Published in final edited form as:
J Pers Soc Psychol. 2013 September ; 105(3): 388–424. doi:10.1037/a0033056.

Spouses' Attachment Pairings Predict Neuroendocrine, Behavioral, and Psychological Responses to Marital Conflict

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Abstract

This research investigated how spouses' attachment styles jointly contributed to their stress responses. Newlywed couples discussed relationship conflicts. Salivary cortisol indexed physiological stress; observer-rated behaviors indexed behavioral stress; self-reported distress indexed psychological stress. Multilevel modeling tested predictions that couples including one anxious and one avoidant partner or two anxious partners would show distinctive stress responses. As predicted, couples with anxious wives and avoidant husbands showed physiological reactivity in anticipation of conflict: Both spouses showed sharp increases in cortisol, followed by rapid declines. These couples also showed distinctive behaviors during conflict: Anxious wives had difficulty recognizing avoidant husbands' distress, and avoidant husbands had difficulty approaching anxious wives for support. Contrary to predictions, couples including two anxious partners did not show distinctive stress responses. Findings suggest that the fit between partners' attachment styles can improve understanding of relationships by specifying conditions under which partners' attachment characteristics jointly influence individual and relationship outcomes.

Keywords

close relationships; adult attachment; neuroendocrine responses; behavior; affect

When individuals feel distressed in response to a threat, they often turn to an attachment figure for comfort and reassurance. This idea is a central premise of attachment theory, which proposes that an attachment system serves to regulate negative affect in the face of a threat (Bowlby, 1969, 1973, 1979, 1980). Bowlby's original theory, which focused on explaining the close bonds between infants and caregivers, emphasized two components of this affect regulation function. First, when infants feel distressed, they seek proximity to their caregivers. Second, caregivers who respond with comfort and reassurance help infants regulate their distress and restore emotional well-being, or "felt security" (Sroufe & Waters, 1977). Hazan and Shaver (1987) extended these ideas to adult romantic relationships; they suggested that the close bonds between adult relationship partners parallel those between caregivers and infants. For example, when adults feel distressed they also turn to attachment

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figures (e.g., their spouse) to help them regulate distress and regain emotional well-being (Collins & B. C. Feeney, 2010; Simpson & Rholes, 1994).

Importantly, individuals differ in the extent to which they feel distress in the face of a threat, as well as in their ability to depend on relationship partners to help them regulate distress (Pietromonaco & Barrett, 2000; Pietromonaco, Barrett, & Powers, 2006). These individual differences in the quality of attachment, or attachment styles, develop from actual differences in the quality of recurring interactions with caregivers (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1973). Attachment styles reflect internal working models of relationships, or underlying representations that include feelings, expectations, and beliefs about whether attachment figures will be available and responsive and whether one deserves such care (Bowlby, 1973).

In adults, individual differences in attachment style reflect two underlying dimensions: attachment avoidance and attachment anxiety (Fraley, Waller, & Brennan, 2000). Importantly, avoidantly-attached and anxiously-attached individuals use different strategies for regulating negative affect in the face of threat (for reviews, see Mikulincer & Shaver, 2007 and Pietromonaco & Beck, in press). People high in attachment avoidance feel uncomfortable being close to and relying on others and prefer to maintain emotional distance. As a result, avoidant individuals show deactivating affect regulation strategies in response to threats; they downplay their distress, avert their attention from threats, and overly rely on themselves. In contrast, people high in attachment anxiety want excessive closeness and worry about their partners' availability and responsiveness. As a result, anxious individuals show hyperactivating affect regulation strategies in response to threats; they draw attention to their distress, express heightened distress, and continually seek closeness and reassurance from their partners. Secure individuals are low in avoidance and anxiety; they are comfortable being close to and depending on others and they are confident in their partners' availability and responsiveness. As a result, they do not typically rely on either hyperactivating or deactivating strategies in response to threats. Instead, they are adept at regulating their distress and regaining emotional well-being, and when needed, they are able to do so by relying on their partners for comfort and support.

These differences in attachment styles and their associated affect regulation strategies have been shown to predict individuals' behavioral, psychological, and physiological responses to threats (for reviews, see Mikulincer & Shaver, 2007 and Pietromonaco & Beck, in press). Little research has investigated how the *interplay* between partners' attachment styles might shape these outcomes, yet this critical feature of the dyadic relationship context is likely to be an important predictor of each partner's outcomes. The present research examined how the combination of spouses' attachment styles might predict their physiological, behavioral, and psychological responses to an attachment threat (i.e., a relationship conflict).

Interactive Effects of Attachment Styles

In their seminal study of adult romantic attachment, Hazan and Shaver (1987) noted that the unique characteristics of partners and relationships can shape individuals' thoughts, feelings, and behaviors. Despite this early observation, most attachment research has examined

connections between individuals' attachment orientations and their own or their partner's psychological and relational outcomes. However, these processes occur within the context of a relationship, which includes the interplay of both partners' attachment histories, beliefs, and expectations. We propose that attachment processes can be best understood by considering potential *interactions* between partners' attachment orientations, in addition to the effects of each individual's attachment orientation (see also J. A. Feeney, 2003; Mikulincer, Florian, Cowan, & Cowan, 2002; Pietromonaco & Beck, in press; and Pietromonaco, Uchino, & Dunkel Schetter, in press).

Work examining the interplay between both partners' attachment orientations has the potential to make an important theoretical contribution to attachment theory (see also Simpson & Rholes, 2010). Bowlby's original theory did not fully explore the ways in which one partner's attachment history, expectations, and beliefs might shape the other partner's outcomes, nor did it address how both partners' attachment characteristics might interact to jointly influence individual and relationship outcomes. Although transactional or goodness-of-fit models (e.g., Crockenberg, 1981; Thomas & Chess, 1977) in the developmental literature have emphasized the importance of the interplay between infants' and mothers' attachment, behavior, and temperament (e.g., Mangelsdorf, Gunnar, Kestenbaum, Lang, & Andreas, 1990), researchers have just begun to apply these ideas to adult romantic relationships (e.g., Shallcross, Howland, Bemis, Simpson, & Frazier, 2011). The present research seeks to elaborate on and extend attachment theory by examining how the unique interplay between both partners' attachment orientations is linked to their relationship outcomes, with a novel emphasis on partners' physiological responses to relationship conflict.

Although some empirical research has explored how one partner's attachment style might influence the other's relationship outcomes (i.e., "partner effects"), considerably less research has examined how the match between both partners' attachment styles might jointly influence their relationship outcomes (i.e., "interactive effects" or "couple effects"). Whereas some studies have not found that the combination of partners' attachment styles contributes to relationship outcomes (e.g., Creasey, 2002; Jones & Cunningham, 1996; Kirkpatrick & Davis, 1994; Mikulincer & Florian, 1999; Paley, Cox, Burchinal, & Payne, 1999), other research finds consistent effects for two specific attachment pairings. The combination of an anxious partner with an avoidant partner or the combination of two anxious partners may interfere with healthy relationship functioning (for reviews, see J. A. Feeney, 2003 and Mikulincer & Shaver, 2007).

Anxious-Avoidant Pairs

Theoretically, the combination of an avoidant partner and an anxious partner may be especially volatile because both partners have conflicting relationship motivations (e.g., Kirkpatrick & Davis, 1994), as well as conflicting affect regulation strategies. Avoidant individuals chronically strive to maintain relational distance and independence and use deactivating strategies in the face of threats, such as downplaying their distress, averting their attention from threats, and overly relying on themselves. In contrast, anxious individuals chronically strive to attain relational closeness and intimacy and use

hyperactivating strategies in the face of threats, such as drawing attention to their distress, displaying heightened distress, and overly relying on their partners for comfort and reassurance. These opposing motivations and affect regulation strategies have important implications for both partners' relationship functioning. In a study of caregiving in marital relationships, for example, the combination of an avoidant wife with an anxious husband predicted wives' sense of burden in caring for their spouse; that is, wives who were uncomfortable with intimacy reported feeling especially burdened at the prospect of caring for an anxious, needy partner (J. A. Feeney, 2003).

Research on romantic partners' responsiveness also suggests that the pairing of an avoidant partner with an anxious one may contribute to caregiving difficulties (Shallcross et al., 2011). Specifically, in a study of discussions in which partners shared positive events with one another, avoidant individuals perceived themselves and were rated by observers as less responsive, especially when their partners were anxious (Shallcross et al., 2011). Similarly, avoidant individuals underestimated their anxious partners' responsiveness relative to observers' ratings. Furthermore, anxious individuals underestimated their own responsiveness to their avoidant partners relative to observers' ratings. These findings suggest that individuals in couples including an anxious partner and an avoidant partner may find it especially difficult to behave responsively and to perceive responsiveness, even in interactions that should be positive. The implications of this partner combination also extend to issues of relationship quality. For example, one of the first studies to explore the interactive effects of partners' attachment orientations found that the pairing of an anxious wife with an avoidant husband predicted both spouses' relationship dissatisfaction in the early years of marriage (J. A. Feeney, 1994). Furthermore, the pairing of an anxious partner with an avoidant one has been linked to relationship violence among cohabiting and married couples (Allison, Bartholomew, Mayseless, & Dutton, 2008; Roberts & Noller, 1998).

Anxious-Anxious Pairs

Related research indicates that the combination of two anxious partners may be similarly problematic. In couples with two anxious individuals, both partners use hyperactivating strategies to regulate their distress; they call attention to their distress, express heightened distress, and persistently turn to their partner for comfort and reassurance. However, both partners' use of hyperactivating strategies makes it unlikely that either partner will be able to fully respond to the other's needs, which can interfere with individual and relationship functioning. For example, the combination of one anxious partner with another anxious partner can be especially detrimental in conflict situations because one partners' attachment anxiety can amplify the other's attachment anxiety; both partners may feel misjudged and neglected, in part because they are absorbed by their own needs, and both partners may attempt to control one another (e.g., Bartholomew & Allison, 2006; J. A. Feeney, 2003). Indeed, members of couples in which both spouses are anxious report the highest levels of marital conflict (Gallo & Smith, 2001). Furthermore, the pairing of two anxious partners has been linked to women's perceptions of less marital support (Gallo & Smith, 2001) and to women's distancing (i.e., emotional and physical retreat) and power assertion behaviors (i.e., verbal threats, rejections, and demands) in conflict interactions with long-term dating

couples (J. A. Feeney, 2003), as well as to increases in relationship violence (Allison et al., 2008; Bartholomew & Allison, 2006).

Avoidant-Avoidant Pairs

Although it might be expected that couples including two avoidant individuals would also show difficulties in their relationships, just one study has identified difficulties for couples with two avoidant partners; the combination of two avoidant partners has been linked to women's greater physiological reactivity to conflict interactions in dating couples (Laurent & Powers, 2007). The few remaining studies examining the effects of partner pairings have not revealed consistent effects of the combination of two avoidant partners (e.g., Allison et al., 2008; J. A. Feeney, 1994; Gallo & Smith, 2001). In couples with two avoidant individuals, both partners are likely to regulate their distress using distancing strategies; the congruence in partners' coping strategies may allow them to reduce overt conflict and maintain a reasonable level of relationship satisfaction and adjustment. In contrast, couples including an avoidant partner and a non-avoidant partner may have more difficulty, especially during conflict interactions, because the non-avoidant partner may wish to actively discuss a problem while the avoidant partner withdraws. The evidence regarding the effects of avoidant-avoidant pairings is scant, making it difficult to advance specific predictions about this pairing. However, we explored whether couples with two avoidant partners or couples in which partners' levels of avoidance were incongruent (i.e., a high avoidant partner with a low avoidant partner) were associated with partners' physiological, behavioral, and psychological responses to conflict.

Prior research on the interactive effects of partners' attachment styles has focused primarily on outcomes related to behavior, psychological distress, and relationship satisfaction. The present study makes a novel contribution to this literature by examining physiological stress responses; this study also revisits predicted associations with an emphasis on attachment-related behavioral and psychological responses. Specifically, we focused on how the interplay between both spouses' attachment styles might shape their physiological stress responses (assessed via the stress hormone, cortisol), their careseeking and caregiving behaviors, and their psychological distress in response to a potentially threatening laboratory interaction (i.e., a discussion of a major unresolved conflict with their spouse).

Effects of Attachment Style on Psychological and Physiological Responses to Distress

A large body of research has investigated the relationship between adult attachment style and self-reported responses to distress. People who are high in attachment anxiety report heightened distress and affective reactivity in the face of aversive events (e.g., Bartholomew & Horowitz, 1991; Fraley & Shaver, 1998; Hazan & Shaver, 1987; Pietromonaco & Barrett, 1997; Simpson, Rholes, & Nelligan, 1992). In contrast, people who are high in avoidance report less intense, blunted emotional reactions (e.g., Bartholomew & Horowitz, 1991; Collins & Read, 1990; Hazan & Shaver, 1987; Pietromonaco & Barrett, 1997; Pietromonaco & Carnelley, 1994), although they may feel distressed under chronically stressful circumstances (Berant, Mikulincer, & Shaver, 2008).

A much smaller literature has begun to examine connections between adult attachment style and physiological responses to distress (for reviews, see Diamond, 2001 and Diamond & Fagundes, 2010, 2011). This link is important for understanding how attachment may modulate physiological responses in ways that, over time, may influence downstream health and disease outcomes (Pietromonaco et al., in press). Furthermore, physiological responses can offer unique insight into the experience of distress because they typically are less consciously accessible than are self-reported affective responses (e.g., Bradley & Lang, 2000).

Some work has examined the connections between attachment style and cortisol responses (see Pietromonaco, DeBuse, & Powers, 2013). Cortisol responses are especially informative because cortisol is an end product of the hypothalamic-pituitary-adrenal (HPA) axis, which is one of the body's major stress response systems (Chrousos & Gold, 1992; Goldstein, Halbreich, Asnis, Endicott, & Alvir, 1987; Stansbury & Gunnar, 1994). Recent research has linked attachment insecurity to heightened or dysregulated cortisol responses to relationship conflict (Brooks, Robles, & Dunkel Schetter, 2011; Laurent & Powers, 2007; Powers, Pietromonaco, Gunlicks, & Sayer, 2006). For example, attachment anxiety has been shown to predict heightened cortisol levels before, during, and after conflict discussions among dating couples, particularly among men (Brooks et al., 2011; Laurent & Powers, 2007; Powers et al., 2006). Women's avoidance also has been linked to greater cortisol reactivity before and during conflict discussions, as well as to faster declines in cortisol after discussions (Powers et al., 2006). In addition, these studies provide some evidence of partner effects (Brooks et al., 2011; Powers et al., 2006). For example, men with insecure (avoidant, anxious, or both) romantic partners had greater cortisol reactivity to discussions and slower cortisol recovery after discussions (Powers et al., 2006).

Related research on autonomic nervous system (ANS) reactivity provides converging evidence for the association between attachment insecurity and heightened or dysregulated physiological responses to relationship conflict (for reviews, see Diamond, 2001 and Diamond & Fagundes, 2010, 2011). ANS reactivity can be reflected in vagal inhibition of cardiac reactions (measured through changes in respiratory sinus arrhythmia [RSA]), increased heart rate, and increased skin conductance level (SCL). For example, attachment insecurity was associated with greater SCL reactivity during a conflict discussion among dating couples (Holland & Roisman, 2010). Similarly, in a study of physiological responses to conflict discussions among married and engaged partners (Roisman, 2007), individuals whose responses during the Adult Attachment Interview were indicative of attachment avoidance (i.e., a pattern of deactivation) in relation to their childhood primary caregivers had greater SCL reactivity during the conflict, indicating emotional inhibition. In contrast, individuals whose responses were indicative of attachment anxiety (i.e., a pattern of hyperactivation) in relation to their childhood caregivers had increased heart rate during the conflict, indicating behavioral activation. Finally, partners of securely-attached individuals had decreased RSA during the conflict, indicating flexible emotion regulation. In addition, other work has found that individuals with anxious or avoidant attachment styles with respect to romantic relationships evidenced heightened heart rate and blood pressure after being separated from their romantic partner during a stressful task (Carpenter & Kirkpatrick,

1996; B. C. Feeney & Kirkpatrick, 1996) and when thinking about themselves in anger-producing hypothetical situations involving their romantic partner (Mikulincer, 1998).

Taken together, research on affective and physiological responses to distress suggests that anxious individuals experience greater self-reported affective reactivity, as well as greater physiological reactivity. Avoidant individuals may experience greater physiological reactivity, although they tend to report dampened affective responses to distress. Importantly, individuals with insecure partners also may show heightened physiological responses to distress. Although little research has examined interactive effects of partners' attachment styles in predicting physiological response patterns (but see Laurent & Powers, 2007, for an exception), the literature reviewed above suggests the importance of taking into account the unique interplay of both partners' attachment styles, above and beyond any individual effects of partners' attachment styles.

Effects of Attachment Style on Careseeking and Caregiving Behavioral Responses to Distress

When people feel distressed in the face of a threat, they often solicit their partner's help with regulating their distress. In satisfying relationships, partners solicit support and care in an effective and constructive manner, as well as respond to one another's needs for support with sensitive, responsive care. Although the ability to seek and provide support may be essential to regaining emotional well-being (e.g., Collins & B. C. Feeney, 2010), partners may differ in their careseeking and caregiving behaviors depending on their attachment styles and on their associated affect regulation strategies.

Research suggests that insecure people may encounter difficulties with seeking support from their partners. Avoidant individuals may fail to seek support from their partners, especially in situations when they need it most, whereas anxious individuals may behave in ways that do not reflect their true desire for support. For example, anxious people are more likely to want their partners to help them manage their distress than are secure people (Pietromonaco & Barrett, 2006), yet they do not solicit more support from their partners in laboratory observational studies (Collins & B. C. Feeney, 2000). In contrast, avoidant individuals are less likely to seek support from their partners than are secure individuals, as well as less likely to use constructive, effective ways of soliciting support (e.g., Collins & B. C. Feeney, 2000; Fraley & Shaver, 1998; Mikulincer & Florian, 1995; Mikulincer, Florian, & Weller, 1993; Simpson, et al., 1992). For instance, when avoidant women were more distressed while anticipating a stressful event, they were less likely to solicit support from their dating partner (Simpson et al., 1992); similarly, avoidant individuals sought less support from their dating partner when discussing a personal problem, even when they viewed their problem as stressful and threatening (Collins & B. C. Feeney, 2000). Finally, avoidant women solicited less contact, care, and support from their partner when separating from them at the airport (Fraley & Shaver, 1998).

