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Parental Attachment and Compassion as Predictors of Distress Disclosure Among Young Adults

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Parental Attachment and Compassion as Predictors of Distress Disclosure Among Young Adults

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ABSTRACT

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Distress disclosure is associated with perceived social support, so it is important to understand what supports our ability to disclose distress. This study examined relationships between distress disclosure, fear of others' compassion, parental attachment, self-compassion, and perceived social support among young adults. I expected young adults with stronger parental attachment security to report greater capacity for distress disclosure and that this relationship would be mediated by fear of others' compassion. I expected trait self-compassion to moderate relationships between these variables on all paths of the mediation, such that higher self-compassion would reduce the adverse impact of insecure parental attachment on distress disclosure through fear of others' compassion. I expected parental attachment to predict distress disclosure above and beyond fear of others' compassion. I expected perceived social support to be significantly correlated with both distress disclosure and self-compassion, and inversely correlated with fear of others' compassion. Results supported the hypothesis that higher parental attachment security was related to higher distress disclosure through fear of others' compassion for both maternal attachment ($\beta = .0585$, S.E. = .0113, 95% CI [.0382 to .0815]) and paternal attachment ($\beta = .0569$, S.E. = .0118, 95% CI [.0339 to .0806]). However, results did not support moderation by trait self-compassion. Fear of others' compassion predicted distress disclosure above and beyond parental attachment for both mothers (B = -.456, S.E. = .059, $p < .001$) and fathers (B = -.448, S.E. = .068, $p < .001$). Males scored significantly higher on paternal attachment than females ($F = 6.697$, SE = .37, $p = .02$).

Paternal attachment predicted distress disclosure more strongly than did maternal attachment (B = .084, S.E. = .027, p = .002), but this relationship appeared driven less by fear of others' compassion than was maternal attachment, suggesting that paternal attachment predicts distress disclosure through other mechanisms. Distress disclosure was significantly associated with perceived social support ($t(297) = .308$, $p < .001$) and trait self-compassion ($t(296) = .325$, $p < .001$). Perceived social support was significantly inversely associated with fear of others' compassion ($t(297) = -.405$, $p < .001$). Interpretation and implications of findings were discussed.

Keywords: Distress Disclosure, Self-Compassion, Social Support, Fear of Others' Compassion, Attachment

Chapter I – Introduction

Purpose

Distress disclosure has been found to impact many aspects of mental health. Appropriate distress disclosure decreases depression symptoms, increases sense of well-being, and insulates individuals from stress by increasing perceived social support (Kahn & Hessling, 2001; Ward, Doherty, & Moran, 2007). Conversely, difficulty disclosing distress prevents individuals from receiving the social support they need to weather stress and avoid adverse mental health outcomes (Dupasquier et al., 2018.) For these reasons, it is important to explore what contributes to our ability to engage in healthy distress disclosure. Recent theory proposes that our expectations regarding others' compassion may play a significant role in determining our likelihood to engage in distress disclosure.

While others' compassion generally activates affiliative emotions, soothes, calms, and enhances sense of well-being, some individuals respond to others' compassion with feelings of anxiety, fear, loneliness, or grief (Gilbert et al., 2011). For individuals who feel uncertain that others will remain reliable or consistent in their support, others' compassion may activate a threat response, reminding them of their disconnection from others, lack of care received in the past, or perceived ulterior motives (Gilbert et al., 2011; Joeng et al., 2015; Joeng et al., 2017). Thus, fear of others' compassion may limit distress disclosure.

One important contributor to fear of other's compassion may be insecure attachment (Gilbert et al., 2011). Attachment security is an index of an individual's ability to form and maintain safe and trusting relationships, strongly driven by the consistency of responsiveness by childhood caregivers (Bowlby, 1980). Correlations

have been found between attachment security and self-compassion in many studies (Gilbert et al., 2011; Mikulincer & Shaver, 2007; Pepping et al., 2015). While theory suggests that attachment security would be negatively associated with fear of others' compassion, this relationship has not yet been thoroughly examined by researchers. In this study, I see a unique opportunity to investigate whether parental attachment is associated with fear of others' compassion.

Finally, self-compassion has been identified as a significant component of maintaining psychological well-being (Neff & McGehee, 2010). Prior research has found that self-compassion reduces depression, anxiety, shame, self-criticism, and stress scores (Gilbert et al., 2011). In prior research (Dupasquier et al., 2018) self-compassion interventions have been used to induce a self-compassionate mindset to examine self-compassion as a mediator. Research shows that induction of a self-compassionate state decreases the degree to which fear of receiving compassion causes individuals to hide their distress from others (Dupasquier et al., 2018). However, I am interested in whether the trait of self-compassion may serve as a moderator in my model. I want to know whether the trait of self-compassion may be separate enough from the fear of others' compassion to represent a distinct protective factor for individuals with less secure attachment to be able to disclose distress. Because self-compassion is associated with lower perceived risk of disclosing to others, as well as greater feelings of deserving compassion, it may also be a necessary condition for individuals to respond to compassion from others and thereby receive the benefits of distress disclosure (Dupasquier et al., 2018). I believe that self-compassion may moderate these relationships, such that for individuals with lower attachment security, greater self-

compassion will buffer against fear of others' compassion and allow for more distress disclosure.

The purpose of the current study is to build on prior research and better understand the relationships between attachment, fear of others' compassion, and distress disclosure, while examining self-compassion as a possible moderator of these relationships. There has been very limited research in this area, and no research including males, trait self-compassion, or attachment security. Attachment security is included in my investigation, as prior authors have indicated that it may be a missing piece in our understanding of self-compassion and fear of others' compassion, and thus in our understanding of distress disclosure (Dupasquier et al., 2018).

The timing of this study during the COVID-19 pandemic may be particularly fruitful, given that increased stress of quarantine combined with decreased access to social support produce increased risk of mental and physical health problems. Heightened stress during this time may increase our reliance on social support, but we may not be able to access this support without self-compassion. Research is needed to understand what contributes to individual's ability to access social support, and to identify potential barriers to receiving support from others.

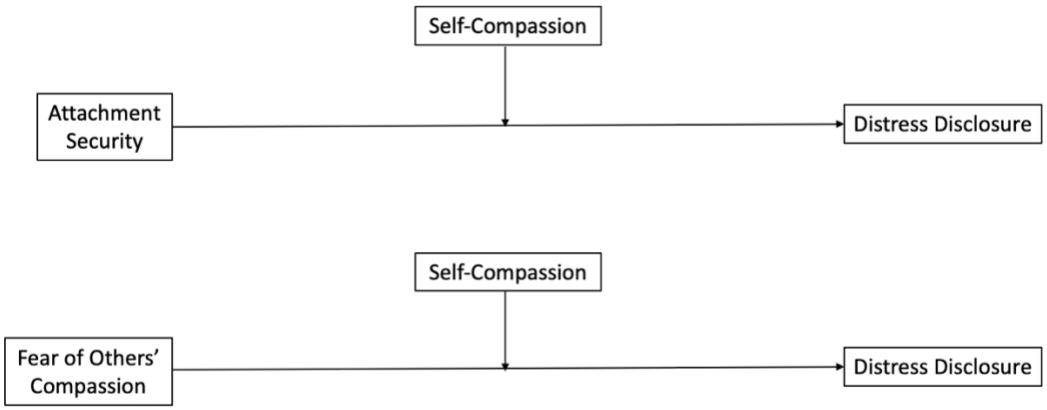

Figure 1. Hypothesized model examining the moderating role of trait self-compassion on the relationships between attachment security and distress disclosure, and between fear of others' compassion and distress disclosure.

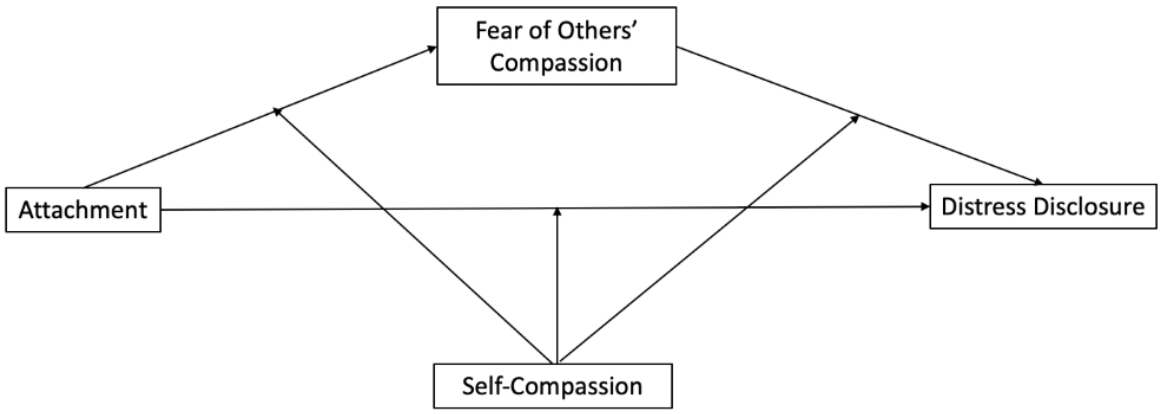

Figure 2. Hypothesized model examining the mediation of the relationship between attachment security and distress disclosure by fear of others' compassion, as well as the moderating role of trait self-compassion on the relationships between attachment, fear of others' compassion, and distress disclosure.

