	2 – 5	0.88
4. Parenting stress (PSS)	36.87	9.75	18 – 73	0.88
5. Child adjustment (CBCL)	49.38	10.07	26 – 77	0.94

The mean values for attachment dimensions were 2.45 for attachment anxiety and 2.54 for attachment avoidance. Comparison to normative means for the ECR-R of 3.56 for attachment anxiety and 2.92 for attachment avoidance (Fraley, Waller, & Brennan, 2000) indicates that the present sample was within average range on both attachment anxiety and avoidance. Levels of parenting stress were also average ($M = 36.87$) considering the mean of 37.1 originally found for a non-clinical sample of mothers (Berry & Jones, 1995), as were levels of self-compassion ($M = 3.36$), with the mean for the normative English-speaking sample being 3.00 (Raes, Pommier, Neff, & Van Gucht, 2011). Finally, child adjustment, as measured by the CBCL, was average ($M = 49.38$), indicating that mothers reported an average amount of problems for their children.

As a means of better describing the current sample, the means, standard deviations, and observed ranges for attachment dimensions according to income level were calculated and are shown in Table 3.

Table 3. Descriptive statistics for attachment dimensions according to income

Income Level	Attachment Anxiety		Attachment Avoidance	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Less than \$40,000	3.14	1.43	2.37	1.07
\$40,000 - \$49,999	3.63	1.80	2.98	1.51
\$50,000 - \$74,999	2.65	1.37	2.55	1.17
\$75,000 - \$99,999	1.92	1.04	2.21	.91
\$100,000 - \$150,000	2.40	1.12	2.73	1.24
More than \$150,000	1.96	.79	2.49	1.29

As is evident, the mean values for attachment avoidance according to income level did not vary significantly. However, the mean values for attachment anxiety varied more according to income level, with a trend of higher levels of attachment anxiety for participants reporting lower annual household incomes and lower levels of attachment anxiety for participants reporting higher annual household incomes being observed.

In addition, Pearson's inter-correlations for the study variables are presented in Table 4.

Table 4. Inter-correlations for study variables

Variables	1	2	3	4	5
1. Attachment anxiety (ECR-R)	-				
2. Attachment avoidance (ECR-R)	0.49**	-			
3. Self-compassion (SCS-SF)	-0.56**	-0.30**	-		
4. Parenting stress (PSS)	0.37**	0.27**	-0.45**	-	
5. Child adjustment (CBCL)	0.42**	0.14	-0.38**	0.48**	-

** $p < .01$

As predicted, attachment anxiety was moderately positively correlated with child difficulties as measured by the CBCL ($r = 0.42, p < .01$), denoting a relationship between higher levels of maternal attachment-related anxiety and lower levels of child adjustment. However, contrary to predictions, attachment avoidance was not significantly associated with child difficulties on the CBCL ($r = 0.14, p = .09$). As expected, maternal attachment anxiety was also strongly negatively correlated with self-compassion ($r = -0.56, p < .01$) and attachment avoidance was moderately

negatively correlated with self-compassion ($r = -0.30, p < .01$). In addition, attachment anxiety and avoidance were moderately positively correlated with parenting stress ($r = 0.37, p < .01$; $r = 0.27, p < .01$) and maternal self-compassion was moderately negatively associated with maternal parenting stress ($r = -0.45, p < .01$), as predicted. Finally, mother's self-compassion was moderately negatively correlated with child difficulties on the CBCL ($r = -0.38, p < .01$) and mother's parenting stress was strongly positively correlated with child difficulties on the CBCL ($r = 0.48, p < .01$).

Path Analysis

Given that multivariate normality is a core assumption of path analysis, the data were checked for this by examining data skew, kurtosis, and histograms depicting the shape of distributions. Results of this analysis showed all study variables to approximate normal distributions, with skewness and kurtosis statistics being between -1 and +1.5.

The proposed models were then tested with path analysis using maximum likelihood estimation in the lavaan package of R version 3.1.3 (R Core Team, 2015). Missing data was computed using maximum likelihood estimation functions. With this, several indices were used to evaluate the goodness-of-fit between the models and data, including the chi-square test, comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA). The chi-square test evaluates the null hypothesis that the covariance matrix estimated from the model accurately reproduces the observed covariance matrix. For this test, a statistic of less than 30 with a non-significant p value indicates good fit. The CFI and TLI are comparative fit indices that evaluate model fit by comparing a proposed model to a null, or baseline, model. For these indices, values close to 1 indicate good fit. Finally, the RMSEA is a parsimony-adjusted fit index that serves as a "badness of fit" test (Kline, 2011). For this index,

values less than or equal to 0.05 indicate good fit. Model fit indices for both the partially and fully mediated models are presented in Table 3.

Table 5. Model Fit Indices Summary

Model	χ^2	DF	CFI	TLI	RMSEA	90% CI for RMSEA
Partially mediated	0.00	0	1.00	1.00	0.00	0.00 – 0.00
Fully mediated	9.16	2	0.95	0.78	0.15	0.06 – 0.25

Note. χ^2 = Chi Square Test; DF = Degrees of Freedom; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; CI for RMSEA = Confidence Interval for Root Mean Square Error of Approximation.

The partially mediated model resulted in $\chi^2(0, N = 166) = 0.000$. This indicates that the model is just-identified and that the number of estimated parameters is equivalent to the number of possible parameters. In other words, the covariance matrix estimated from the model exactly reproduced the observed covariance matrix. Because of this, goodness-of-fit indices are less relevant and inevitably indicated good overall model fit (CFI = 1.00; TLI = 1.00; RMSEA = 0.00). Analysis of individual paths showed several significant direct effects (see Figure 3). Maternal attachment anxiety significantly influenced levels of self-compassion ($\beta = -0.53, b = -0.31, SE = 0.05, p = 0.000$), but maternal attachment avoidance did not ($\beta = -0.05, b = -0.03, SE = 0.05, p = 0.50$). Together, maternal attachment anxiety and avoidance explained 31.2% of the variance in self-compassion ($R^2 = 0.312$) within the model.

In addition, self-compassion was significantly associated with parenting stress ($\beta = -0.35, b = -4.52, SE = 1.09, p = 0.000$), but maternal attachment anxiety and avoidance were not ($\beta = 0.14, b = 1.04, SE = 0.71, p = 0.14$; $\beta = 0.10, b = 0.78, SE = 0.65, p = 0.23$). Together, self-compassion, maternal attachment anxiety, and attachment avoidance explained 23.7% of the variance in parenting stress ($R^2 = 0.237$) within the model. Finally, child adjustment was significantly associated with parenting stress ($\beta = 0.37, b = 0.38, SE = 0.08, p = 0.000$) and maternal attachment anxiety ($\beta = 0.28, b = 2.17, SE = 0.71, p = 0.002$), but was not associated

with self-compassion ($\beta = -0.10$, $b = -1.39$, $SE = 1.15$, $p = 0.228$), or maternal attachment avoidance ($\beta = -0.11$, $b = -0.95$, $SE = 0.66$, $p = 0.153$). Together, these variables accounted for 31.7% of the variance in child adjustment ($R^2 = 0.317$) within the model.

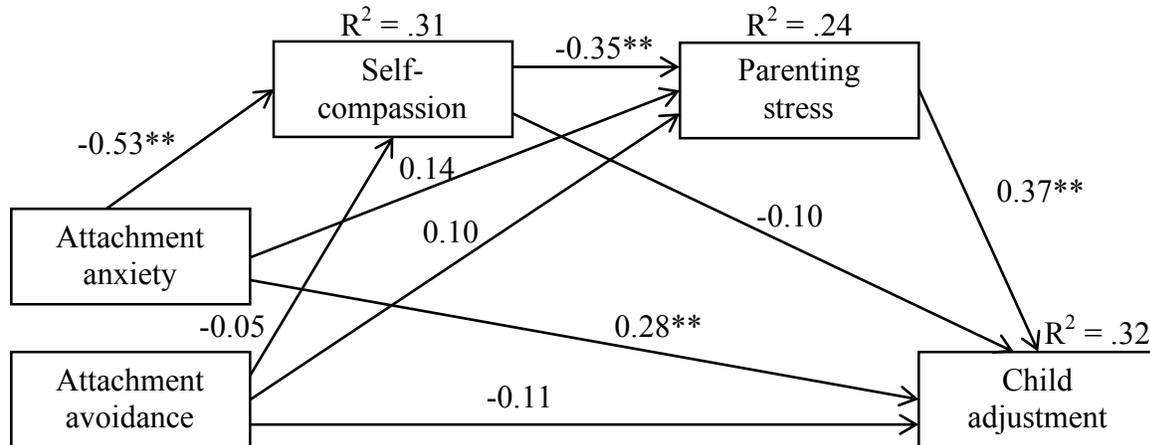


Figure 3. Statistical diagram of the partially mediated path model for the proposed influence of self-compassion and parenting stress on the relationship between attachment dimensions and child adjustment. Path values represent standardized regression coefficients. $^{**}p < .001$

In all, results showed a significant indirect effect of maternal attachment anxiety on child adjustment, as mediated by self-compassion and parenting stress ($\beta = 0.07$, $b = 0.54$, $SE = 0.19$, $p = 0.004$). No significant indirect effects of maternal attachment avoidance were observed.

Overall, there was a significant total effect including the indirect effect of maternal attachment anxiety on child adjustment as mediated by self-compassion and parenting stress and the direct effect of maternal attachment anxiety on child adjustment ($\beta = 0.45$, $b = 3.53$, $SE = 0.67$, $p = 0.000$).