Related research indicates that insecure individuals also may experience challenges with providing support to their partners. Anxious individuals tend to have mixed patterns of supportive behaviors. In some laboratory observational studies, anxious individuals provided

support to their partners as effectively as secure individuals (B. C. Feeney & Collins, 2001; Simpson et al., 1992); in other observational studies, anxious individuals provided support less effectively, especially when their partners did not clearly indicate their need for support (Collins & B. C. Feeney, 2000). In one study of dating couples, for example, anxious caregivers were less responsive, gave less instrumental support, and behaved more negatively toward their partner when their partner shared a personal problem (Collins & B. C. Feeney, 2000). Other research suggests that anxious individuals perceive themselves as providing controlling and compulsive (i.e., overinvolved) care to their partners (B. C. Feeney & Collins, 2001). Whereas anxious individuals may offer unwanted support to their partners, avoidant individuals may fail to provide support to their partners, especially in circumstances when they need it most (B. C. Feeney & Collins, 2001). For instance, avoidant men provided less support to their dating partner when she was more distressed in anticipation of a stressful event (Simpson et al., 1992); avoidant men also expressed more anger toward their partner when she was more distressed or when she solicited more support from them (Rholes, Simpson, & Oriña, 1999). Similarly, avoidant women provided less care and support to their partner when separating from them at the airport (Fraley & Shaver, 1998).

In sum, research on careseeking and caregiving behaviors suggests that insecure individuals encounter difficulties with soliciting and providing support. Anxious individuals may fail to solicit as much support from their partners as they might like, as well as offer undesired or negative support to their partners. In contrast, avoidant individuals may fail to seek or provide support and care to their partners, especially in situations when they or their partners need support most. Few studies have investigated how the unique combination of partners' attachment styles might interact to predict their careseeking and caregiving behaviors, yet the existing literature suggests that this approach would enhance our understanding of both partners' behaviors.

The Present Study

As the literature indicates, many questions about the connection between attachment and physiological response patterns remain unanswered. Most research has focused on how an individual's attachment style is associated with his or her own physiological responses. Few studies have examined how one partner's attachment style might impact the other partner's physiological response patterns, and even less work has examined how the fit between partners' attachment styles might shape each partner's physiological response patterns. Furthermore, no research has taken an integrated approach, examining links between attachment and physiological response patterns, as well as between attachment and behavioral patterns and between attachment and subjective perceptions. Accordingly, the present research investigated how attachment processes in marital relationships shape partners' neuroendocrine, behavioral, and psychological responses to a relationship conflict. We emphasize the interdependence of relationship partners and therefore focused on the interplay between spouses' attachment styles in predicting these outcomes. Specifically, we examined the extent to which individuals' own attachment orientations, their partners' attachment orientations, and the interactions between both spouses' attachment orientations predicted (1) their physiological stress patterns (assessed via the stress hormone, cortisol) in

response to a laboratory threat (i.e., a discussion of a major unresolved conflict with their spouse), (2) their careseeking and caregiving behaviors, and (3) their self-reported psychological distress in response to the same laboratory threat. Consistent with evidence that couples including one anxious partner and one avoidant partner or couples including two anxious partners may experience difficulties in their relationship, we focused on these combinations of spouses' attachment styles when making our predictions. Given that only one study has identified difficulties for couples including two avoidant partners (Laurent & Powers, 2007), we explored potential effects of this attachment style combination but did not advance specific predictions due to the dearth of evidence for such couples.

The first set of hypotheses addressed both spouses' physiological responses to the marital conflict discussion. First, we expected that one partner's attachment avoidance would interact with the other partner's attachment anxiety to predict both spouses' physiological stress patterns in anticipation of the conflict discussion. Prior research has linked attachment insecurity (anxiety, avoidance, or both) to increased cortisol responses to stress (e.g., Brooks et al., 2011; Diamond, Hicks, & Otter-Henderson, 2008; Laurent & Powers, 2007; Powers et al., 2006; Quirin, Pruessner, & Kuhl, 2008); therefore, we expected that members of couples with one partner high in anxiety and the other high in avoidance would exhibit greater cortisol reactivity (i.e., an increase in cortisol) in anticipation of the conflict discussion. We made similar predictions for couples in which both partners were anxious; that is, we also expected that members of couples with both partners high in anxiety would exhibit greater cortisol reactivity in anticipation of the conflict discussion. Furthermore, consistent with research linking attachment anxiety to greater cortisol levels during and after relationship conflict (Brooks et al., 2011; Laurent & Powers, 2007; Powers et al., 2006), we expected that members of couples with two anxious partners would have heightened cortisol levels during and after the conflict discussion. In contrast, we did not advance specific predictions for partners' cortisol levels during and after the conflict discussion in couples with one avoidant partner and one anxious partner because of differences between anxious and avoidant individuals' physiological recovery patterns. Although avoidance has been associated with faster declines in cortisol after relationship conflict, primarily among women (Powers et al., 2006), anxiety has been associated with heightened cortisol levels during and after relationship conflict, particularly among men (Brooks et al., 2011; Laurent & Powers, 2007; Powers et al., 2006). Furthermore, men with insecure (avoidant, anxious, or both) partners have been shown to experience heightened cortisol levels during relationship conflict and slower declines in cortisol after conflict (Powers et al., 2006). Therefore, we explored whether the interaction between one partner's level of attachment anxiety and the other partner's level of attachment avoidance would predict their cortisol levels during and after the conflict discussion, in order to assess potential differences in physiological recovery. Finally, we also explored whether the interaction between partners' levels of attachment avoidance would be associated with their cortisol levels before, during, and after the conflict discussion.

The second set of hypotheses addressed both partners' careseeking and caregiving behaviors during the conflict discussion with their spouse. First, we expected that one partner's attachment avoidance would interact with the other partner's attachment anxiety to predict each partner's careseeking and caregiving behaviors. In line with evidence that couples with

one anxious partner and one avoidant partner experience problems with careseeking and caregiving (e.g., J. A. Feeney, 2003; Shallcross et al., 2011), we predicted that members of couples with one partner high in anxiety and the other high in avoidance would exhibit less constructive careseeking and caregiving behaviors during the conflict discussion. Second, we predicted that one partner's attachment anxiety would interact with the other partner's attachment anxiety to predict both spouses' careseeking and caregiving behaviors. Consistent with evidence that couples in which both partners are high in anxiety experience problems with careseeking and caregiving (e.g., J. A. Feeney, 2003; Gallo & Smith, 2001), we predicted that members of couples with both partners high in anxiety would exhibit less constructive careseeking and caregiving behaviors during the conflict discussion. Finally, we explored whether the interaction between partners' incongruent levels of attachment avoidance would be associated with careseeking and caregiving behaviors during the conflict discussion. Although we did not make specific predictions, we acknowledged the possibility that incongruence between partners' levels of attachment avoidance might predict less constructive careseeking and caregiving. For example, avoidant spouses may be unwilling or unable to provide effective support to their partners (for reviews, see Collins & B. C. Feeney, 2010 and Mikulincer & Shaver, 2007), which might lead their non-avoidant partners to display less constructive careseeking behaviors. Similarly, avoidant spouses may be unwilling or unable to benefit from their partners' supportive attempts, which might lead their non-avoidant partners to display less constructive caregiving behaviors.

The third set of hypotheses addressed both spouses' psychological distress in anticipation of and during the conflict discussion. Although we expected that the interplay between spouses' attachment orientations would predict each partner's psychological distress in anticipation of and during the conflict discussion, we did not expect partners' self-reported responses to parallel their physiological and behavioral responses. Self-reported affective responses and physiological responses are often either unrelated or minimally related (Cacioppo, Gardner, & Bernston, 1999; Dickerson & Kemeny, 2004; Lang, 1994; Powers et al., 2006), and self-reported affective responses likely occur in a different, more consciously accessible response system than behavioral or physiological responses (e.g., Bradley & Lang, 2000). Therefore, we predicted different patterns for affective responses compared to physiological and behavioral responses. Specifically, we predicted that incongruence between partners' attachment styles (and between their associated affect regulation strategies) would lead to heightened feelings of distress in anticipation of and during the conflict discussion. First, we expected that incongruence between one partner's attachment anxiety and the other's attachment avoidance (e.g., a partner high in avoidance paired with a partner low in anxiety or a partner low in avoidance paired with a partner high in anxiety) would lead to heightened feelings of distress in anticipation of and during the discussion because these partners likely approach the discussion in different ways due to their affect regulation strategies. Partners who are low in anxiety are likely to be inclined to have a heated or active conflict discussion with their spouse. In contrast, partners who are high in avoidance are likely to feel distressed at the prospect of engaging in a heated or active discussion because it counters their deactivating strategies of averting their attention from attachment-related threats and overly relying on themselves. Therefore, more avoidant partners who are paired with a less anxious spouse might feel distressed because their

spouse is likely to want to have a heated discussion with them. Although partners who are low in avoidance and partners who are high in anxiety both are more likely to engage in a heated or active discussion with their spouse, less avoidant partners who are paired with a more anxious spouse might feel distressed in anticipation of the discussion because their spouse is likely to behave less constructively during conflict (for a review, see Pietromonaco, Greenwood, & Barrett, 2004), as well as likely to express heightened distress to their partner and excessively rely on him or her for comfort and reassurance. Second, we expected more anxious partners to feel more distressed when they are paired with a more avoidant spouse; their spouse is likely to frustrate their attempts to engage in a heated discussion, as well as their attempts to repeatedly turn to him or her for support and comfort, due to their hyperactivating versus deactivating affect regulation strategies. Third, we explored whether the interaction between partners' levels of avoidance would predict their self-reported distress.

Method

Participants

Participants were members of 228 opposite-sex newly married couples. Couples were identified from marriage licenses filed in several municipalities in Western Massachusetts and invited to participate via mail and phone. In addition, to identify and recruit couples who lived in the local area but had married elsewhere, eight of the couples in our sample were recruited through flyers and advertisements. To be eligible for participation in the study, we required that both partners were in their first marriage, that they were between the ages of 18 and 50 years old, that neither had any children, that they were able to participate within seven months after the date of their marriage, and that the wife was not pregnant at the time of the laboratory session. We also screened the respondents for endocrine disorders that are known to influence hormone levels. Couples were ineligible if either partner had an endocrine disorder (e.g., diabetes, Cushing's disease) or worked overnight shifts, which can alter the circadian rhythm of cortisol (e.g., Federenko, Nagamine, Hellhammer, Wadhwa, & Wüst, 2004; James, Cermakian, & Boivin, 2007).

Of the 228 couples, three couples did not complete the study; two couples were excluded because one partner could not provide saliva and one couple decided not to participate. In addition, one couple was excluded because one partner did not complete the attachment measure due to a computer malfunction. Six additional couples were dropped from the analyses because at least one partner's values for most cortisol samples were at least three standard deviations above or below the mean.

The final sample consisted of 218 couples (436 individuals). Wives' average age was 27.72 years (*SD* = 4.79) and husbands' average age was 29.13 years (*SD* = 5.27). Most participants had a bachelor's degree (48% of wives, 44% of husbands) or advanced degree (32% of wives, 19% of husbands). The majority of participants identified as White (93% of wives, 96% of husbands). The average length of couples' relationships (starting from the time they began dating) was 60.36 months (*SD* = 35.21).

Procedure

All sessions began during the late afternoon and early evening hours (between 4:00 pm and 7:00 pm) to control for the diurnal rhythm of cortisol (Dickmeis, 2009; Dorn, Lucke, Loucks, & Berga, 2007). Sessions lasted approximately three hours. At the beginning of each session, a trained experimenter described the tasks that participants would perform during the session and gave participants the opportunity to ask questions. Prior to the study, all participants knew that they would be discussing an area of disagreement with their partner that would be digitally recorded, and this information was reiterated in the consent form. Throughout the session, participants individually completed questionnaires; partners were separated by a partition for privacy and the experimenter asked them not to talk to each other while completing questionnaires. Participants provided five saliva samples during the laboratory session at times intended to reflect cortisol levels before, during, and after the conflict discussion. They also provided another saliva sample at home on a different day from the laboratory session.

After completing some questionnaires and providing one saliva sample about 30 minutes after arriving at the laboratory, each partner identified three important and unresolved areas of disagreement in their relationship and rated the intensity of each on a 7-point scale from 1 (*Not at all intense [calm]*) to 7 (*Extremely intense [heated]*). For each couple's conflict discussion, the experimenter chose a topic that both partners had listed and that had the highest combined intensity rating, when possible. Otherwise, the experimenter chose a topic that had the highest intensity rating or chose a topic randomly (by flipping a coin), if two were tied. Next, the experimenter provided additional details about the upcoming conflict discussion by reminding couples that they would discuss an important topic that they had disagreed about recently and had not completely resolved. The experimenter also stated that "we would like you to *clearly* understand that we are asking you to discuss a topic you *disagree* about which might take the form of an argument … and, it could even get a bit heated." Participants provided another saliva sample 15 minutes after they were reminded about the upcoming discussion of an area of disagreement in their relationship. Immediately afterward, the experimenter took the couple to a private room, which was set up like a living room and included a small sofa and some lamps. In addition, the room included three small, but visible, cameras to record the interaction. The experimenter asked couples to try to resolve the conflict topic chosen for them over the next 15 minutes. Ten, thirty, and sixty minutes after the conflict discussion ended, an assistant collected saliva samples from each partner. At the session's conclusion, participants returned to the private room to discuss the positive aspects of their relationship to end the session on a positive note. Finally, the experimenter debriefed and thanked couples and gave each participant $50.

Measures

Attachment style with spouse—To assess attachment styles, participants completed a version of the Experiences in Close Relationships Questionnaire (ECR; Brennan, Clark, & Shaver, 1998), but the instructions and items were revised to ask participants to rate feelings about their relationship with their spouse (partner). (The standard version of the measure asks participants to rate their romantic partners in general.) This questionnaire included items that measured attachment anxiety (husbands' α = .88, wives' α = .91) and attachment

avoidance (husbands' α = .87, wives' α = .83). Examples of the items are "I often wish that my partner's feelings for me were as strong as my feelings for him/her" for anxiety and "I prefer not to show my partner how I feel deep down" for avoidance. All items were rated on a 7-point scale from 1 (*Disagree strongly*) to 7 (*Agree strongly*). Scores for the anxiety and avoidance dimensions were moderately correlated for men, $r(218) = .38$, $p < .0001$, and for women, $r(218) = .42$, $p < .0001$.

Salivary cortisol—To measure HPA activation patterns before, during, and after the conflict discussion, five salivary cortisol samples were collected over the laboratory session. Because cortisol takes between 15 to 20 minutes to enter saliva after secretion from the adrenal gland, each sample reflects participants' cortisol reactions 15 to 20 minutes prior to collection (Stansbury & Gunnar, 1994). We collected saliva samples five times during the laboratory session and once at home (see Table 1). The first sample was provided approximately 30 minutes after participants arrived at the laboratory. This sample was the first anticipatory sample because all participants knew before the session that they would discuss a major area of disagreement and they were reminded of this task when they completed the consent form. The second anticipatory sample was provided 15 minutes after participants had received even more detailed instructions about the conflict discussion and had generated three areas of unresolved conflict in their relationship. The third sample (the conflict discussion sample) was provided 10 minutes after the conflict discussion ended and reflected cortisol during the discussion. The fourth sample (post-discussion sample 1) was provided 30 minutes after the discussion; the fifth sample (post-discussion sample 2) was provided 60 minutes after the discussion. In addition, to obtain a baseline outside of the laboratory, a home saliva sample (the home sample) was collected on a different day (typically one week after the laboratory session) at the same time of day that participants provided their first saliva sample in the laboratory. For example, if they provided their first saliva sample at 6:00 pm in the laboratory, then they provided their home sample on a different (but similar) day at 6:00 pm. For the purposes of the analyses, we set the home sample at 30 minutes prior to the first laboratory sample; although this setting is arbitrary, at a conceptual level this sample should reflect cortisol at the same time of the day as the first laboratory sample, regardless of the exact date on which this sample was provided. Our procedure allowed us to assess the trajectories of participants' cortisol responses from the home baseline through each of the five laboratory samples.

Following guidelines provided by Salimetrics, LLC, we asked participants to "passively drool down a straw and into a small plastic vial" with their heads tilted forward until the required amount of saliva was collected. The vial was sealed and immediately placed in frozen storage (−85°C) until samples were shipped on dry ice to Salimetrics, LLC for analysis of cortisol levels. All samples were divided into two vials and separately assayed for salivary cortisol using a highly-sensitive enzyme immunoassay (Salimetrics, PA). Thus, each cortisol sample had two values, resulting in a total of 12 values for the six samples. The test used 25 μL of saliva per determination and had a lower limit of sensitivity of .003 μg/dL, a standard curve range from .012 μg/dL to 3.0 μg/dL, an average intra-assay coefficient of variation of 3.5%, and an average inter-assay coefficient of variation of 5.1%. Method accuracy determined by spike and recovery averaged 100.8% and linearity

determined by serial dilution averaged 91.7%. Values from matched serum and saliva samples show the expected strong linear relationship, $r(47) = .91$, $p < .0001$.

We followed several procedures to safeguard the accuracy of the cortisol assays. Participants received instructions (both written and oral) asking them to: (a) avoid brushing their teeth, using any salivary stimulants (e.g., chewing gum), and eating a major meal within one hour prior to the session; (b) avoid eating acidic or high sugar foods and smoking within 30 minutes before the session; (c) refrain from drinking alcohol for 12 hours prior to the session; and (d) not visit the dentist within 48 hours of the session. We asked participants to call to reschedule if either they or their partner had an elevated temperature or felt ill.

At the laboratory session, we confirmed that participants were not ill, and all participants took their temperature with an ear thermometer; if either partner had an elevated temperature, we asked them to return on another date. About 10 minutes before participants provided their first saliva sample, they drank a small bottle of water (or rinsed their mouths thoroughly with the water if they chose not to drink it). This procedure was designed to minimize the potential for saliva contamination from food or other particles. During the session, participants did not eat or drink anything (other than the water provided early in the session) until all five saliva samples had been collected.

Medications can potentially affect salivary cortisol through different pathways (Granger, Hibel, Fortunato, & Kapelewski, 2009). To allow us to assess the potential effects of different medications on cortisol levels in the present study, participants listed all medications (prescription and nonprescription) and supplements they had taken in the 24 hours prior to the laboratory session; they were provided with a reference guide of common medications and supplements if they needed help recalling the names. Research assistants categorized each medication by type, and we created dummy variables (0 = no, 1 = yes) for each of the following medications: hormonal birth control (for wives only), corticosteroids, allergy medications, antidepressant or antianxiety medications, ADHD medications, analgesics, proton pump inhibitors, and anti-inflammatories.

Subjective distress—Prior to the discussion, participants indicated how they felt about the upcoming discussion by rating the extent to which they felt a variety of emotions on a 7-point scale from 1 (*Not at all*) to 7 (*Extremely*). Their ratings of six adjectives reflected their subjective distress in anticipation of the discussion (distressed, upset, scared, nervous, jittery, and afraid; husbands' $\alpha = .86$, wives' $\alpha = .86$). After the discussion, participants rated the same six adjectives, which reflected their feelings of distress during the discussion (husbands' $\alpha = .83$, wives' $\alpha = .82$).