Distress Disclosure

Distress disclosure can be defined as the process of sharing distressing feelings, thoughts, or experiences with others (Kahn & Hessling, 2001). As a psychological construct, distress disclosure is a unidimensional, trait-like index of an individual's general tendency, falling on a continuum between concealment and disclosure of distress. The construct of distress disclosure was born from the integration of two bodies of research literature – self-concealment and self-disclosure – but is distinct from each. Unlike its predecessors, distress disclosure is focused on the confiding of unpleasant internal and external experiences to others (e.g. shame, sadness, or a conflict with a partner). Additionally, while research on self-concealment and self-disclosure is primarily concerned with singular major events (e.g. keeping a major illness or traumatic experience a secret), distress disclosure researchers investigate individual differences in response to multiple stressors across time and context (Kahn & Hessling, 2001).

Perceived social support and other psychological outcomes of distress disclosure. Distress disclosure is associated with a wide variety of important psychological outcomes. Positive outcomes of distress disclosure to trusted others include decreases in perceived stress, depressive symptoms, loneliness, and symptoms of physical illness (Coates & Winston, 1987; Greenland et al., 2009; Kahn et al., 2001; Saxena & Maehrotra, 2010; Ward et al., 2007), as well as increases in self-esteem, positive affect, life satisfaction, and perceived social support (Hienrichs, 2003; Hyde et al., 2011; Kahn & Hessling, 2001; Kalichman, DiMarco, & Austin, 2003). Distress disclosure is a critical way by which our species obtains social support, and the two constructs are highly correlated (Kahn & Hessling, 2001). It is easy to see why – to be

helped by others, you must first let them know you need help. This is not to say that others will always be helpful, but we cannot receive support if we conceal our need for it. Individuals who struggle with distress disclosure are less likely to receive social support from others, and by extension are made more vulnerable to stress and its adverse physical and mental health consequences (Coates & Winston, 1987; Dupasquier et al., 2018).

Studies show that sharing distressing feelings can cause an immediate increase, rather than decrease in distress (Konecni, 1975; Schare & Lisman, 1984) – contrary to Freud's "catharsis" hypothesis (Freud, 1935). Theory suggests that the benefits of opening up to others come not immediately after distress disclosure but some time later, manifesting largely through its impacts on relationships. In a review by Deregla (1984), distress disclosure is demonstrated as being fundamentally necessary for building and maintaining authentic, supportive relationships. One may see distress disclosure as an act of vulnerability, which, if practiced reciprocally over time, can build the mutual trust necessary for a supportive relationship. The distress discloser takes a risk, and if this risk is rewarded with validation and continued acceptance by the relationship partner, the relationship grows deeper and stronger. Strengthening of the relationship may also occur when the distress discloser's vulnerability causes the relationship partner to feel closer to them and experiences similar relief to the discloser – they are allowed to be imperfect and honest about their humanity. Now the recipient of the distress disclosure may feel permission to disclose their own distress, and receive compassion, creating a virtuous upward spiral of altruism and social support.

Studies suggest that the mechanisms driving the relationship between distress disclosure and perceived social support are nuanced. When experienced alone, distressing

experiences (emotions, thoughts, or events) often lead to feelings of shame, incompetence, and "being crazy" (Coates & Winston, 1987; DeLong & Kahn, 2014). Distress leads us to feel abnormal in our suffering, less-than or worse in some way than those around us. When we share with others and receive feedback, we have the potential to learn that we are not alone, "crazy," or incompetent. Disclosing distress can help individualize normalize distress as a natural part of the human experience. Being treated with warmth and compassion by others in our worst moments can be rewarding and comforting, further reducing our distress, and strengthening our sense of belonging (Schradle & Dougher, 1985; Silver & Wortman, 1980).

On the other hand, concealing distress from others can, over time, increase feelings of isolation, incompetence, and unrealistic beliefs that others would cope better in our place; In this way, concealing distress creates more distress (Kopel, 1982). If we are not honest about our struggles, it is easy to believe that we must perform constant happiness and success for those around us in order to be loved and accepted. When we only show parts of ourselves to others, we never get the chance to experience and benefit from others' acceptance and care for our full selves (Coates & Wortman, 1980). Hiding their distress, a natural part of human experience, may therefore reinforce an individual's maladaptive beliefs around perfectionism, shame, and low self-esteem, leading to further isolation and increased vulnerability to negative mental health outcomes.

The discussion of distress disclosure and perceived social support would be incomplete without mentioning the influence of Western culture. In the West, individual success and failure are attributed to an individual's character and core value – unlike

many non-Western cultures, which see social and environmental context (e.g. availability of support and resources) as integral to determining the outcome of an individual's efforts (Grinker, 2021). Despite some improvement due to efforts of many mental health advocates and policymakers, emotional distress is still stigmatized and blamed on individual deficiency in much of the West (Grinker, 2021). Western culture promotes the myth that regardless of circumstance, and individual's hard work, moral virtue, and patience pay off and guarantee success in each of our rightful pursuit of happiness. Following this reasoning, failure to secure happiness is the fault of an individual who is lazy, immoral, or impatient (Grinker, 2021). For an individual raised in this culture, it is natural to feel shame, and to fear rejection and judgment, and to attempt to hide evidence of real or perceived failure – the opposite of distress disclosure. An entire society acting out of this belief system creates a culture of performativity of constant happiness and success far removed from the true human experience – in which we succeed and fail, experience joy and distress, and naturally traverse the full spectrum of emotions. When much of the natural human experience is seen as shameful, each individual compares their real life to the performance of others in a way that exacerbates distress (Grinker, 2021).

Predictors of distress disclosure. Why do some individuals consistently choose not to disclose their distress? Given the benefits of distress disclosure and risks of nondisclosure to psychological adjustment, researchers have started to explore potential barriers to disclosure, focusing on individual traits. According to the Disclosure Decision Model, personality differences, motives for disclosure, and context of disclosure are all factors contributing to this choice (Omarzu, 2000). In their seminal study, Kahn and

Hessling (2001) found no significant correlation between distress disclosure and anxiety, social desirability, or neuroticism, concluding that distress disclosure is unlikely to motivated by desire for social approval or anxiety. In a study of college students, Kahn and Cantwell (2016) found that existing social support was associated with higher likelihood of disclosure of unpleasant emotional events. In their 2009 study of motives and antecedents of distress disclosure, Greenland and colleagues found shame to predict decreased distress disclosure and also existing social support to predict increased distress disclosure among adolescents in the United Kingdom. DeLong and Kahn (2014) found that therapy clients disclosed distressing secrets less when they had more shame, and that clients with more shame anticipated less support from their therapists. In other words, anticipated risk of disclosure (less support) mediated the pathway from shame to distress disclosure. The authors concluded that anticipated risk of disclosure would make a good target for therapy, increasing the ability of clients experiencing shame to share openly and receive needed support in therapy. In other words, a client "feeling felt" (Wallin, 2007) through compassionate responsivity from a clinician could be the key to challenging clients' beliefs that others will not support them if they share their distress (DeLong & Kahn, 2014). More recently, Dupasquier and colleagues (2018) discovered a possible key to distress disclosure in the form of two related abilities: the ability to receive compassion from others and the ability to offer compassion to oneself. In the following sections, I will define and explore first the former ability, and then the latter.

Fear of Others' Compassion

A recent study by Dupasquier and colleagues (2018) was first to find that individuals who fear receiving others' compassion are less likely to disclose distress.

Compassion is typically seen as a universally desirable response from those around us. As a broader society, humans depend on compassion and social support to survive and thrive. In nurturing environments, children are taught from a young age to treat others with compassion, and naturally perceive an exchange of compassionate care as foundational to healthy, satisfying relationships (Gilbert et al., 2014; van der Kolk, 2014). For example, these children learn that when a friend falls down on the playground, or later, suffers from a relationship break-up, they should offer the friend compassion. This lesson is useful in many cases, as for a large part of the population, compassion from others leads to soothing and stress-relief through the activation of affiliative emotions (Gilbert et al., 2014).

Fear of others' compassion and affiliative emotions. Affiliative emotions are positive feelings of warmth created by interpersonal closeness (Gilbert et al., 2014). These feelings are crucial in helping humans co-regulate, reduce stress, and protect against the threat of social isolation during difficult times (Gilbert et al., 2011; Mikulincer & Shaver, 2007). However, for some individuals, receiving compassion and experiencing activation of affiliative emotions has the opposite effect, increasing their feelings of distress and threat (Gilbert et al., 2011, 2014). For this latter group, receiving compassion can bring about feelings of anxiety, loneliness, or grief in thinking about disconnection from others. Receiving compassion can be a reminder of their unmet yearning for acceptance, or of past painful relationships which lacked compassion (Gilbert et al., 2011). These individuals may also experience fear of compassion because, previously, others' kindness was followed closely by abuse or neglect. The fear of others' compassion may create feelings of distrust, such as suspecting ulterior motives or

expecting that the person providing compassion will prove unreliable or inconsistent, as others have in the past (Gilbert et al., 2011; Joeng et al., 2015, 2017). Those who fear others' compassion may miss out on soothing, stress-relieving benefits of affiliative emotions, becoming increasingly vulnerable to adverse effects of stress (Gilbert et al., 2011; Mikulincer & Shaver, 2007). As Dupasquier points out, those high in fear of receiving others' compassion may suffer particularly from inability to disclose their distress, because this group is known to have a higher vulnerability to stress and negative affectivity than their peers (Dupasquier et al., 2018).

