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Self-Compassion Mediates the Link Between Attachment Security and Intimate Relationship Quality for Couples Navigating Pregnancy

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Abstract

Millions of couples navigate the transition from pregnancy to postpartum in a given year, and this period of change and adjustment in the family is associated with elevated risk for intimate relationship dysfunction. Self-compassion has the potential to promote skills that are essential for healthy adaptation (e.g., emotion regulation, greater openness and flexibility, more awareness of the needs of oneself and one's partner). The overarching goal of the present study was to investigate the role of self-compassion in intimate relationship quality during pregnancy. A sample of 159 couples completed semi-structured interviews and questionnaires. Parents engaging in more compassionate self-responding during pregnancy had higher quality intimate relationships as measured across multiple facets – the degree of emotional intimacy and closeness in the relationship, adaptive conflict management and resolution, high quality support in response to stress, and a high degree of respect and acceptance directed toward each other. Further, compassionate self-responding emerged as a mediator of the link between attachment security and intimate relationship quality. Specifically, mothers who were higher in attachment anxiety reported lower levels of compassionate self-responding which, in turn, undermined multiple dimensions of the intimate relationship. Further, fathers who were higher in attachment avoidance practiced less self-compassion, which had deleterious consequences for the couple. These results provide implications that can inform conceptual frameworks of intimate relationship quality and clinical implications for interventions targeting the transition into parenthood.

Keywords

self-compassion; attachment; intimate relationship quality; pregnancy

Couples navigating pregnancy and childbirth are at increased risk for stress and discord as they adapt to new or modified caregiving roles (Lawrence et al. 2010; Ramsdell,

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Franz, & Brock, 2019). The degree to which couples can maintain a close and supportive relationship during this time has important implications for the entire family. Indeed, intimate relationship quality during pregnancy appears to play a central role in maternal and paternal mental health, which impacts parenting after childbirth (Brock, Franz, & Ramsdell, 2019). As such, research identifying key factors contributing to intimate relationship quality during pregnancy is sorely needed. Consistent with adult attachment theory (Feeney, 2016), an insecure attachment orientation is associated with a range of maladaptive processes unfolding in intimate relationships including less synchronicity, support, and connection; however, the mechanisms explaining how attachment security ultimately impacts relationships requires closer empirical attention. One proposed mechanism is the degree to which each individual partner engages in self-compassion (e.g., being kind to oneself when facing distress or discomfort). Indeed, self-compassion has been linked to attachment (Bolt et al., 2019), and emerging research points toward self-compassion playing an important role in intimate relationship quality (Diedrich et al., 2014; Jacobson et al., 2018; Neff & Beretvas, 2013). The overarching goal of the present study was to examine self-compassion as a mechanism through which attachment security promotes multiple dimensions of intimate relationship quality (e.g., conflict management, support, intimacy, sexual quality, respect and acceptance) in a sample of heterosexual couples navigating pregnancy.

Attachment, Self-Compassion, and Intimate Relationship Quality

Attachment insecurity of either partner has been linked to a range of maladaptive relational processes such as lack of trust, poor communication, and inadequate support, along with more general indicators of dissatisfaction and instability in relationships (Brock & Lawrence, 2014; Collins and Read 1990; Feeney, 2016; Mikulincer, Florian, Cowan, & Cowan, 2002; Simpson, Rholes, & Phillips, 1996). Thus, it is not surprising that practitioners often work with couples to help them understand how each partner's unique attachment style ultimately plays out within the context of the relationship and impacts relational functioning (Benson, McGinn, & Christensen, 2012; Johnson & Wiffren, 2003). Adult attachment insecurity is anchored in early childhood interactions with primary caregivers and is further shaped by experiences in adult relationships (Feeney, 2016). Although there are multiple conceptualizations of attachment, researchers often examine two key dimensions of attachment during adulthood: dependence/anxiety and avoidance. Individuals who are high in *attachment anxiety* have underlying, internal working models that lead them to view themselves as unlovable. They are prone to experiencing fear of rejection and abandonment, and they often engage in proximity seeking behaviors. In contrast, individuals who are high in *attachment avoidance* perceive others as unreliable and untrustworthy and engage in behaviors that create physical and emotional separation with others because of discomfort with closeness. Although both dimensions of attachment insecurity have been linked to dysfunction in intimate relationships, there is some research suggesting that attachment anxiety in women and attachment avoidance in men might be particularly detrimental to intimate relationship functioning (e.g., Feeney, 2016; Kirkpatrick & Davis, 1994); however, other studies have failed to replicate these gender differences (e.g., Feeney, 2016).

Self-compassion arises from attachment security.

Self-compassion involves treating oneself in a manner that he or she would engage in with a friend in need, with kindness, and comprises three core components (Neff, 2003). The first component of self-compassion is mindfulness. Having greater present-moment awareness can reduce a person's engagement in prolonged rumination or overidentification with their emotional narrative. The second component, common humanity, helps a person to understand that their suffering is part of the greater human experience—one that entails positive experiences but also suffering. Embracing common humanity can help to establish a mindset of openness and connectedness with others, such as an intimate partner. The third component, self-kindness, involves being one's ally during hard times by facilitating a greater self-understanding through awareness and acceptance rather than condemnation of imperfections and shortcomings. Self-kindness can cultivate a gentler inner dialog with less self-judgment, self-criticism, and self-evaluation.