The fully mediated model resulted in $\chi^2(2, N = 166) = 9.157$, $p < 0.010$, indicating poor model fit. Goodness-of-fit indices also indicated less than adequate model fit (CFI = 0.95; TFI = .78; RMSEA = 0.15). Analysis of individual paths, however, showed several significant direct effects (see Figure 4). Again, maternal attachment anxiety significantly influenced levels of self-compassion ($\beta = -0.53$, $b = -0.31$, $SE = 0.04$, $p = 0.000$), but maternal attachment avoidance did

not ($\beta = -0.05$, $b = -0.03$, $SE = 0.05$, $p = 0.51$), accounting for 31.2% of the variance in self-compassion within the model. As in the partially mediated model, self-compassion was significantly associated with parenting stress ($\beta = -0.35$, $b = -4.47$, $SE = 1.10$, $p = 0.000$), but maternal attachment anxiety and avoidance were not ($\beta = 0.14$, $b = 1.10$, $SE = 0.71$, $p = 0.12$; $\beta = 0.09$, $b = 0.77$, $SE = 0.65$, $p = 0.24$), explaining 23.7% of the variance in parenting stress within the model. Finally, child adjustment was significantly associated with parenting stress ($\beta = 0.39$, $b = 0.41$, $SE = 0.08$, $p = 0.000$) and self-compassion ($\beta = -0.21$, $b = -2.80$, $SE = 1.044$, $p = 0.007$) in a model accounting for 27.3% of the variance in child adjustment ($R^2 = 0.273$).

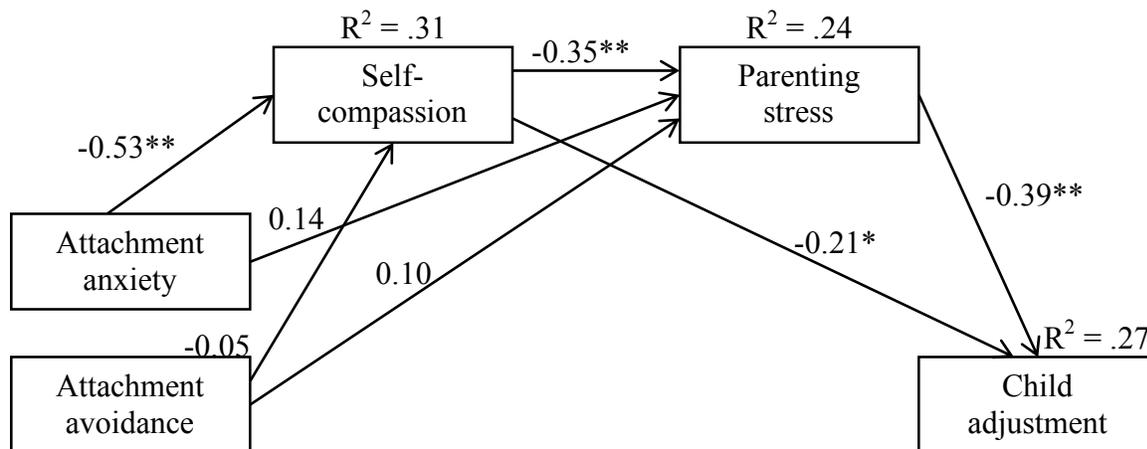


Figure 4. Statistical diagram of the fully mediated path model for the proposed influence of self-compassion and parenting stress on the relationship between attachment dimensions and child adjustment. Path values represent standardized regression coefficients. ** $p < .001$, * $p < .01$

In all, analysis of this model revealed a significant indirect effect of maternal attachment anxiety on child adjustment, as mediated by self-compassion ($\beta = 0.11$, $b = 0.88$, $SE = 0.35$, $p = 0.012$). There was also a significant indirect effect of maternal attachment anxiety on child adjustment as mediated by self-compassion and parenting stress ($\beta = 0.07$, $b = 0.57$, $SE = 0.20$, $p = 0.004$). No significant indirect effects of maternal attachment avoidance were observed within this model.

Finally, the partially and fully mediated models were compared using the chi-square difference statistic and Akaike Information Criterion (AIC). The partially mediated model had a chi-square value of 0.00 with 0 degrees of freedom, while the fully mediated model had a chi-square value of 9.16 with 2 degrees of freedom. As such, the chi-square difference statistic is 9.16 with 2 degrees of freedom. In addition, the partially mediated model had an AIC of 3517.46, while the fully mediated model had an AIC of 3522.62. Given the greater AIC value of the fully mediated model, the partially mediated model showed overall better fit.

Discussion

Review of Study Purpose

The present study sought to more clearly delineate the links between parental attachment-related anxiety/avoidance, self-compassion, parenting stress, and child adjustment to better understand the means by which the parental psychological factors of attachment, parenting stress, and self-compassion contribute to child adjustment. This objective was accomplished through testing two mediation models in a normative sample of mothers recruited online. More specifically, these models examined the potential mediating effects of self-compassion and parenting stress in the relationship between maternal attachment and child adjustment. Based on the theoretical framework of attachment theory and the existing literature base, it was hypothesized that parenting stress and self-compassion would mediate the relationship between maternal attachment-related anxiety/avoidance and child adjustment, with higher levels of attachment anxiety and avoidance being associated with lower levels of self-compassion, higher levels of parenting stress, and poorer child adjustment.

Major Findings

As expected, higher levels of attachment-related anxiety were associated with lower levels of self-compassion. Contrary to expectations, however, attachment-related avoidance did not significantly predict levels of self-compassion. This finding both confirms and disconfirms the results of previous studies. These findings are in keeping with studies conducted by Neff and Beretvas (2013) and Neff and McGehee (2010), which demonstrated that secure attachment was positively correlated with higher levels of self-compassion, while preoccupied and fearful attachment orientations (both characterized by high levels of attachment-related anxiety) were associated with lower levels of self-compassion. Also similar to the present study, Neff and colleagues found no significant relationship between dismissive attachment (characterized by high levels of attachment-related avoidance and low anxiety) and self-compassion. However, Moreira et al.'s (2014) investigation of the links between attachment anxiety and avoidance and child quality of life as mediated by self-compassion and parenting stress found higher levels of both attachment-related anxiety and avoidance to be associated with lower levels of self-compassion.

These inconsistent findings may be accounted for by returning to attachment theory's framework for understanding individuals' internal working models of self and others, along with subsequent abilities to connect with others for sources of support. According to attachment theory, individuals who experienced parenting characterized by inconsistent accessibility and responsiveness as children tend to hyperactivate the attachment system as adults, leading to exaggerated distress reactions meant to achieve proximity to an attachment figure and ensure attention and support (Mikulincer, Shaver, & Pereg, 2003). There is evidence that such individuals tend to have positive views of others as supportive and benevolent, but negative

models of self as flawed and undeserving (Pietromonaco & Feldman Barrett, 2000). In contrast, those who experienced parenting unresponsive to their needs in childhood are more likely to deactivate the attachment system as adults, leading to repression of emotions and distancing from intimate relationships (Mikulincer et al., 2003). Such individuals tend to have negative models of others as untrustworthy and undependable and either positive or negative views of self (Pietromonaco & Feldman Barrett, 2000).

Given these patterns, it seems likely that those with higher levels of attachment-related anxiety would more consistently evidence lower levels of self-compassion. When people have negative views of self, they are more likely to be self-critical and less likely to practice self-kindness. With the exaggeration of emotional distress to provoke support from others, such individuals may also be more likely to become immersed in negative thoughts and feelings. Together, these deficits in the self-soothing system are likely to result in lower levels of self-compassion. On the other hand, the relationship between attachment-related avoidance and self-compassion appears to be more variable and complex. As stated, research suggests that individuals with high levels of attachment avoidance may have positive *or* negative models of self (Pietromonaco & Feldman Barrett, 2000). To add to this, Mikulincer and Orbach (1995) found people characterized by high avoidance to report high defensiveness and show low accessibility to negative memories. This defensiveness and/or low insight may lead such individuals to report positive sense of self and subsequent high levels of self-compassion. Alternatively, individuals with high avoidance may come to be overly self-reliant with high expectations for themselves so that they are able to avoid intimacy and possible rejection. These high expectations and over reliance on self may result in a lack of self-kindness and lower levels

of self-compassion. As is clear, further research is needed to better understand the relationship between attachment avoidance and self-compassion.

In opposition to expectations and previous studies (Moreira et al., 2014; Nygren et al., 2012; Rholes et al., 2006; Vasquez et al., 2002), levels of mothers' attachment-related anxiety and avoidance did not significantly directly predict levels of parenting stress within the path models. These findings may be a result of the demographic characteristics of the present sample. As mentioned, mothers who participated in this study were predominantly Caucasian, highly educated, and had annual household incomes placing them in the middle to upper-middle socioeconomic class. Thus, even with any elevated levels of attachment anxiety or avoidance, mothers in this sample may not have experienced and reported greater parenting stress because the protective effects of education and adequate financial resources inoculated them against it. Indeed, studies have found family income and level of education to contribute to variance in parenting stress (e.g., Reitman, Currier, & Stickle, 2002).

As expected, there was a significant indirect effect of maternal attachment anxiety on child adjustment as mediated by self-compassion and parenting stress with a significant direct effect of maternal self-compassion on levels of parenting stress. This finding suggests that maternal self-compassion is an important aspect of the relationship between attachment-related anxiety and parenting stress. Previous studies either have not explored self-compassion in conjunction with attachment and parenting stress (e.g., Nygren et al., 2012) or relied on regression-based analyses specifically targeting the ability of attachment dimensions to predict parenting stress (Moreira et al., 2014). Thus, results of the present study do not discount the findings of previous studies, but propose that one's attitude towards the self during periods of

duress, or self-compassion, may partially account for how attachment-related anxiety influences perceptions of parenting stress.