In a study by Rockliff and colleagues (2008), individuals scoring high on self-criticism showed reduction in heart rate variability (an index of increased threat) as compared with low self-critics when asked to imagine a compassionate being giving them support, while those scoring low on self-criticism showed an increase in heart rate variability (demonstrating relaxation). It is unsurprising then that those who score higher on fear of others' compassion also score higher on measures of self-criticism, stress, anxiety, and depression. In depressed populations, fear of others' compassion is also correlated with insecure attachment (Gilbert et al., 2011, 2014). It is this last quality that I will focus on in this study, because it precedes the others in time, creating predictive potential – and has yet to be explored thoroughly in the literature.

Attachment as a predictor of fear of others' compassion. Gilbert and other researchers theorize that fear of compassion is created from insecure childhood attachment, when past experiences in which individuals sought support and care from others, activated affiliative feelings, and were met with rejection, criticism, abuse, or neglect (Gilbert et al., 2011, 2014). Attachment theory would suggest that the repetition

of this pattern creates an association between activation of affiliative feelings and emotional pain for these individuals (Gilbert et al., 2011, 2014; Wallin, 2007). It would also produce beliefs of others as untrustworthy, or themselves as bad, shameful, and unworthy of others' compassion (Gilbert et al., 2011, 2014). As of today, research on the relationship between attachment security and fear of compassion is lacking for non-clinical samples.

Attachment

Attachment is a term that psychologists use to describe the quality of the bond between individuals, and most attachment research thus far has focused on the relationship of an infant and their mother. While the significance of infant attachment has centered it in the field of attachment research, increasing attention has been paid over the last few decades to adult attachment, and attachment among adolescents and young adults, as I will be investigating in this study. This field of research is based in Attachment Theory, created by Bowlby, who focused on childhood attachment (1969, 1979, 1980, 1988), and developed further by Ainsworth who studied the impact of childhood attachment across the lifespan (Ainsworth 1963; Ainsworth et al., 2015).

Attachment security refers to an individual's ability to create and maintain safe and trusting bonds with others, allowing for effective social engagement and confident exploration of the world (Bowlby, 1980, 1988). While subject to change over the course of a lifetime, attachment security is significantly defined by our earliest relationships with caregivers. When caregivers are responsive and mostly attuned to an infant, a sociobiological process called co-regulation allows for a hungry, cold, sad, tired, hurting, or otherwise distressed infant to be soothed by nurture, attention, and connection with the

caregiver, so that the pair regulates the infant's internal state together (Bowlby, 1969). At the same time, with enough repetitions of attuned responding and successful co-regulation, the infant learns that this adult can be trusted to provide them with a "secure base" (Bowlby, 1969; van der Kolk, 2014) and is able to begin exploring the world, increasing distance from the caregiver. A secure relationship with the caregiver gives the child an opportunity to learn and develop themselves, build millions of neural connections, and gain a sense of confidence and trust both in their own abilities to navigate the world and in the safety of the world itself. As the infant grows, an internal working model of self and other is built (Bosmans, 2016; Bowlby, 1969; van der Kolk, 2014). In a positive internal working model of both self and other, the securely attached child perceives the caregiver as a reliable haven they can return to when distressed, and themselves as capable of getting the caregiver's attention and nurture when needed (Bosmans, 2016; van der Kolk, 2014).

Secure attachment is very important for humans, as our species spends an unusually long time in a vulnerable state, completely dependent on our parents for survival and protection (Bosmans, 2016; van der Kolk, 2014). It is also important because internal working models developed in childhood extend beyond the child's expectations of the caregiver to expectations of their whole social world, and continue to function within children when they become adults (Bosmans, 2016; Bowlby, 1988; van der Kolk, 2014). For example, if Maddie's crying is consistently responded to with a cuddle and the meeting of a need (a meal, a nap, etc.), Maddie tends to form a sense of security with her caregiver and a lasting expectation of security in relationship with others. However, if Maddie's crying is inconsistently responded to or ignored by her caregiver, she will come

to expect misattunement not only from this caregiver but from all the other people she encounters throughout development and into adulthood. Those children who are securely attached to caregivers continue to benefit as they become adults, through acquisition of skills, knowledge, ability to regulate their emotions, increased autonomy, and improved ability to create and maintain further healthy relationships – all of which draw on the ability to trust themselves and the world around them (Bosmans, 2016; Bowlby, 1988). In the words of psychologist Diana Fosha, "The roots of resilience… are to be found in the sense of being understood by and existing in the mind and heart of a loving, attuned, and self-possessed other" (van der Kolk, 2014).

Insecure attachment arises when caregivers are insufficiently attuned to the child, absent or inconsistent in their caregiving (van der Kolk 2014) leading to an absence of safety and trust in the relationship. This sense of distrust and lack of safety are generalized by children to create negative internal working models of self, other, and the world, which can persist through adulthood (Bosmans, 2016). Because children form their identities through their earliest relationships, and tend to center themselves in their understanding of their world, children who do not experience consistent caregiving turn on themselves – forming the belief that something must be wrong with them (van der Kolk, 2014). These children lose faith in their ability to elicit care when needed. They begin to perceive others and their environment as unsafe, and the expectations created from these early experiences often persist into adulthood, shaping their inner worlds and social behavior (Ainsworth, 1963; Ainsworth et al., 2015; van der Kolk, 2014; Wallin, 2007). Usually, insecurely attached children become insecurely attached adults who lack confidence in their ability to navigate their environment and manage stressors, expect

others to be inconsistently responsive and fail to meet their needs, and perceive the world as an unsafe place (Ainsworth, 1963; Ainsworth et al., 2015; van der Kolk, 2014). Because responsivity and healthy attachment has not been modeled sufficiently for children with insecure attachment to caregivers, these children are less likely to develop healthy ability to attune, respond to, or relate to those around them (van der Kolk, 2014), setting them up for difficulty in close relationships.

Young adult attachment styles. An attachment style can be understood as the typical strategy an individual uses to meet their relational needs, based on what worked in their earliest formative relationships (Vivona, 2000). Beyond the secure/insecure binary, adult attachment is categorized into three major attachment styles: secure, insecure-ambivalent/anxious attachment, and insecure-avoidant attachment (Bartholomew, 1990). Each of these styles can be explained by the level of trust an individual accords themselves vs. others to get their needs met. Secure attachment results from consistent caregiver attunement and responsiveness to the individual's needs in childhood. Securely attached adults are comfortable both with closeness and autonomy and have a positive view of both self and other (Bartholomew, 1990). Insecure-ambivalent /anxious attachment is the result of inconsistency in caregiver responsiveness and insensitivity or insufficient attunement in parenting, which often leads to a sense of unworthiness in the child and continuous search for intimacy that is thwarted much of the time (Bartholomew, 1990). Adults with insecure-ambivalent/anxious attachment have a positive view of other and negative view of themselves, tending towards reassurance-seeking, and trying to prove themselves as worthy of care to others, because early relationships have taught them that they must be undeserving of care (Bartholomew,

1990; Gilbert et al., 2011). Adults with avoidant attachment styles may be either fearful or dismissing of others, but have in common a tendency to avoid getting too close. Adults with an avoidant attachment style generally have a negative view of the other, because their childhood caregivers were consistently rejecting or unavailable to meet their needs. They often still feel a longing for intimacy but behave based on their fear of rejection, which is more prominent. Those with avoidant attachment style may deny their need for attachment, dismissing others, and creating a self-image invulnerable to others' criticism or rejection (Bartholomew, 1990). Adults with dismissive- avoidant attachment often avoid their own internal distress as part of a strategy to sustain the appearance of invulnerability, while those with fearful-avoidant attachment experience greater distress about their insecurity (Bartholomew, 1990; Bowlby, 1988).

Current conceptualization of adult attachment has moved away from categories and increasingly considers attachment from a dimensional perspective (Fraley et al., 2015; Vivona, 2000). This dimensional view of attachment is illustrated in Figure 3, where an individual's attachment style is determined by their position on the continuum of anxiety (low to high) on the X axis and avoidance (low to high) on the Y axis. Generally, the attachment style categories I discussed above map onto the graph as follows: Secure (low avoidance, low anxiety). Insecure-Ambivalent/Anxious, called "Preoccupied" on this graph (low avoidance, high anxiety), Fearful-avoidant (high avoidance, high anxiety), and Dismissive-avoidant (high avoidance, low anxiety) (Bartholomew, 1990).

Research evidence suggests that three factors should be used to understand young adult attachment security: trust, communication, and alienation (Vivona, 2000). Young

adult secure attachment involves medium or high trust, medium or high communication, and medium or low alienation. Insecure-avoidant attachment among young adults is characterized by medium or low trust, low communication, and high alienation. Finally, insecure-ambivalent (i.e. anxious) attachment in young adulthood is characterized by medium or low trust, medium or high communication, and medium or high alienation (Vivona, 2000). For the purpose of this paper, I will refer to insecure-ambivalent/anxious attachment as anxious attachment for simplicity.