Over the past decade, research has demonstrated that attachment security is positively associated with self-compassion (Moreira et al., 2015; Pepping, Davis, & O'Donovan, 2013). For example, in a sample 104 heterosexual couples, Neff and Beretvas (2013) found that people with a more secure attachment orientation exhibited greater self-compassion. In another study, Raque-Bogdan et al. (2011) identified self-compassion as a key mechanism through which insecure attachments impacts mental health among older adults. Thus, it is expected that one's internal working model, anchored in past experiences in relationships, plays a central role in the ability to engage in self-compassion when experiencing emotional pain. For instance, individuals who view themselves as unlovable (consistent with attachment anxiety) might be less capable of engaging in self-kindness and, instead, have an inner dialog of self-criticism and judgement. Individuals who create physical and emotional separation with others (consistent with attachment avoidance) might find it more difficult to embrace a mindset of openness and connectedness with others. However, research is needed to more fully explore the links between different dimensions of attachment security and self-compassion.

Self-compassion impacts intimate relationships functioning.

Self-compassion holds particular promise for understanding ways to promote stronger intimate partner relationship quality. To date, a scarce body of literature has focused on self-compassion and its role in intimate relationship quality, and much of this research has been conducted with individual partners rather than couples. Higher levels of self-compassion are associated with more adaptive problem-solving strategies with one's partner (Yarnell & Neff, 2013), and reduced likelihood of engaging in maladaptive behaviors such as verbal aggression (Neff & Beretvas, 2013). Further, self-compassion can be an effective emotion regulation strategy, which is important for managing disagreements (Diedrich et al., 2014). Importantly, self-compassion might serve a similar function of strengthening partner support given engaging in greater self-compassion can facilitate increased awareness of one's own emotional state and the emotional state of one's partner during times of stress. It is anticipated that individuals higher in self-compassion will be better equipped to accurately assess the situation with greater mental and emotional clarity leading to a more skillful provision of support that meets the unique needs of one's partner in the moment.

Taken together, existing theory and research suggests that self-compassion holds considerable promise for understanding how to best promote high-quality intimate relationships, including for couples navigating pregnancy. Self-compassion has the potential to cultivate intrapersonal resilience by increasing parents' coping skills (e.g., emotion regulation, more awareness of the needs of oneself and one's partner), which in turn, might promote healthier and more adaptive relationship dynamics between parents during pregnancy – a time when relationship processes are evolving and changing and there is increased risk for dysfunction (Lawrence et al., 2010; Ramsdell, Franz, & Brock, 2019). Unfortunately, there is limited research examining the role of self-compassion in intimate relationship quality for expecting parents (Duncan & Bardacke, 2010; Gambrel & Piercy, 2015). However, there is some evidence that expecting couples can benefit from engaging in more mindfulness—a key dimension of self-compassion—during pregnancy. For example, Gambrel and Piercy (2015) found that fathers reported greater relationship satisfaction and less negative affect after completing a mindfulness-based program for couples who were expecting their first child.

The Present Study

Insecure attachment is closely linked to numerous maladaptive relational patterns that ultimately undermine intimate relationship quality, but the mechanisms that explain the deleterious effects of attachment insecurity on intimate relationships warrant closer attention. By identifying such mechanisms, we can better understand how to intervene and mitigate risk for dissatisfaction and instability experienced by couples. Although it is not possible to erase one's history of relational experiences that culminate in attachment insecurity—attachment is relatively stable in adulthood (Raque-Bogdan et al., 2011)—it is feasible to decrease uncompassionate self-responding that arises from an insecure attachment and, ultimately, undermines functioning in intimate relationships. Moreover, self-compassion appears to be an ideal target in this line of research given it can be cultivated in interventions (Carson et al., 2004; Gilbert et al., 2014; Grossman et al., 2004).

To our knowledge, only one study has fully tested the proposed mechanism. Bolt et al. (2019) sampled individual partners and found that uncompassionate self-responding and less compassionate attitude towards partner mediated the association between attachment insecurity and poor relationship quality (self-reported). Yet, researchers have not examined this mechanism in a dyadic framework, with couples, across multiple dimensions of intimate relationship quality, or during pregnancy when couples are at elevated risk for relationship discord.

We pursued two primary aims in the present study. The first aim was to examine the associations between self-compassion and multiple dimensions of prenatal intimate relationship quality measured via semi-structured interviews administered to each partner during the unique context of pregnancy. We hypothesized that greater self-compassion reported by both mothers and fathers would be significantly associated with better conflict management, higher quality partner support, a greater degree of closeness and emotional intimacy in the relationship, a high-quality sexual relationship, and a high degree of respect and acceptance felt by each parent from his or her partner. The second aim was

to examine self-compassion as a mechanism explaining the well-established association between attachment and intimate relationship quality (e.g., Brock & Lawrence, 2014; Collins & Read, 1990; Feeney, 2016; Mikulincer et al., 2002; Simpson, Rholes, & Phillips, 1996) in this sample of heterosexual couples navigating pregnancy. We hypothesized that higher levels of both avoidant and attachment anxiety would predict lower levels of intimate relationship quality by undermining self-compassion in each partner.

Method

Participants and Procedures

All procedures were approved by the University of Nebraska-Lincoln Institutional Review Board. Flyers and brochures were broadly distributed to businesses and clinics frequented by pregnant women (e.g., obstetric clinics) in Lincoln, NE and surrounding communities. We established cooperative arrangements with multiple agencies in the community. If an establishment permitted, members of the research team approached potential participants and provided a short, five-minute overview of the study along with a brochure. Eligibility criteria included: (a) 19 years of age or older (legal age of adulthood where the research was conducted), (b) English speaking, (c) pregnant at the time of the initial appointment, (d) both partners are biological parents of the child, (e) singleton pregnancy, and (f) in a committed intimate relationship and cohabiting. Certain eligibility criteria (e.g., singleton pregnancy, biological parents) were selected as part of a larger study of early child socioemotional development. One hundred sixty-two heterosexual couples enrolled. Three couples were excluded from the final sample, due to either ineligibility or invalid data, for a final sample of 159 couples (159 women and 159 men).