As stated, individuals with high levels of attachment anxiety tend to hyperactivate the attachment system (Mikulincer, Shaver, & Pereg, 2003) and have negative models of self (Pietromonaco & Feldman Barrett, 2000), which may result in lower levels of self-compassion, or over-identification with negative thoughts and feelings and a tendency to be self-critical during periods of suffering. In turn, this tendency to be self-critical may result in higher levels of parenting stress for several reasons. First, individuals with lower self-compassion and high self-criticism are thought to have greater difficulty accessing the soothing-focused affect regulation system (Gilbert, 2009). Such individuals have greater emotion regulation difficulties (Vettese, Dyer, Li, & Wekerle, 2011), fewer self-regulatory resources (Terry & Leary, 2011), and are more likely to suppress or amplify emotions (Neff, Kirkpatrick, Rude, 2007). For parents, then, levels of self-compassion may impact how well they are able to manage negative emotions and subsequent feelings of stress related to the daily challenges of child rearing.

In addition, self-compassionate parents may be more likely to display positive relationship behaviors, such as caring and affection, which may extend to their children and lead to lower levels of parenting stress. This assertion is supported by past studies, which have found individuals higher in self-compassion to exhibit more positive relationship behaviors in romantic relationships (Neff & Beretvas, 2013), greater perspective taking and forgiveness (Neff & Pommier, 2013), and greater likelihood of compromise during interpersonal conflict resolution (Yarnell & Neff, 2013). In all, these findings suggest self-compassion may enable parents to enact positive behaviors that promote relational affiliation, as well as acknowledge their shortcomings in negative events without becoming overwhelmed by negative emotion (Leary,

Tate, Adams, Allen, & Hancock, 2007). Together, these capacities may serve to decrease stress in response to the trials of parenthood.

As expected, both higher levels of maternal attachment-related anxiety and parenting stress directly predicted poorer child adjustment, as represented by higher levels of total emotional and behavioral problems on the CBCL. This finding is in accordance with previous investigations, which have shown maternal and paternal attachment anxiety to be predictive of children's internalizing and externalizing behaviors (Al-Yagon, 2008; Marchand, Schedler, & Wagstaff, 2004), as well as studies of parenting stress and child outcomes that have consistently found a strong association between higher levels of parenting stress and a myriad of negative child outcomes (e.g., Anthony et al., 2005; Rodriguez, 2011). When compared to mothers with secure working models of attachment, mothers with insecure models of attachment have been found to be less responsive and attuned to both the positive and negative states of their infants (Grossmann, Fremmer-Bombik, Rudolph, & Grossmann, 1988; Haft & Slade, 1989).

Specifically, it has been suggested that parents with high levels of attachment anxiety may have difficulty attending to their child's attachment signals in predictable ways because they become overwhelmed or distracted by their own attachment experiences (vanIJzendoorn, 1995). As such, the current findings lend credence to the notion that mothers' proclivity to hyperactivate the attachment system may interfere with their ability to provide consistent care to their children and thereby heighten the occurrence of child externalizing and internalizing behaviors.

Similarly, the finding of greater parenting stress being directly predictive of poorer child adjustment may be accounted for by the potential relationship between parenting stress and negative parenting practices, such as authoritarian discipline (Deater-Deckard & Scarr, 1996) high demandingness, and low responsiveness (Ponnet et al., 2013). Previous studies have also

suggested that parental distress, anxiety, and depression related to high levels of parenting stress could explain the link between parenting stress and child behavioral difficulties (Barry et al., 2005; Bayer et al., 2006). Regardless of the mechanism, the present study indicates that when mothers perceive greater stress due to the demands of parenting, their children are more likely to have greater behavioral and emotional difficulties.

In all, results from the partially and fully mediated models showed that lower levels of maternal self-compassion and higher levels of parenting stress mediated the relationship between maternal attachment anxiety and child adjustment. In comparing these two models, analyses revealed the partially mediated model to better fit the observed data and account for greater variance in child adjustment. The superior fit of this model suggests that mothers' attachment anxiety both directly and indirectly contributes to child adjustment via the mechanisms of self-compassion and parenting stress. These results also denote that there are likely other mechanisms involved in the connection between maternal attachment representations and child adjustment not investigated within the current study. Furthermore, results of the fully mediated model showed that when the direct path from attachment anxiety to child adjustment was eliminated, lower levels of self-compassion mediated the relationship between higher levels of maternal attachment anxiety and lower child adjustment. This finding suggests that levels of attachment anxiety and self-compassion may function similarly in their influence upon child adjustment. Although they are distinct constructs, both high levels of attachment anxiety and low levels of self-compassion have been theoretically and empirically associated with comparable deficits in emotional regulation and interpersonal skills (e.g., Mikulincer, Shaver, & Pereg, 2003; Neff, 2003a; Neff & Beretvas, 2013). Thus, they may exert an analogous impact upon child adjustment through these means. Previous work has uncovered this same correspondence, noting that the

mediator roles of attachment and self-compassion appear to be interchangeable (Wei, Liao, Ku, & Shaffer, 2011).

Finally, contrary to expectations, maternal attachment-related avoidance was not significantly associated with child adjustment and no meditational relationships were found via the mechanisms of self-compassion and parenting stress. As discussed prior, these findings may not preclude the existence of relationships between these variables, but may be impacted by characteristics related to attachment avoidance. For one, individuals with higher levels of attachment avoidance appear to be less attentive to emotional events and encode less information about these events (Fraley, Garner, & Shaver, 2000). As stated, they also have greater difficulty retrieving negative memories and report lower emotional intensity associated with these memories when compared to individuals low in attachment avoidance (Mikulincer & Orbach, 1995). Thus, it is possible that these modes of information processing may complicate reports of child behavior problems. Indeed, studies that have found a significant connection between parental attachment avoidance and child behavior problems have relied on observational data, teacher report, or child self-report (e.g., Cowan, Cowan, & Mehta, 2009); Kouvo & Silvan, 2010; Mills-Koonce et al., 2011) for measurement of child behaviors as opposed to parent report utilized in the current study.

Another possibility is that these findings may be accounted for by the demographic characteristics unique to the present sample. As has been highlighted, the sample was composed of predominantly middle to upper-middle class, highly educated mothers. Thus, the children being reported upon likely had access to adequate health and educational resources, as well as social support. These factors may have served as buffers against the potentially deleterious effects of elevated levels of parental attachment avoidance on child adjustment, leading to the

lack of association between maternal attachment avoidance and child adjustment in this study. However, regardless of the higher income and education levels represented in this study, maternal attachment anxiety still exerted an effect on child adjustment, with greater levels of attachment anxiety contributing to poorer child adjustment. This inconsistency is likely because parental attachment anxiety tends to result in inconsistent, anxiety-driven caregiving, while parental attachment avoidance tends to lead to minimally involved caregiving (Belsky, 1997). Thus, children with sufficient financial resources may be less affected by parental attachment avoidance because they are able to obtain adaptive care and positive investment elsewhere, but may be vulnerable to the effects of parental attachment anxiety due to such parents' inconsistent, yet intense, modes of caregiving. As is evident, future research should seek to better understand the influence of parental attachment avoidance upon child adjustment in families of diverse socioeconomic backgrounds, ideally through the use of multiple informants of child behavior to disentangle the potentially confounding effects of avoidant individuals' attentional, encoding, and retrieval processes.

Limitations

Several limitations of the present study should be noted. First, the cross-sectional design of the current study does not allow for the designation of causal mechanisms or directionality between variables. Thus, future longitudinal studies are needed to determine the causal associations between these variables over time. Additionally, as discussed, major findings of this study are based solely on mothers' reports of their own characteristics and child behaviors. Because of this, rater bias, or common method variance, may have influenced the results. It is possible that findings reflect participants' perceptions of themselves and their children, rather than an objective perspective of parental and child characteristics. For parent attributes, the use

of self-report may be the most appropriate method for measuring different aspects of psychological well-being, as research in this area has suggested that findings based on self-report data are largely congruent with findings based on multiple informants and/or observational data (e.g., Creasey & Hesson-McInnis, 2001). However, findings should be interpreted with caution until they are replicated using multiple informants and/or observational measures of child behavior.

In addition, because of the low numbers of fathers who participated in the current study, they were excluded from analyses. As a result, the models were only tested with mothers and generalization of results to fathers is limited. Although mothers are often primary attachment figures (Bowlby, 1969), including paternal factors in addition to maternal factors within the study of child psychosocial adjustment has been found to add to the amount of variance explained in models predicting child emotional symptoms (Michiels, Grietens, Onghena, & Kuppens, 2010). Both cross-sectional and longitudinal results support the contention that mother and father involvement explain unique variance in children's adjustment (Cookston & Finlay, 2006). As such, future studies should include mothers and fathers to establish whether similar variables are involved in the impact of attachment orientations upon child adjustment.

Generalization to populations dissimilar to that of the current sample also cannot be ensured. Though snowball sampling on social media as utilized in the present study served as a simple and efficient process for data collection, a sample representative of mothers and children across the United States was not obtained. The sample was majority Caucasian, highly educated, middle to upper-middle class mothers. These characteristics are likely due, in part, to the recruitment of participants through social media, which more readily targeted mothers with sufficient personal resources allowing them access to online media. The geographical location in

which the current study originated also likely contributed to the ethnic composition of the sample. As such, generalizability to populations beyond those similar to that of the sample should be made with caution.