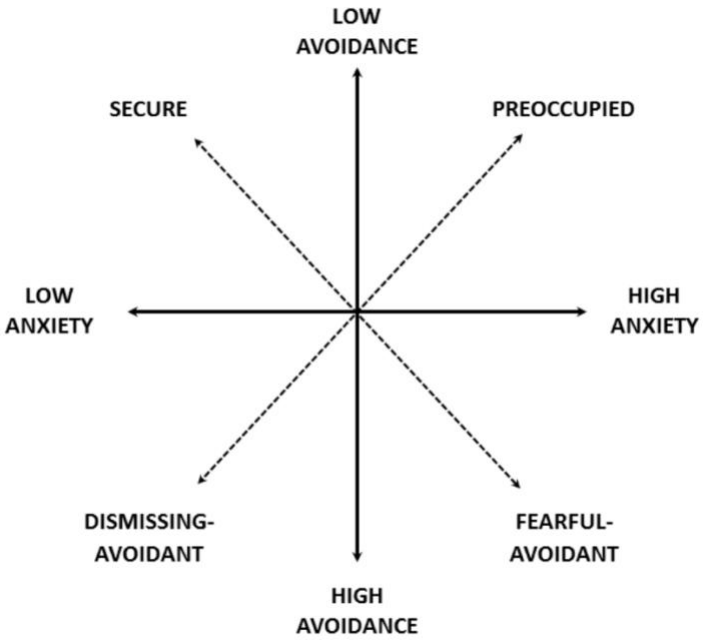

Figure 3. The four-category model of attachment (Bartholomew, 1990).

Attachment and fear of others' compassion. Anxiously attached individuals can be fearful of positive and affiliative emotions, which cause them to feel dangerously "off guard" (Gilbert, 2011). This theory may be understood as follows. In the case of an inconsistently available parent, the child's positive experience of parental compassion is

often followed by absence of compassion, criticism, or rejection – conditioning the child to associate the positive feelings of receiving compassion with the pain that quickly follows (Shaver & Mikulincer, 2002; van der Kolk, 2014; Wallin, 2007). As a result, through childhood and into adulthood, compassion from others becomes a danger cue, eliciting a fear response. In addition, insecurely attached children grow into adults who do not believe themselves worthy of compassion, so others' compassion appears ingenuine or brings up shame around that sense of unworthiness (Gilbert, 2014).

When others offer compassion, insecurely attached individuals can experience distressing emotions, such as fear, grief, and shame, (Gilbert et al., 2014), and this informs their behavior. While insecurely attached individuals need others' compassion just like the rest of us, distressing emotions and memories along with their negative internal working model of the other may cause them to behave in ways incongruous to their internal states and needs – pulling away, or turning against the other, "biting the hand that feeds them" (Cassidy, 1994; Liotti, 2000, 2009; van der Kolk, 2014, Wallin, 2007). As Cassidy (1994) writes, an insecurely attached individual finds the experience of negative affect itself to be distressing because the individual expects either rejection or insufficient support from the other. The violation of this expectation through others expressing compassion often puts insecurely attached individuals in a defensive stance, always waiting for the other shoe to drop, effectively preventing the development of potentially supportive relationships (Gilbert et al., 2014; van der Kolk, 2014).

While the relationship between self-compassion and attachment has been studied by researchers for the past twenty years, there have only been a couple of studies conducted on the relationship between attachment style and fear of others' compassion.

Gilbert and colleagues have begun to examine this relationship, finding a correlation between insecure attachment and fear of others' compassion both in a non-clinical sample (2011) and a depressed sample (2014). Anxious attachment has been linked more strongly than avoidant attachment to fear of others' compassion (Gilbert et al., 2011, 2014). This follows from attachment theory, as individuals with avoidant attachment often employ a strategy of suppressing distress and distance from others in order to minimize their experience of fear and chance of interpersonal rejection (Cassidy, 1994).

Attachment security and distress disclosure. Not only may an insecurely attached individual lack the ability to accept others' compassion, but they may avoid disclosing distress to others at all, to avoid this compassion being offered. For example, Armsden and Greenberg (1987) found that college students with lower attachment security were less likely to seek social support. Shaver and Mikulincer (2002) suggest that insecurely attached individuals would be less likely to disclose distress fearing both the potential rejection and potential compassion their distress disclosure may elicit.

Different attachment styles are associated with different emotion regulation strategies (Cassidy, 1994; Wallin, 2007) which I would expect to differentially impact distress disclosure. Children learn to adapt their behavior to their environments to maximize their chances at security and closeness with caregiver (Cassidy, 1994). For example, avoidant attachment develops when an infant experiences a rejecting or controlling caregiver response to their signals of distress, which prevents the dyad from restoring an emotional equilibrium, and leads to infant overregulating and distancing from caregiver (Wallin, 2007). Consistent with this theory, research has shown that avoidant attachment is particularly strongly associated with decreased distress disclosure

(Anders & Tucker, 2000; Garrison, Kahn, Sauer, & Florczak, 2012; Mikulincer & Nachshon, 1991; O'Loughlin et al., 2018; Wei, Russell, & Zakalik, 2005). A child who has learned that showing distress causes others to leave or respond in some other hurtful way is highly motivated as an adult to minimize emotion (Cassidy, 1994) and hide distress in the interest of preserving relationships (Mikulincer, Shaver, & Pereg, 2003). We may observe this effect in avoidant babies, who during separation from caregivers in the Strange Situation task were more distressed than securely attached babies, but only turned towards their mothers once their physiological arousal (measured by heart rate) had decreased (Cassidy, 1994). Consistent with the infant study, adult avoidant attachment appears more strongly negatively associated with distress disclosure than anxious attachment (Mikulincer & Nachshon, 1991). However, there is little literature examining the link between anxious attachment and distress disclosure. Attachment theory would suggest that anxiously attached young adults might engage in greater distress disclosure than avoidant peers (but still less than securely attached peers) because of their tendency towards greater dependence on others, higher social support seeking (Bartholomew, 1990), and tendency for heightened emotional expression to get attention when needing support (Cassidy, 1994). This expectation would also follow from the basis of anxious attachment, which is formed when an infant's distress signals are met with misattunement from caregiver, not satisfying the infant's need for coregulation and resulting in chronic activation of the attachment system (Wallin, 2007). However, because anxiously attached young adults do not experience a sense of security or autonomy in relationship with others (Cassidy, 1994; Wallin, 2007) it is possible that

they would still be significantly less likely to disclose distress than their securely attached peers.

Both children with anxious and avoidant attachment styles may learn early on not to disclose distress to their parents because when they do it threatens the relationship – the parent, unable or unwilling to respond compassionately in a consistent manner, either pushes the child away, increases distance and leads child to feel more vulnerable or like there is something wrong with them, or criticizes child for their distress disclosure, with similar results (Shaver & Mikulincer, 2002). When care is given inconsistently or not all, a child associates needing care with the fear of getting hurt (van der Kolk, 2014; Wallin, 2007). The child is also likely to develop a sense that they are not worthy of others' compassion, because there is no better explanation for compassion being denied by an adult who is responsible for their care (van der Kolk, 2014). This sense of unworthiness may motivate shame, causing the child to hide, even as an adult, concealing their suffering and inner experiences to protect themselves from rejection or abandonment by others (Gilbert, 2014; van der Kolk, 2014). When they are young adults, individuals with insecure attachment may carry this lesson with them into present day relationships, careful not to disclose distress so as to not jeopardize existing bonds. In doing so, they may avoid problems with others who would not respond supportively to their distress disclosure, but also fail to receive the support others would be willing to offer.

Following from existing research literature, I expect that attachment security will be negatively associated with distress disclosure, and that this relationship will be partially explained by fear of others' compassion. I also want to investigate whether the trait of self-compassion may moderate the relationships between these variables.

Self-Compassion

Kristin Neff, a leading researcher in the field of self-compassion, defines it as "compassion turned inward, the ability to hold one's feelings of suffering with a sense of warmth, connection, and concern" (Neff & McGehee, 2010). Neff's Theory of Self-Compassion involves three dimensions: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus overidentification (Neff, 2003). In other words, to be self-compassionate an individual must respond to distress, perceived failure, or inadequacies with self-care and self-love rather than judging themselves harshly. They must be able to see their distressing experience as a natural part of being human and not as if they alone experience such hardships. The self-compassionate individual must also be able to mindfully disentangle their identity from the distressing experience. In this way, self-compassion provides a buffer against stressors – it protects individuals already experiencing distress or perceived failure from harshly blaming themselves, feeling separate and worse than the rest of humanity, and feeling that this temporary setback defines them as a person. With practice, a self-compassionate stance establishes beliefs that we are as worthy as anyone else – as deserving of compassion, respect, and forgiveness for our human inadequacies, failures, and feelings of distress (Neff, 2003).