Couples had dated an average of 81.90 months ($SD = 49.59$) and cohabited an average of 61.00 months ($SD = 41.80$). The majority of couples were married (84.9%). Most women were in the second (38.4%) or third (58.5%) trimester of pregnancy. On average, couples had one child living at home ($SD = 1.18$); 57.9% reported that they had no children and, therefore, were experiencing the transition into parenthood for the first time. Participants were primarily White (89.3% of women; 87.4% of men); 9.4% of women and 6.4% of men identified as Hispanic or Latino. On average, women were 28.67 years of age ($SD = 4.27$) and men were 30.56 years of age ($SD = 4.52$). Annual joint income ranged from less than \$9,999 to more than \$90,000 with a median *joint* income of \$60,000 to \$69,999, and most participants were employed at least 16 hours per week (74.2% of women; 91.8% of men). Modal education was a bachelor's degree (46.5% of women; 34.6% of men).

Both partners attended a three-hour laboratory appointment during which they completed a series of procedures, some of which are beyond the scope of the present study. Those procedures included behavioral observation paradigms, semi-structured clinical interviews, and self-report questionnaires. Following the dyadic interaction tasks, partners were escorted to separate rooms to complete the clinical interviews and self-report questionnaires and did not interact with one another until the procedures were complete. Participants were compensated \$50 (for a total of \$100 per couple) for attending the appointment.

Measures

The *Relationship Scales Questionnaire* (RSQ; Griffin & Bartholomew, 1994) directs respondents to consider how they feel about close relationships in general, both past and present, on a 1 (not at all like me) to 5 (very much like me) scale. We factor analyzed items from the RSQ, extracting 2 factors indicative of the avoidance scale (16 items) and anxiety scale (10 items) identified by Kurdek (2002). The internal consistency of each scale was excellent ($\alpha = .86$ for avoidance and $\alpha = .86$ for anxiety).

The *Self-Compassion Scale* (SCS; Neff, 2003) consists of a 26-item questionnaire that is divided across six dimensions. Three of the six dimensions represent compassionate self-responding (CSR)—mindfulness, common humanity, and self-kindness. The last three dimensions represent uncompassionate self-responding (USR) including self-judgment, isolation, and overidentification. Questions on the SCS are rated on a five-point Likert scale ranging from 1 (almost never) to 5 (almost always). The internal consistency for each scale of the SCS was adequate: mindfulness ($\alpha = .75$; 4 items), common humanity ($\alpha = .76$; 4 items), self-kindness ($\alpha = .79$; 5 items), self-judgment ($\alpha = .83$; 5 items), isolation ($\alpha = .79$; 4 items), and overidentification ($\alpha = .79$; 4 items). To guide scoring of this measure, a series of confirmatory factor analyses and model comparisons were conducted (please refer to supplemental materials for detailed information). Ultimately, a 2-factor model with the first factor comprised of the compassionate self-responding subscales (mindfulness, common humanity, and self-kindness) and the second factor comprised of the uncompassionate self-responding subscales (overidentification, isolation, and self-judgment) was the best fit to the data. Additionally, scores from the two factors demonstrated unique convergent, divergent, and criterion validity as evidenced by associations presented in Figure 1 and Table 1.

The *Relationship Quality Interview* (RQI; Lawrence et al., 2011; Lawrence et al., 2009) is a 60- to 90-minute interview enabling functional analyses of relationships over the past 6 months across five domains. The interview was designed to assess functioning across multiple domains based on behavioral exemplars and pointed follow-up questions to gain relatively objective assessments of dyadic functioning based on multiple reporters. The five relational domains include: (a) *emotional intimacy*: mutual sense of closeness, warmth, interdependence and affection in the relationship; comfort with disclosing emotionally vulnerable information; quality of self-disclosures; friendship; demonstrations of love and affection; (b) *conflict management*: frequency and length of arguments; levels and severity of negative affect and behaviors; aggression or withdrawal during arguments; recovery strategies after arguments, (c) *sexual quality*: satisfaction with the sexual relationship; presence/absence of negative emotions during sex; sexual difficulties; sensual behaviors; (d) *received support*: quality of support received when the interviewed partner is feeling down or has a problem, match between desired and received levels of support, and (e) *received respect*: the extent to which the interviewed partner feels respected (e.g., degree to which the partner is treated like an equal in the relationship) and accepted (e.g., degree to which the partner is allowed to be his or her own person); degree to which the partner has decision-making power in the relationship. Concrete behavioral indicators reported by each partner in separate interviews facilitate objective ratings. Interviewers rated each domain on scales ranging from 1 (poor functioning) to 9 (high functioning). The RQI has demonstrated strong

reliability and validity (Lawrence et al., 2011). Interviewers completed training in reliable coding and participated in consensus and recalibration meetings. Approximately 20% of the interviews were randomly assigned and double-coded to assess interrater reliability (average ICC = .91).

Correlations between scores from the maternal and paternal interviews were significant for intimacy ($r = .26, p = .001$), sex ($r = .53, p < .001$), and conflict ($r = .51, p < .001$); thus, consistent with scoring procedures for the RQI, maternal and paternal scores were averaged to obtain dyadic scores for those domains. In contrast, in this sample of pregnant couples, inter-partner correlations were relatively small for respect ($r = .18, p = .021$) and support ($r = .11, p = .161$). Notably, questions in the support and respect sections of the interview are focused on the respondent's experiences receiving support or respect from his or her partner (e.g., to what extent does your partner provide emotional support when you have had a bad day; is your partner respectful of who you are as a person); thus, relational processes assessed in those domains are less dyadic in nature than other domains (e.g., how often couples argue and how they work together to get back to normal after an argument; e.g., conflict management). Accordingly, separate partner scores of respect and support received from their partner were retained.