Finally, the models tested in the present study assumed parent attributes are important determinants of child behavior problems. However, differential susceptibility (Belsky & Pluess, 2009) and goodness-of-fit (Thomas & Chess, 1977) models, as well as increasing research evidence, suggest that transactional relationships between parent and child characteristics should be considered as best capturing processes driving child adjustment. For example, child temperament, or biologically-based individual differences in reactivity and self-regulation (Rothbart & Bates, 1998), has been implicated as having interactional effects upon parent-child relationships and subsequent stress generation (Casalin, Tang, Vliegen, & Luyten, 2014). Future research using longitudinal data and/or statistical procedures allowing for the designation of bidirectional causality should be pursued to better understand the complex associations between parent and child attributes in the generation of child outcomes.

Implications

Theoretical implications. Despite these limitations, the current study has several strengths and important implications. Theoretically, the results of this study support basic tenets of attachment theory. In particular, findings back the construct of internal working models that encompass views of self and others. This study extends the idea of internal working models by suggesting that such self-views may include how kind or critical one is towards the self during periods of suffering, or one's level of self-compassion. Findings connecting attachment anxiety, self-compassion, and parenting stress also serve as support for the centrality of emotional regulation to attachment theory. As reviewed, high levels of attachment anxiety should

theoretically result in hyperactivation of the attachment system. This contention appears to have been reinforced in this study, as higher levels of attachment anxiety predicted lower self-compassion, including an over-identification with negative thoughts and feelings, which contributed to greater difficulty managing negative emotions and greater parenting stress.

In addition, attachment theory rests on the basic assumption that parental characteristics and behavior impact child adjustment; however, the means by which this occurs has not been entirely clear. The present study partially illuminates this process by suggesting that parenting stress and self-compassion may be mechanisms by which parental attachment dimensions affect parenting behavior and child development. Similarly, it has also been theoretically asserted that attachment representations may be transmitted across generations (vanIJzendoorn & Bakermans-Kranenburg, 1997). Although this study did not specifically explore this topic, it points to the notion that attachment transmission and child outcomes may be impacted by the variables of self-compassion and parenting stress. As such, it may be useful to explore these variables as mechanisms of inter-generational attachment transmission in future investigations within this line of research.

Research implications. In all, the present study posits a new avenue to explain the association between parental attachment and child adjustment, particularly the association between maternal attachment anxiety and child adjustment. As such, there are numerous implications for future research, some of which have already been noted. First, it is clear from this study that further empirical research is needed to better understand the relationships between attachment avoidance and self-compassion, as well as parental attachment avoidance and child adjustment. As stated, multiple informants of child adjustment may be particularly useful in decreasing the probability of confounding variables within the study of these constructs. In

addition, given that attachment anxiety and self-compassion appeared to function similarly in their influence upon child adjustment in this study, it may be interesting to further probe these constructs to better understand what drives their analogous impact upon child adjustment. For example, as posited above, attachment anxiety and self-compassion seem to have comparable impact upon emotional regulation and interpersonal skills (e.g., Mikulincer, Shaver, & Pereg, 2003; Neff, 2003a; Neff & Beretvas, 2013), which may make these worthy areas of further exploration in regards to their impact on child adjustment.

Conceptually, this area of research could also be advanced through exploring additional factors in the relationship between parental attachment and child adjustment. For example, data on marital quality and distress has been found to add predictive power to equations predicting children's externalizing and internalizing behaviors (Cowan, Cohn, Cowan, & Pearson, 1996). Parental mental health also appears to interact with parenting behaviors, marital quality, and child mental health in significant ways (Leinonen, Solantaus, & Punamaki, 2003). In addition, as stated, child temperament is likely an important part of the conceptual puzzle, as certain aspects of temperament such as extraversion and regulation capabilities may buffer against the negative impact of parental stress and self-criticism on child adjustment (Casalin, Tang, Vliegen, & Luyten, 2014).

Moreover, it may be valuable to investigate the impact of additional demographic variables in the relationships among parental attachment, self-compassion, parenting stress, and child adjustment. For example, future research could seek to understand how these variables relate and/or alter among adoptive parents, foster parents, and grandparents functioning as primary caretakers for their grandchildren, as there are indications that these parenting experiences may be particularly stressful (e.g., Butler, 2005). The present study also did not

collect data on children's birth order, which has been implicated in the study of child outcomes (e.g., Carlson & Corcoran, 2001). As such, it may be important to understand how child birth order impacts the connections among parental attachment, self-compassion, parenting stress, and child adjustment.

Furthermore, the present study investigated the influence of parental attachment, self-compassion, and parenting stress among child adjustment within a non-clinical sample. Although this investigation presents important conclusions, it does not speak directly to the relevance of these variables within a clinical population. Thus, the links between these variables should be explored within a clinical sample to better understand their salience for this population and identify most critical areas for intervention.

Finally, the current study also presents several methodological considerations for future studies. As noted, longitudinal designs and/or statistical procedures that allow for the exploration of bidirectional causality should be employed whenever possible. Utilization of these techniques will allow for the determination of causal associations between variables over time and the designation of complex associations between parent and child attributes in the production of child adjustment. Furthermore, future studies should seek to recruit fathers in the study of child adjustment. As mentioned, fathers contribute unique variance to explanations of child adjustment (Cookston & Finlay, 2006) and should be included in studies to determine whether similar variables are involved in the impact of attachment representations on child adjustment. Beyond this, it will be important for future studies to recruit more ethnically, socioeconomically, and educationally diverse samples. Although attachment theory appears to be universally valid across cultures (vanIJzendoorn & Sagi-Schwartz, 2008), there is also evidence that attachment representations may vary according to region, acculturation, collectivism, and ethnicity

(Agishtein & Brumbaugh, 2013). Thus, in order to confidently apply research on parental attachment and child adjustment to vulnerable and minority populations, such research must seek to intentionally and sensitively recruit samples representative of these populations.

Clinical implications. Finally, findings of the present study point to several practical implications for improving child adjustment in clinical settings. Most basically, this study emphasizes the importance of providing parenting interventions in the treatment of child internalizing and externalizing behaviors. More specifically, results indicate that mothers, and their children by extension, may benefit from interventions that augment self-compassion as a means of decreasing parenting stress. Several interventions have been developed that focus on the cultivation of self-compassion. For example, Compassionate Mind Training (CMT; Gilbert & Procter, 2006), Compassion Cultivation Training (CCT; Jazaieri et al., 2013), and Mindful Self-Compassion (MSC; Neff & Germer, 2013) training have all been found to increase self-compassion and mindfulness in the case of CCT and MSC (Jazaieri et al., 2014; Neff & Germer, 2013). Therefore, such programs may be useful in helping parents develop adequate self-soothing systems and responsive caregiving behaviors that decrease parental stress and promote healthy child development.

Practitioners may also consider the inclusion of exercises found to promote self-compassion within treatment with parents. For instance, compassionate imagery and loving kindness meditation (LKM) are two commonly used practices within self-compassion training programs (e.g., Gilbert & Irons, 2004; Neff & Germer, 2013) that may easily be incorporated within a parent training protocol. Compassionate imagery asks the individual to visualize the “perfect nurturer,” one who offers unquestioning warmth, non-judgment, and acceptance, and to call upon this nurturer anytime the individual engages in self-judgment (Gilbert & Irons, 2004).

Similarly, LKM is the practice of cultivating caring for the self and others and often begins with directing caring feelings towards the self and subsequently expanding these feelings towards others (Salzberg, 1995). As stated, both practices have been shown to increase compassion for self during short-term courses (Gilbert & Irons, 2004; Weibel, 2007) and could be useful supplements to preexisting parenting programs.

Clinically, results of the present study also suggest that parental attachment histories, particularly attachment anxiety, are important to assess and consider within the treatment of child internalizing and externalizing difficulties. First, given the findings linking lower self-compassion and maternal attachment anxiety, it is important to note that many of the aforementioned interventions focused on self-compassion may initially be experienced as unpleasant or even aversive to parents with insecure attachment representations. Such exercises are likely to activate the attachment system and may incite unprocessed attachment-related memories and emotions. As such, parenting interventions incorporating self-compassion exercises should evaluate and attend to the impact of individual attachment representations.

Finally, this study supports mindful parenting as a means of fostering secure attachment relationships between parents and children (Siegel & Hartzell, 2003). As a framework for parenting, mindful parenting is focused on training parents to intentionally bring moment-to-moment awareness to the parent-child relationship (Duncan, Coatsworth, & Greenberg, 2009). It accomplishes this by developing listening skills, emotional awareness and regulation skills, and practicing compassion and nonjudgmental acceptance within parenting interactions. In so doing, studies have found improvements in child internalizing and externalizing symptoms, parents' own internalizing symptoms, parenting stress, and satisfaction with parenting (Bogels, Hellemans, van Deursen, Romer, & van der Meulen, 2013; Singh et al., 2007; Singh et al.,

2010). The present study and others (Singh et al., 2007) suggests that mindful parenting may be beneficial and act on child adjustment by prompting parents to experience the unconditional, compassionate acceptance of themselves and their children, which may decrease stress and increase parents' abilities to be responsive and attentive to the emotional and physical needs of their children moment-by-moment.