Observer-rated attachment behavior—Behaviors during the conflict discussion were coded using the Secure Base Scoring System (SBSS; Crowell et al., 1998; Crowell et al., 2002). The SBSS was designed to be analogous to scoring systems for infant-parent attachment behaviors (Ainsworth et al., 1978); it captures the behavioral aspects of the attachment system within an adult relationship. The SBSS assesses both partners' secure base use (careseeking) and secure base support (caregiving) behaviors while they discuss a topic on which they disagree, which should create a potentially distressing situation that

activates attachment behavior in one or both partners and puts them in a position to respond to one another.

Individuals' secure base use (careseeking) behavior is measured on four subscales: (1) strength and clarity of the initial distress signal, (2) maintenance of a clear distress signal, (3) approach to the attachment figure, and (4) ability to be comforted. A summary scale allows coders to give a global score for the quality of secure base use, taking into account individuals' overall pattern of careseeking behavior as well as their partners' caregiving behavior (e.g., ensuring that secure base users are not penalized for an inability to be comforted given their partners' lack of responsiveness). All subscales are rated using theoretically-developed scores from 1 to 7, with low scores representing poor secure base use and high scores representing excellent secure base use. The first subscale, strength and clarity of the initial distress signal, assesses the clarity and intensity of the individual's first concern expressed to the partner through verbal, affective, and behavioral cues. The next subscale, maintenance of the distress signal, assesses the individual's ability to actively and persistently maintain a clear distress signal. The approach subscale assesses the individual's expectations and direct expressions in affect, words, and behavior that the partner should act as an attachment figure (i.e., should respond to and care about him or her) and not just act as a sounding board. Finally, the ability to be comforted subscale assesses the extent to which the individual responds to the partner's support with relief and decreased distress, or tries to self-soothe if the partner does not respond effectively. Four trained observers coded partners' secure base use (careseeking) behaviors during the conflict discussion using the SBSS. The intraclass correlation coefficients (Shrout & Fleiss, 1979) were calculated for each SBSS subscale using the scores for the 30% of conflict discussions that had been coded by all trained observers to determine agreement among the observers. The intraclass correlation coefficients were .93 for strength and clarity of the initial distress signal, .92 for maintenance of the distress signal, .92 for approach, .93 for ability to be comforted, and .94 for the secure base use summary scale, all of which indicated excellent agreement. Consistent with prior research (Crowell et al., 2002), the average inter-item correlation among secure base use subscales was $r = .62$ for men and $r = .47$ for women; the secure base use subscales were highly correlated with the secure base use summary scale, with *r*s ranging from .67 to .93 for men and from .53 to .84 for women.

Individuals' secure base support (caregiving) behavior is measured on four subscales: (1) interest in the partner, (2) recognition of distress, (3) interpretation of distress, and (4) responsiveness to distress. A summary scale allows coders to give a global score for the quality of secure base support, taking into account individuals' overall pattern of caregiving behavior (e.g., ensuring that individuals who scored high on recognition and interpretation but who were intentionally unresponsive to their partners do not receive high summary scores). All subscales are rated using theoretically-developed scores from 1 to 7, with low scores representing poor secure base support and high scores representing excellent secure base support. The first subscale, interest in the partner, assesses the individual's ability to be a good listener and to encourage the partner to express his or her thoughts and feelings. The next subscale, recognition of distress, assesses the individual's sensitivity and understanding that the partner is distressed. The interpretation of distress subscale assesses the extent to

which the individual correctly understands the content of the partner's distress. Finally, the responsiveness subscale assesses two related components: (1) desire and willingness to help the partner, and (2) effectiveness and effort of the individual's attempts to help the partner, as conveyed by the individual's affect, words, and behavior. The same four trained observers coded partners' secure base support (caregiving) behaviors during the conflict discussion. Intraclass correlation coefficients based on the 30% of the conflict discussions coded by all observers were .94 for interest in the partner, .87 for recognition of distress, .94 for interpretation of distress, .92 for responsiveness to distress, and .94 for the secure base support summary scale, all of which indicated excellent agreement. Consistent with prior research (Crowell et al., 2002), the average inter-item correlation among secure base support subscales was $r = .67$ for both men and women; the secure base support subscales were highly correlated with the secure base support summary scale, with *r*s ranging from .62 to .96 for men and from .66 to .96 for women.

Relationship quality—We controlled for relationship quality in our final models by including the global perceived relationship quality measure of the Perceived Relationship Quality Component Inventory (PRQC; Fletcher, Simpson, & Thomas, 2000) as a covariate in those analyses. This questionnaire included items such as "How satisfied are you with your relationship?" and "How intimate is your relationship?" that measured partners' perceptions of relationship quality (husbands' $\alpha = .77$, wives' $\alpha = .77$). All items were rated on a 7-point scale from 1 (*Not at all*) to 7 (*Extremely*).

Results

Cortisol Patterns

Analytic strategy—We first excluded any cortisol data with values greater than or equal to 4 μg/dL because these values are outside the normative range for salivary cortisol (Aardal & Holm, 1995). The distribution for cortisol remained skewed after excluding cortisol data outside this range, so we explored a variety of transformations to symmetrize the distribution. The base-10 logarithmic transformation was best at achieving this goal, so we performed this transformation on all cortisol values to normalize them. After transforming the data, we removed (treated as missing) cortisol values that were at least three standard deviations from the mean transformed scores. Table 1 presents mean scores for the six observed cortisol values for husbands and wives.

We used latent growth modeling to chart participants' cortisol trajectories and to predict individual differences in these trajectories from participants' attachment styles. We used the Hierarchical Linear Modeling, Version 7 (HLM 7; Raudenbush, Bryk, & Congdon, 2011) program to estimate a special parameterization of these multilevel models, called the multivariate outcomes model (Lyons & Sayer, 2005; Raudenbush, Brennan, & Barnett, 1995), which allowed us to take into account nonindependence in spouses' data and to examine cortisol patterns of change over six time points. These models used the couple as the unit of analysis, with husbands' and wives' longitudinal cortisol responses nested within the couple.

Our inspection of each participant's log-transformed cortisol patterns over time revealed that these patterns were non-linear and showed discontinuity in cortisol trajectories before and after participants provided the second anticipatory cortisol sample. Therefore, we used a piecewise model with two separate components to analyze the cortisol trajectories. This strategy allowed us to simultaneously model the trajectories of cortisol reactivity and recovery. We centered time at the second anticipatory cortisol sample to create a common intercept by subtracting the mean value of time at the second anticipatory sample from each participant's time value, thus giving the second anticipatory sample a value of zero. In other words, the second anticipatory sample was coded as 0 for both the first and second component of the model; the timing of the other samples was set relative to this zero point. Table 1 describes each of the sample points and indicates the timing of each sample (in minutes) relative to the second anticipatory sample provided in the laboratory (anticipatory sample 2). Prior to the second anticipatory sample, we modeled time as both a linear and a quadratic function (the anticipatory reactivity trajectory); after the second anticipatory sample, we modeled time as a linear function (the recovery trajectory). This piecewise model allowed us to evaluate cortisol trajectories over the course of the home sample, first anticipatory sample, and second anticipatory sample, all three of which reflect the anticipatory piece of the model, as well as cortisol trajectories from the second anticipatory sample through the discussion, 30-minute post-discussion, and 60-minute post-discussion samples (the recovery piece of the model). This model was a better fit to the data than a piecewise model with two linear components, $\chi^2(17) = 1786.54$, $p < .001$, according to HLM's general linear hypothesis test that tests the change in deviance scores between models relative to the change in degrees of freedom between models.

The level 1 model—The level 1 model was represented by the following equation:

$$Y_{ij}=\beta_{f1j}(female\ intercept)+\beta_{f2j}(female\ linear\ reactivity)+\beta_{f3j}(female\ quadratic\ reactivity)+\beta_{f4j}(female\ linear\ recovery)+\beta_{m5j}(male\ intercept)+\beta_{m6j}(male\ linear\ reactivity)+\beta_{m7j}(male\ quadratic\ reactivity)+\beta_{m8j}(male\ linear\ recovery)+r_{ij}$$

Y_{ij} is the log base-10 cortisol level for the i^{th} person in the j^{th} couple, which is estimated by β_{f1j}, the wife's mean cortisol level at the time of the second anticipatory laboratory sample (also known as the intercept); β_{f2j}, the wife's rate of cortisol change at that time point; β_{f3j}, the wife's change in slope or curvature over the entire reactivity trajectory; β_{f4j}, the wife's rate of cortisol change for the recovery trajectory; plus measurement error for that individual, r_{ij}. β_{m5j}, β_{m6j}, β_{m7j}, and β_{m8j} represent the husband's corresponding intercept, rate of change, and curvature for the reactivity trajectory, and rate of change for the recovery trajectory, respectively.

The level 2 model—The unconditional level 2 model was represented by the following equations:

$$\beta_{f1j}=\gamma_{10}+u_{1j}$$
$$\beta_{f2j}=\gamma_{20}+u_{2j}$$
$$\beta_{f3j}=\gamma_{30}+u_{3j}$$
$$\beta_{f4j}=\gamma_{40}+u_{4j}$$
$$\beta_{m5j}=\gamma_{50}+u_{5j}$$
$$\beta_{m6j}=\gamma_{60}+u_{6j}$$
$$\beta_{m7j}=\gamma_{70}+u_{7j}$$
$$\beta_{m8j}=\gamma_{80}+u_{8j}$$

where the intercepts, rates of change, and curvatures (trajectory parameters) for both members of couple *j* are each estimated by γ's, the overall means for all wives' and husbands' cortisol trajectory parameters, plus residual errors, *u*'s. In the level 2 model, every γ represents a predictor (e.g., avoidant attachment scores) or a control variable (e.g., hormonal birth control use); every *u* represents a random effect (i.e., the residual variance around the grand mean). When we fit the unconditional model to the data, both levels were estimated simultaneously via full maximum likelihood. There was within-person variance at level 1 of the model (σ^2 = .008) and significant variance in trajectory parameters at level 2 of the model (all *p*s < .001), indicating that there was variability in husbands' and wives' cortisol trajectory parameters around the overall mean, which verified that there would be variance left to explain by including attachment scores in the model.

In addition, we controlled for the use of any medications that were related to cortisol in our data.[1] The medications controlled for in our model were hormonal birth control and benzodiazepines for wives and antidepressant or antianxiety medications for husbands. Our final model also included the main effects of both spouses' attachment scores for anxiety and avoidance (i.e., their own and their partner's scores) as well as theoretically meaningful interactions between them (i.e., wives' anxiety x husbands' avoidance, wives' avoidance x husbands' anxiety, wives' anxiety x husbands' anxiety, and wives' avoidance x husbands' avoidance). We also conducted two additional analyses with our final model to control for (1) couples' relationship length (starting from the time they began dating) and (2) both spouses' relationship quality, assessed by the PRQC Inventory (Fletcher et al., 2000).[2]

[1]We ran a series of multilevel models to test whether different medications were associated with cortisol responses in our sample. We added dichotomous medication control variables (coded as "1" if a given participant was taking a medication, "0" if he or she was not) to all level 2 equations, one at a time. These variables were hormonal birth control (for wives only), corticosteroids, allergy medications, antidepressant or antianxiety medications, ADHD medications, analgesics, proton pump inhibitors, and anti-inflammatories. Each of these medications is hypothesized to have one or more ties to pathways that influence the functioning of the HPA-axis or cortisol (Granger et al., 2009). After each medication was added, we trimmed the model to retain only those medications that significantly predicted each trajectory parameter, starting with the parameters of the highest order—wives' and husbands' curvature parameters—and working down to the parameters of the lowest order, the intercepts. If a medication variable significantly predicted the husbands' or wives' higher order parameter, it was retained in the equation for that parameter, as well as for all lower order parameters.

[2]Couples' relationship length did not significantly predict husbands' or wives' cortisol trajectories. Furthermore, the key interaction effects in the original model remained the same even when relationship length was included in the model. Similarly, spouses' relationship quality did not significantly predict husbands' or wives' cortisol trajectories, with the exception of husbands' relationship quality significantly predicting their intercept and wives' relationship quality significantly predicting husbands' curvature (from the home sample to the second laboratory sample). Again, the key interaction effects in the original model remained the same even when relationship quality was included in the model. (For more details, see supplemental materials.)

Does the Interaction between Spouses' Attachment Styles Predict Cortisol Patterns?

We proposed that the marital context, which is determined in part by the interplay between both spouses' attachment styles, would shape individuals' cortisol responses in anticipating a conflict discussion. As expected, one partner's avoidance interacted with the other partner's anxiety to predict both husbands' and wives' cortisol patterns (see Tables 2 and 3). Also as expected, partners' levels of anxiety interacted to predict their cortisol patterns.

Wives' anxiety by husbands' avoidance—Consistent with evidence that couples in which one partner is avoidantly-attached and the other is anxiously-attached experience difficulties in their relationships, we found that members of couples with an anxious wife and an avoidant husband showed distinctive patterns of physiological reactivity and recovery.

Wives' cortisol patterns: Controlling for the main effects of both spouses' attachment scores for anxiety and avoidance, the interaction between wives' anxiety and husbands' avoidance significantly predicted wives' linear rate of change (at the second laboratory sample), $\gamma = -.131$, $p = .008$, curvature (from the home sample to the second laboratory sample), $\gamma = -.170$, $p = .001$, and recovery slope (from the second through the fifth laboratory sample), $\gamma = -.031$, $p = .022$. Figure 1 shows wives' cortisol trajectories plotted at high (1 *SD* above the mean) and low (1 *SD* below the mean) values of their attachment anxiety and by high (1 *SD* above the mean) and low (1 *SD* below the mean) values of their husbands' attachment avoidance.

The anticipatory portion of the piecewise model in Figure 1 shows the linear rate of change and curvature (quadratic) pattern of wives' cortisol trajectories. This pattern indicates that high anxious wives paired with high avoidant husbands evidenced a sharp increase in cortisol from home to the first laboratory sample, followed by a rapid decline in cortisol at the second laboratory sample. To better characterize this pattern, we conducted simple slopes tests (e.g., Aiken & West, 1991; Preacher, Curran, & Bauer, 2006) to compare the linear rate of change and curvature for all partner pairings. In line with our predictions, we report comparisons of the linear rate of change and curvature for high anxious wives paired with high avoidant husbands with each of the other partner pairings, but see Table 4 for comparisons of all partner pairings. In these simple slopes tests and in all simple slopes tests that follow, the tests examine differences in cortisol patterns for prototypical partner pairings, where "high" represents values one standard deviation above the mean and "low" represents values one standard deviation below the mean. Cortisol patterns for the high anxious wife/high avoidant husband pairing differed significantly from those for the high anxious wife/low avoidant husband pairing in both the linear rate of change, $t(208) = -3.098$, $p = .002$, and curvature, $t(208) = -3.006$, $p = .003$, and from those for the low anxious wife/high avoidant husband pairing in both the linear rate of change, $t(208) = -3.028$, $p = .003$, and curvature, $t(208) = -3.548$, $p < .0001$. The simple slopes test comparing the cortisol patterns for the high anxious wife/high avoidant husband pairing with those for the low anxious wife/low avoidant husband pairing was in the same direction as the other tests but was marginal for the linear rate of change, $t(208) = -1.866$, $p = .063$, and non-significant for the curvature, $t(208) = -1.428$, $p = .155$.

The second portion of the piecewise model reflects the recovery slope from the second laboratory sample through the fifth laboratory sample. The interaction between wives' anxiety and husbands' avoidance in predicting wives' recovery was driven primarily by the low anxious wife/high avoidant husband pairing rather than by the high anxious wife/high avoidant husband pairing. In line with this finding, we report comparisons of the recovery slope for low anxious wives paired with high avoidant husbands with each of the other partner pairings, but see Table 4 for comparisons of all partner pairings. Low anxious wives with high avoidant husbands evidenced a significantly flatter slope than did high anxious wives with high avoidant husbands, $t(208) = -2.459$, $p = .015$, and low anxious wives with low avoidant husbands, $t(208) = 3.437$, $p = .001$; their slope was marginally flatter than for high anxious wives with low avoidant husbands, $t(208) = 1.93$, $p = .055$.

Husbands' cortisol patterns: Husbands' cortisol patterns were generally similar to those of wives for the anticipatory portion of the model (see Figure 2). That is, high avoidant husbands paired with high anxious wives showed a sharp increase in cortisol from home to the first laboratory sample, followed by a rapid decline in cortisol at the second laboratory sample. The interaction between wives' anxiety and husbands' avoidance significantly predicted husbands' linear rate of change at the second laboratory sample, $\gamma = -.120$, $p = .04$, and marginally predicted their curvature, $\gamma = -.106$, $p = .084$. Unlike the pattern for wives, the interaction between wives' anxiety and husbands' avoidance did not predict husbands' recovery slope.

We again conducted simple slopes tests to compare the linear rate of change and curvature for all partner pairings. In line with our predictions, we report comparisons of the linear rate of change and curvature for high avoidant husbands paired with high anxious wives with each of the other partner pairings, but see Table 5 for comparisons of all partner pairings. Cortisol patterns for the high avoidant husband/high anxious wife pairing differed significantly from the low avoidant husband/high anxious wife pairing in both the linear rate of change, $t(209) = -2.693$, $p = .008$, and curvature, $t(209) = -2.199$, $p = .029$; from the high avoidant husband/low anxious wife pairing in both the linear rate of change, $t(209) = -2.721$, $p = .007$, and curvature, $t(209) = -2.434$, $p = .016$; and from the low avoidant husband/low anxious wife pairing in both the linear rate of change, $t(209) = -1.964$, $p = .051$, and curvature, $t(209) = -1.722$, $p = .086$, although the latter effect was marginal.

Wives' avoidance by husbands' anxiety—We also observed distinctive cortisol reactivity patterns for husbands (but not for wives) when wives were high in avoidance and husbands were low in anxiety (see Figure 3). Specifically, the interaction between wives' avoidance and husbands' anxiety significantly predicted husbands' linear rate of change, $\gamma = -.209$, $p = .027$, and curvature, $\gamma = -.198$, $p = .045$, but not husbands' recovery. As Figure 3 illustrates, the pattern diverged from our prediction and from the pattern observed for anxious wives with avoidant husbands: Husbands who were *low* in anxiety and paired with wives high in avoidance showed a much weaker cortisol response (i.e., an attenuated response pattern) in anticipating the conflict discussion than did husbands in other pairs. In line with this finding, we report comparisons of the linear rate of change and curvature for low anxious husbands paired with high avoidant wives with each of the other partner

pairings, but see Table 6 for comparisons of all partner pairings. Cortisol patterns for low anxious husbands with high avoidant wives differed significantly from the low anxious husband/low avoidant wife pairing in linear rate of change, $t(209) = 2.644$, $p = .009$, and curvature, $t(209) = 6.459$, $p < .0001$; from the high anxious husband/high avoidant wife pairing in linear rate of change, $t(209) = -2.325$, $p = .021$, and curvature, $t(209) = -2.453$, $p = .015$; and from the high anxious husband/low avoidant wife pairing in curvature, $t(209) = -2.979$, $p = .003$ (but not in linear rate of change, $t[209] = -1.449$, $p = .149$).