Data Analytic Plan

Data analysis was conducted using Mplus software (Muthén & Muthén, 2010). Missing data were minimal (covariance coverage ranged from .98 to 1.00); Full Information Maximum Likelihood (FIML) estimation was used to address missing data (Enders, 2010). Consistent with actor-partner interdependence modeling (APIM) for distinguishable dyads (Kenny, Kashy, & Cook, 2006), there were two sets of effects for those models: (a) X affects own Y (actor effects; e.g., maternal attachment predicts maternal self-compassion) and (b) X affects partner's Y (partner effects; e.g., maternal attachment predicts paternal self-compassion). A bootstrap approach (Shrout & Bolger, 2002) was used for estimating indirect effects. Bootstrapping provides an empirical approximation of sampling distributions of effects to produce confidence intervals (CI) of estimates. If zero does not fall within the CI, we concluded that an indirect is different from zero. We used a nonparametric resampling method (bias-corrected bootstrap) with 5,000 resamples drawn to derive the 95% CIs for the indirect effects (Preacher & Hayes, 2008). In each model, we controlled for week of pregnancy, whether this was the first child for a couple, and relationship duration.

Results

Descriptive Statistics and Correlations

Descriptive statistics are presented in Table S1. Gender differences were present as mothers and fathers differed in some, but not all, dimensions of self-compassion. Mothers exhibited greater self-kindness than fathers; however, mothers were also engaging in more uncompassionate self-responding behaviors including overidentification, isolation, and self-judgment, compared to fathers. Mothers also reported receiving greater support relative to fathers. In contrast, fathers reported receiving more respect relative to mothers. Fathers had

higher scores of attachment avoidance than mothers. In contrast, mothers had higher scores of attachment anxiety.

Bivariate correlations are reported in Table 1. Specifically, the correlations suggest that mothers' attachment anxiety and fathers' attachment avoidance were inversely associated to two of the three compassionate self-responding dimensions (mindfulness and self-kindness) whereas both anxious and attachment avoidance in both mothers and fathers were positively associated with all three indicators of uncompassionate self-responding (overidentification, isolation, and self-judgment). As expected, maternal and paternal attachment insecurity were significantly correlated with numerous domains of intimate relationship quality. Specifically, maternal attachment anxiety was significantly correlated with all dimensions of relationship quality while attachment avoidance was significantly correlated with intimacy, conflict management, and received respect in the expected direction. Paternal anxious and attachment avoidance scores were significantly associated with all facets of intimate relationship quality except sexual quality.

The correlations reported in Table 1 also provide support for our Aim 1 hypothesis that greater self-compassion would be associated with greater intimate relationship quality. The strongest evidence of the association between maternal self-compassion (both compassionate and uncompassionate self-responding) and intimate relationship quality was found for emotional intimacy and conflict management, followed by received support and received respect; however, some indicators of uncompassionate self-responding were also associated with sexual quality. When examining paternal self-compassion, multiple indicators of both compassionate and uncompassionate self-responding in fathers were associated with intimacy, conflict management, received support, and received respect; however, quality of the sexual relationship was not associated with paternal self-compassion.

Mediation Analysis

We tested the full dyadic mediation model with attachment predicting multiple indicators of intimate relationship quality through self-compassion as a mediator. The results of the structural model with the latent variable representing compassionate self-responding (for each partner) as a mechanism is depicted in Figure 1 and results of the model are reported in Table 2. The model demonstrated adequate global fit, RMSEA = .06, CFI = .96, and SRMR = .05. Maternal attachment anxiety was associated with less compassionate self-responding for mothers whereas paternal attachment avoidance was associated with less compassionate self-responding for fathers. In turn, and consistent with Aim 1 hypotheses, less compassionate self-responding by mothers was uniquely associated with lower levels of emotional intimacy, poor conflict management, lower quality support received by fathers, and less respect and acceptance received by fathers. Less compassionate self-responding by fathers was also uniquely associated with lower levels of emotional intimacy in the couple relationship and lower quality support received by fathers.

Regarding the presence of significant indirect effects, providing a test of Aim 2 mediation hypotheses, maternal attachment anxiety had significant indirect effects, via maternal compassionate self-responding, on conflict management, 95% CI [-.045, -.010], emotional intimacy, 95% CI [-.030, -.004], paternal support received, 95% CI [-.044, -.011] and

paternal respect received, 95% CI [-0.040, -.006]. Paternal attachment avoidance also had significant indirect effects, via paternal compassionate self-responding, on paternal support received, 95% CI [-.015, -.001], and emotional intimacy, 95% CI [-.011, -.001] in the relationship. Although self-compassion did not uniquely predict maternal support received or maternal respect received, maternal attachment anxiety has a significant unique effect on those dimensions of intimacy relationship quality independent from self-compassion. Insecure attachment and compassionate responding measures were not unique predictors of sexual quality.

We also tested a parallel model using the latent variable of *uncompassionate* self-responding as the mediator. This model had adequate fit, RMSEA = .05, CFI = .97, and SRMR = .06; however, no significant indirect effects were present. Unlike compassionate self-responding which demonstrated significant associations with intimate relationship quality, uncompassionate self-responding was not associated with any dimension of the relationship. As expected, insecure attachment was significantly associated with uncompassionate responding. Mothers with a more attachment anxiety orientation reported more uncompassionate self-responding. Both anxious and attachment avoidance reported by fathers was associated with paternal uncompassionate self-responding. Results of this model are presented in Table S2.