Conclusion

In sum, despite its limitations, this study represents the first to this author's knowledge to explore the associations between attachment dimensions, parenting stress, self-compassion, and child adjustment in a U.S. sample. It rests upon a strong theoretical and empirical foundation and revealed important information about how parental psychological factors contribute to child adjustment. In particular, mothers who have anxious patterns of attachment are more likely to be self-critical of themselves during periods of duress and to experience greater stress related to the demands of parenting. Together, these variables contribute to poorer child adjustment with the presence of greater internalizing and externalizing difficulties and at least partially explain how anxious parental attachment negatively impacts child adjustment. Of distinct importance, self-compassion appears to be a significant part of the relationship between attachment-related anxiety and parenting stress. This study suggests that self-compassion develops through attachment processes and allows parents to more readily access the affiliative self-soothing system, which enables them to manage negative emotions and stress related to caregiving.

With these findings, attachment theory continues to provide a rich and proliferous framework for studying, conceptualizing, and promoting human relationships. Future research should seek to better understand how self-compassion relates to nuanced aspects of attachment theory and the array of constructs implicated in child adjustment within diverse populations.

Collectively, these investigations should continue to guide the development and implementation of clinical interventions that promote reflexive capacity regarding the impact of parental attachment histories on attitudes towards the self and experiences of caregiving stress to ultimately facilitate child and family well-being.

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Appendix A

Review of Literature

Child socioemotional adjustment is significantly influenced and partially determined by the quality of parental caregiving behaviors (Bowlby, 1969; George & Solomon, 1996). In turn, this quality of care may be importantly impacted by parental attachment orientations, which formulate, in effect, internal working models of caregiving (Gilbert, 2005) and may play an essential role in the appraisal and experience of stressors related to parenting (Jarvis & Creasey, 1991). When individuals are securely attached, they may be better equipped to respond to the demands of parenting with consistency and caring (Nygren, Carstensen, Ludvigsson, & Frostell, 2012). In conjunction, the relative amount of compassion or criticism one holds towards the self during instances of pain or failure has been associated with attachment orientations (Neff & Beretvas, 2013), signifying that this variable may be related to the experience of parenting stress and serve to indirectly impact child adjustment as well. However, research investigating the link between parenting stress and self-compassion, as well as distinguishing the potential mediating effects of parenting stress and self-compassion in the relationship between parental attachment and child adjustment, is scarce.

As such, the present review seeks to outline the potential links between parenting stress and self-compassion, as well as the potential intermediary associations of parenting stress and self-compassion in the relationship between parental attachment and child adjustment. To accomplish this, an overview of attachment theory is provided, followed by a consideration of the link between parental attachment and child adjustment. From here, the construct of parenting stress is explored and attention is given to the relationships between parenting stress and parental attachment, as well as parenting stress and child adjustment. Finally, conceptualizations of self-

compassion are examined, along with the association between self-compassion and attachment and the notion of self-compassion as an important psychological resource implicated in the experience of parenting stress. In sum, this critical review points to gaps in the literature and a need for research that addresses the relationship between parenting stress and self-compassion, detailing the potential mediating role of these variables in the association between parental attachment and child adjustment. In so doing, the mechanisms by which parental attachment are theorized to impact child adjustment within attachment theory may be elucidated and more effective parenting interventions that positively shape childhood adjustment and development may be formulated.

Attachment Theory

According to Bowlby (1969), humans are born with an innate biological and psychological system that motivates them to seek proximity to individuals equipped to provide protection (*attachment figures*) during times of need. The development and functioning of this system is highly influenced by early experiences with caregivers, where the provision of accessible and responsive care, especially during times of need, facilitates individual differences in *attachment security*. In Bowlby's (1969) conception, when attachment figures, or caregivers, are consistently caring and responsive, *internal working models* are generated that represent the world as safe, others as reliable and protective, and the self as worthy and capable of environmental exploration and engagement with others. Additionally, the experience of attentive caregiving facilitates the development of an adequate self-soothing, or emotional regulation, system, by which one is able to internalize and draw upon experiences of care and compassion during times of pain or suffering (Gilbert, 2005). In contrast, if experiences with caregivers are characterized by inaccessibility, unresponsiveness, and/or inconsistency during times of need, a

sense of attachment security is not attained, negative working models are formed, and an adequate self-soothing system is not developed, with emotional regulation strategies related to anxiety and avoidance being adopted as means of self-protection (Gilbert, 2005).

Within the literature, these emotional regulation strategies have been termed *secondary attachment strategies*, because they are initially formulated when the primary attachment strategy of proximity seeking to an attachment figure fails to relieve distress or cannot be enacted (Mikulincer, Shaver, & Pereg, 2003). According to Mikulincer et al. (2003), secondary strategies involve the *hyperactivation* or *deactivation* of the attachment system. Hyperactivation is described as intense, frantic efforts to achieve proximity to attachment figures and ensure attention and support, while deactivation refers to the inhibition of proximity-seeking behaviors through the evasion and disregard of threats that may activate the attachment system (Mikulincer & Shaver, 2005). People who tend to employ hyperactivation strategies compulsively seek proximity and are hypersensitive to signals of abandonment or rejection, while those who have a proclivity towards deactivation strategies tend to maximize distance from others and experience unease with closeness (Mikulincer et al., 2003). Thus, these affect regulation strategies emerge from internal working models related to insecure attachment and come to represent an individual's prototypic means of responding to distress or threats, especially in close relationships.

Bowlby (1988) further assumed that although the attachment system is most critical in early life, internal working models developed in infancy and childhood are highly stable and carried forward into adolescent and adult relationships where they serve as a guide for one's expectations, perceptions, and behaviors. Given this, empirical study of attachment theory in adolescents and adults has focused upon individual *attachment styles*, defined as the systematic

pattern of relational expectations, emotions, and behaviors that results from internalization of a particular history of interactions with attachment figures and ensuing reliance upon specific attachment-related strategies of affect regulation (Fraley & Shaver, 2000; Shaver & Mikulincer, 2002). Early work utilized Ainsworth, Blehar, Waters, and Wall's (1978) categorizations of attachment styles in infancy—namely, *secure*, *anxious-ambivalent*, and *avoidant*. These categorizations were devised through observing infants' reactions to separation from and reunion with their mothers in the Strange Situation test. During this test, infants considered to have secure attachment to their caregivers were observed using their caregivers as sources of comfort and support to control feelings of distress generated by separation. However, infants classified as having anxious-ambivalent attachment to their caregivers made conflicted and often futile attempts to garner support from their caregivers, likely indicating reservation about the caregiver's ultimate ability to be accessible and responsive to the infant's needs. Finally, infants demarcated as displaying avoidant attachment towards their caregivers did not actively seek support from their caregivers when distressed, instead appearing to cope internally and desire distance from caregivers.

Later, Hazan and Shaver (1987) successfully translated these three attachment styles to the domain of adult romantic relationships though demonstrating that adults fell into one of the three categories of secure, anxious-ambivalent, or avoidant as defined by distinctly different means of experiencing romantic love and mental models of self and other. The use of categorical measures rather than continuously distributed scales to assess attachment style proved to be problematic, however, for conceptual and data analysis reasons. Conceptually, there was no evidence supporting the latent existence of discrete categorical attachment styles,

and in terms of data analysis, categorical measurement limited the number of statistical techniques available to researchers (Simpson & Rholes, 1998).

Given these challenges, Bartholomew (1990) proposed and Bartholomew and Horowitz (1991) subsequently tested a theory of attachment styles that delineated four prototypic attachment patterns according to the combination of two dimensions: a person's self-perception (positive or negative) and perception of others (positive or negative). These four attachment patterns were labeled *secure*, *preoccupied*, *dismissing*, and *fearful*. Secure was defined as a positive model of self and others, while preoccupied was outlined as a negative model of self and positive model of others. Moreover, dismissing was demarcated as a positive model of self and negative model of others, while fearful was defined as a negative model of self and other. Bartholomew and Horowitz (1991) also acknowledged that these categorizations could be conceptualized according to the dimensions of *dependency* and *avoidance*, with low dependency and avoidance characterizing secure attachment, high dependency and low avoidance typifying preoccupied attachment, low dependency and high avoidance exemplifying dismissing attachment, and high dependency and avoidance embodying fearful attachment.

Building on these models, more recent work has revealed that attachment styles appear to be best conceptualized dimensionally, or continuously, as opposed to categorically, with *attachment anxiety* and *attachment avoidance* representing the two dimensions by which attachment style can be measured (Brennan, Clark, & Shaver, 1998). In this conceptualization, congruent with the theories of Bowlby (1969) and Ainsworth et al. (1978), attachment anxiety is described as the extent to which an individual utilizes hyperactivating strategies, while attachment avoidance reflects the degree to which an individual relies upon deactivating strategies. Within this framework, any individual's attachment style may be characterized by the

presence or lack of anxiety or avoidance in the context of intimate relationships. As such, attachment security is said to be present in an individual when both anxiety and avoidance dimensions are assessed to be low (Brennan et al., 1998). To this end, attachment theory provides an extensively researched and particularly germane framework for conceptualizing and positioning the present study and review.

Parental Attachment and Child Adjustment

As stated, attachment styles are likely intricately intertwined with the caregiving system and a parent's ability to provide quality care to children (Gilbert, 2005), which, in turn, significantly influences child socioemotional adjustment (Bowlby, 1969; George & Solomon, 1996; vanIjzendoorn, 1995). When mothers with secure working models of attachment have been compared to mothers with insecure models of attachment, they have been found to be warmer, more responsive, and highly attuned to both the positive and negative states of their infants (Grossman, Fremmer-Bombik, Rudolph, & Grossman, 1988; Haft & Slade, 1989). Mothers with avoidant attachment styles, in particular, have been found to be less sensitive with their infants than mothers with secure attachment when experiencing elevated levels of psychological distress (Mills-Koonce et al., 2011). Congruent with these findings, it has been suggested that the ability to direct attention and resources towards the needs of others, especially when one is distressed or threatened, may only be possible when one feels reasonably secure oneself (Mikulincer & Shaver, 2005). Thus, it appears that securely attached parents may perceive their children's attachment signals more accurately and be more able and willing to react promptly and adequately than are insecure parents.