Impacts of self-compassion. Self-compassion is instrumental in the maintenance of psychological well-being, having been found to reduce depression, anxiety, shame, self-criticism and stress levels among adults (Gilbert et al., 2011) and adolescents (Lathren et al., 2019; Marsh et al., 2018; Neff & McGehee, 2010). Research has shown that self-compassion increases health-promoting behaviors including stress

management and social support seeking (Gedik, 2019), coping with setbacks and re-engaging with goals (Miyagawa et al., 2018), happiness, optimism, connectedness, and stable self-worth (Booker & Dunsmore, 2018; Neff, 2009; Neff & McGehee, 2010). Self-compassion has been found to reduce physiological arousal (decreasing heart rate and skin conductivity) and increase activity of the parasympathetic nervous system (increasing heart rate variability), which allows individuals to experience a sense of connection and safety with others (Kirschner et al, 2019) and helps insecurely attached individuals experience a lower level of psychological distress (Neff, 2003). Research suggests that self-compassion may be integral to our ability to respond to compassion from others and thus benefit from distress disclosure and better mental health (Dupasquier et al., 2018) because self-compassion allows us to regulate our distress and decreases feelings of threat that may accompany disclosing our distress to others (Chishima et al., 2018). These studies have found that interventions that activate a self-compassionate mindset in participants can promote distress disclosure (Dupasquier et al., 2018, 2020a), even those who fear receiving compassion from others. However, no studies to date have been conducted to explore whether the trait of self-compassion may moderate the impact of fear of others' compassion on distress disclosure. Additionally, there has been no research done on whether trait self-compassion moderates the relationships between attachment security and fear of others' compassion.

Attachment security is a known predictor of trait self-compassion, which makes sense in light of theory if we consider how a caregiver providing consistent attuned responsiveness and support to the child eventually leads to the child's internalization of self as deserving of care (Neff & McGehee, 2010). By contrast, insecurely attached

children would not find the concept of a deserving self as accessible due to care from others historically being absent or inconsistent in nature (Neff & McGehee, 2010). Similarly fear of others' compassion arises in insecurely attached individuals because of their lacking a feeling of social safety and anticipation of negative consequences when others offer them compassion (Gilbert, 2013; Liotti, 2000).

Though self-compassion is positively associated with attachment security and fear of others' compassion negatively associated with attachment security (Neff & McGehee, 2010) it is important to ask if these traits may develop orthogonally enough that a significant number of individuals who fear others' compassion are still able to be compassionate towards themselves. These are questions that I will explore in this study, as our understanding of these constructs may inform mental health interventions.

Perceived Social Support

Perceived social support refers to the degree to which individuals feel that they have access to support from others and has been consistently linked with greater psychological well-being (Kahn & Hessling, 2001; Wilson et al., 2020). Ability to disclose distress is significant because it is significantly correlated with perceived social support – and it appears that the relationship is bidirectional; Perceived social support has been found to be a significant variable in individuals' decisions whether or not to disclose distress (Kahn & Cantwell, 2016). Recent studies show a significant association between perceived social support and self-compassion (Dupasquier et al., 2020b; Wang & Lou, 2021). On the other hand, fear of others' compassion is, as one would expect, associated with lower perceived social support (Gilbert et al., 2011). I was interested in the variables

in this study because of their potential impact on individuals' ability to access the support of others, particularly given the social isolation created by the current global pandemic.

Impacts of Western Culture, COVID-19 Pandemic and Racial Violence

I would like to briefly address two contextual variables affecting this study, one being its location in the United States, and the other being its timing during the COVID-19 pandemic and ongoing racial violence against Blacks and Asians/Pacific Islanders.

Because of the study's location in the United States, I would expect participants to engage in less distress disclosure than if the study were conducted in a more collectivistic culture. Due to the influence of highly individualistic Western culture that glorifies self-reliance (Grinker, 2021), I also believe that attachment to parents will be less secure, self-compassion lower, and fear of others' compassion higher than in a collectivistic society. These predictions are also based on research cited earlier in this manuscript, as well as the trend of growing loneliness and isolation (Cigna, 2020; Lee et al., 2020) and decreased perception of social support among young adults in the US (Choo & Marszalek, 2019), particularly during quarantine in the pandemic (Cigna, 2020).

Several considerations also arise due to the timing of the study during the COVID-19 pandemic and increased racial violence towards Blacks and Asians/Pacific Islanders (API) in US. The COVID-19 pandemic is a time of increased stress (Brooks et al., 2020; Wang et al., 2020), increased social isolation due to quarantine (Brody, 2020; Cigna, 2020), and increased likelihood for living at home for many young adults who would otherwise have moved away, according the Pew Research Center (Fry, 2017). Family tensions and harsh parenting have risen due to the stress of the pandemic (Chung et al., 2020), with parents struggling to balance work and close quarters, and young adults

struggling to navigate interruption of their move towards independence, differentiated identity, and proximity to peer group (Golemis et al., 2021; da Silva Junior et al., 2020). For all of these reasons, I would expect strain in parent-child relationships to decrease attachment security and distress disclosure. However, given heightened worry about family members getting sick and the need to work together to survive the pandemic both physically and emotionally (Germani et al., 2020), there may be sufficient increase in collectivistic values to override the previously named impacts of stress, isolation, and prolonged stay with parents on young adults.

The Current Study

The current study examined the relationship between attachment security, fear of others' compassion, self-compassion, distress disclosure, and perceived social support among undergraduate college students.

Hypotheses. As seen in Figure 1, I hypothesized that **(1)** less secure attachment would be associated with lower levels of distress disclosure, and that trait self-compassion would moderate this relationship, such that higher self-compassion would buffer the adverse effect of insecure attachment on low distress disclosure.
(2) I also hypothesized that greater fear of others' compassion would be associated with lower levels of distress disclosure, and that trait self-compassion would moderate this relationship, such that higher self-compassion decreases the strength of the relationship between fear of others' compassion and distress disclosure.
(3) As seen in Figure 2, I hypothesized that fear of receiving compassion from others would mediate the relationship between attachment security and distress disclosure such that insecure attachment would predict greater fear of receiving compassion from others

and lower distress disclosure. In this model, I hypothesized that self-compassion would act as a moderator, decreasing the strength of the relationships between attachment, fear of others' compassion, and distress disclosure.

(4) On suggestion of previous researchers, I also examined whether attachment security is a stronger predictor of distress disclosure than fear of others' compassion.

(5) Finally, I expected my findings to support extant literature finding a significant positive association between distress disclosure and perceived social support, as well as between self-compassion and perceived social support. I expected to find an inverse association between perceived social support and fear of others' compassion.

CHAPTER II – METHOD

Sample and Participant Selection

Participants were 315 (76.8% female, 20.6% male, 1.9% other) undergraduate college students recruited from a private liberal arts university in the Pacific Northwest. Participants ranged from 18 to 36 years old, with a mean age of 20.05 years (SD = 2.543). Approximately 54.6% of participants were Caucasian, 22.2% were Asian American, 6.7% were African American, 1.9% were Pacific Islander, 1% were Native American, and 13.3% identified as Other. 14 percent of participants were Hispanic/Latino. 69.5 percent of participants identified as heterosexual, 4.4% as gay or lesbian, 17.5% as bisexual or pansexual, 3.2% as "other" sexual orientation, and 5.4% chose not to respond to this question.

Procedure

This study was approved by the institutional review board. Participants were eligible to participate if they were currently enrolled as an undergraduate at the university and were recruited through electronic (e-mail) communications. Participants completed a questionnaire electronically through the Qualtrics survey platform. Consent was obtained prior to survey completion. Participants were given the option to enter into a raffle for one of two $50 Amazon gift cards by submitting their email address at the end of the survey.

Sample Size, Power, and Precision

Power analysis was conducted using G*Power (Faul et al., 2008). The linear multiple regression: fixed model, R^2 deviation from zero, a priori power analysis was used with three predictors (a mediator, a moderator, and one independent variable), a power of

.80 (Fritz & MacKinnon, 2007), alpha level of .05, and the suggested medium effect size ($f^2 = .15$). This analysis yielded a suggested total sample size of 77.

Measures

Demographic variables. Participant age, gender, race, and ethnicity were collected by online questionnaire.

Distress Disclosure. Distress disclosure was measured using the Distress Disclosure Index (DDI; Kahn & Hessling, 2001a). The DDI is a 12-item scale measuring tendency to conceal or disclose psychological distress. Example items include "I prefer not to talk about my problems," and "When I'm in a bad mood, I talk about it with my friends." Respondents were asked to rate each item on a scale from 1 (strongly disagree) to 5 (strongly agree). Total scores are calculated by taking the mean of the 12 item scores, such that higher scores reflect higher tendency to disclose distress. The DDI has demonstrated strong reliability in previous studies with α ranging from 0.89 to 0.95 (Kahn et al., 2012). Internal consistency for the DDI in the current study was $\alpha = 0.928$.

Attachment security. Parental attachment was assessed using the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987). The IPPA-45 is a short form consisting of 15 items measuring maternal, paternal, and peer attachment (Wilkinson & Goh, 2014). Trust, Communication, and Alienation subscales assess for the quality of each relationship. This measure provides indication of both overall attachment security and attachment style. Secure attachment is characterized by medium or high trust and communication levels and low alienation score; Insecure-avoidant attachment is characterized by medium or low trust level with low communication score and high alienation score; Insecure-ambivalent attachment is characterized by medium or low trust

level with medium or high communication and alienation scores (Vivona, 2000). Example items include “My mother respects my feelings” (Trust), “I like to get my father’s point of view on things I am concerned about” (Communication), and “My mother doesn’t understand what I’m going through these days” (Alienation). Respondents were asked to rate each item on a scale from 1 (almost never or never) to 5 (always or almost always). Results include means for each subscale and the total score representing overall attachment security. The IPPA-45 has demonstrated adequate psychometric properties (Wilkinson & Goh, 2014). Internal consistency for the IPPA-45 in the current study was $\alpha = 0.936$ for paternal attachment and $\alpha = 0.929$ for maternal attachment.