Discussion

In the present study, we applied a dyadic framework demonstrating that compassionate self-responding in both partners explains, in part, the link between attachment security and intimate relationship quality during pregnancy. Our research builds on past self-compassion research which has largely focused on individual partners but not couples. Ultimately, our approach allowed us to investigate the unique roles of each partner in an integrated framework, and revealed that it was attachment anxiety in women and attachment avoidance in men that undermined self-compassion and relationship quality. We assessed multiple relationship processes with an objective, semi-structured interview administered to both partners which further bolstered the strength of our findings. Typically, self-report questionnaires are used to assess intimate relationship functioning in relation to self-compassion. Ultimately, we demonstrated that self-compassion has pervasive effects on intimate relationship quality during pregnancy, impacting *multiple dimensions* of the relationship including emotional intimacy, conflict management, partner support, and received respect; however, our multifaceted measurement approach also suggested that certain aspects of the relationship might not be associated with self-compassion (e.g., sexual quality). We now turn to a discussion of specific elements of the tested model.

First, results highlight the relative importance of maternal and paternal self-compassion, with regard to the couple relationship during pregnancy, which in turn, has the potential to set the family on a healthy trajectory after the baby is born. Expecting parents who can establish a more compassionate way of responding, especially during more tense interactions, might engage in more adaptive behaviors, which ultimately preserves or enhances the quality of the couple relationship. Further, self-compassion might ultimately help expecting parents to effectively adjust as they welcome a new child to the family and

nurture their developing coparenting relationship. If a person can enact greater mindfulness and self-kindness during difficult times, they may be more likely to exert similar gestures towards their partner during tense interactions. Thus, their partner may feel emotionally safe and respected, which can result in greater intimate relationship quality as both partners are more likely to respond to conflict more peacefully and mindfully (Yarnell and Neff, 2013). Although multiple dimensions of maternal self-compassion were correlated with sex, in the final tested models, self-compassion was not uniquely associated with quality of the sexual relationship. Other factors impacting sex during pregnancy should be explored in future research.

Second, results from the present study highlight gender differences in self-compassion. In a meta-analysis, Yarnell et al. (2015) found that men reported higher levels of self-compassion than women; however, most of the studies included in this meta-analysis only examined overall self-compassion instead of distinctive dimensions. Barnard and Curry (2011) noted that future research is needed to investigate gender differences across various facets of self-compassion. In the present study, we found that women reported higher levels of uncompassionate self-responding across all three measured dimensions relative to men; however, women also reported higher levels of self-kindness. In contrast, similar levels of mindfulness and common humanity were observed across men and women. Further, the present study builds on research simply identifying gender differences in levels of self-compassion by also investigating the unique antecedents and consequences of self-compassion for men versus women. Specifically, maternal self-compassion during pregnancy might have a more pervasive influence on intimate relationship quality than paternal self-compassion. Maternal self-compassion appeared to promote greater intimacy in the relationship, better support received by fathers, more effective conflict management, and more respect and acceptance received by fathers. Paternal self-compassion also played a role in intimate relationship quality, but in a more focused way, demonstrating links with emotional intimacy and the quality of support received by fathers.

Third, it was notable that the specific type of attachment insecurity that influenced self-compassion – avoidance versus anxiety – varied for men and women. For instance, it was attachment anxiety that drove the maternal pathways in the model, whereas attachment avoidance undermined paternal self-compassion and, in turn, the couple relationship. This finding could be attributed, in part, to the higher rates of attachment anxiety in women and attachment avoidance in men, gender differences that have been also observed in other research (Del Giudice, 2019; Neff and Beretvas, 2013). However, other research has suggested that both attachment avoidance and attachment anxiety predict reduced relationship satisfaction regardless of gender (Feeney, 2016); as such, these results should be interpreted with caution and gender differences should not be overstated.

Fourth, it was striking that, when testing the integrated dyadic model, we found that compassionate self-responding (mindfulness, common humanity, and self-kindness) uniquely predicts multiple indicators of relationship quality when controlling for attachment anxiety and avoidance relative to the uncompassionate self-responding (overidentification, isolation, and self-judgment). Ultimately, this pattern of results points toward the utility of distinguishing between compassionate versus uncompassionate forms of self-

responding for understanding intimate relationship quality. Nonetheless, it might be overly simplistic to conclude that only compassionate responding plays a role in intimate relationships. Indeed, emerging research suggests that uncompassionate self-responding in the form of overidentification, self-isolation, and self-judgment, plays a significant role in psychopathology (e.g., depression and anxiety; Muris, Otgaar, Pfattheicher, 2019; Wadsworth et al., 2018) which is a robust correlate of intimate relationship quality (Whisman, Sbarra, & Beach, 2021). As such, uncompassionate forms of self-responding could still indirectly impact relationship quality, and future research should investigate this possibility.

Fifth, from a dyadic perspective, it was noteworthy that the first stage in the tested pathway, linking attachment to self-compassion, was a purely intrapersonal process. Specifically, no partner paths emerged. Thus, it appears that an individual's own attachment insecurity influences his or her own ability to engage in compassionate self-responding but has no bearing on an intimate partner's ability to engage in self-compassion. In contrast, interesting partner paths emerged in the link between self-compassion and intimate relationship quality. Specifically, to the extent that mothers engaged in more compassionate self-responding, they provided higher quality support to their partners and demonstrated more respect toward their partners. In contrast, fathers' compassionate self-responding was associated with better quality support *received* by fathers; thus, to the extent that fathers were more mindful and engaged in more self-kindness and common humanity, fathers received better quality support—which could reflect more skillful support solicitation or more receptivity to and comfort receiving help during times of distress. Given the novelty of these findings, it is important that researchers replicate these effects and attempt to explain these gender differences. A tentative hypothesis can be derived from literature suggesting that, due to gender role socialization, it can be more difficult for men to express distress and ask for emotional support (Horne & Johnson, 2019). Perhaps practicing self-compassion toward oneself is especially important for men for feel comfortable actively soliciting and receiving high quality support from their partners.