Extending this, parental attachment orientations have been linked with child adjustment. In general, Cowan, Cohn, Cowan, and Pearson (1996) found that parents' attachment histories

showed consistent associations with parenting style, as observed during children's preschool years, and functioned as moderate to strong predictors of children's externalizing and internalizing behaviors in elementary school. More specifically, children have been found to be at increased risk for internalizing and externalizing behavior, as well as lower academic achievement if their parents have insecure working models of attachment to their parents or partners (Cowan, Cowan, & Mehta, 2009). In contrast, children who have experienced at least one securely attached parent in infancy have been found to be more empathic and have fewer difficulties in social relationships and thought processes in preadolescence when compared to children of two insecurely attached parents (Kouvo & Silven, 2010). Parental attachment anxiety may be particularly salient in child adjustment, as both maternal and paternal attachment anxiety have been specifically implicated in children's internalizing and externalizing behaviors (Al-Yagon, 2008; Marchand, Schedler, & Wagstaff, 2004). In sum, parents' developmental histories related to attachment appear to directly influence childrearing quality and, in turn, child development.

Parenting Stress

Attachment orientation may be a potentially significant factor in the appraisal and experience of parenting stress as well. Simply put, parenting stress can be defined as the aversive psychological effects deriving from the demands of parenthood (Deater-Deckard, 1998). More specifically, parenting stress involves a perceived incongruence between the demands of parenting and parental resources (e.g., parenting skills, perceived competence, emotional support) to meet such demands (Abidin, 1992; Deater-Deckard, 2004). Within models of parenting, the parent's personality and psychological resources are regarded as most important—more so than child individual characteristics or contextual stress and support—in determining

parental functioning (Abidin, 1992; Belsky, 1984). As such, understanding individual differences in parental appraisals of stressors is particularly important to apprehending conceptions of parenting stress, as these differences in the stress reaction are likely vital to understanding individual differences in parents' psychosocial adjustment (Deater-Deckard, 1998). In particular, parental developmental history has been found to be more prominent as a direct predictor of parenting behavior than originally conceived, with internal working models of the self as a parent, created out of the individual's attachment history, being thought to influence the appraisal of threats and subsequent levels of parenting stress (Abidin, 1992).

Parenting Stress and Attachment

Though scarcely studied in relation to parenting stress, studies of parental attachment and parenting experiences have shown a consistent connection between insecure attachment and parenting difficulties, with the specific findings of these studies being mixed. For one, Nygren, Carstensen, Ludvigsson, and Frostell (2012) found significant associations between perceptions of greater parenting stress and attachment anxiety, but did not find evidence supporting a similar association between parenting stress and attachment avoidance. Similarly, Vasquez, Durik, and Hyde (2002) found parents with fearful attachment styles to experience greater difficulty in family and work domains, with parents with dismissing and preoccupied attachment styles being found to experience greater difficulty than parents with secure attachment, but less difficulty than those with fearful attachment styles. Contrary to this, however, Rholes, Simpson, and Friedman (2006) found parents with more avoidant attachment styles to experience greater stress following the birth of a child and to perceive parenting as less satisfying and personally meaningful. Other studies have found that individuals with more avoidant or anxious ambivalent attachment experience higher parenting stress one year after childbirth (Trillingsgaard, Elkklit, Shevlin, &

Maimburg, 2011). They also anticipate being easily irritated by children, approve of stricter disciplinary practices, and generally hold more negative models of parenthood and parent-child relationships, with individuals with avoidant attachment reporting comparatively less desire to have children (Rholes, Simpson, Blakely, Lanigan, & Allen, 1997). Thus, though results delineating the relationship between different insecure attachment styles and parenting stress are varied and at times contradictory, these studies congregate around the finding that secure attachment orientations appear to be related to the experience of lower levels of parenting stress.

Parenting Stress and Child Adjustment

Parenting stress has also come to be identified as an important determinant of parenting behavior and child adjustment (Abidin, 1992). To be sure, although parenting is a highly gratifying and meaningful experience for many, it is also inevitably wrought with challenges. Parents are confronted with a myriad of extrafamilial, interpersonal, and child stressors that can negatively impact parenting practices and child behaviors (Webster-Stratton, 1990). Even the daily stressful events encountered by parents have been correlated with children's emotional and behavioral problems (Banez & Compas, 1990), with minor parenting hassles being positively associated with child behavior problems (Creasey & Reese, 1996) and predictive of child, parent, and family functioning (Crnic & Greenberg, 1990). Within the literature, higher levels of parenting stress have been consistently associated with negative child outcomes, such as higher instances of internalizing and externalizing difficulties (Anthony et al., 2005), conduct disorders, social aggression, attention problems, (Abidin, Jenkins, & McGaughey, 1992), disruptive behaviors (Barry, Dunlap, Cotton, Lochman, & Wells, 2005; Eyberg, Boggs, & Rodriguez, 1992), anxious and depressive symptoms (Rodriguez, 2011), preadolescent psychopathology (Mesman & Koot, 2000), decreased social competence (Ostberg & Hagekull, 2013), and

decreased pretend play and self-assertion among toddlers (Creasey & Jarvis, 1994). Of even more concern, parenting stress in conjunction with anger expression has been found to positively correlate with child abuse potential (Rodriguez & Green, 1997). Even when parenting stress is compared to other predictors, such as child health, child temperament, and parent-child relationships, parenting stress has emerged as the most powerful predictor of child behavior problems (Goldberg et al., 1997).

Several mechanisms have been posited to explain the relationship between parenting stress and child adjustment. One of the most extensively studied is parenting practices. In a study of the relationships between parenting stress, childrearing behaviors and attitudes, and child behavior, Deater-Deckard and Scarr (1996) found a small, but statistically reliable, relationship between parenting stress, authoritarian discipline, and child misbehavior. Within this study, both mothers and fathers who reported greater stress also reported the utilization of more authoritarian, power assertive discipline strategies, which in turn were related to greater child misbehavior. Similarly, a more recent study using structural equation modeling found parenting stress to be determinant of mothers' and fathers' parenting, with higher levels of childrearing stress being associated with a more demanding and less responsive parenting style (Ponnet et al., 2013). Furthermore, family life-stress has been found to predict problematic parenting practices, such as over-involved/protective and low warmth/engaged parenting, which were found to be predictive of early childhood internalizing difficulties (Bayer, Sanson, & Hemphill, 2006). Despite these consistent findings, other studies have found no evidence to support the mediation of parenting stress and child outcomes by parent behavior, uncovering instead a direct association between parenting stress and child behavior (Crnic, Gaze, & Hoffman, 2005).

Beyond parenting style, or childrearing behaviors, other mechanisms have been proposed to account for the relationship between parenting stress and child adjustment. For one, parental distress, perhaps due to stress, has been associated with child disruptive behavior problems (Barry et al., 2005) and parental anxiety and depression have been associated with early childhood internalizing difficulties (Bayer et al., 2006). Dysfunctional parent-child interactions, as a facet of parenting stress, have also been shown to be a specific predictor of childhood internalizing symptoms when controlling for parental psychopathology (Costa, Weems, Pellerin, & Dalton, 2006). Furthermore, parenting stress may impact parenting self-efficacy, or an individual's appraisal of one's competence in the parental role, which may account for variance in parenting skills (Sevigny & Loutzenhiser, 2009). Thus, though this issue has yet to be resolved, it is clear that parenting stress is importantly implicated in child adjustment, whether directly or indirectly through any number of mechanisms.

Finally, the permanency and developmental course of parenting stress is important to consider here. In all, parenting stress appears to be a relatively stable individual characteristic, especially throughout children's early years (Crnic et al., 2005), though a slight decrease in average levels of parenting stress has been noted as children age (Ostberg, Hagekull, & Hagelin, 2007; Williford, Calkins, & Keane, 2007). Even so, parenting stress experienced during the infancy period has been found to be a rather strong predictor of stress approximately 7 years later, with mothers who experienced higher levels of parenting stress in the infancy period reporting slightly higher levels of stress during the school-aged period in comparison to mothers from a child sex- and age-matched group (Ostberg et al., 2007). It also may be that parenting stress is cumulative throughout time and builds across developmental periods, as parents who reported stress at child age 3 were found to be more likely to report higher stress at child age 5

(Crnic et al., 2005). In other words, it is probable that across developmental stages, parenting tasks and challenges may change, but be no less stressful to experience, hence creating increased risk for parenting and child functioning and beckoning for further research investigating the relationships among parenting stress and potential protective factors.

Self-Compassion

One protective factor that may affect parental appraisals of the demands of parenting and subsequent experiences of parenting stress is an individual's attitude towards the self during times of duress, or one's level of self-compassion. Originating from Eastern philosophical thought, and specifically Buddhist philosophy, self-compassion can be simply conceptualized as compassion directed toward the self (Germer & Neff, 2013). More specifically, self-compassion has been operationalized and validated in the West as encompassing three components: self-kindness, common humanity, and mindfulness (Neff, 2003a; Neff, 2003b). Self-kindness is described as offering kindness to the self rather than judgment or criticism during periods of failure or suffering, while common humanity refers to perceiving one's experiences as common to the human condition rather than isolating, and mindfulness is designated as the ability to observe and note painful thoughts and feelings rather than over-identify with them (Neff, 2003a; Neff, 2003b).