Wives' anxiety by husbands' anxiety—As expected, the interaction between both spouses' levels of attachment anxiety also predicted husbands' and wives' cortisol patterns.

Wives' cortisol patterns: Wives' anxiety interacted with husbands' anxiety to predict wives' recovery slope, $\gamma = .03$, $p = .043$. As Figure 4 shows, wives in couples in which both partners were low in anxiety (i.e., more secure pairs) showed a flatter recovery slope compared to wives in couples in which one partner was high in anxiety. In line with this finding, we report comparisons of the recovery slope for low anxious wives paired with low anxious husbands with each of the other partner pairings, but see Table 7 for comparisons of all partner pairings. Simple slopes tests indicated that low anxious wives paired with low anxious husbands showed a flatter recovery slope than did either high anxious wives paired with low anxious husbands, $t(208) = -2.222$, $p = .027$, or low anxious wives paired with high anxious husbands, $t(208) = -2.462$, $p = .015$, and they tended (non-significantly) to have a flatter slope than did high anxious wives paired with high anxious husbands, $t(208) = -1.64$, $p = .102$.

Husbands' cortisol patterns: Husbands' anxiety also interacted with wives' anxiety to predict husbands' cortisol patterns. However, this interaction significantly predicted the anticipatory component of the piecewise model rather than the recovery slope. The interaction between husbands' anxiety and wives' anxiety predicted husbands' linear rate of change at the second anticipatory laboratory sample, $\gamma = .133$, $p = .041$; it did not significantly predict the curvature, $\gamma = .111$, $p = .101$. Figure 5 shows that husbands who were low in anxiety paired with low anxious wives showed a significantly slower rate of change at the second anticipatory sample than did husbands in other pairs. In line with this finding, we report comparisons of the linear rate of change for low anxious husbands paired with low anxious wives with each of the other partner pairings, but see Table 8 for comparisons of all partner pairings. Simple slopes tests indicated that husbands low in anxiety paired with low anxious wives showed a significantly slower rate of change at the second anticipatory sample than did the low anxious husband/high anxious wife pairing, $t(209) = -2.562$, $p = .011$, and the high anxious husband/low anxious wife pairing, $t(209) = -2.347$, $p = .02$. Husbands low in anxiety paired with low anxious wives also showed a marginally slower rate of change than did husbands high in anxiety paired with high anxious wives, $t(209) = -1.881$, $p = .061$.

Wives' avoidance by husbands' avoidance—The interaction between spouses' levels of attachment avoidance did not significantly predict husbands' and wives' cortisol patterns.

Summary—Both spouses' attachment orientations interacted to predict their physiological stress patterns in response to the conflict discussion. As expected, both husbands and wives in couples with a wife high in attachment anxiety and a husband high in attachment avoidance tended to show heightened patterns of cortisol reactivity in anticipation of the discussion; both spouses tended to show a faster rate of change at the second anticipatory laboratory sample compared to other types of couples. In contrast, couples in which the husband was high in anxiety and the wife was high in avoidance did not show the expected pattern; instead, husbands who were *low* in anxiety and paired with a wife high in avoidance showed weaker cortisol reactivity patterns compared to other couple combinations. In addition, contrary to our predictions, members of couples in which both partners were high in anxiety did not show exaggerated cortisol reactivity patterns in anticipation of the discussion. Instead, husbands in couples in which both partners were *low* in anxiety (i.e., more secure pairs) showed a slower rate of change at the second anticipatory laboratory sample.

Contrary to our predictions for spouses' patterns of cortisol recovery, members of couples with two anxious partners did not show heightened cortisol levels during and after the conflict discussion. However, we did find two unexpected significant interactive effects for wives' recovery trajectories. First, wives low in anxiety paired with husbands high in avoidance showed flatter trajectories of cortisol recovery. Second, wives low in anxiety paired with husbands low in anxiety (i.e., more secure pairs) also showed flatter trajectories of cortisol recovery.

Observer-Rated Attachment Behavior

Analytic strategy—As when we analyzed physiological outcomes, we fit two-level hierarchical linear models, which allowed us to take into account nonindependence in spouses' data, using HLM 7 (Raudenbush et al., 2011). Analyses modeled individual responses (level 1) as nested within couples (level 2). We used the cross-sectional multivariate outcomes model, described by Lyons, Zarit, Sayer, and Whitlatch (2002), which let us model separate equations for husbands and wives. We tested a series of analogous models with observer-rated careseeking behaviors (i.e., strength and clarity of the initial distress signal, maintenance of a clear distress signal, approach to the attachment figure, ability to be comforted, and the secure base use summary score) and observer-rated caregiving behaviors (i.e., interest in the partner, recognition of distress, interpretation of distress, responsiveness to distress, and the secure base support summary score) as the outcomes.

The level 1 model—The level 1 model was represented by the following equation:

$$Y_{ij}=\beta_{f1j}(female\ intercept)+\beta_{m2j}(male\ intercept)+r_{ij}$$

Y_{ij} is the observer-rated careseeking or caregiving behavior for the i^{th} person in the j^{th} couple, which is estimated by the wife's mean observer-rated careseeking or caregiving behavior (β_{f1j}, the female intercept), the husband's mean observer-rated careseeking or

caregiving behavior (β_{m2j}, the male intercept), and the measurement error for that individual (r_{ij}).

The level 2 model—Every coefficient in the level 1 model becomes an outcome in the level 2 model, which is predicted by a series of level 2 variables. The level 2 model was represented by the following equations:

$$\beta_{f1j}=\gamma_{10}+[\text{predictors}]$$
$$\beta_{m2j}=\gamma_{20}+[\text{predictors}]$$

The intercepts for both members of couple *j* are each estimated by the overall means for all wives' and husbands' mean observer-rated careseeking or caregiving behaviors (γ's). Slopes were modeled as fixed across couples due to the limited degrees of freedom at level 1 (i.e., two individuals in each couple; Campbell & Kashy, 2002; Kashy & Kenny, 2000). When we fit the unconditional models to the data, both levels were estimated simultaneously via full maximum likelihood. There was variance at level 1 of the models (all σ^{2}'s = .675 - 2.08). Our final models included both spouses' attachment scores for anxiety and avoidance (i.e., their own and their partner's scores), as well as theoretically meaningful interactions between them (i.e., wives' anxiety x husbands' avoidance, wives' avoidance x husbands' anxiety, wives' anxiety x husbands' anxiety, and wives' avoidance x husbands' avoidance). We also conducted two additional analyses with our final models to control for (1) couples' relationship length (starting from the time they began dating) and (2) both spouses' relationship quality, assessed by the PRQC Inventory (Fletcher et al., 2000).[3]

Does the Interaction Between Spouses' Attachment Styles Predict Observer-Rated Careseeking and Caregiving Behaviors?

We hypothesized that spouses' attachment styles would interact to predict their observer-rated careseeking and caregiving behaviors during the conflict discussion. As expected, the interaction between one partner's avoidance and the other partner's anxiety, as well as the interaction between both partners' levels of anxiety, predicted husbands' and wives' careseeking and caregiving behaviors (see Tables 9, 10, 11, and 12).

Wives' anxiety by husbands' avoidance—In line with our predictions and with evidence that couples with an anxious partner and an avoidant partner experience challenges with careseeking and caregiving (e.g., J. A. Feeney, 2003; Shallcross et al., 2011), wives' anxiety and husbands' avoidance interacted to predict both spouses' careseeking and caregiving behaviors. The interaction between wives' anxiety and husbands' avoidance predicted wives' ability to recognize their husband's concerns and distress, γ = -.154, p = .047. We conducted simple slopes tests (e.g., Aiken & West, 1991; Preacher et al., 2006) to better characterize the pattern of this interaction and of all interactions that follow. These

[3]Couples' relationship length did not significantly predict husbands' or wives' careseeking or caregiving behaviors. Furthermore, the key interaction effects in the original models remained the same even when relationship length was included in the models. Similarly, spouses' relationship quality did not significantly predict husbands' or wives' careseeking or caregiving behaviors, with the exception of wives' relationship quality significantly predicting wives' greater ability to be comforted. Again, the key interaction effects in the original models remained the same even when relationship quality was included in the models. (For more details, see supplemental materials.)

tests examine differences in behavior patterns for prototypical partner pairings, where "high" represents values one standard deviation above the mean and "low" represents values one standard deviation below the mean. As shown in Figure 6, wives who were high in anxiety were less adept at recognizing their husband's concerns and distress when their husband was high in avoidance, $\gamma = -.163$, $t(408) = -2.193$, $p = .029$, 95% CI [-.309, -.017]. However, anxious wives did not have difficulty recognizing their husband's concerns and distress when their husband was low in avoidance, $\gamma = .044$, $t(408) = .507$, $p = .613$, 95% CI [-.125, .212].

Similarly, the interaction between wives' anxiety and husbands' avoidance tended to predict husbands' ability to engage in constructive approach toward their wife, $\gamma = -.232$, $p = .055$. As shown in Figure 7, husbands high in avoidance were less able to directly and constructively express their need for their wife's responsiveness when their wife was high in anxiety, $\gamma = -.467$, $t(404) = -4.058$, $p < .001$, 95% CI [-.693, -.242]; however, avoidant husbands did not have difficulty engaging in direct, constructive approach when their wife was low in anxiety.

Wives' avoidance by husbands' anxiety—Wives' avoidance and husbands' anxiety also interacted to predict wives' careseeking and caregiving behaviors. The interaction between wives' avoidance and husbands' anxiety predicted wives' ability to be comforted by their husband, $\gamma = .410$, $p = .045$. Wives who were high in avoidance were less comforted and less calmed at the end of the discussion when their husband was *low* in anxiety, $\gamma = -.932$, $t(397) = -3.284$, $p = .001$, 95% CI [-1.489, -.376], but not when their husband was high in anxiety, $\gamma = -.238$, $t(397) = -1.057$, $p = .291$, 95% CI [-.679, .203].

The interaction between wives' avoidance and husbands' anxiety also predicted wives' interest in their husband's concerns, $\gamma = .352$, $p = .045$. Similar to the pattern for wives' ability to be comforted, wives who were high in avoidance expressed less interest when listening to their husband's concerns when their husband was low in anxiety, $\gamma = -.508$, $t(408) = -2.096$, $p = .037$, 95% CI [-.983, -.033], but not when their husband was high in anxiety, $\gamma = .089$, $t(408) = .464$, $p = .643$, 95% CI [-.287, .465].

Taken together, these behavioral patterns indicate that avoidant wives were unable to benefit emotionally (i.e., feel comforted) when discussing the conflict with their non-anxious husbands, as well as unable to effectively listen to their non-anxious husbands' concerns (i.e., they were less available as caregivers). Wives' avoidance alone, then, does not appear to impair their ability as a caregiver or careseeker; rather, avoidant wives' careseeking and caregiving are disrupted when they are paired with less anxious husbands. These results also suggest that avoidant wives' careseeking and caregiving abilities actually may be improved when they are paired with more anxious husbands. Perhaps anxious husbands are more likely to demand their avoidant wives' engagement in the discussion; avoidant wives, in turn, may reap the benefits of their engagement by feeling more comforted by their anxious husbands and by listening to them more attentively.

Wives' anxiety by husbands' anxiety—Both partners' levels of attachment anxiety also interacted to predict wives' caregiving behaviors. This interaction significantly

predicted wives' responsiveness, $\gamma = .328$, $p = .014$, and overall caregiving ability, $\gamma = .271$, $p = .029$, as well as marginally predicted wives' interest, $\gamma = .233$, $p = .054$, and recognition of their husband's concerns, $\gamma = .157$, $p = .068$. For example, wives who were high in anxiety were less responsive to their husband's concerns, but only when their husband was low in anxiety, $\gamma = -.421$, $t(407) = -2.815$, $p = .005$, 95% CI [-.714, -.128]. When their husband was high in anxiety, wives were equally responsive regardless of their own level of anxiety, $\gamma = .135$, $t(407) = .919$, $p = .359$, 95% CI [-.153, .423]. The patterns for wives' overall caregiving ability, interest, and recognition were similar to those for wives' responsiveness. The interaction between partners' levels of anxiety did not predict wives' careseeking behaviors.

The interaction between spouses' levels of attachment anxiety predicted husbands' careseeking behaviors, including their approach, $\gamma = .416$, $p = .002$, ability to be comforted, $\gamma = .308$, $p = .031$, and overall careseeking ability, $\gamma = .259$, $p = .03$. The patterns of husbands' careseeking behaviors parallel those of wives' caregiving behaviors: Husbands were less able to effectively seek care when they were low in anxiety and their wife was high in anxiety. For instance, husbands low in anxiety showed less constructive approach when their wife was high in anxiety, but not when their wife was low in anxiety, $\gamma = -.664$, $t(404) = -4.464$, $p < .001$, 95% CI [-.956, -.373]. Patterns were similar for husbands' ability to be comforted and for their overall careseeking ability.

Wives' avoidance by husbands' avoidance—Both partners' levels of avoidance interacted to predict husbands' careseeking and caregiving behaviors. This interaction significantly predicted husbands' signal maintenance, $\gamma = .444$, $p = .015$, approach, $\gamma = .422$, $p = .05$, and ability to be comforted, $\gamma = .459$, $p = .042$, and it marginally predicted husbands' initial distress signal, $\gamma = .355$, $p = .066$, and overall careseeking, $\gamma = .349$, $p = .066$. For example, husbands who were low in avoidance engaged in less constructive approach when their wife was high in avoidance than when their wife was low in avoidance, $\gamma = -.545$, $t(404) = -2.077$, $p = .038$, 95% CI [-1.060, -.031]; unexpectedly, husbands who were high in avoidance were equally constructive in their approach regardless of their wife's level of avoidance, $\gamma = .021$, $t(404) = .108$, $p = .914$, 95% CI [-.357, .399]. Patterns were similar for husbands' other careseeking behaviors.

Both partners' levels of avoidance also interacted to predict husbands' caregiving behaviors, including their interest as a caregiver, $\gamma = .423$, $p = .028$, their responsiveness, $\gamma = .410$, $p = .055$, and their overall caregiving, $\gamma = .382$, $p = .054$. For instance, husbands who were low in avoidance expressed marginally less interest when listening to their wife's concerns when their wife was high in avoidance than when their wife was low in avoidance, $\gamma = -.443$, $t(408) = -1.899$, $p = .058$, 95% CI [-.900, .014]; unexpectedly, husbands who were high in avoidance were equally interested regardless of their wife's level of avoidance, $\gamma = .125$, $t(408) = .722$, $p = .471$, 95% CI [-.214, .464]. This pattern was similar for husbands' responsiveness and overall caregiving. The interaction between wives' avoidance and husbands' avoidance did not significantly predict wives' careseeking and caregiving behaviors.

Summary—One partner's attachment avoidance interacted with the other partner's attachment anxiety to predict spouses' careseeking and caregiving behaviors during the conflict discussion. As expected, members of couples with a wife high in anxiety and a husband high in avoidance had difficulty providing and seeking care from their partners. Anxious wives were less able to recognize their husband's distress when he was high in avoidance, but not when he was low in avoidance. Similarly, avoidant husbands were less able to constructively express their need for their wife's responsiveness when their wife was high in anxiety, but not when she was low in anxiety. Contrary to expectations, avoidant wives were less comforted and less interested in their husband's concerns when he was *low* in anxiety, but not when he was high in anxiety.

Both partners' levels of attachment anxiety interacted to predict spouses' careseeking and caregiving behaviors during the conflict discussion. Unexpectedly, wives were less interested in, less able to recognize, and less responsive to their husband's concerns when they were high in anxiety and their husband was low in anxiety than when both partners were low in anxiety; these wives also were less effective caregivers overall. Husbands' careseeking behaviors paralleled those of wives' caregiving behaviors. Husbands were less able to feel comforted, to constructively express their need for their wife's responsiveness, and to seek care in general when they were low in anxiety and their wife was high in anxiety than when both partners were low in anxiety.

Although we did not make specific predictions about the interactive effects of spouses' levels of attachment avoidance, we did find significant effects for husbands' careseeking and caregiving behaviors. These patterns were similar to those for the interactions between spouses' levels of attachment anxiety. Husbands were less able to maintain a clear distress signal, to constructively express their need for their wife's responsiveness, and to feel comforted when they were low in avoidance and their wife was high in avoidance than when both partners were low in avoidance; these husbands also tended to give less clear signals of their initial distress and to be less effective careseekers overall. Husbands also expressed less interest in their wife's concerns when they were low in avoidance and their wife was high in avoidance than when both partners were low in avoidance; these husbands also tended to be less responsive to their wife's concerns and to be less effective caregivers overall.

Subjective Distress

Analytic strategy—We again fit two-level hierarchical linear models, which allowed us to take into account nonindependence in spouses' data, using HLM 7 (Raudenbush et al., 2011). Analyses modeled individual responses (level 1) as nested within couples (level 2). We used the cross-sectional multivariate outcomes model (Lyons et al., 2002) to model separate equations for husbands and wives. We tested two analogous models: One predicting self-reported distress in anticipation of the discussion and one predicting self-reported distress during the discussion. In both cases, we had multiple measures of self-reported distress at the item level in our data file.

The level 1 model—The level 1 model was represented by the following equation:

$$Y_{ij}=\beta_{f1j}(female\ intercept)+\beta_{m2j}(male\ intercept)+r_{ij}$$

Y_{ij} is the self-reported distress for the i^{th} person in the j^{th} couple, which is estimated by the wife's mean self-reported distress (β_{f1j}, the female intercept), the husband's mean self-reported distress (β_{m2j}, the male intercept), and the measurement error for that individual (r_{ij}).

The level 2 model—Every coefficient in the level 1 model becomes an outcome in the level 2 model, which is predicted by a series of level 2 variables. The level 2 model was represented by the following equations:

$$\beta_{f1j}=\gamma_{10}+[\text{predictors}]+u_{1j}$$
$$\beta_{m2j}=\gamma_{20}+[\text{predictors}]+u_{2j}$$

The intercepts for both members of couple *j* are each estimated by the sum of the six item responses for all wives' and husbands' mean self-reported distress (γ's) and their random effects (*u*'s), which represent the residual variance around the grand mean. When we fit the unconditional models to the data, both levels were estimated simultaneously via full maximum likelihood. There was variance at level 1 of the models (all σ^2's = 1.22 - 1.833) and significant variance in parameters at level 2 of the models (all *p*s < .001), indicating that there was variability in husbands' and wives' self-reported distress parameters around the overall mean, which verified that there would be variance left to explain by including attachment scores in the models. Our final models included both spouses' attachment scores for anxiety and avoidance (i.e., their own and their partner's scores), as well as theoretically meaningful interactions between them (i.e., wives' anxiety x husbands' avoidance, wives' avoidance x husbands' anxiety, wives' anxiety x husbands' anxiety, and wives' avoidance x husbands' avoidance). We also conducted two additional analyses with our final models to control for (1) couples' relationship length (starting from the time they began dating) and (2) both spouses' relationship quality, assessed by the PRQC Inventory (Fletcher et al., 2000).[4]

Does the Interaction between Spouses' Attachment Styles Predict Self-Reported Distress?