Theoretical and Clinical Implications

With regard to the theoretical implications of the present study, results have the potential to inform models of intimate relationship quality. In addition to informing adult attachment theory (Feeney, 2016), results also have the potential to inform contemporary models of couple relationships such as a vulnerability-stress-adaptation model of marriage (Cohan & Bradbury, 1997). Within this model, attachment security is recognized as a key predictor of couple relationship quality and stability; however, results suggest that another intrapersonal process – compassionate self-responding – represents a key mechanism through which attachment ultimately impacts the relationship in various ways, across multiple dimensions. Thus, consideration of self-compassion might enhance the explanatory power of conceptual frameworks of intimate relationship quality and stability.

Refining Prenatal Interventions.—Although this study does not directly investigate the efficacy of a self-compassion intervention for expecting parents, our results do provide preliminary evidence in support of integrating self-compassion into clinical interventions

that target parents during pregnancy. Specifically, results indicated that heterosexual couples at risk for intimate relationship dysfunction, due to attachment insecurity, are also less likely to engage in compassionate self-responding, which represents a key process driving intimate relationship quality. Thus, promoting self-compassion in parents during pregnancy has the potential to interrupt a maladaptive cascade linking one's history of relational experiences, culminating in attachment security, to current functioning in the couple relationship.

Regarding specific directions for interventions targeting compassionate responding during pregnancy, results point toward the utility of both individualized and dyadic-focused intervention components such that partners might better understand their own thoughts and emotions within the context of their relationships. For example, mindfulness-related practices such as meditation and journaling could also emphasize positive aspects of the relationship that each partner feels gratitude for. Partners could be encouraged to promote compassionate self-responding in one another, and to recognize when this type of response might be most helpful (e.g., when one's partner is feeling distressed or overwhelmed). Fortunately, there are efficacious interventions that already exist that might guide this endeavor. For example, elements of existing compassion-based interventions – such as *Compassion-Focused Therapy* (CFT; Gilbert, 2014) and *Mindful Self-Compassion program* (MSC; Neff & Germer, 2013) – could be modified and integrated with family-based interventions that already target pregnancy such as the *Family Foundations Program* (e.g., Feinberg et al., 2016). Interventions of this nature have the potential to set couples who would otherwise be at risk for family dysfunction on a healthier course as they transition from pregnancy to postpartum.

Limitations, Future Directions, and Conclusion

This study is not without limitations. First, the sample was predominantly White. Although the racial composition of the sample is consistent with the demographic characteristics of the state where the research was conducted (89.4%; United States Census Bureau, 2014), the generalizability of the results is limited. Second, our sample was relatively well-educated, with a high rate of employment, and was comprised of heterosexual couples. Further, gender was measured as binary, overlooking non-binary identities and gender diversity in the present sample. As such, study aims should be replicated in a more diverse sample. Third, given the number of paths that were tested in the model, there was risk for inflated Type I error; replication of results in independent samples is of critical importance. Fourth, the sample size was relatively modest given the number of model parameters and inclusion of latent variables in model testing. Results should be replicated in a larger sample. Fifth, data were cross-sectional in nature, and the possibility that relationship quality also promotes self-compassion, a bidirectional association, should be considered when interpreting the results. The implementation of longitudinal designs in future research would help to clarify the direction of effects.

Conclusion.—Integrating attachment theory and self-compassion research, we demonstrated that self-compassion represents a key mechanism through which attachment security contributes to multiple dimensions of intimate relationship quality during pregnancy when couples are at elevated risk for relationship dysfunction. The results