Self-compassion can further be conceptualized within an evolutionary paradigm. According to Gilbert (1989, 2005), compassion may be understood as a product of the mammalian evolved caregiving system that positions the self to respond to the protective and survival needs of others. Because humans can respond to both external and internal cues as if they are synonymous, self-compassion occurs when the self responds to internal cues of threat with socially evolved caregiving abilities, including the desire to care for the well-being of

another, distress sensitivity and recognition, sympathy, distress tolerance, empathy, non-judgment, and emotional warmth (Gilbert & Procter, 2006). Within this conceptualization, self-compassion is also highly connected to evolved physiological affect regulation systems. When the self is approached with the caregiving mentality of self-compassion, affiliative emotions are activated, such as connectedness and soothing. Conversely, when internal stimuli are approached with self-criticism, the threat-focused physiological system is activated, cuing emotions such as anger, anxiety, and disgust (Gilbert, 1989, 2005, 2014). It is thought that this threat-focused affect regulation system is dominant in people with high shame and self-criticism and that the soothing-focused affect regulation system is inadequately accessible (Gilbert, 2009).

Self-Compassion and Attachment

Building upon these conceptualizations, it has been argued that attachment theory may be implicated in the development of self-compassion (Gilbert, 2005; Gilbert & Procter, 2006; Neff & Beretvas, 2013). As elucidated above, a central premise of attachment theory is that experiences of a caregiver as accessible and responsive in times of need facilitates the development of attachment security (Bowlby, 1969). If a caregiver is consistently caring and responsive, these experiences generate the development of internal working models that represent others as safe and supportive and the self as worthy of love and connectedness. Additionally, the provision of these positive caregiving experiences also facilitates the development of an adequate self-soothing, or emotional regulation, system, by which one is able to internalize and draw upon experiences of care and compassion during times of pain or suffering (Gilbert, 2005). However, if one's experiences of a caregiver are characterized by inaccessibility, unresponsiveness, and/or inconsistency during times of need, emotional regulation strategies related to anxiety and avoidance are developed as means of self-protection,

secure attachment does not result, and an adequate self-soothing system is not developed. (Gilbert, 2005).

As such, safe, supportive environments, and the experience of caring and supportive relationships with caregivers are thought to nurture individual self-compassion, as individuals with internalized representations of soothing and responsive caregiving behavior are better able to access and direct such responses towards the self. In contrast, individuals raised in threatening, insecure environments and who experience critical and/or dismissive relationships with caregivers are likely to develop high levels of self-criticism that stem from perceiving others as sources of threat and striving to avoid criticism and rejection from others (Gilbert & Procter, 2006).

Indeed, a few studies have established a relationship between attachment orientation and compassion. Mikulincer, Shaver, Gillath, and Nitzberg (2005) found that increases in attachment security cultivated compassion and altruistic behavior, while attachment-related anxiety and avoidance negatively impacted compassion and altruistic behavior, indicating that attachment security may provide a foundation for the enactment of caregiving behaviors, while insecure attachment may impede the implementation of caregiving behaviors. Self-compassion also appears to mediate the relationship between attachment and mental/physical health (Raque-Bogdan, Ericson, Jackson, Martin, & Bryan, 2011) and attachment and subjective well-being (Wei, Liao, Ku, & Shaffer, 2011), suggesting that well-being and health may be promoted via the mechanisms of self-compassion—feeling cared for, connected, and emotionally calm. It is likely that these benefits may be extended to the experience of parenting stress as well, as stress is an important component of health and well-being.

Furthermore, secure attachment has been found to correlate with higher levels of self-compassion, while preoccupied and fearful attachment have evidenced an association with lower levels of self-compassion, and dismissive attachment has been found to lack a relationship with self-compassion (Neff & Beretvas, 2013). Finally, in a study of self-compassion and psychological resilience among adolescents and young adults, Neff and McGehee (2010) found maternal support to be associated with significantly greater self-compassion, while maternal criticism was correlated with less self-compassion. In sum, these authors concluded that self-compassion may be viewed as an internal manifestation of the parent-child relationship and that one means by which parents may impact their children's functioning is by cultivating self-compassionate or self-critical inner dialogues. Though a small body of work, these studies support self-compassion as a viable mechanism in the attachment and caregiving process that may facilitate salubrious child adjustment.

Correlates of Self-Compassion

Beyond this, self-compassion has recently come to be widely studied and recognized as an important individual psychological resource. One of the most consistent findings within the literature is that greater self-compassion is significantly associated with greater psychological well-being and life satisfaction and appears to provide a buffer against negative emotions such as depression and anxiety, as well as overall psychopathology, both in younger and older adults (Allen, Goldwasser, & Leary, 2012; MacBeth & Gumley, 2012; Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, 2003b; Neff, Kirkpatrick, & Rude, 2007; Neff, Rude, & Kirkpatrick, 2007). Additionally, self-compassion has been found to have significant positive associations with such positive psychological and personality traits as happiness, optimism, positive affect, wisdom, curiosity and exploration, agreeableness, extroversion, and

conscientiousness, and was found to contribute to positive psychological health beyond the effects accounted for by personality (Neff, Rude, & Kirkpatrick, 2007). Furthermore, self-compassion seems to play an important role in physical health and motivation, with higher levels of self-compassion being associated with reduced levels of stress, depression, and anxiety associated with chronic pain and pain adjustment (Costa & Pinto-Gouveia, 2013; Wren et al., 2012), increased motivation for self-improvement following failure (Breines & Chen, 2012), and greater orientation towards mastery goals versus performance goals in an academic setting (Neff, Hsieh, & Dejitterat, 2005).

Self-compassion and interpersonal functioning. Self-compassion has been lesser studied in conjunction with interpersonal functioning, but more studies are beginning to investigate such constructs in concert. For one, in a study investigating the role of self-compassion in romantic relationships, Neff and Beretvas (2013) found that individuals higher in self-compassion exhibited more positive relationship behaviors than those deficient in self-compassion, with self-compassion evidencing stronger predictive ability for relationship behaviors than trait self-esteem or attachment orientation. Additionally, a few studies have shown higher levels of self-compassion to be significantly associated with greater perspective taking and forgiveness (Neff & Pommier, 2013), as well as greater likelihood of compromise during interpersonal conflict resolution (Yarnell & Neff, 2013). In all, it appears that self-compassion may function in an interpersonal context through enabling individuals to recognize their role in negative events without over identifying with and becoming overwhelmed by negative emotions (Leary, Tate, Adams, Allen, & Hancock, 2007), an ability that could be especially beneficial for parents in response to the stressors of parenthood.

Self-compassion, emotional regulation, and coping. The ability of those high in self-compassion to simultaneously recognize their role in negative events without over identifying with and becoming overwhelmed by negative emotions may also be construed as a means of coping or emotional regulation. According to Thompson (1994), emotional regulation may be defined as the processes by which individuals are attentive to their emotions, manage the intensity and duration of emotional arousal, and adjust the nature and meaning of affective states in response to distressing stimuli. Neff (2003a) suggested that self-compassion may be construed as an emotional-approach coping strategy, in which painful feelings are approached with kindness and a sense of common humanity. This, in turn, has the potential to transform negative emotions into more positive states, allowing the broadening of perception and the ability to alter oneself and/or the environment as needed (Fredrickson, 2001). As a result, people high in self-compassion may have greater self-regulatory resources (Terry & Leary, 2011), as they are less likely to suppress or amplify emotions (Neff, Kirkpatrick, & Rude, 2007), which can drain one's self-regulatory resources available for other tasks (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Schmeichel, 2007).

Empirically, a relationship between self-compassion, emotional regulation, and coping appears to exist. When therapy has incorporated a process called compassionate mind training (CMT) that targets abilities to utilize and practice compassion, participants have experienced significant increases in their ability to be self-soothing and focus on feelings of warmth and assurance for the self (Gilbert & Procter, 2006). Likewise, in a study investigating self-compassion as an emotion regulation strategy in major depressive disorder, Diedrich, Grant, Hofmann, Hiller, and Berking (2014) found that decline in depressed mood was significantly greater in participants who were part of the self-compassion condition than those in the waiting

list condition. Higher self-compassion has also been negatively associated with emotion regulation difficulties (Vettese, Dyer, Li, & Wekerle, 2011) and emotional intrusion following divorce (Sbarra, Smith, & Mehl, 2012), as well as positively associated with the use of more emotion-focused strategies and fewer avoidance-oriented strategies in response to setbacks (Neff et al., 2005). For parents, utilizing avoidant coping in response to parenting stressors may be particularly harmful, as this strategy has predicted increases in maternal depressive symptoms during early adolescence (Steger, Gondoli, & Morrissey, 2013). Parents high in self-compassion, then, may benefit from the emotional regulation and emotion-focused coping properties of self-compassion, allowing them to invest their time and energy as parents more judiciously, deal with the stressors of parenting more effectively, and facilitate healthier child adjustment.