We hypothesized that spouses' attachment styles would interact to predict their self-reported distress in anticipation of and during the conflict discussion. As expected, the interactions between one partner's avoidance and the other partner's anxiety (i.e., wives' anxiety and husbands' avoidance, wives' avoidance and husbands' anxiety) predicted spouses' self-reported distress (see Tables 13 and 14). However, the interactions between both partners' levels of anxiety and between both partners' levels of avoidance did not predict self-reported distress.

[4]Couples' relationship length did not significantly predict husbands' or wives' self-reported distress in anticipation of or during the conflict discussion, with the exception of couples' relationship length significantly predicting wives' lower levels of distress during the discussion. Furthermore, the key interaction effects in the original models remained the same even when relationship length was included in the models. Similarly, spouses' relationship quality did not significantly predict husbands' or wives' self-reported distress in anticipation of or during the conflict discussion. Again, the key interaction effects in the original models remained the same even when relationship quality was included in the models. (For more details, see supplemental materials.)

Wives' anxiety by husbands' avoidance—Wives' anxiety and husbands' avoidance interacted to predict husbands' self-reported distress in anticipation of the conflict discussion, $\gamma = -.312$, $p = .004$. We conducted simple slopes tests (e.g., Aiken & West, 1991; Preacher et al., 2006) to better characterize the pattern of this interaction and of all interactions that follow. These tests examine differences in self-reported distress patterns for prototypical partner pairings, where "high" represents values one standard deviation above the mean and "low" represents values one standard deviation below the mean. As shown in Figure 8, husbands who were low in avoidance reported greater distress when their wife was high in anxiety, $\gamma = .304$, $t(209) = 2.567$, $p = .011$, 95% CI [.072, .537]; high avoidant husbands' self-reported distress did not vary as a function of their wife's anxiety, $\gamma = -.115$, $t(209) = -1.117$, $p = .265$, 95% CI [-.316, .086].

Wives' avoidance by husbands' anxiety—Wives' avoidance and husbands' anxiety interacted to predict wives' self-reported distress during the conflict discussion, $\gamma = -.375$, $p = .012$. As shown in Figure 9, although wives who were high in avoidance generally reported greater distress, this association was especially strong when their husband was low in anxiety, $\gamma = .935$, $t(209) = 4.570$, $p < .001$, 95% CI [.534, 1.335], compared to when their husband was high in anxiety, $\gamma = .299$, $t(209) = 1.826$, $p = .069$, 95% CI [-.022, .620].

Wives' avoidance and husbands' anxiety also interacted to marginally predict husbands' self-reported distress during the conflict discussion, although the pattern of results differed from those of wives, $\gamma = .253$, $p = .061$ (see Figure 10). Husbands who were low in anxiety tended to report less distress regardless of their wife's level of avoidance, $\gamma = -.026$, $t(209) = -.142$, $p = .887$, 95% CI [-.390, .338], whereas husbands who were high in anxiety tended to report greater distress as their wife's level of avoidance increased, $\gamma = .402$, $t(209) = 2.705$, $p = .007$, 95% CI [.111, .693].

Summary—As expected, one partner's attachment avoidance interacted with the other partner's attachment anxiety to predict spouses' self-reported distress in anticipation of and during the conflict discussion. Specifically, husbands' avoidance interacted with their wives' anxiety to predict husbands' self-reported distress in anticipation of the conflict discussion; husbands who were low in avoidance reported feeling more distressed in anticipation of the conflict when their wife was high in anxiety. In contrast, husbands' anxiety interacted with their wives' avoidance to predict both spouses' self-reported distress during the conflict discussion. Husbands who were high in anxiety reported feeling marginally more distressed during the conflict when their wife was high in avoidance, whereas wives who were high in avoidance reported feeling more distressed when their husband was low in anxiety. Contrary to expectations, both partners' levels of anxiety did not interact to predict their self-reported distress.

Integrated Summary of Physiological, Behavioral, and Psychological Distress Responses to Relationship Conflict

Taken together, these findings suggest that the interplay between spouses' attachment styles creates a context that shapes both partners' physiological, behavioral, and psychological

distress responses to relationship conflict. We provide a brief, integrated overview of these results based on the combination of partners' attachment styles.

Wives' anxiety by husbands' avoidance—Both husbands and wives in couples with an anxious wife and an avoidant husband showed distinctive physiological and behavioral responses to marital conflict. Both partners showed exaggerated patterns of cortisol reactivity in anticipation of the conflict compared to other couples, although their linear rate of cortisol change differed only marginally from couples with a low anxious wife and a low avoidant husband. However, both husbands and wives in couples with an anxious wife and an avoidant husband had greater difficulty giving and seeking care from their partners during the conflict compared to partners in all other couples. Anxious wives were less able to recognize their avoidant husband's distress, and avoidant husbands were less able to constructively express their need for their anxious wife's responsiveness. Although the interplay between wives' anxiety and husbands' avoidance also predicted husbands' self-reported distress in anticipation of the conflict, this finding did not parallel the results for cortisol and behavior. Instead, *non-avoidant* husbands felt more distressed in anticipation of having a conflict with an anxious wife.

Wives' avoidance by husbands' anxiety—Husbands—but not wives—in couples with an avoidant wife and a non-anxious husband showed distinctive physiological responses to marital conflict. Non-anxious husbands with avoidant wives showed weaker patterns of cortisol reactivity in anticipation of the conflict. In contrast, wives—but not husbands—in couples with an avoidant wife and a non-anxious husband showed distinctive behavioral and self-reported distress responses during the conflict. Avoidant wives were less comforted and less interested in their non-anxious husband's concerns; avoidant wives also reported feeling more distressed during the conflict with their non-anxious husband. At the same time, non-anxious husbands' self-reported distress did not mirror the greater distress of their avoidant wives; instead, anxious husbands paired with an avoidant wife tended to report more distress during the conflict.

Wives' anxiety by husbands' anxiety—Contrary to our predictions, members of couples with two anxious partners did not show distinctive physiological, behavioral, or psychological responses to distress. Instead, husbands and wives in couples in which both partners were *low* in anxiety (i.e., more secure pairs) showed distinctive cortisol trajectories; husbands in these couples showed a slower rate of cortisol change in anticipation of the conflict, whereas wives in these couples showed flatter cortisol recovery trajectories during and after the conflict. Spouses' behavioral responses to the conflict paralleled their cortisol responses. That is, non-anxious wives were more interested in, able to recognize, and responsive to their non-anxious husband's concerns than were anxious wives, as well as more able to provide care in general. Similarly, non-anxious husbands were more able to feel comforted, to constructively express their need for their wife's responsiveness, and to seek care in general when their wife was non-anxious than when she was anxious. Unexpectedly, the interplay between both partners' levels of anxiety did not predict their self-reported distress.

Wives' avoidance by husbands' avoidance—We did not make specific predictions about the interplay between spouses' levels of attachment avoidance, and indeed, the interaction between spouses' avoidance did not predict either partner's cortisol patterns or self-reported distress responses to conflict. However, spouses' levels of avoidance did interact to predict husbands' careseeking and caregiving behaviors; these patterns were similar to those for the interactions between spouses' levels of anxiety. Non-avoidant husbands were more able to maintain a clear distress signal, to constructively express their need for their wife's responsiveness, and to feel comforted when their wife was non-avoidant than when she was avoidant; these husbands also tended to give clearer distress signals and to seek care more effectively when their wife was non-avoidant than when she was avoidant. Furthermore, non-avoidant husbands expressed more interest in their wife's concerns when their wife was non-avoidant than when she was avoidant; non-avoidant husbands also tended to be more responsive to their wife's concerns and to provide more effective care overall when their wife was non-avoidant than when she was avoidant.

Discussion

Attachment styles have been associated with individuals' physiological, behavioral, and psychological responses to threats (for reviews, see Mikulincer & Shaver, 2007 and Pietromonaco & Beck, in press), yet little research has examined how the unique interplay of partners' attachment styles might predict these outcomes. The present study advances the literature by providing a comprehensive examination of the links between the *combination* of partners' attachment styles and their physiological, behavioral, and psychological responses to a potentially threatening situation (i.e., the discussion of an important, unresolved conflict with their spouse). Our approach highlights the importance of taking an integrated perspective by examining different types of responses to distress (i.e., physiological, behavioral, and self-reported affective responses), each of which offers novel insight into the experience of attachment-related distress. Our findings further contribute to and extend prior research in several ways. They demonstrate that newlywed spouses' attachment orientations interact to shape both partners' physiological stress patterns, careseeking and caregiving behaviors, and feelings of psychological distress in response to a relationship conflict. Furthermore, the patterns for each type of response underscore the importance of considering gender as a significant feature of the relationship context. Finally, our emphasis on examining the unique interplay between both partners' attachment orientations extends attachment theory by specifying conditions under which both partners' attachment characteristics might interact to jointly influence individual and relationship outcomes. We discuss and expand on these points below.

Interactive Effects of Spouses' Attachment Styles on Physiological Responses to Distress

As expected, members of couples with one partner high in attachment avoidance and the other high in attachment anxiety tended to experience greater cortisol reactivity in anticipation of the conflict discussion, but only when the wife was high in anxiety and the husband was high in avoidance. It is unlikely that the first anticipatory laboratory sample merely reflects spouses' reactions to coming into the laboratory because, prior to participating in the laboratory session, all spouses knew that they would discuss an

important, unresolved area of disagreement in their relationship; they also were reminded of this information during the consent process (about 30 minutes before they provided their first anticipatory laboratory sample). Therefore, the first anticipatory laboratory sample reflects spouses' cortisol reactivity in anticipation of the discussion because of the context of our procedures. Both husbands and wives in couples with an anxious wife and an avoidant husband tended to show heightened cortisol reactivity in anticipation of the conflict compared to other couples, with rapid declines in cortisol at the second anticipatory laboratory sample. However, it is important to note that these declines in cortisol only marginally differed from those of couples with a wife low in anxiety and a husband low in avoidance, which raises the possibility that these cortisol patterns may reflect different underlying processes for different couples. For example, among spouses in couples with a non-anxious wife and a non-avoidant husband, showing some physiological arousal may promote their engagement in the conflict discussion; indeed, their behavioral and self-reported distress patterns suggest that they responded constructively to the discussion. In contrast, among spouses in couples with an anxious wife and an avoidant husband, showing some physiological arousal may interfere with their engagement during the conflict discussion; in fact, both spouses in these couples had greater difficulty giving and seeking care from their partners compared to partners in all other couples. Our findings that spouses in couples with an anxious wife and an avoidant husband tended to show heightened cortisol reactivity in anticipation of the discussion are consistent with evidence that couples in which one partner is anxious and the other is avoidant may experience relationship difficulties (e.g., Allison et al., 2008; J. A. Feeney, 1994; Roberts & Noller, 1998; Shallcross et al., 2011); these findings also contribute to evidence that links insecure attachment with greater cortisol responses to stress (e.g., Brooks et al., 2011; Diamond et al., 2008; Laurent & Powers, 2007; Powers et al., 2006; Quirin et al., 2008; see also Pietromonaco et al., 2013).

These findings also raise interesting possibilities for the reciprocal relationship between attachment styles and physiological stress patterns at the dyadic level (see Powers et al., 2006, for a discussion of this relationship at the individual level). Evidence that hypothalamic-pituitary-adrenal (HPA) reactivity has a heritable component (Bartels, de Geus, Kirschbaum, Sluyter, & Boomsma, 2003; Kirschbaum, Wüst, Faig, & Hellhammer, 1992) suggests that heightened stress reactivity may leave individuals vulnerable to insecure attachment because they may be less likely to feel comforted by their partners' care. Yet other work indicates that caregivers' responses can influence individuals' neuroendocrine patterns (Glaser, 2000; Gunnar, 1998; Polan & Hofer, 1999; Schore, 2001a, 2001b), which suggests that the nature of the attachment relationship also can shape stress responses. The present findings indicate that anxious wives paired with avoidant husbands, as well as avoidant husbands paired with anxious wives, may be predisposed by genes or by relationship history to heightened cortisol levels during the early anticipation of an attachment threat. Both members of couples with an anxious wife and an avoidant husband showed sharp increases in cortisol from the home baseline to the first laboratory sample, but then showed rapid declines in cortisol to the second laboratory sample, which may suggest that they were physiologically disengaging from the conflict discussion before it began. Over time, this physiological relief may reinforce each partner's attachment style, as well as the unique interplay of their attachment styles, and in turn may intensify both partners'

exaggerated cortisol reactivity to relationship conflict. These reciprocal influences of the interplay between partners' attachment styles and their physiological stress patterns also may have important implications for their long-term relationship functioning, given that couples in which one partner is anxious and the other is avoidant may be vulnerable to a host of negative outcomes, such as relationship dissatisfaction (J. A. Feeney, 1994).

Our results also revealed some unexpected interactive effects of partners' attachment styles on their physiological stress patterns. Non-anxious husbands paired with avoidant wives showed distinctive patterns of physiological reactivity in anticipation of the conflict discussion, as did non-anxious husbands paired with non-anxious wives (i.e., more secure couples). Non-anxious husbands paired with avoidant wives showed attenuated cortisol trajectories from the home baseline through the second laboratory sample; non-anxious husbands paired with non-anxious wives showed conceptually similar patterns, with attenuated rates of cortisol change at the second laboratory sample. These results indicate that husbands' lack of attachment anxiety may attenuate their cortisol reactivity, but only when they are paired with avoidant or non-anxious wives. Non-anxious husbands may show weakened cortisol responses when they have an avoidant wife because their wife is unlikely to engage in a heated conflict discussion. In contrast, non-anxious husbands may show weakened cortisol responses when they have a non-anxious wife because, although their wife is likely to engage in a heated discussion, she also is likely to engage in a more constructive manner than would an anxious wife (see Pietromonaco et al., 2004).

In contrast, non-anxious wives paired with avoidant husbands showed distinctive patterns of physiological *recovery*, as did non-anxious wives paired with non-anxious husbands. In both types of couples, non-anxious wives showed relatively flat cortisol trajectories from the second laboratory sample through the final laboratory sample. These findings suggest that wives' lack of attachment anxiety may slow down their cortisol recovery, but only when they are paired with avoidant or non-anxious husbands. Wives' slower cortisol recovery in these dyadic contexts may be attributed to the fact that they had the lowest cortisol levels in anticipation of the conflict discussion—perhaps because their husband was unlikely to engage in a heated discussion (in the case of an avoidant husband) or because their husband was unlikely to engage in an unconstructive discussion (in the case of a non-anxious husband)—so they did not require much physiological recovery after the discussion.

With the exception of the findings described above, the interaction between spouses' attachment styles mainly shaped their cortisol reactivity in anticipation of the conflict discussion, but not their cortisol recovery following the conflict discussion. Although prior studies have linked individuals' attachment styles to both cortisol reactivity and recovery in response to a relationship conflict, all of these studies were conducted among young dating couples rather than newlywed couples (Brooks et al., 2011; Laurent & Powers, 2007; Powers et al., 2006). Therefore, distinct features of the relationship context may account for the differences in our findings. First, in most cases, newlywed couples have likely developed full-fledged attachment bonds to one another, whereas many of the young dating couples in prior research were unlikely to have developed such bonds, especially given that full-fledged attachment bonds take about two years to develop (e.g., Fraley & Davis, 1997). Relatedly, the prior research assessed dating couples' attachment styles by asking them to report their

attachment to romantic partners in general, not to their current partner in particular. In contrast, we specifically assessed newlywed couples' attachment to their spouse, not to romantic partners in general. These differences in individuals' relationship contexts may shed light on why the interaction between spouses' attachment styles generally did not shape their cortisol recovery following the conflict discussion. One possibility, for example, may be that newlywed spouses are better at managing their physiological stress responses through their behavioral strategies during the conflict than are dating partners—perhaps due to their longer history of shared interactions or to the nature of their full-fledged attachment relationship—which may make their attachment styles a less consistent predictor of their cortisol recovery. This possibility and others deserve further examination in future research.

Our results also highlight the importance of gender in shaping partners' cortisol responses. The findings described above reveal significant effects for wives' cortisol reactivity and recovery and for husbands' cortisol reactivity, but not their recovery. These effects may reflect gender differences in the context of the conflict discussion. Prior research demonstrates that women may be especially likely to voice concerns about the relationship and to direct discussions about sources of disagreement (Christensen & Heavey, 1990; Kelly et al., 1978), whereas men may be especially likely to control the content and emotional depth as the discussion progresses, as well as the eventual outcome (Ball, Cowan, & Cowan, 1995). These gender differences may influence both partners' physiological responses to a relationship conflict. For example, the interplay between partners' attachment orientations may be likely to shape both spouses' cortisol responses in anticipation of the conflict discussion due to the shared expectation that wives will lead the discussion. Husbands may experience physiological stress due to uncertainty about how, exactly, their wives will lead the discussion and which concerns they will raise, whereas wives may experience physiological stress due to uncertainty about how their husbands will respond to their attempts to lead the discussion and to voice their concerns. In contrast, the interplay between partners' attachment orientations may be more likely to shape wives' cortisol responses following the conflict discussion due to a relative lack of control over the content, emotional depth, and eventual outcome as the discussion progresses. These possibilities and others represent an important direction for future research and emphasize the value of considering effects of gender within the relationship context.

Interactive Effects of Spouses' Attachment Styles on Careseeking and Caregiving Responses to Distress

Couples with an anxious wife and an avoidant husband also showed distinctive patterns of careseeking and caregiving behaviors during the conflict discussion. Anxious wives had difficulty recognizing their avoidant husband's distress and concerns during the conflict, and avoidant husbands had difficulty directly and constructively expressing their need for their anxious wife's responsiveness. These gender differences coincide conceptually with the demand/withdraw pattern of communication (e.g., Christensen & Heavey, 1990), in which one partner behaves in a critical and demanding manner while trying to voice a relationship problem, whereas the other partner behaves in a withdrawn and defensive manner while trying to evade the relationship discussion. Research on demand/withdraw interactions have revealed consistent gender effects, such that women tend to demand and men tend to

withdraw (e.g., Gottman & Krokoff, 1989; Stanley, Markman, & Whitton, 2002). The conflict behaviors of anxious wives and avoidant husbands may parallel gender differences in these demand/withdraw interactions, in part due to differences between partners' relationship motivations and affect regulation strategies. Anxious wives chronically strive to attain relational closeness and are likely to demand intimacy, support, and reassurance from their avoidant husbands. In contrast, avoidant husbands chronically strive to maintain relational distance and are likely to withdraw from their anxious wives' demands for intimacy and support, which in turn may exacerbate anxious wives' demands and intensify avoidant husbands' withdrawal. Indeed, anxious wives had difficulty recognizing their avoidant husband's concerns during the conflict discussion—perhaps because they were singularly focused on their own demands for support—and avoidant husbands had difficulty expressing their need for their anxious wife's responsiveness—perhaps because they had withdrawn from the conflict.