isolate an intrapersonal vulnerability in each partner—diminished mindfulness, self-kindness, and awareness of common humanity—resulting from attachment insecurity that ultimately influenced multiple dimensions of the intimate relationship between partners. Implementation of self-compassion-based couple interventions during pregnancy could improve intimate relationship quality by helping each partner cultivate greater equanimity, openness, and acceptance, which in turn, will foster adaptation to changing roles in the family while preserving a critical source of support and stability within the family system – the couple relationship.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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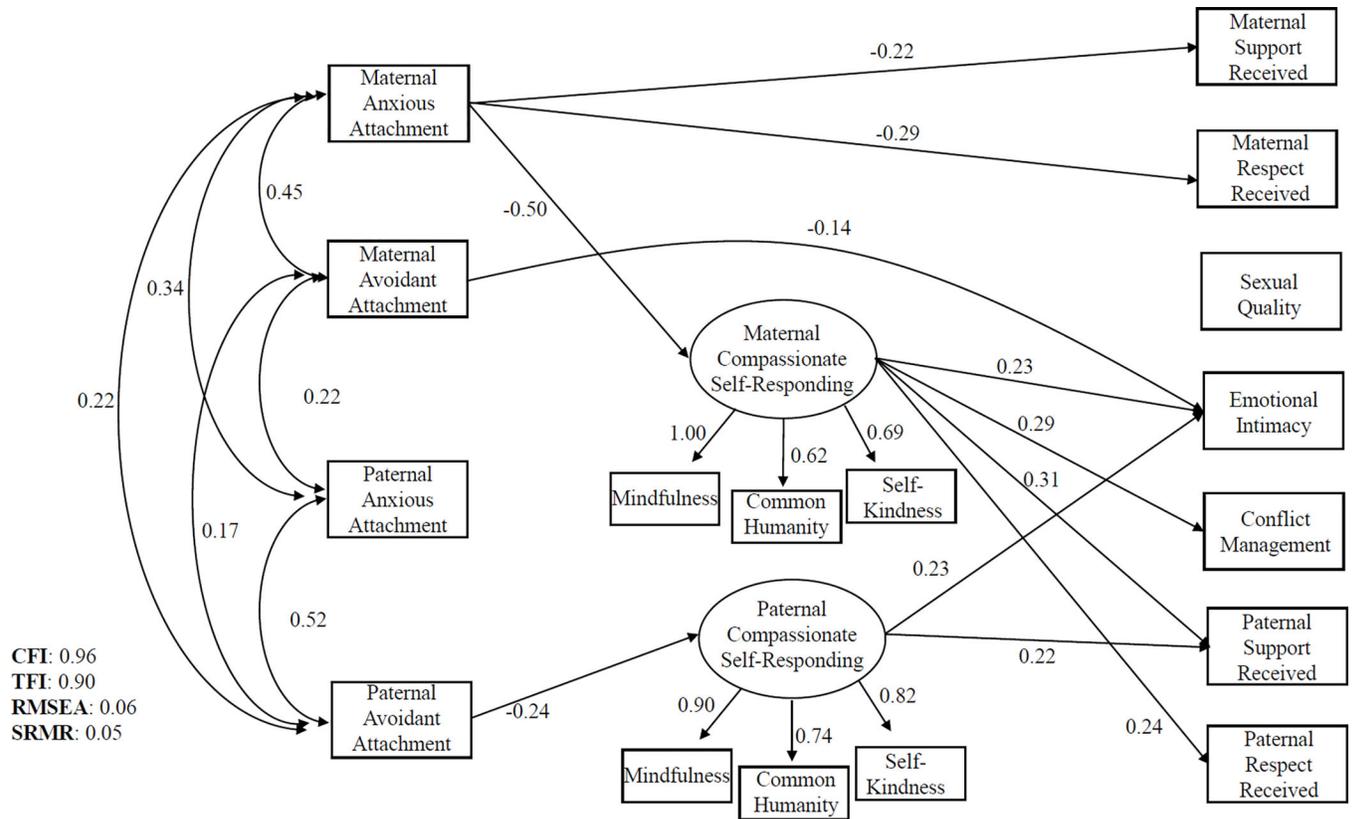


Figure 1. Mediation model demonstrating the effects of maternal and paternal attachment (anxious and avoidant) on intimate relationship quality, as mediated by self-compassion (maternal and paternal compassionate self-responding). Only significant paths ($p < .05$) are presented in the figure along with standardized coefficients. In the tested model, we also covaried the residuals of maternal and paternal compassionate responding to address interdependence within couples and the residuals among the relationship quality dimensions. All actor (e.g., maternal attachment → maternal compassion) and partner (e.g., paternal attachment → maternal compassion) were also tested.

Table 1. Within- and between-partner correlations among variables of attachment, self-compassion, and intimate relationship quality

	Maternal												
	Attachment		Compassionate Self-responding				Uncompassionate Self-Responding				Intimate Relationship Quality		
Paternal	A1	A2	S1	S2	S3	S4	S5	S6	R1	R2	R3	R4	R5
Anxious (A1)	.34**	.52**	-.40**	-.15	-.24**	.53**	.56**	.45**	-.37**	-.34**	-.16*	-.25**	-.33**
Avoidant (A2)	.52***	.17*	-.08	-.05	-.08	.19*	.28**	.21**	-.29**	-.18*	-.15	-.14	-.16*
Mindfulness (S1)	-.06	-.19*	-.02	.62**	.70**	-.43**	-.47**	-.39**	.29**	.34**	.11	.17*	.24**
Common Humanity (S2)	.10	-.06	.67**	-.14	.49**	-.23**	-.20*	-.14	.07	.16*	.08	.07	.13
Self-kindness (S3)	.01	-.21**	.74**	.60**	-.03	-.29**	-.39**	-.45**	.14*	.16*	.03	.04	.15
Overidentification (S4)	.46**	.36**	-.25**	-.01	-.24**	.03	.70**	.76**	-.17*	-.27*	-.10*	-.21*	-.17*
Isolation (S5)	.48**	.42**	-.20*	-.01	-.21**	.79**	.04	.76**	-.19*	-.19*	-.17*	-.15	-.17*
Self-judgment (S6)	.42**	.40**	-.13	.10	-.27**	.76**	.72**	-.02	-.13	-.10	-.06	-.11	-.11
Emotional Intimacy (R1)	-.28**	-.19*	.24**	.08	.19*	-.21**	-.28**	-.17*	<i>dyadic</i>	.59**	.40**	.60**	.53**
Conflict Mgmt (R2)	-.24**	-.22**	.21**	.01	.09	-.17*	-.21**	-.08	.59**	<i>dyadic</i>	.21**	.49**	.57**
Sexual Quality (R3)	.10	.10	.04	-.03	-.02	-.02	.03	-.00	.40**	.21**	<i>dyadic</i>	.36**	.24**
Received Support (R4)	-.17*	-.18*	.17*	.14	.19*	-.16*	-.25**	-.17*	.43**	.37**	.07	.11	.63**
Received Respect (R5)	-.24**	-.24**	.20*	.14	.05	-.13	-.24**	-.11	.50**	.60**	.16*	.21**	.18*

Note. N = 159 couples. Paternal data are below the diagonal. Maternal data are above the diagonal. RQI objective ratings of emotional intimacy, conflict management, and sexual quality between partners of a dyad were combined to create dyadic scores; Received support and respect are separate Maternal and Paternal scores. Correlations between self-compassion subscales and intimate relationship quality (Aim 1) are shaded.

* $p < .05$.

** $p < .01$.

*** $p < .001$ (two-tailed).

Table 2.