Fear of Others’ Compassion. Fear of others’ compassion was measured using the Fear of Responding to the Expression of Compassion from Others scale (Gilbert et al., 2011). The Fear of Responding to the Expression of Compassion from Others scale is a 13-item scale measuring fear of others’ compassion. Example items include “Feelings of kindness from others are somehow frightening,” and “When people are kind and compassionate to me I feel empty and sad.” Respondents were asked to rate each item on a scale from 1 (strongly disagree) to 5 (strongly agree). The total is calculated by sum of scores. This scale has demonstrated adequate psychometric properties with alphas ranging from .80 to .87 (Gilbert et al., 2011; Gilbert et al., 2014). Internal consistency for this scale in the current study was $\alpha = 0.918$.

Self-Compassion. Self-compassion was measured using the Self Compassion Scale (SCS; Neff, 2003a). The SCS is a 26-item scale measuring self-compassion. The SCS contains six subscales: self-kindness, self-judgment, common humanity, isolation,

mindfulness, and overidentification. Example items include "When I'm feeling down I tend to obsess and fixate on everything that's wrong," and "When I'm going through a very hard time I give myself the caring and tenderness I need." Respondents were asked to rate how often they acted in the manner stated in each item on a scale from 1 (almost never) to 5 (almost always). To calculate the total self-compassion score, the mean of each subscale is calculated and then the total mean is computed, or to simply take the sum of subscale scores (Neff, 2003a). Higher scores represent greater self-compassion. The SCS has demonstrated strong psychometric properties with α ranging from .90 to .95 (Neff & McGehee, 2009). Internal consistency for the SCS in the current study was α = 0.925.

Perceived Social Support. Perceived social support was measured using the Perceived Social Support Family and Friends scales (PSS-Fa and PSS-Fr; Turner & Marino, 1994) consist of 8 items each (16 items total) relating to the degree of support participants feel they receive from friends and family. Example items include "My friends enjoy hearing about what I think" and "I rely on my family for emotional support". Respondents were asked to rate how much each statement represented their experience on a scale from 1 (Not applicable) to 5 (Very much like my experience). Higher scores indicate more perceived social support. The Cronbach's reliability coefficient for PSS-Fa and PSS-Fr were α = 0.952 and α = 0.956 respectively.

Data Analysis

Parental attachment security and fear of others' compassion were examined in independent moderation models with distress disclosure, run separately, with self-compassion as moderator. Data were analyzed using SPSS version 26. Preacher and

Hayes PROCESS macro for SPSS was used to test the significance of the moderation models (Figure 1) using PROCESS moderated mediation model 1 (Preacher, Rucker, & Hayes, 2007). This macro uses logistic regression to calculate indirect effects and bootstrapping to estimate confidence intervals. The mediation alone was examined using PROCESS mediation model 4. The full moderated mediation model presented in Figure 2 was tested using PROCESS moderated mediation model 59. The relative contributions of parental attachment and fear of others' compassion to distress disclosure were tested using a stepwise hierarchical regression and bootstrapping to estimate confidence intervals in SPSS version 26.

CHAPTER III – RESULTS

Data Preparation

Missing data. Data analyses were conducted in IBM SPSS 26.0. Missing data was assessed using the patterns described by Enders (2010). The missing values created a general or haphazard pattern. A total of 147 participants were excluded from analyses due to more than 24% missing information, leaving 315 participants included in final analyses (Olinsky et al., 2003). Four participants reported no mother figure and were not included in analyses where maternal attachment was the independent variable, leaving 311 participants' data available for these analyses. Thirty three participants reported no father figure, leaving 282 participants' data available for analyses where paternal attachment was the independent variable.

Normality. The assumption of normality was assessed using the Kolmogorov-Smirnov (K-S) test, ascertaining that the data should follow a normal distribution (Field, 2013). The assumption was violated ($p < .001$) for fear of others' compassion and maternal attachment. These variables were also examined through histograms showing them to be significantly skewed, with fear of others' compassion skewed to the right and maternal attachment skewed to the left. In other words, the majority of participants experienced moderate to high levels of maternal attachment security, while paternal attachment followed a normal distribution. The majority of participants also experienced low fear of others' compassion. These violations of normality were expected in the study sample as it was drawn from a non-clinical population.

Multicollinearity. When more than one predictor is in a model, multicollinearity is a concern (Field, 2013). A strong or perfect correlation between two or more predictors

can make it difficult to obtain unique estimates of the regression coefficients. Variance inflation factor (VIF) and Tolerance statistics were examined to assess for strong linear relationships between predictors. VIF substantially greater than one or a Tolerance below .10 may be indicative of multicollinearity (Bowerman & O'Connell, 1990; Menard, 1995, in Field, 2013). VIF ranged from 1.24 to 1.48 and Tolerance ranged from .68 to .80, suggesting multicollinearity was not of concern.

Preliminary Analyses and Descriptives

Mean and standard deviation for demographic variables and study variables are presented in Table 1, and fell within expected values. Bivariate correlations were analyzed between demographic variables and study variables – maternal attachment, paternal attachment, self-compassion, fear of others' compassion, distress disclosure, and perceived social support – to explore whether relationships between study variables were in the expected direction and to determine which variables to include as covariates. Pearson's correlation coefficients are reported in Table 2. Weak to moderate relationships were observed across demographics and study variables. Due to age and sex being significantly correlated with several of the model variables, these demographic variables were entered into the primary analyses as covariates.

Table 1. Descriptive Statistics for Demographic and Study Variables

	N	M (SD)
Age	313	20.05(2.54)
Sex (0 = male, 1 = female, 2 = other)	315	.83(.51)
Maternal Attachment	311	4.97(2.49)
Paternal Attachment	282	4.32(2.67)
Fear of Others' Compassion	315	1.23(.89)
Self-Compassion	315	2.94(.70)
Distress Disclosure	314	3.06(1.00)
Perceived Social Support	297	2.75(.67)

Table 2. Bivariate Correlations Among Study Variables (N = 315).

	1	2	3	4	5	6	7	8
1. Age		-.03	-.05	.07	-.13*	.07	.13*	-.14*
2. Sex			-.12*	-.13*	.01	-.03	.02	-.01
3. Maternal Attachment				.52**	-.37**	.26**	.19**	.47**
4. Paternal Attachment					-.40**	.27**	.27**	.52**
5. Fear of Others' Compassion						-.52**	-.42**	-.41**
6. Self-Compassion							.32**	.33**
7. Distress Disclosure								.31**
8. Perceived Social Support								

Note. * $p < .05$, ** $p < .001$

All correlations between study variables were statistically significant in the direction expected. Maternal and paternal attachment were both significantly associated with self-compassion, distress disclosure, and perceived social support. Both maternal and paternal attachment were significantly inversely associated with fear of others' compassion. Fear of others' compassion was significantly inversely associated with self-compassion, distress disclosure, and perceived social support. Self-compassion was significantly associated with distress disclosure and perceived social support. Distress disclosure was significantly associated with perceived social support.

Moderation Analyses

Is the relationship between parental attachment and distress disclosure moderated by self-compassion? To address Hypothesis 1, parental attachment was entered as the independent variable, and distress disclosure as the dependent variable, with self-compassion as moderator. Maternal and paternal attachment were tested separately. Neither maternal nor paternal attachment were significantly associated with distress disclosure, nor did self-compassion significantly moderate this relationship. The direct effect of maternal attachment on distress disclosure was statistically insignificant, with a

95% bias-corrected bootstrap confidence interval crossing zero (-.0280 to .3027). The moderation of this relationship by self-compassion was also statistically insignificant, with a 95% bias-corrected bootstrap confidence interval crossing zero (-.0843 to .0277). Paternal attachment did approach significance in predicting distress disclosure directly ($p = 0.067$), but the moderation by self-compassion was insignificant with a 95% bias-corrected bootstrap confidence interval crossing zero (-.0782 to .0297).

Is the relationship between fear of others' compassion and distress disclosure moderated by self-compassion? To address Hypothesis 2, fear of others' compassion was entered as the independent variable, distress disclosure as the dependent variable, and self-compassion as the moderator. The direct effect of fear of others' compassion on distress disclosure was significantly different from zero in the direction expected ($p = 0.0278$) with a 95% bias-corrected bootstrap confidence interval entirely below zero (-.9485 to -.0551). That is, higher fear of others' compassion was associated with lower distress disclosure. However, this relationship was not significantly moderated by self-compassion, with a 95% bias-corrected bootstrap confidence interval crossing zero (-.1127 to .1943).

Mediation Analyses

Data analyses were conducted using PROCESS 4.0 (Hayes, 2012). Bootstrapping procedures were used to test the mediation alone as well as the moderated mediation model shown in Figure 2. Five thousand bootstrap samples were used to calculate the 95% bias-corrected confidence intervals of the conditional indirect effects. Confidence intervals that do not contain zero indicate a significant indirect effect via the specific mediator.