Importantly, anxious wives were able to recognize their husband's concerns and distress as well as non-anxious wives when their husband was low in avoidance. Similarly, avoidant husbands were able to constructively express their need for their wife's responsiveness as well as non-avoidant husbands when their wife was low in anxiety. These results complement other research suggesting that one partner's positive qualities can buffer the other partner from negative relationship outcomes (e.g., Salvatore, Kuo, Steele, Simpson, & Collins, 2011; Tran & Simpson, 2009), as well as contribute to this literature by taking an interactive perspective.

Although not predicted, we observed different effects for couples including an avoidant wife and an anxious husband. Avoidant wives were less comforted by their husband and less interested in his concerns when they had a husband low in anxiety, as opposed to a husband high in anxiety. These results suggest that wives' avoidance alone does not interfere with their caregiving and careseeking abilities; instead, these abilities may suffer when avoidant wives are paired with a non-anxious husband, at least in the careseeking domain of feeling comforted and in the caregiving domain of expressing interest in their partner's concerns. These results also suggest that avoidant wives' careseeking and caregiving abilities actually may be enhanced when they are paired with an anxious husband. Anxious husbands may be more likely to demand their wives' presence and engagement in the discussion, in line with evidence that anxious individuals are more likely to want their partners' help with managing their distress (Pietromonaco & Barrett, 2006). Although this added demand might seem threatening to avoidant partners, who generally prefer to use distancing strategies (e.g., Birnbaum, Orr, Mikulincer, & Florian, 1997; Davis, Shaver, & Vernon, 2003), anxious partners also are more concerned with pleasing their partners and are more willing to oblige them (O'Connell Corcoran & Mallinckrodt, 2000), which may make avoidant partners feel less threatened at the prospect of engaging in a discussion with an anxious partner. Avoidant wives, in turn, may benefit from their engagement in the conflict discussion by feeling more comforted by their anxious husband and by listening to him more effectively.

We found conceptually similar results for the interaction between partners' levels of anxiety, consistent with evidence that couples with one partner high in anxiety and the other low in anxiety may experience relationship problems (J. A. Feeney, 2003). Anxious wives were

less interested in, less able to recognize, and less responsive to their husband's concerns, as well as less effective caregivers overall, when their husband was low in anxiety. Patterns for husbands' careseeking behaviors parallel those of wives' caregiving behaviors. Husbands low in anxiety had difficulty directly and constructively expressing their need for their anxious wife's responsiveness, as well as difficulty feeling comforted and seeking care in general. Like the findings for couples including an avoidant wife and an anxious husband, these findings suggest that wives' anxiety alone does not impair their caregiving abilities or their husband's careseeking abilities; instead, anxious wives' caregiving abilities may suffer when they are paired with a non-anxious husband (or their caregiving abilities may be enhanced when they are paired with an anxious husband), and non-anxious husbands' careseeking abilities may suffer when they are paired with an anxious wife. Perhaps anxious wives' caregiving efforts and non-anxious husbands' careseeking efforts are attenuated in these couples because both spouses believe the anxious partner needs more care. This belief could lead anxious wives to provide less care to non-anxious husbands; similarly, this belief could lead non-anxious husbands to seek less care from anxious wives.

Incongruence between spouses' levels of attachment avoidance also predicted less constructive careseeking and caregiving. Just as husbands low in anxiety generally had difficulty seeking care from their anxious wife, husbands low in avoidance who were paired with a wife high in avoidance had difficulty maintaining a clear signal of their distress, constructively expressing their need for their wife's responsiveness, and feeling comforted. Husbands low in avoidance also had difficulty providing care to their avoidant wife; these husbands were less interested in their wife's concerns. Although husbands low in avoidance generally are skilled caregivers (for reviews, see Collins & B. C. Feeney, 2010 and Mikulincer & Shaver, 2007), these results indicate that husbands low in avoidance may have difficulty providing care when they are paired with an avoidant wife, perhaps because their wife is unwilling or unable to benefit from their supportive attempts. Similarly, although husbands low in avoidance usually are effective careseekers (for reviews, see Collins & B. C. Feeney, 2010 and Mikulincer & Shaver, 2007), husbands low in avoidance may have difficulty soliciting care when they are paired with an avoidant wife, perhaps because their wife is unwilling or unable to provide appropriate support.

Interactive Effects of Spouses' Attachment Styles on Psychological Responses to Distress

Findings for spouses' self-reported stress responses in anticipation of and during the conflict discussion did not parallel findings for their physiological stress responses. This is consistent with prior research (e.g., Dickerson & Kemeny, 2004; Powers et al., 2006; Stroud, Salovey, & Epel, 2002) indicating that there is little correspondence between individuals' physiological stress responses and their self-reported distress, perhaps because self-reported affective responses occur in a different, more consciously accessible system (e.g., Bradley & Lang, 2000). Psychobiological research on adult attachment (for a review, see Diamond & Fagundes, 2010) indicates that although both anxious individuals and avoidant individuals exhibit heightened physiological reactivity to stress, anxious individuals also report heightened affective reactivity (in line with their hyperactivating affect regulation strategies), whereas avoidant individuals report dampened affective reactivity (in line with their deactivating affect regulation strategies). Taken together, this research suggests that

avoidant individuals may be especially likely to show dissociations between their self-reported stress responses and their physiological stress responses, whereas anxious individuals may be especially likely to show associations between their self-reported stress responses and their physiological stress responses (Diamond & Fagundes, 2010). Existing literature has yet to examine how the combination of partners' attachment styles might shape the association between each individual's physiological and self-reported stress responses, but our research suggests that specific combinations of partners' attachment styles may influence the association between each individual's responses in unexpected ways. For example, avoidant wives with non-anxious husbands reported feeling more distressed during the relationship conflict, yet they did not show distinctive physiological patterns in response to the conflict. Future psychobiological research that examines the interplay between partners' attachment styles will help shed light on the observed discrepancies between spouses' self-reported stress responses and their physiological stress responses.

As hypothesized, one partner's attachment avoidance interacted with the other partner's attachment anxiety to predict spouses' self-reported distress in anticipation of and during the relationship conflict. Non-avoidant husbands reported feeling more distressed in anticipation of the conflict when their wife was high in anxiety, whereas avoidant husbands' feelings of distress did not differ as a function of their wife's anxiety. Perhaps non-avoidant husbands felt more distressed before discussing the conflict with their anxious wife because they anticipated that their wife not only would direct the conflict, but also would behave less constructively during the conflict. This possibility is consistent with evidence that women are especially likely to voice relationship concerns and direct conflict discussions (Christensen & Heavey, 1990; Kelly et al., 1978), as well as with evidence that anxious individuals are likely to behave less constructively during conflict (for a review, see Pietromonaco et al., 2004).

In contrast, avoidant wives reported feeling more distressed during the conflict when their husband was low in anxiety, whereas non-avoidant wives' feelings of distress did not differ as a function of their husband's anxiety. These results complement our behavioral findings that avoidant wives were less comforted during the conflict discussion when their husband was low in anxiety and raise the possibility that avoidant wives and non-anxious husbands approach the conflict discussion in different ways. Spouses low in anxiety are likely to be inclined to engage in a heated discussion, whereas spouses high in avoidance are likely to feel distressed at the prospect of engaging in a heated discussion. Avoidant women may feel especially distressed during the discussion because they prefer to cope with distress by using distancing strategies (e.g., Birnbaum et al., 1997; Davis et al., 2003), but the nature of the discussion prevents them from using such strategies and instead forces them to engage with their spouse. Although spouses high in anxiety also are likely to engage in a heated discussion, anxious partners are more concerned with pleasing and obliging their partners (O'Connell Corcoran & Mallinckrodt, 2000), which may make avoidant spouses feel less distressed when they engage in a discussion with an anxious partner as opposed to a non-anxious partner. Taken together, these considerations may lead avoidant wives to feel more distressed, as well as less comforted, during a conflict discussion when their husband is low in anxiety.

Theoretical Contributions of an Interactive Approach

We sought to contribute to and extend attachment theory by investigating the unique interplay between both partners' attachment histories, expectations, and beliefs. Bowlby's original theory included little information about how one partner's attachment characteristics might contribute to the other partner's outcomes, and it included even less information about how both partners' attachment characteristics might interact to shape their individual and relationship outcomes. Given that attachment processes occur within the context of a relationship, we propose that these processes can be best understood by taking into account potential interactions between both partners' attachment styles, in addition to the effects of each partner's attachment style (see also J. A. Feeney, 2003; Laurent & Powers, 2007; Mikulincer et al., 2002; Pietromonaco & Beck, in press; and Simpson & Rholes, 2010).

The present findings emphasize the importance of considering the fit between partners' attachment styles and provide examples of how this approach can improve our understanding of attachment-related relationship processes. For instance, although some of our findings suggest that insecure individuals may respond in ways consistent with their attachment style within the context of certain partner pairings, other findings suggest that insecure individuals may respond in ways consistent with attachment *security* within the context of certain partner pairings. For example, both husbands and wives in couples with an anxious wife and an avoidant husband tended to show heightened cortisol reactivity in anticipation of the conflict discussion; these spouses also had difficulty with effective caregiving (for wives) and effective careseeking (for husbands) during the conflict. In contrast, anxious wives were able to effectively provide care to their husband when their husband was low in avoidance, and avoidant husbands were able to effectively seek care from their wife when their wife was low in anxiety. Finally, secure individuals may respond in ways consistent with attachment *insecurity* within the context of certain partner pairings. Husbands low in anxiety had difficulty seeking care when their wife was high in anxiety, and husbands low in avoidance had difficulty seeking and providing care when their wife was high in avoidance. Taken together, these findings indicate that an interactive approach offers a more nuanced perspective and is likely to yield novel insights into both partners' responses in attachment-relevant situations.

Limitations

We also acknowledge several limitations that should be considered when interpreting our findings. Although we have sound theoretical reasons to believe that the interplay between spouses' attachment orientations shapes their physiological, behavioral, and affective responses to distress, these findings are correlational. Therefore, we cannot draw causal conclusions about the relationship between spouses' attachment styles and their responses to distress. As noted earlier, reciprocal effects may exist between attachment styles and distress responses; for example, the interplay between spouses' attachment styles may shape their physiological stress patterns, but their physiological stress patterns also may maintain and reinforce their attachment styles over time.

The present research examined attachment processes among opposite-sex newlywed couples, so it will be important to determine whether these effects generalize to different types of couples, such as older couples, same-sex couples, and couples of other ethnicities. We expect that the general processes we observed—that is, the interactive effects of spouses' attachment styles—are likely to be similar, but that the exact patterns may differ depending on other features of the relationship context. For example, newly married couples tend to be more satisfied with their relationship compared to couples who have been married for longer periods of time, so it remains an open question whether the patterns observed for newlyweds will extend to different relationship phases. As another example, the current work focused on opposite-sex couples, but whether these patterns generalize to same-sex couples represents a significant direction for future research. Although we expect that the interactive effects of spouses' attachment styles also will shape outcomes in same-sex couples, we may observe different results for effects that were related to gender differences in opposite-sex couples. Research on these processes in same-sex couples will shed light on the role of gender as a feature of the relationship context.

Conclusions

This research demonstrates that the interplay between romantic partners' attachment styles predicts their physiological, behavioral, and psychological stress responses to a relationship conflict, as well as suggests that these patterns vary with other features of the dyadic context, such as gender role norms. The findings emphasize the value of taking an integrated approach to understanding attachment-related distress; each type of response to distress (i.e., physiological, behavioral, and self-reported affective responses) offers unique insight into the experience of attachment-related distress. The findings also emphasize the value of considering the fit between both partners' attachment histories, beliefs, and expectations because spouses' attachment styles interacted to shape their stress responses in ways that would not necessarily be predicted by each individual's attachment style. For example, some results suggest that insecure individuals respond in ways consistent with attachment *security* within the context of particular partner pairings, whereas other results suggest that secure individuals respond in ways consistent with attachment *insecurity* within the context of particular partner pairings. This work contributes to and extends attachment theory by identifying conditions under which both partners' attachment qualities might interact to jointly shape individual and relationship outcomes.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

This research was supported by a grant to Paula R. Pietromonaco and Sally I. Powers from the National Cancer Institute of the National Institutes of Health under award number R01CA133908 and based upon work supported by a National Science Foundation Graduate Research Fellowship (Grant S121000000211) to Casey J. DeBuse. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health or the National Science Foundation. We thank Judith Crowell for providing training in the use of the Secure Base Scoring System; Mary D'Alessandro for recruiting and scheduling couples; Douglas Granger for providing advice regarding hormonal markers; and Holly Laws, Gabriela Quiñones-Torres, Dana Roth, Mattitiyahu Zimbler, Alysia Boyle, Corinne Golash, Emily Kelleher, Morgan Kelly, Rebecca Lieberman, Sara

Woodworth, and many additional research assistants in the Growth in Early Marriage Lab for their invaluable help with data collection and/or coding.

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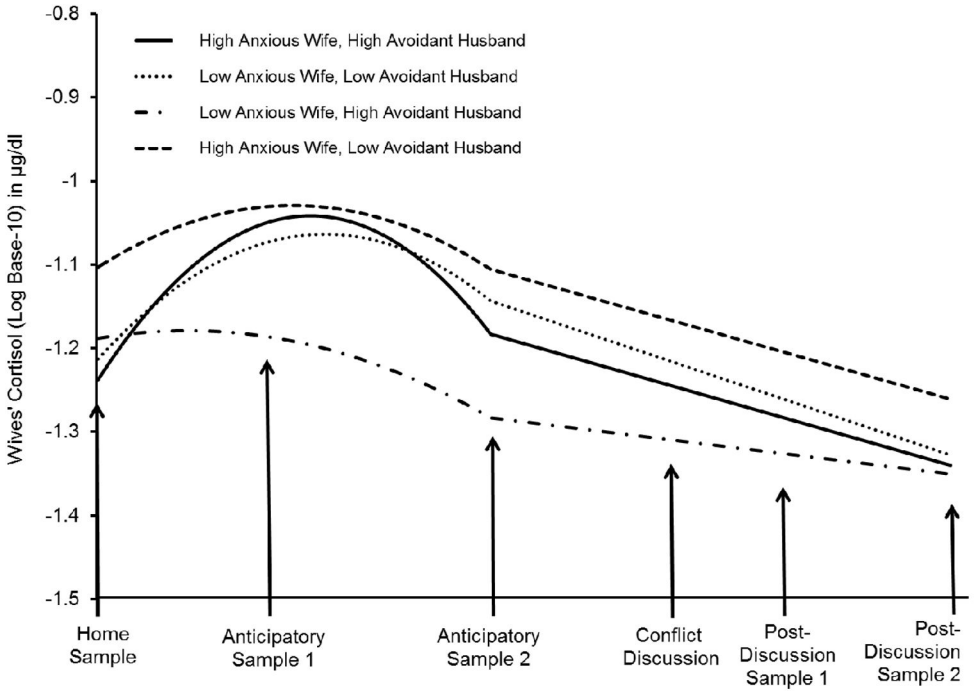

Figure 1.

The interaction between wives' attachment anxiety and husbands' attachment avoidance predicts cortisol patterns for wives. Wives' anxiety and husbands' avoidance are plotted at 1 standard deviation above and below their respective means.

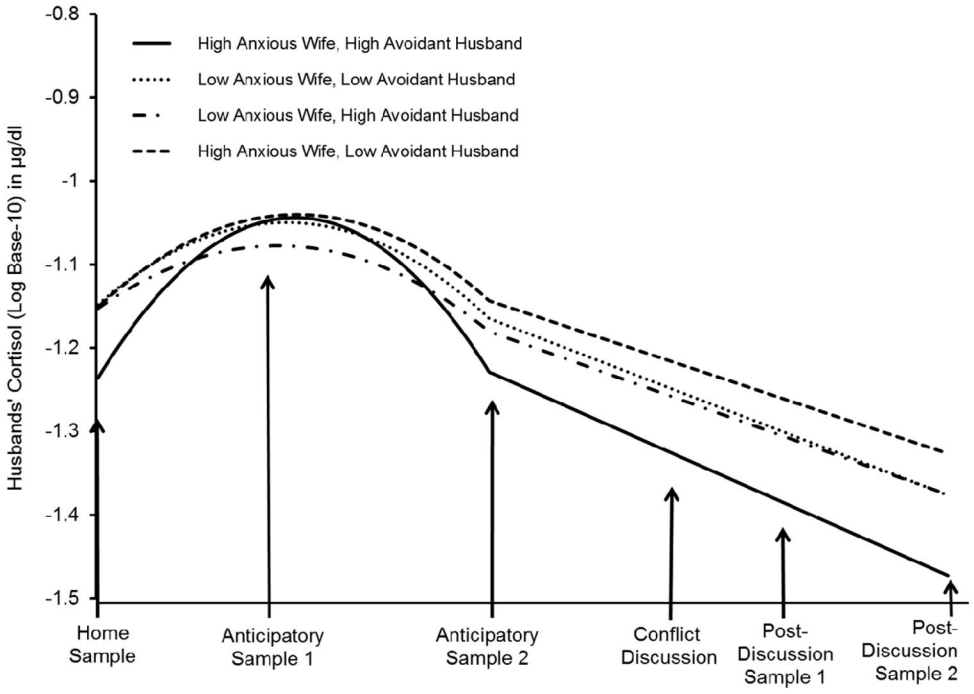

Figure 2.

The interaction between wives' attachment anxiety and husbands' attachment avoidance predicts cortisol patterns for husbands. Wives' anxiety and husbands' avoidance are plotted at 1 standard deviation above and below their respective means.

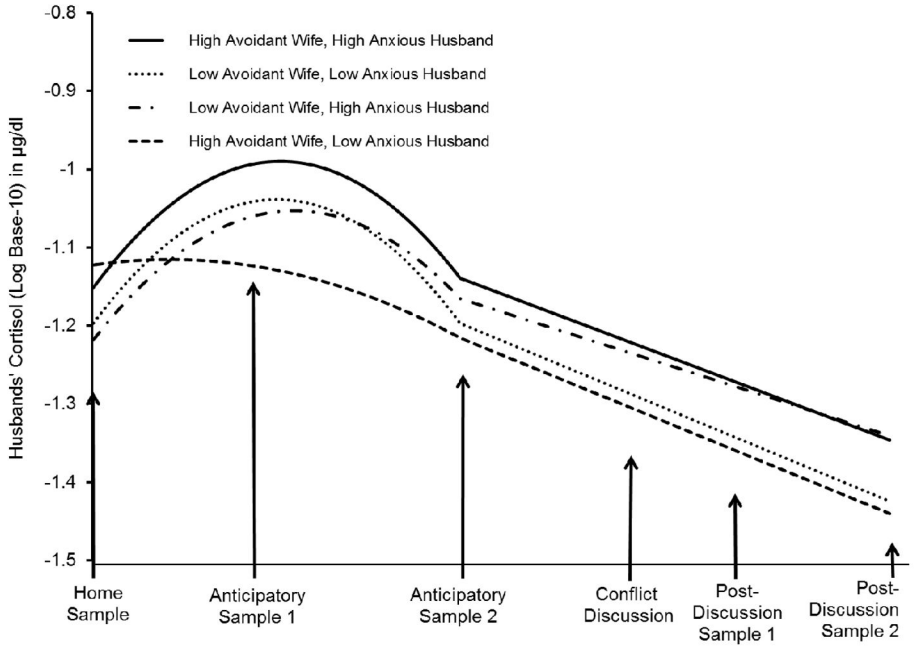

Figure 3.