The Current Study

Despite its potentially valuable contribution within interpersonal and developmental milieus, self-compassion has received little empirical attention in this line of research. To date, this author is aware of only one study by Moreira, Gouveia, Carona, Silva, and Canavarro (2014) investigating the mediating role of self-compassion and parenting stress in the relationship between maternal attachment and children's quality of life. Moreira et al. (2014) generated a serial multiple mediator model with a sample of Portuguese mother-child dyads in which they found mothers' attachment to their own mothers to be indirectly correlated with child self-reports of quality of life via the mechanisms of self-compassion and parenting stress. More specifically, they found higher levels of attachment-related anxiety and avoidance among mothers to be associated with decreased children's quality of life, as mediated by lower levels of maternal self-compassion and higher levels of parenting stress.

Although this study is valuable in being the first to explore self-compassion in relation to attachment, parenting stress, and child adjustment, it is also limited. In particular, the results of Moreira et al.'s (2014) study are confined to a Portuguese population and cannot be confidently applied to a U.S. population. For one, although attachment theory appears to be universally valid across cultures (vanIjzendoorn & Sagi-Schwartz, 2008), there is also evidence that attachment patterns may vary according to region, acculturation, collectivism, and ethnicity (Agishtein & Brumbaugh, 2013). Additionally, cross-cultural studies on parenting stress have reported distinct types and different levels of parenting stress across cultures (Krulik et al., 1999; Solis & Abidin, 1991). Finally, though self-compassion has been seldom studied cross-culturally, there are also indications that average levels of individual self-compassion may vary according to culturally prescribed interpretations of autonomy and connectedness (Neff, Pisitsungkagarn, & Hsieh, 2008).

Beyond this, the use of a regression-based multiple mediator model may obscure important relationships between the variables of attachment, parenting stress, self-compassion, and child adjustment that may be more fully captured by path analytic procedures. In addition, although child quality of life is an important subjective perception of physical, psychological, and social functioning often studied in conjunction with chronic illness (e.g., Danckaerts et al., 2010), measures of this construct do not primarily seek to assess child psychological and adaptive functioning. Given this, the construct of child adjustment, as defined by the presence or lack of internalizing and externalizing behavioral problems and level of adaptive functioning (Achenbach & Rescorla, 2001), may be a more fruitful outcome for study with demonstrated predictive value for adult psychiatric disorders and functioning (e.g., Caspi, Moffitt, Newman, & Silva, 1996).

Conclusion and Potential Implications

In all, this review presents a rationale for a new line of research that considers self-compassion within interpersonal and developmental contexts. It illustrates that self-compassion is importantly associated with attachment orientations, which in turn evidence implications for parenting stress and child adjustment. When parents are more securely attached, they appear to be better equipped to cope with the stressors of parenting, thereby contributing to healthy child adjustment. Self-compassion is a significant personal resource that may further speak to parents' abilities to adapt to the changing developmental needs of their children, deal with the stressors of parenting effectively, and facilitate healthy child adjustment.

Given these apparent and plausible connections, positioning self-compassion within the constellation of attachment, parenting stress, and child adjustment is a logical and potentially consequential space for advancing scholarly inquiry. Beyond the gaps in research that pursuing study in this area will fill, elucidating the mechanisms by which parental attachment is theorized to impact child adjustment may build upon attachment theory in important ways. As is evident, attachment theory is foundationally driven by the notion that parental characteristics and behaviors impact child adjustment; however, the means by which this process occurs are unclear. Indeed, in a meta-analysis of adult attachment representations, parental responsiveness, and infant attachment, vanIJzendoorn (1995) found that parental attachment security accounted for only about 12% of the variation in parents' responsiveness to their children. Thus, there are clearly additional variables influencing parenting and subsequent child adjustment that have not been fully captured by current research. Exploration of the mechanisms of parenting stress and self-compassion may serve to at least partially illuminate some of these variables and advance

understanding of *how* parental attachment dimensions may affect parenting behavior and child development.

Furthermore, and perhaps of upmost value, understanding the links among parental attachment, parenting stress, self-compassion, and child adjustment within a U.S. population has the potential to aid practitioners in developing more effective parenting interventions.

Importantly, a few studies have established that self-compassion can be cultivated/enhanced and that this cultivation/enhancement augments well-being and decreases dysfunction and distress (Adams & Leary, 2007; Leary et al., 2007). Thus, if self-compassion proves to be a viable mechanism in the associations between parental attachment, parenting stress, and child adjustment, parenting interventions that target this construct may present a means of positively shaping childhood adjustment and creating functional, thriving families.

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Appendix B

Questionnaires

Demographic Questionnaire

The following set of questions is designed to assess relevant participant demographics. Please answer them as honestly as possible.

1. What is your age?
2. What is your sex?
3. What is your ethnicity?
4. What is your nationality?
5. What is your sexual orientation?
6. What is your relationship status?
 - a. Married
 - b. Partnered
 - c. Single
 - d. Separated
 - e. Divorced
7. If you are in a relationship, what is the duration of your present relationship?
8. What is the highest level of education you have completed?
 - a. Some high school
 - b. High school or equivalent
 - c. Vocational/technical school (2 year)
 - d. Some college
 - e. Bachelor's degree
 - f. Post-graduate degree
9. What is your current household income?
 - a. Under \$10,000
 - b. \$10,000-\$19,999
 - c. \$20,000-\$29,999
 - d. \$30,000-\$39,999
 - e. \$40,000-\$49,999
 - f. \$50,000-\$74,999
 - g. \$75,000-\$99,999
 - h. \$100,000-\$150,000
 - i. Over \$150,000

10. What is your child's age?
11. What is your child's grade level?
12. What is your child's sex?
13. What is your child's ethnicity?
14. What is your child's nationality?
15. How many siblings does your child have?
16. Has your child been diagnosed with any of the following? (Please check all that apply)
 - a. Anxiety Disorder
 - b. Depressive Disorder
 - c. Attention-Deficit Hyperactivity Disorder
17. Does your child currently take any prescribed psychopharmacological medications?

If so, please list your child's currently prescribed medications:

**The Experiences in Close Relationships-Revised (ECR-R) Questionnaire
Fraley, Waller, and Brennan (2000)**

The statements below concern how you feel in emotionally intimate relationships. We are interested in how you *generally* experience relationships, not just in what is happening in a current relationship. Respond to each statement by clicking a number to indicate how much you agree or disagree with the statement.

Strongly Disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. I'm afraid that I will lose my partner's love.
2. I often worry that my partner will not want to stay with me.
3. I often worry that my partner doesn't really love me.
4. I worry that romantic partners won't care about me as much as I care about them.
5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.
6. I worry a lot about my relationships.
7. When my partner is out of sight, I worry that he or she might become interested in someone else.
8. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.
9. I rarely worry about my partner leaving me.
10. My romantic partner makes me doubt myself.
11. I do not often worry about being abandoned.
12. I find that my partner(s) don't want to get as close as I would like.
13. Sometimes romantic partners change their feelings about me for no apparent reason.
14. My desire to be very close sometimes scares people away.
15. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.
16. It makes me mad that I don't get the affection and support I need from my partner.
17. I worry that I won't measure up to other people.
18. My partner only seems to notice me when I'm angry.
19. I prefer not to show a partner how I feel deep down.
20. I feel comfortable sharing my private thoughts and feelings with my partner.
21. I find it difficult to allow myself to depend on romantic partners.
22. I am very comfortable being close to romantic partners.
23. I don't feel comfortable opening up to romantic partners.
24. I prefer not to be too close to romantic partners.
25. I get uncomfortable when a romantic partner wants to be very close.
26. I find it relatively easy to get close to my partner.
27. It's not difficult for me to get close to my partner.
28. I usually discuss my problems and concerns with my partner.
29. It helps to turn to my romantic partner in times of need.
30. I tell my partner just about everything.
31. I talk things over with my partner.

32. I am nervous when partners get too close to me.
33. I feel comfortable depending on romantic partners.
34. I find it easy to depend on romantic partners.
35. It's easy for me to be affectionate with my partner.
36. My partner really understands me and my needs.

SELF-COMPASSION SCALE–Short Form (SCS–SF)

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. When I fail at something important to me I become consumed by feelings of inadequacy.
- ____ 2. I try to be understanding and patient towards those aspects of my personality I don't like.
- ____ 3. When something painful happens I try to take a balanced view of the situation.
- ____ 4. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
- ____ 5. I try to see my failings as part of the human condition.
- ____ 6. When I'm going through a very hard time, I give myself the caring and tenderness I need.
- ____ 7. When something upsets me I try to keep my emotions in balance.
- ____ 8. When I fail at something that's important to me, I tend to feel alone in my failure
- ____ 9. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
- ____ 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 disapproving and judgmental about my own flaws and inadequacies.
- ____ 12. I'm intolerant and impatient towards those aspects of my personality I don't like.

Parental Stress Scale

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

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

1	I am happy in my role as a parent	
2	There is little or nothing I wouldn't do for my child(ren) if it was necessary.	
3	Caring for my child(ren) sometimes takes more time and energy than I have to give.	
4	I sometimes worry whether I am doing enough for my child(ren).	
5	I feel close to my child(ren).	
6	I enjoy spending time with my child(ren).	
7	My child(ren) is an important source of affection for me.	
8	. Having child(ren) gives me a more certain and optimistic view for the future.	
9	The major source of stress in my life is my child(ren).	
10	Having child(ren) leaves little time and flexibility in my life.	
11	Having child(ren) has been a financial burden.	
12	. It is difficult to balance different responsibilities because of my child(ren).	

13	The behavior of my child(ren) is often embarrassing or stressful to me.	
14	. If I had it to do over again, I might decide not to have child(ren).	
15	I feel overwhelmed by the responsibility of being a parent.	
16	Having child(ren) has meant having too few choices and too little control over my life.	
17	I am satisfied as a parent	
18	I find my child(ren) enjoyable	