Is parental attachment associated with distress disclosure through fear of others' compassion? Prior to addressing Hypothesis 3, I tested whether the mediation alone was significant – whether fear of others' compassion explains the relationship between parental attachment and distress disclosure. I included age and sex as covariates. As shown in Table 3, the mediation model was significant for maternal attachment, (β = .0585, S.E. = .0113) with a 95% bootstrap corrected confidence interval entirely above zero (.0382 to .0815). The a-path from maternal attachment to fear of others compassion was negative and statistically significant (b = -.1371, S.E. = .0189, p <.0001). The b-path from fear of others compassion to distress disclosure was negative and statistically significant (b = -.4270, S.E. = .0633, p < .0001). Neither the c nor the c' path from maternal attachment to distress disclosure were statistically significant, with both confidence intervals crossing zero.

As shown in Table 4, the full mediation model was also significant when testing paternal attachment, (β = .0560, S.E. =.0118) with a 95% bootstrap corrected confidence interval entirely above zero (.0339 to .0806). The a-path from paternal attachment to fear of others compassion was negative and statistically significant (b =-.1338, S.E. = .0185, p <.0001). The b-path from fear of others compassion to distress disclosure was negative and statistically significant (b = -.4187, S.E. = .0661, p <.0001). Interestingly, unlike maternal attachment, both the c and c' paths were significant from paternal attachment to distress disclosure, with neither confidence interval crossing zero.

Table 3.
Results of Mediation Model for Maternal Attachment Security (MAttach) and Distress Disclosure (DDI) through Fear of Receiving Compassion from Others (FORCOS)

	Unstandardized B	SE	95% CI Lower	95% CI Upper	p
(N=309)					
MAttach → FORCOS (a path)	-.14	.02	-.17	-.10	.00**
FORCOS → DDI (b path)	-.42	.06	-.55	-.30	.00**
MAttach → DDI (c path)	.03	.02	-.02	.07	.21
MAttach → DDI (c' path)	.03	.02	-.02	.07	.26
MAttach → FORCOS → DDI	.06	.02	.04	.08	

Note. ** p< .01; * p< .05; Covariates: Age, Sex

Table 4.
Results of Mediation Model for Paternal Attachment Security (PAttach) and Distress Disclosure (DDI) through Fear of Receiving Compassion from Others (FORCOS)

	Unstandardized B	SE	95% CI Lower	95% CI Upper	p
(N=280)					
PAttach → FORCOS (a path)	-.13	.02	-.17	-.10	.00**
FORCOS → DDI (b path)	-.42	.07	-.55	-.29	.00**
PAttach → DDI (c path)	.05	.02	.01	.09	.02*
PAttach → DDI (c' path)	.05	.02	.01	.09	.03*
PAttach → FORCOS → DDI	.06	.02	.03	.08	

Note. ** p< .01; * p< .05; Covariates: Age, Sex

Does self-compassion moderate the relationship between parental attachment and distress disclosure through fear of others' compassion? To address Hypothesis 3, the hypothesized moderated mediation model (see Figure 2) was tested in a single model using a bootstrapping approach to assess the significance of the indirect effects at differing levels of the moderator (Hayes, 2013). Maternal and paternal attachment were entered as the independent variable in turn, with fear of others' compassion as the mediator. The outcome variable was distress disclosure, and self-compassion was the proposed moderator on all paths. Age and sex were entered as covariates. The model was

tested using PROCESS moderated mediation model 59, with bias-corrected 95% confidence intervals, where significant effects are supported by confidence intervals that do not contain zero.

Neither maternal nor paternal attachment were statistically significant predictors of distress disclosure through the full moderated mediation model. To break down results further, self-compassion did not significantly moderate the relationship between maternal attachment and fear of others' compassion (b = .0178, S.E. = .0220, t = .8079, p = .4198). Self-compassion also did not significantly moderate the relationship between fear of others' compassion and distress disclosure with maternal attachment entered as the independent variable (b = .0174, S.E. = .0922, t = .1888, p = .8504). In other words, looking at conditional indirect effects, maternal attachment predicted distress disclosure through fear of others' compassion at every level of self-compassion (16th, 50th, and 84th percentiles), where all confidence intervals were entirely above zero.

Self-compassion also did not significantly moderate the relationship between paternal attachment and fear of others' compassion (b = .0278, S.E. = .0212, t = 1.3145, p = .1898). Self-compassion did not significantly moderate the relationship between fear of others' compassion and distress disclosure with paternal attachment as the independent variable (b = .0263, S.E. = .0976, t = .2690, p = .7882). In other words, looking at conditional indirect effects, paternal attachment predicted distress disclosure through fear of others' compassion at every level of self-compassion (16th, 50th, and 84th percentiles), where all confidence intervals were entirely above zero.

Results indicated that the indirect effect was reduced at higher levels of self-compassion, so I ran the Johnson-Neyman test to determine at what level of self-

compassion I would see a full buffering effect (the point at which the indirect effect became insignificant) for maternal attachment. I found that at the 96th percentile of self-compassion (SCS score of 3.97), conditional effects of maternal attachment on fear of others' compassion became statistically insignificant. At the 98th percentile of self-compassion (SCS score of 4.54), self-compassion begins to buffer the effects of fear of others' compassion on distress disclosure – in other words, participants at this level of self-compassion were likely to be able to disclose distress.

I again ran the Johnson-Neyman test to determine at what level of self-compassion we would see a full buffering effect for paternal attachment. I found that at the 93rd percentile of self-compassion (SCS score of 4.05), conditional effects of paternal attachment on fear of others' compassion became statistically insignificant. At the 97th percentile of self-compassion (SCS score of 4.32) self-compassion begins to buffer the effects of fear of others' compassion on distress disclosure with paternal attachment entered as the predictor – in other words, participants at this level of self-compassion were likely to be able to disclose distress.

Does fear of others' compassion predict distress disclosure above and beyond parental attachment? To address Hypothesis 4, a stepwise hierarchical regression analysis was conducted to determine whether fear of others' compassion predicted distress disclosure above and beyond parental attachment. P-values of less than 0.05 were considered statistically significant. I found that fear of others' compassion explained more of the variance in distress disclosure than did maternal or paternal attachment.

When entered by itself in the first regression, maternal attachment predicted distress disclosure (B =.076, S.E. = .026, p <.001). In the second regression which

included both maternal attachment and fear of others' compassion, fear of others' compassion predicted distress disclosure (B = -.456, S.E. = .059, p < .001) while maternal attachment did not (B = .016, S.E. = .025, p = .522).

When entered by itself in the first regression, paternal attachment predicted distress disclosure (B = .103, S.E. = .023, p <.001). In the second regression which included both paternal attachment and fear of others' compassion, fear of others' compassion predicted distress disclosure (B = -.448, S.E. = .068, p < .001) while paternal attachment did not (B = .043, S.E. = .025, p = .085).

Are distress disclosure and self-compassion positively associated with perceived social support, and is fear of others' compassion negatively associated with perceived social support? In effort to address Hypothesis 5, connecting distress disclosure with its meaningful impact on mental health, I examined bivariate correlations and found that higher distress disclosure was significantly associated with higher perceived social support (t(297) = .308, p < .001). Higher self-compassion was significantly associated with higher perceived social support (t(296) = .325, p < .001), and higher perceived social support was significantly negatively associated with fear of others' compassion (t(297) = -.405, p < .001).

Post Hoc Analyses

I examined the impact of paternal attachment on variables of interest in order to determine whether it had a different relationship than maternal attachment with variables of interest. I found that paternal attachment had similar effects as maternal attachment in our study in all three models, except for the mediation. The relationship between paternal attachment and distress disclosure was only partially mediated by fear

of others' compassion, while the relationship between maternal attachment and distress disclosure was fully mediated by fear of others' compassion.

Through further analysis using stepwise hierarchical regression, I also found that paternal attachment predicted distress disclosure above and beyond maternal attachment. When entered alone in the first regression model, maternal attachment predicted distress disclosure (B = .088, S.E. = 030., p = .003). In the second regression which included both maternal and paternal attachment, paternal attachment predicted distress disclosure (B = .084, S.E. = .027, p = .002) while maternal attachment did not (B = .040, S.E. = .034, p = .23).

Finally, I ran independent samples t-tests to compare gender differences across our variables of interest. There were no significant differences between genders found for mean scores on maternal attachment, self-compassion, fear of others' compassion, distress disclosure, or perceived social support, but I did find a significant difference between mean scores on paternal attachment by gender (F = 6.697, SE = .37, p = .02), such that male participants scored significantly higher than females.

CHAPTER IV – DISCUSSION

Results of this study extended prior research (Dupasquier et al., 2018; Neff & McGehee, 2010) in being the first to include attachment security and finding that the relationship between both maternal and paternal attachment and distress disclosure is significantly mediated by fear of others compassion. I extended prior research in finding that the relationship between paternal attachment security and distress disclosure was only partially mediated by fear of others' compassion – while the relationship between maternal attachment and distress disclosure was fully mediated by fear of others' compassion. This finding suggests that there are differences in the pathway by which maternal and paternal attachment predict distress disclosure – that while maternal attachment is related to distress disclosure through fear of others' compassion, the relationship between paternal attachment and distress disclosure has less to do with fear of others' compassion and more to do with other variables outside the scope of the study. This finding has face validity, given the different roles mothers and fathers are socialized to play in our culture, but more research is needed to determine what the specific mechanisms are. The finding that paternal attachment predicts distress disclosure above and beyond maternal attachment further underscores the importance of studying the impact of paternal attachment on young adults' ability to disclose distress and connect with social support. The significant gender difference in paternal attachment scores, such that females scored significantly lower than males on this measure, suggests that clinicians would do well to pay particular attention to female clients in treatment for sequelae of insecure paternal attachment. Findings regarding differences in parental attachment must be interpreted with caution given that while paternal attachment scores

for this sample followed a normal distribution, maternal attachment scores were skewed, with participants mostly reporting moderate to high levels of maternal attachment security.