The interaction between wives' attachment avoidance and husbands' attachment anxiety predicts cortisol patterns for husbands. Wives' avoidance and husbands' anxiety are plotted at 1 standard deviation above and below their respective means.

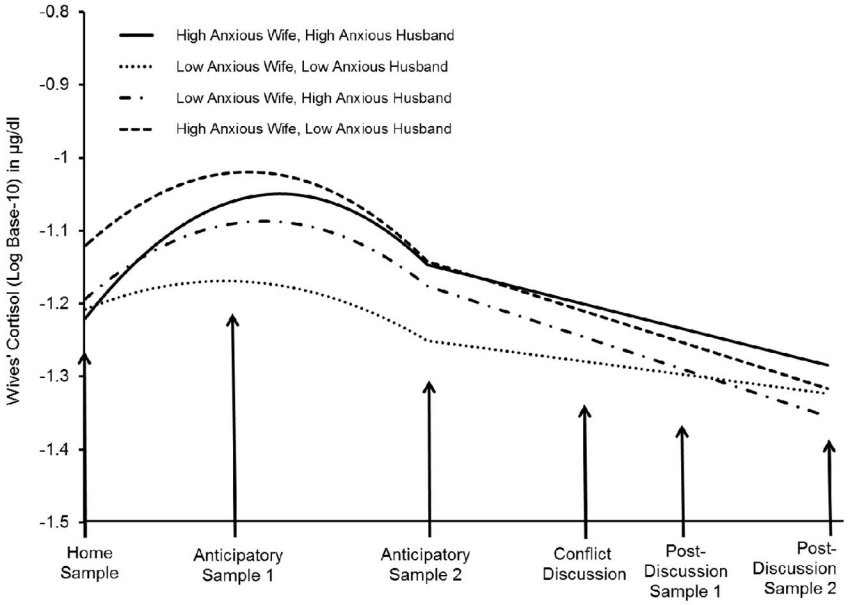

Figure 4.

The interaction between wives' attachment anxiety and husbands' attachment anxiety predicts cortisol patterns for wives. Wives' anxiety and husbands' anxiety are plotted at 1 standard deviation above and below their respective means.

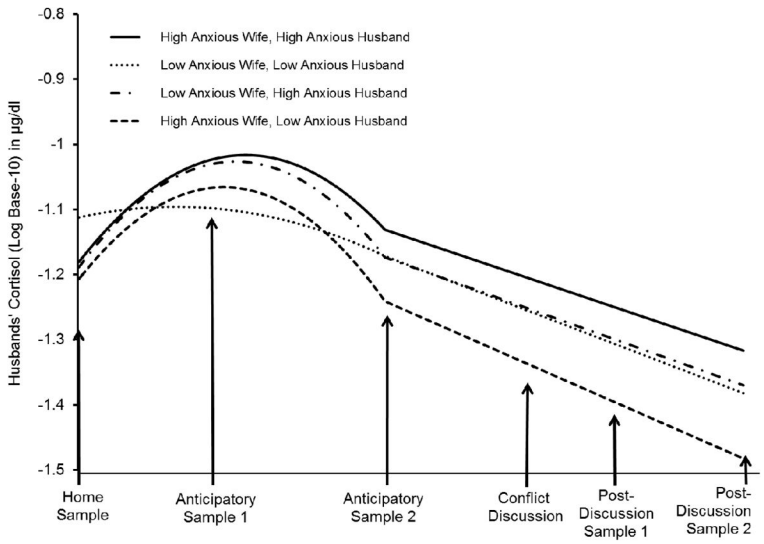

Figure 5.

The interaction between wives' attachment anxiety and husbands' attachment anxiety predicts cortisol patterns for husbands. Wives' anxiety and husbands' anxiety are plotted at 1 standard deviation above and below their respective means.

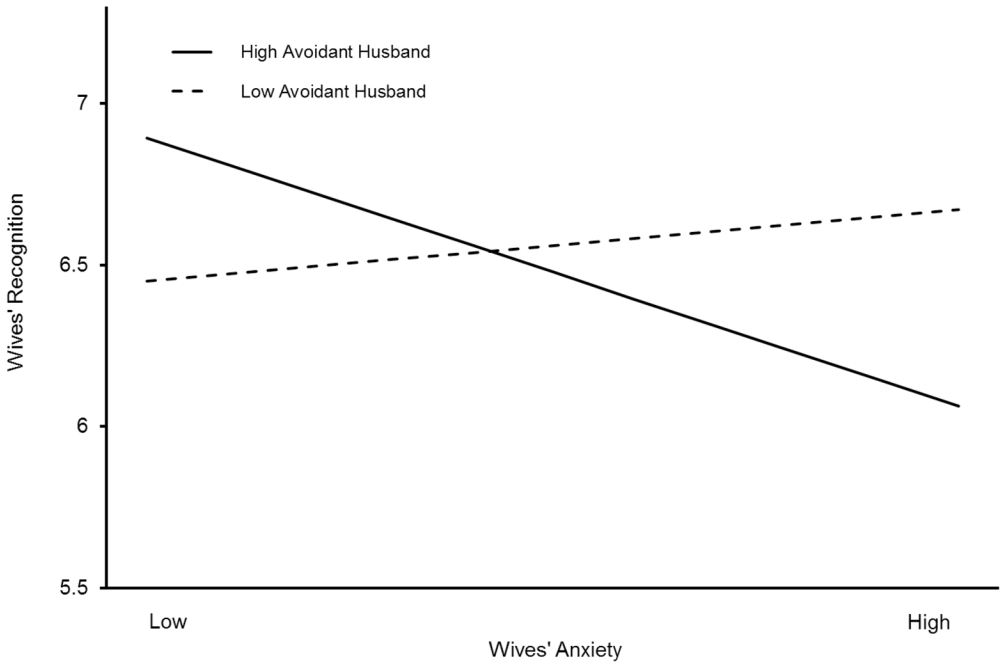

Figure 6.

The interaction between wives' attachment anxiety and husbands' attachment avoidance predicts wives' recognition of their husband's concerns (observer-rated) during the conflict discussion. Husbands' avoidance is plotted at 1 standard deviation above and below the mean.

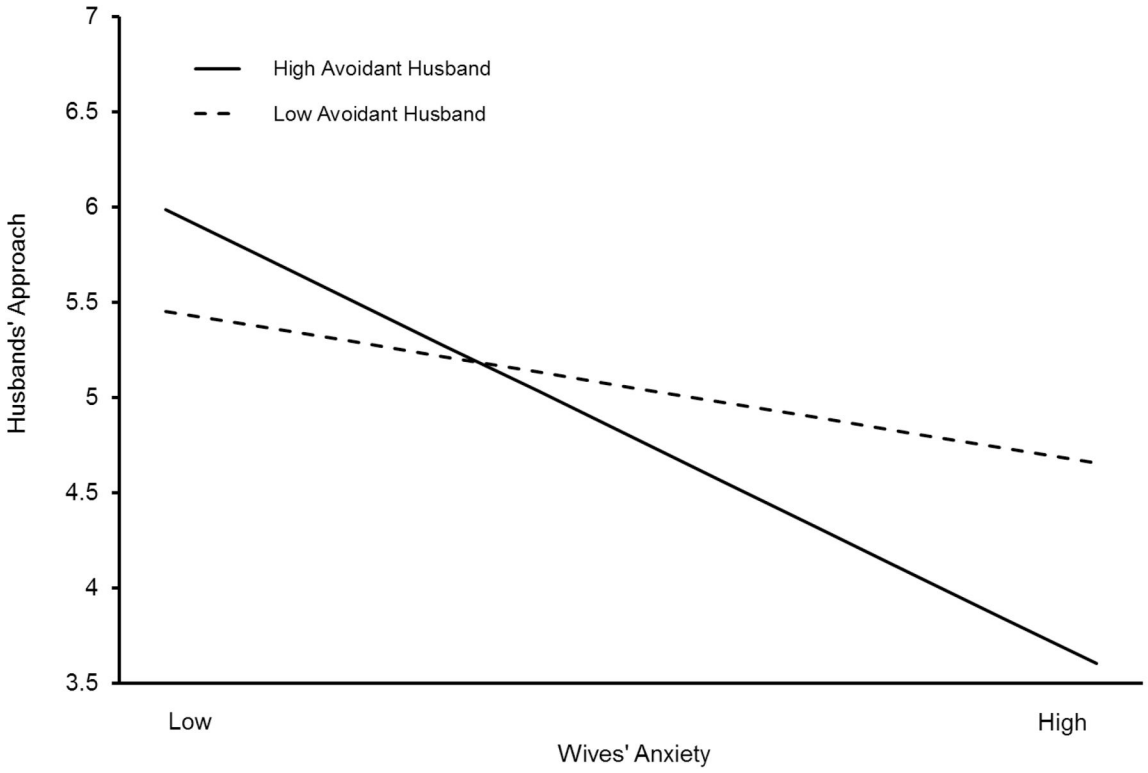

Figure 7.

The interaction between wives' attachment anxiety and husbands' attachment avoidance predicts husbands' approach toward their wife (observer-rated) during the conflict discussion. Husbands' avoidance is plotted at 1 standard deviation above and below the mean.

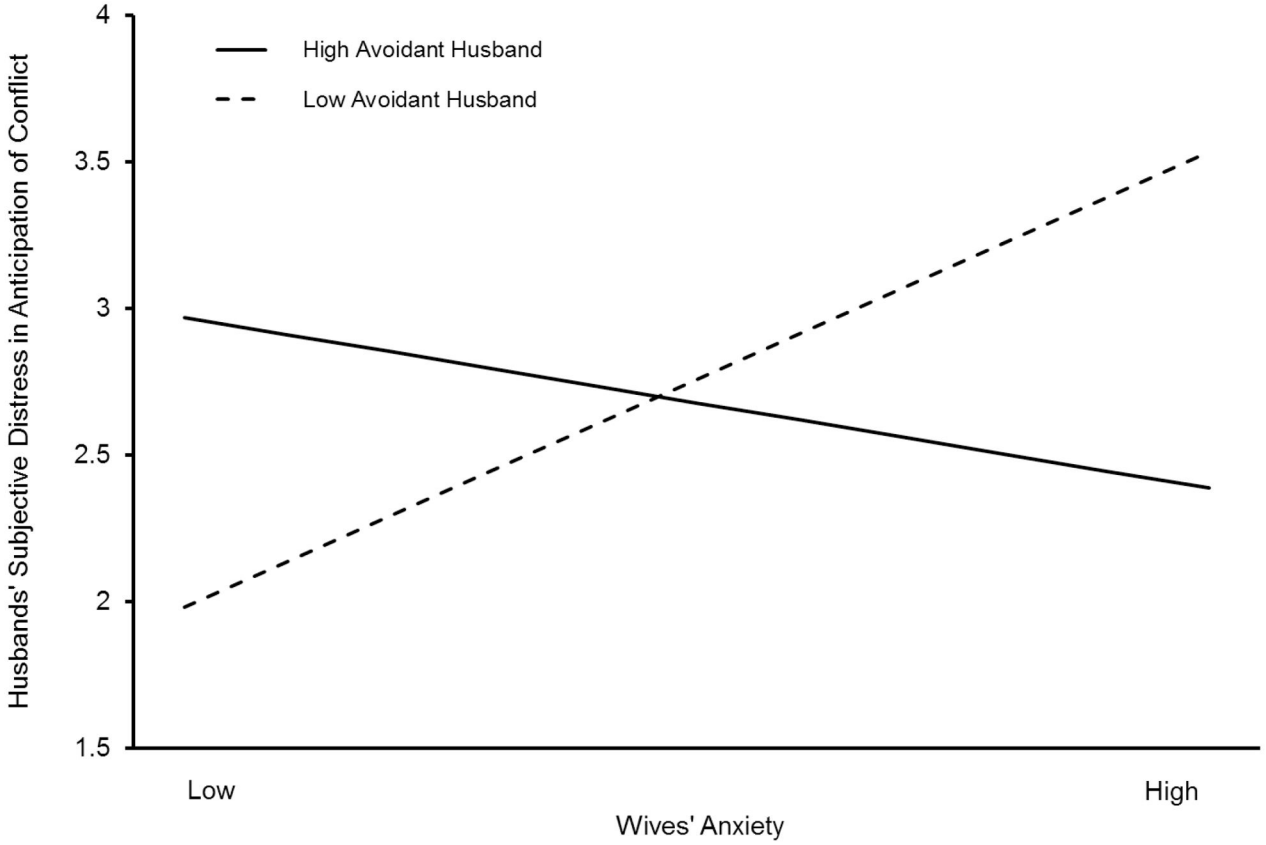

Figure 8.

The interaction between wives' attachment anxiety and husbands' attachment avoidance predicts husbands' subjective distress in anticipation of the conflict discussion. Husbands' avoidance is plotted at 1 standard deviation above and below the mean.

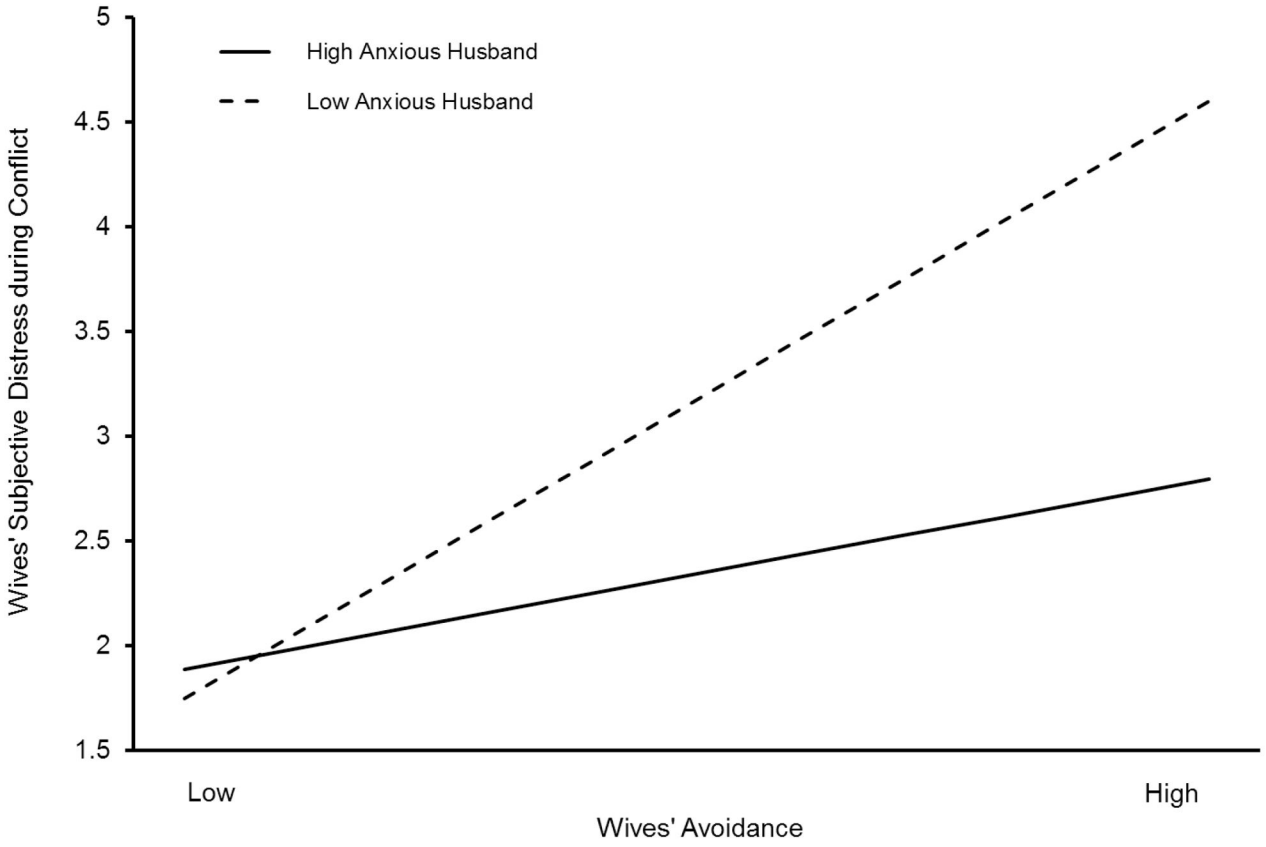

Figure 9.

The interaction between wives' attachment avoidance and husbands' attachment anxiety predicts wives' subjective distress during the conflict discussion. Husbands' anxiety is plotted at 1 standard deviation above and below the mean.