Results of model with compassionate self-responding as the mediator

	Unstandardized		
	Estimate	S.E.	p-value
<i>Latent: Maternal Compassionate Self-Responding</i>			
Common Humanity ($R^2=37.8\%$)	0.47	0.07	0.000
Mindfulness ($R^2=100\%$)	0.66	0.06	0.000
Self-kindness ($R^2=48.0\%$)	0.41	0.05	0.000
<i>Latent: Paternal Compassionate Self-Responding</i>			
Common Humanity ($R^2=54.4\%$)	0.65	0.07	0.000
Mindfulness ($R^2=81.1\%$)	0.71	0.06	0.000
Self-kindness ($R^2=66.8\%$)	0.66	0.06	0.000
Paternal Compassionate Self-Responding ($R^2=8.0\%$)			
Anxious-Paternal	0.02	0.02	0.117
Avoidant-Paternal	-0.03	0.01	0.019
Anxious-Maternal	0.01	0.02	0.670
Avoidant-Maternal	-0.01	0.01	0.392
Week of Pregnancy	0.00	0.01	0.861
First-time Parenthood	0.15	0.21	0.481
Relationship Duration	0.00	0.00	0.108
Maternal Compassionate Self-Responding ($R^2=21.3\%$)			
Anxious-Paternal	0.02	0.02	0.223
Avoidant-Paternal	0.01	0.01	0.419
Anxious-Maternal	-0.08	0.02	0.000
Avoidant-Maternal	0.01	0.01	0.160
Week of Pregnancy	-0.02	0.01	0.193
First-time Parenthood	0.28	0.18	0.134
Relationship Duration	0.00	0.00	0.116
Emotional Intimacy ($R^2=27.6\%$)			
Compassionate-Paternal	0.19	0.06	0.001
Compassionate-Maternal	0.18	0.06	0.005
Anxious-Paternal	-0.02	0.01	0.082
Avoidant-Paternal	0.00	0.01	0.839
Anxious-Maternal	-0.02	0.01	0.128
Avoidant-Maternal	-0.01	0.01	0.048
Week of Pregnancy	0.00	0.01	0.805
First-time Parenthood	0.17	0.14	0.237
Relationship Duration	0.00	0.00	0.635
Sexual Quality ($R^2=11.8\%$)			
Compassionate-Paternal	0.06	0.10	0.564
Compassionate-Maternal	0.05	0.10	0.599

	Unstandardized		
	Estimate	S.E.	p-value
Anxious-Paternal	0.02	0.02	0.330
Avoidant-Paternal	0.01	0.01	0.409
Anxious-Maternal	-0.04	0.02	0.067
Avoidant-Maternal	-0.01	0.01	0.247
Week of Pregnancy	-0.03	0.02	0.059
First-time Parenthood	-0.07	0.25	0.777
Relationship Duration	0.00	0.00	0.159
Conflict Management	$(R^2=23.6\%)$		
Compassionate-Paternal	0.16	0.09	0.094
Compassionate-Maternal	0.29	0.08	0.001
Anxious-Paternal	-0.01	0.02	0.430
Avoidant-Paternal	-0.01	0.01	0.153
Anxious -Maternal	-0.02	0.02	0.219
Avoidant-Maternal	-0.01	0.01	0.510
Week of Pregnancy	0.02	0.01	0.173
First-time Parenthood	0.29	0.20	0.141
Relationship Duration	0.00	0.00	0.501
Paternal Support Received	$(R^2=16.8\%)$		
Compassionate-Paternal	0.22	0.08	0.005
Compassionate-Maternal	0.29	0.08	0.000
Anxious-Paternal	-0.02	0.01	0.131
Avoidant-Paternal	-0.01	0.01	0.182
Anxious-Maternal	0.00	0.01	0.978
Avoidant-Maternal	0.00	0.01	0.792
Week of Pregnancy	0.00	0.01	0.714
First-time Parenthood	0.00	0.20	0.983
Relationship Duration	0.00	0.00	0.267
Maternal Support Received	$(R^2=8.8\%)$		
Compassionate-Paternal	0.10	0.11	0.356
Compassionate-Maternal	0.10	0.11	0.369
Anxious-Paternal	0.01	0.02	0.578
Avoidant-Paternal	0.00	0.01	0.937
Anxious-Maternal	-0.04	0.02	0.030
Avoidant-Maternal	-0.01	0.01	0.604
Week of Pregnancy	-0.01	0.02	0.606
First-time Parenthood	0.11	0.26	0.667
Relationship Duration	0.00	0.00	0.642
Paternal Respect Received	$(R^2=19.5\%)$		
Compassionate-Paternal	0.16	0.11	0.160
Compassionate-Maternal	0.24	0.08	0.005

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	Unstandardized		
	Estimate	S.E.	<i>p</i> -value
Anxious-Paternal	-0.02	0.02	0.242
Avoidant-Paternal	-0.02	0.01	0.055
Anxious-Maternal	0.00	0.02	0.866
Avoidant-Maternal	-0.02	0.01	0.117
Week of Pregnancy	0.00	0.01	0.938
First-time Parenthood	0.40	0.21	0.054
Relationship Duration	0.00	0.00	0.816
Maternal Respect Received	$(R^2=14.5\%)$		
Compassionate-Paternal	0.12	0.10	0.203
Compassionate-Maternal	0.12	0.08	0.144
Anxious-Paternal	0.00	0.01	0.976
Avoidant-Paternal	0.01	0.01	0.296
Anxious-Maternal	-0.04	0.02	0.006
Avoidant-Maternal	0.00	0.01	0.735
Week of Pregnancy	0.00	0.01	0.962
First-time Parenthood	0.01	0.18	0.939
Relationship Duration	0.00	0.00	0.785

Note. Significant ($p < .05$) paths are bolded.

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