My study did not support the hypotheses that self-compassion would significantly moderate the relationship between maternal attachment and distress disclosure (Hypothesis 1), fear of others' compassion and distress disclosure (Hypothesis 2) or the full model (Hypothesis 3) in which self-compassion was hypothesized to moderate all three paths of the mediation. I understand these findings through a simple observation that the study was cross-sectional, and measured self-compassion as a stable trait, while prior researchers manipulated self-compassion experimentally through diary work, mindfulness practices, or other strategies, to induce a temporary state of enhanced self-compassion (Dupasquier et al., 2018, 2020a). The lack of significance in the moderation is also supported by the theory that trait self-compassion is predicted by parental attachment security and is associated with fear of others' compassion (Neff & McGehee, 2010) so it cannot serve as a buffer ameliorating the adverse impact of insecure attachment on an individual's capacity for distress disclosure. In other words, my findings support prior research suggesting that self-compassion is not orthogonal to attachment – those with more secure attachment to their caregiver are unlikely to develop high self-compassion. This explanation is supported by the finding that participants required very high levels of self-compassion (in the 93rd percentile or higher) in order to buffer against the impact of insecure parental attachment on distress disclosure through fear of others' compassion.

My study replicated and extended previous research showing that during the COVID-19 pandemic, higher maternal attachment (Shaver & Mikulincer, 2002) and higher self-compassion (Dupasquier et al., 2018, 2020a) are both associated with higher distress disclosure. This study replicated the first study that found higher fear of others' compassion to be associated with lower distress disclosure (Dupasquier et al., 2018). These results provide evidence that parental attachment security among young adults is critical for development of self-compassion and for ability to disclose distress, both of which are significant predictors of social support that buffers against the stresses of life. They also suggest that parental attachment security protects individuals from developing a fear of others' compassion, so that they may disclose distress access the social support needed to weather life's stresses.

Limitations and Strengths

The strengths of this study include the examination of the role of parental attachment as a predictor of variables of interest, the inclusion of males in my sample, a moderately high sample size, and the timing of the study during the COVID-19 pandemic - a time of unprecedented social isolation and stress. The study also has a number of limitations I would like to address. The primary limitation of this study was that it was a cross-sectional design without an intervention to manipulate self-compassion. Prior research involving self-compassion interventions showed promise of influencing participants' capacity for distress disclosure (Dupasquier et al., 2018, 2020a) thus benefitting their mental health through increased social support (Kahn & Hessling, 2001). I was unable to run an intervention for this study due to pandemic constraints, and thus missed out on the opportunity to see whether prior findings were replicable with my

sample during the pandemic. Another limitation of the study was the difference in distribution of maternal and paternal attachment scores, such that while paternal attachment followed a normal distribution, maternal attachment was skewed towards higher attachment scores, making results challenging to interpret. The study was also limited because minority groups were underrepresented, including gender minorities, sexual minorities, and racial minorities.

Future research could benefit from exploring the impact of race on the relationships between the variables examined in this study. I would predict a complex picture to be painted for racial minorities. On one hand, I would expect that the disproportionate impact of pandemic stress on racial minorities (Kujawa et al., 2020) and resulting exhaustion to decrease distress disclosure, a potentially costly act (Coates & Winston, 1987) particularly among racial minority participants with insecure attachment styles. I would expect the current stress of the pandemic and racial violence to magnify differences between groups compared with if this study were run at a different time in history. I would expect that higher stress, anxiety, and discrimination likely felt by Black and API participants (Kujawa et al., 2020) would increase sense of social risk, increase activation of attachment systems in response to threat, and amplify motivation to engage in attachment-style based self-regulation strategies. That is, I would expect fewer insecurely attached individuals to disclose distress than if this study were run at a different time in history.

However, on the other hand, I can imagine that communities rallying around a common struggle may counteract these effects. In particular, I would expect Black and API communities rising up together against the twin crises of the pandemic and racial

violence and inequity to strengthen interpersonal bonds. In this way, the timing of the study may produce increased attachment security, self-compassion, and distress disclosure, while decreasing fear of others' compassion for these groups compared with the study being run at another time. I would posit that increased social modeling of voicing distress, both by demonstrators on the street and activists on social media, would serve to enhance these effects. Overall, however, I believe that the complexity of dynamics at play will prevent significant differences to be found between racial groups. It may be that much is happening under the surface we cannot see.

In general, I would expect results to follow according to the differential-susceptibility hypothesis (Belsky, 2016). In this hypothesis, individuals with greater sensitivity to their environmental context suffer more negative outcomes when in adverse consequences than their peers, but also benefit more from nurturing environments than their less sensitive peers (Belsky. 2016). As this susceptibility is not governed by race, I'd expect the complexity of the above considerations to prevent significant differences from emerging between racial groups.

Clinical Implications

Given that both maternal and paternal attachment security impacts distress disclosure through fear of others' compassion, clinical interventions aimed at reducing fear of others' compassion would likely benefit insecurely attached clients. Such interventions may improve clients' ability to disclose their distress to trusted others, and obtain the social support they need to weather life's storms and stresses. Given that attachment security changes based on the degree of safety a person feels in their closest relationships, clinicians – who are positioned in a uniquely intimate relationship with

clients in terms of distress disclosure– would do well to focus on establishing secure attachments with clients and helping clients establish more secure attachment with friends, partners, and intimate others in their lives. Increasing clients' attachment security should decrease their fear of others' compassion and increase distress disclosure, again leading to benefits of greater social support, creating a virtuous cycle, as better social support would likely improve attachment security. The finding that paternal attachment has an even greater impact than maternal attachment on these constructs underlines the importance of focusing on the impacts of this relationship on client attachment in therapy. Finally, given the association of distress disclosure with higher perceived social support, clinicians would do well to reinforce distress disclosure directly in session, and to help clients learn to identify trustworthy others to whom they might disclose distress and receive safe, supportive responses.

Future Directions

It would be highly useful to replicate this study as an intervention – examining the impacts of journaling prompts, guided imagery, or other practices for activating a state of self-compassion –on individuals' self-compassion, their ability to disclose distress to a peer or confederate, and their in-the-moment fear of others' compassion. This may help us find invaluable applications in clinical practice to help clients either through a single intervention or practice over time in therapy and between sessions. This kind of research could be invaluable especially in building resilience among clients with insecure parental attachment and difficulty connecting in supportive relationships with others.

Future research might also benefit practice by focusing on studying participants from clinical samples selected for highly disrupted attachment to parents. My community

sample could not capture dynamics between variables of interest at their extremes, and a clinical sample would likely help inform practice with clinical populations.

Future researchers could extend our understanding of this area by employing larger sample size and sufficient representation by all genders (male, female, nonbinary, etc.). Comparing the ways in which participant gender might interact with parent gender in informing the way attachment security predicts variables of interest would similarly aid our understanding of effective clinical interventions to help clients develop greater ability to disclose distress and access social support. Future research might also study the dynamics between variables of interest in more diverse populations, including BIPOC Americans, participants from other countries and cultures, and nontraditional family structures including GLBTQ+ families, families with a single parent, and families with more than two parents.

Gender appears to play an important role both as a possible moderator of relationships between study variables for participants, and in terms of the different influences parents of each gender have on outcomes for study variables. Future studies would benefit from exploring the moderating role of gender.

Finally, it would be useful to understand how age influences our ability to alter our ability to disclose distress and to reduce our fear of others' compassion. Because it is well understood and documented that greatest neural malleability occurs early in life, the earlier we intervene the better – but it would be useful for future research to explore if there are critical periods in which particular types of intervention are more beneficial for helping individuals overcome challenges around fearing others' compassion. Such research could guide powerful interventions to support insecurely attached individuals in

developing greater ability to disclose distress to trusted others and obtain the social support we all need to cope with challenges throughout life.

Conclusions

This study supported extant literature connecting both higher parental attachment and higher self-compassion with higher distress disclosure. It also supported literature showing the strong association between distress disclosure and social support. It added evidence to the research base by showing that attachment to both mothers and fathers predicts distress disclosure through fear of others' compassion, and was first to replicate the finding that higher fear of others' compassion is associated with lower distress disclosure. This study was first to examine these variables with males included in the sample, and was unique in being administered during the COVID-19 pandemic. Importantly, the results of the study showed that attachment to fathers may inform the development of the pathway from parental attachment to distress disclosure even more strongly than maternal attachment, though the latter is more commonly studied; Additional study of paternal attachment and its impact on individuals' ability to benefit from relationships with supportive others is warranted. Results failed to support the proposed moderation of this model by trait self-compassion, which is likely due to the strong association between this trait and attachment security. These findings support the continuing need for strong parent-child attachments through young adulthood, as parental attachment security among young adults contributes strongly to the ability to disclose distress to others and obtain benefits of social support to buffer against life stress.

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