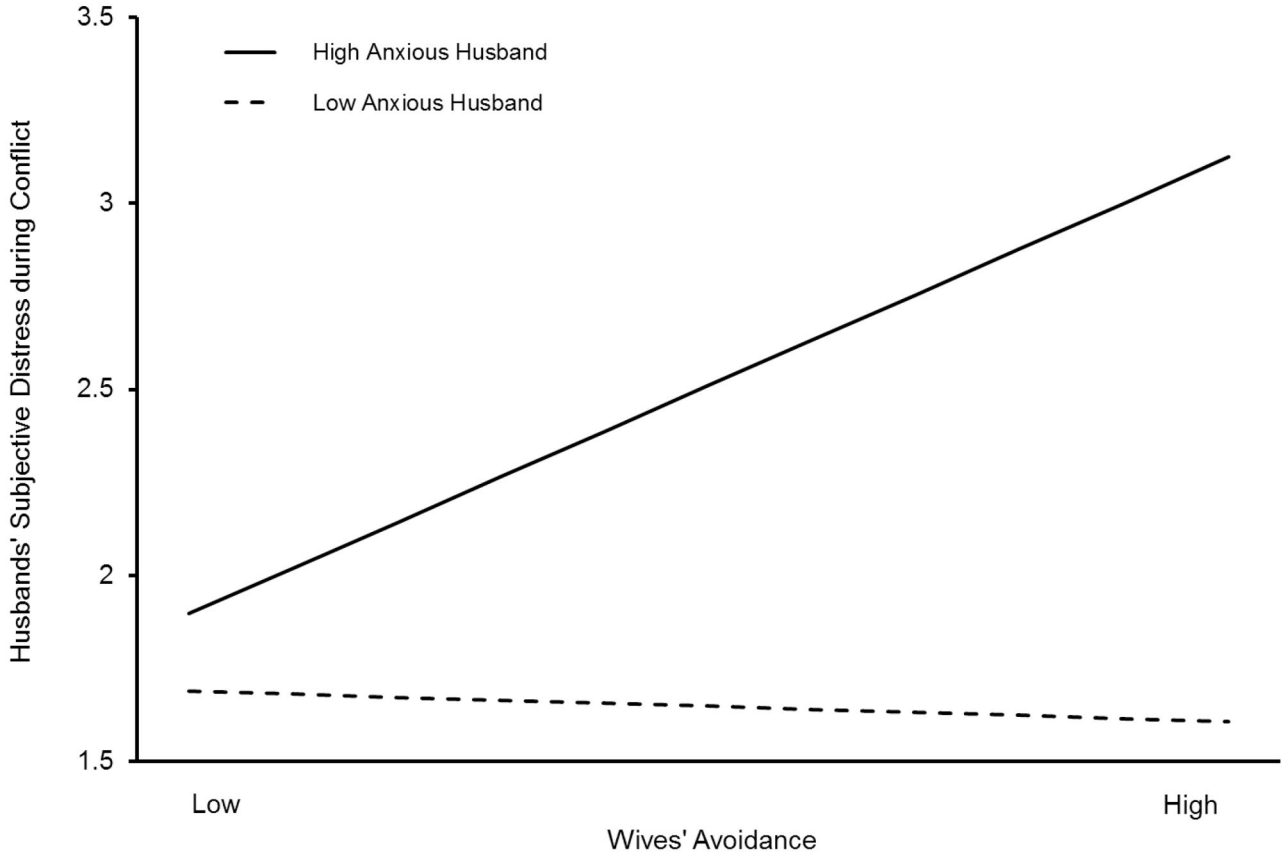

Figure 10.

The interaction between wives' attachment avoidance and husbands' attachment anxiety predicts husbands' subjective distress during the conflict discussion. Husbands' anxiety is plotted at 1 standard deviation above and below the mean.

Table 1

Timing of Saliva Samples

Cortisol sample	Sample time (in minutes)[a]	Name of sample	Wives' Mean Cortisol (in μg/dl)[b]	Husbands' Mean Cortisol (in μg/dl)[b]
0	−70.23	Home sample	−1.191	−1.177
1	−40.23	Anticipatory sample 1	−1.084	−1.055
2	0	Anticipatory sample 2	−1.151	−1.165
3	32.47	Conflict discussion	−1.233	−1.263
4	52.45	Post-discussion sample 1	−1.267	−1.310
5	82.42	Post-discussion sample 2	−1.295	−1.365

[a] Centered at anticipatory sample 2

[b] Base-10 log-transformed

Table 2

Final Estimation of Level 2 Predictors of Wives' Cortisol Levels

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' cortisol level at anticipation (laboratory sample 2)					
Intercept	−1.244	.024	−52.320 (207)	.000	[−1.291, −1.197]
Husbands' avoidance	−.081	.034	−2.376 (207)	.018	[−.148, −.014]
Husbands' anxiety	.021	.025	.844 (207)	.400	[−.028, .070]
Wives' avoidance	−.032	.039	−.830 (207)	.408	[−.108, .044]
Wives' anxiety	.034	.021	1.605 (207)	.110	[−.007, .075]
Wives' avoidance x husbands' anxiety	.055	.042	1.289 (207)	.199	[−.027, .137]
Wives' anxiety x husbands' avoidance	.023	.027	.845 (207)	.399	[−.030, .076]
Wives' avoidance x husbands' avoidance	.000	.047	.002 (207)	.998	[−.092, .092]
Wives' anxiety x husbands' anxiety	−.023	.029	.786 (207)	.433	[−.080, .034]
Wives' hormonal contraceptive	.112	.027	4.209 (207)	.000	[.059, .165]
Wives' benzodiazepine	.347	.100	3.590 (207)	.000	[.151, .543]
Wives' reactivity: Rate of change at anticipation (laboratory sample 2)					
Intercept	−.334	.036	−9.225 (208)	.000	[−.405, −.263]
Husbands' avoidance	−.066	.062	−1.054 (208)	.293	[−.188, .056]
Husbands' anxiety	−.020	.045	−.447 (208)	.655	[−.108, .068]
Wives' avoidance	.089	.071	1.265 (208)	.207	[−.050, .228]
Wives' anxiety	−.056	.038	−1.474 (208)	.142	[−.130, .018]
Wives' avoidance x husbands' anxiety	.059	.076	.772 (208)	.441	[−.090, .208]
Wives' anxiety x husbands' avoidance	−.131	.049	−2.666 (208)	.008	[−.227, −.035]
Wives' avoidance x husbands' avoidance	.054	.085	.641 (208)	.522	[−.113, .221]
Wives' anxiety x husbands' anxiety	.027	.053	.520 (208)	.603	[−.077, .131]
Wives' benzodiazepine	−.041	.210	−.193 (208)	.847	[−.453, .371]
Wives' reactivity: Curvature across trajectory from home sample to laboratory sample 2					
Intercept	−.283	.038	−7.478 (208)	.000	[−.357, −.209]
Husbands' avoidance	−.027	.065	−.411 (208)	.681	[−.154, .100]
Husbands' anxiety	−.051	.047	−1.080 (208)	.281	[−.143, .041]
Wives' avoidance	.089	.074	1.206 (208)	.229	[−.056, .234]

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' anxiety	−.062	.040	−1.550 (208)	.123	[−.140, .016]
Wives' avoidance x husbands' anxiety	.067	.080	.836 (208)	.404	[−.090, .224]
Wives' anxiety x husbands' avoidance	−.170	.051	−3.336 (208)	.001	[−.270, −.070]
Wives' avoidance x husbands' avoidance	.100	.088	1.101 (208)	.272	[−.072, .272]
Wives' anxiety x husbands' anxiety	.016	.055	.295 (208)	.768	[−.092, .124]
Wives' benzodiazepine	−.258	.218	−1.184 (208)	.238	[−.685, .169]
Wives' recovery: Rate of change from laboratory sample 2 to laboratory sample 5					
Intercept	−.127	.013	−9.689 (208)	.000	[−.152, −.102]
Husbands' avoidance	.032	.017	1.809 (208)	.072	[−.001, .065]
Husbands' anxiety	−.015	.012	−1.207 (208)	.229	[−.039, .009]
Wives' avoidance	.013	.020	.676 (208)	.500	[−.026, .052]
Wives' anxiety	−.011	.011	−1.027 (208)	.306	[−.033, .011]
Wives' avoidance x husbands' anxiety	.007	.021	.339 (208)	.735	[−.034, .048]
Wives' anxiety x husbands' avoidance	−.031	.014	−2.305 (208)	.022	[−.058, −.004]
Wives' avoidance x husbands' avoidance	.014	.024	.594 (208)	.553	[−.033, .061]
Wives' anxiety x husbands' anxiety	.030	.015	2.037 (208)	.043	[.001, .059]
Wives' hormonal contraceptive	.049	.017	2.882 (208)	.004	[.016, .082]

Table 3

Final Estimation of Level 2 Predictors of Husbands' Cortisol Levels

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Husbands' cortisol level at anticipation (laboratory sample 2)					
Intercept	−1.171	.021	−55.913 (208)	.000	[−1.212, −1.130]
Husbands' avoidance	−.038	.036	−1.048 (208)	.296	[−.109, .033]
Husbands' anxiety	.032	.026	1.234 (208)	.218	[−.019, .083]
Wives' avoidance	.003	.041	.079 (208)	.937	[−.077, .083]
Wives' anxiety	−.007	.022	−.301 (208)	.764	[−.050, .036]
Wives' avoidance x husbands' anxiety	.022	.044	.502 (208)	.616	[−.064, .108]
Wives' anxiety x husbands' avoidance	−.025	.028	−.917 (208)	.360	[−.080, .030]
Wives' avoidance x husbands' avoidance	.034	.049	.681 (208)	.497	[−.062, .130]
Wives' anxiety x husbands' anxiety	.032	.031	1.046 (208)	.297	[−.029, .093]
Husbands' antianxiety/antidepressant	−.162	.073	−2.208 (208)	.028	[−.305, −.019]
Husbands' reactivity: Rate of change at anticipation (laboratory sample 2)					
Intercept	−.426	.044	−9.661 (209)	.000	[−.512, −.340]
Husbands' avoidance	−.084	.076	−1.107 (209)	.270	[−.233, .065]
Husbands' anxiety	−.055	.055	−1.010 (209)	.314	[−.163, .053]
Wives' avoidance	.097	.086	1.125 (209)	.262	[−.072, .266]
Wives' anxiety	−.071	.046	−1.544 (209)	.124	[−.161, .019]
Wives' avoidance x husbands' anxiety	−.209	.094	−2.232 (209)	.027	[−.393, −.025]
Wives' anxiety x husbands' avoidance	−.120	.058	−2.070 (209)	.040	[−.234, −.006]
Wives' avoidance x husbands' avoidance	.105	.104	1.017 (209)	.310	[−.099, .309]
Wives' anxiety x husbands' anxiety	.133	.064	2.057 (209)	.041	[.008, .258]
Husbands' reactivity: Curvature across trajectory from home sample to laboratory sample 2					
Intercept	−.359	.046	−7.750 (209)	.000	[−.449, −.269]
Husbands' avoidance	−.069	.080	−.862 (209)	.390	[−.226, .088]
Husbands' anxiety	−.081	.057	−1.413 (209)	.159	[−.193, .031]
Wives' avoidance	.125	.091	1.374 (209)	.171	[−.053, .303]
Wives' anxiety	−.072	.049	−1.475 (209)	.142	[−.168, .024]
Wives' avoidance x husbands' anxiety	−.200	.098	−2.014 (209)	.045	[−.392, −.008]

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' anxiety x husbands' avoidance	−.106	.061	−1.738 (209)	.084	[−.226, .014]
Wives' avoidance x husbands' avoidance	.078	.108	.724 (209)	.470	[−.134, .290]
Wives' anxiety x husbands' anxiety	.111	.068	1.646 (209)	.101	[−.022, .244]
Husbands' recovery: Rate of change from laboratory sample 2 to laboratory sample 5					
Intercept	−.156	.012	−13.105 (208)	.000	[−.180, −.132]
Husbands' avoidance	−.012	.021	−.591 (208)	.555	[−.053, .029]
Husbands' anxiety	.015	.015	1.023 (208)	.307	[−.014, .044]
Wives' avoidance	−.009	.023	−.385 (208)	.701	[−.054, .036]
Wives' anxiety	−.004	.012	−.289 (208)	.773	[−.028, .020]
Wives' avoidance x husbands' anxiety	−.013	.025	−.497 (208)	.620	[−.062, .036]
Wives' anxiety x husbands' avoidance	−.020	.016	−1.246 (208)	.214	[−.051, .011]
Wives' avoidance x husbands' avoidance	.036	.029	1.265 (208)	.207	[−.021, .093]
Wives' anxiety x husbands' anxiety	.009	.017	.502 (208)	.616	[−.024, .042]
Husbands' antianxiety/antidepressant	.080	.046	1.739 (208)	.083	[−.010, .170]

Table 4

Simple Slopes Tests of Differences in Wives' Cortisol Patterns for Prototypical Pairings of Wives' Attachment Anxiety x Husbands' Attachment Avoidance

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' reactivity: Rate of change at anticipation (laboratory sample 2)					
High wives' anxiety x high husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	−.296	.098	−3.028 (208)	.003	[−.487, −.104]
- High wives' anxiety x low husbands' avoidance	−.268	.087	−3.098 (208)	.002	[−.438, −.098]
- Low wives' anxiety x low husbands' avoidance	−.204	.109	−1.866 (208)	.063	[−.418, .010]
Low wives' anxiety x low husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	.092	.087	1.065 (208)	.288	[−.077, .262]
- High wives' anxiety x low husbands' avoidance	.064	.098	.658 (208)	.511	[−.127, .256]
Low wives' anxiety x high husbands' avoidance vs.					
- High wives' anxiety x low husbands' avoidance	.028	.120	.233 (208)	.816	[−.207, .263]
Wives' reactivity: Curvature across trajectory from home sample to laboratory sample 2					
High wives' anxiety x high husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	−.362	.102	−3.548 (208)	.000	[−.562, −.162]
- High wives' anxiety x low husbands' avoidance	−.271	.090	−3.006 (208)	.003	[−.447, −.094]
- Low wives' anxiety x low husbands' avoidance	−.163	.114	−1.428 (208)	.155	[−.387, .061]
Low wives' anxiety x low husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	.199	.090	2.209 (208)	.028	[.022, .376]
- High wives' anxiety x low husbands' avoidance	.108	.102	1.055 (208)	.293	[−.092, .308]
Low wives' anxiety x high husbands' avoidance vs.					
- High wives' anxiety x low husbands' avoidance	.091	.125	.729 (208)	.467	[−.154, .337]
Wives' recovery: Rate of change from laboratory sample 2 to laboratory sample 5					
High wives' anxiety x high husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	−.066	.027	−2.459 (208)	.015	[−.118, −.013]
- High wives' anxiety x low husbands' avoidance	−.001	.025	−.047 (208)	.963	[−.050, .048]
- Low wives' anxiety x low husbands' avoidance	.020	.030	.663 (208)	.508	[−.039, .079]
Low wives' anxiety x low husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	.085	.025	3.437 (208)	.001	[.037, .134]

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
- High wives' anxiety x low husbands' avoidance	.021	.027	.794 (208)	.428	[−.031, .073]
Low wives' anxiety x high husbands' avoidance vs.					
- High wives' anxiety x low husbands' avoidance	.064	.033	1.930 (208)	.055	[−.001, .130]

Note. Simple slopes tests were conducted to follow up all significant interactions between wives' attachment anxiety and husbands' attachment avoidance. These tests examined differences in cortisol patterns for prototypical partner pairings; "high" represents values one standard deviation above the mean and "low" represents values one standard deviation below the mean.

Table 5

Simple Slopes Tests of Differences in Husbands' Cortisol Patterns for Prototypical Pairings of Wives' Attachment Anxiety x Husbands' Attachment Avoidance

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Husbands' reactivity: Rate of change at anticipation (laboratory sample 2)					
High wives' anxiety x high husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	−.313	.115	−2.721 (209)	.007	[−.538, −.087]
- High wives' anxiety x low husbands' avoidance	−.279	.104	−2.693 (209)	.008	[−.482, −.076]
- Low wives' anxiety x low husbands' avoidance	−.260	.132	−1.964 (209)	.051	[−.519, −.001]
Low wives' anxiety x low husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	.053	.104	.510 (209)	.610	[−.150, .256]
- High wives' anxiety x low husbands' avoidance	.019	.115	.166 (209)	.868	[−.206, .244]
Low wives' anxiety x high husbands' avoidance vs.					
- High wives' anxiety x low husbands' avoidance	.034	.146	.231 (209)	.818	[−.253, .321]
Husbands' reactivity: Curvature across trajectory from home sample to laboratory sample 2					
High wives' anxiety x high husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	−.293	.120	−2.434 (209)	.016	[−.529, −.057]
- High wives' anxiety x low husbands' avoidance	−.238	.108	−2.199 (209)	.029	[−.450, −.026]
- Low wives' anxiety x low husbands' avoidance	−.240	.139	−1.722 (209)	.086	[−.512, .033]
Low wives' anxiety x low husbands' avoidance vs.					
- Low wives' anxiety x high husbands' avoidance	.053	.108	.492 (209)	.623	[−.159, .266]
- High wives' anxiety x low husbands' avoidance	−.002	.120	−.013 (209)	.990	[−.237, .234]
Low wives' anxiety x high husbands' avoidance vs.					
- High wives' anxiety x low husbands' avoidance	.055	.153	.357 (209)	.721	[−.246, .356]

Note. Simple slopes tests were conducted to follow up all significant interactions between wives' attachment anxiety and husbands' attachment avoidance. These tests examined differences in cortisol patterns for prototypical partner pairings; "high" represents values one standard deviation above the mean and "low" represents values one standard deviation below the mean.

Table 6

Simple Slopes Tests of Differences in Husbands' Cortisol Patterns for Prototypical Pairings of Wives' Attachment Avoidance x Husbands' Attachment Anxiety

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Husbands' reactivity: Rate of change at anticipation (laboratory sample 2)					
High wives' avoidance x high husbands' anxiety vs.					
- Low wives' avoidance x high husbands' anxiety	−.095	.123	−.776 (209)	.439	[−.336, .145]
- High wives' avoidance x low husbands' anxiety	−.304	.131	−2.325 (209)	.021	[−.560, −.048]
- Low wives' avoidance x low husbands' anxiety	.021	.132	.158 (209)	.874	[−.237, .279]
Low wives' avoidance x low husbands' anxiety vs.					
- Low wives' avoidance x high husbands' anxiety	.116	.131	.889 (209)	.375	[−.140, .372]
- High wives' avoidance x low husbands' anxiety	.325	.123	2.644 (209)	.009	[.084, .565]
Low wives' avoidance x high husbands' anxiety vs.					
- High wives' avoidance x low husbands' anxiety	−.209	.144	−1.449 (209)	.149	[−.491, .073]
Husbands' reactivity: Curvature across trajectory from home sample to laboratory sample 2					
High wives' avoidance x high husbands' anxiety vs.					
- Low wives' avoidance x high husbands' anxiety	−.052	.053	−.966 (209)	.335	[−.157, .053]
- High wives' avoidance x low husbands' anxiety	−.337	.137	−2.453 (209)	.015	[−.605, −.068]
- Low wives' avoidance x low husbands' anxiety	.009	.075	.119 (209)	.906	[−.138, .156]
Low wives' avoidance x low husbands' anxiety vs.					
- Low wives' avoidance x high husbands' anxiety	.061	.137	.442 (209)	.659	[−.208, .329]
- High wives' avoidance x low husbands' anxiety	.346	.053	6.459 (209)	.000	[.241, .450]
Low wives' avoidance x high husbands' anxiety vs.					
- High wives' avoidance x low husbands' anxiety	−.285	.096	−2.979 (209)	.003	[−.472, −.097]

Note. Simple slopes tests were conducted to follow up all significant interactions between wives' attachment avoidance and husbands' attachment anxiety. These tests examined differences in cortisol patterns for prototypical partner pairings; "high" represents values one standard deviation above the mean and "low" represents values one standard deviation below the mean.

J Pers Soc Psychol. Author manuscript; available in PMC 2014 September 01.

Table 7

Simple Slopes Tests of Differences in Wives' Cortisol Patterns for Prototypical Pairings of Wives' Attachment Anxiety x Husbands' Attachment Anxiety

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' recovery: Rate of change from laboratory sample 2 to laboratory sample 5					
High wives' anxiety x high husbands' anxiety vs.					
- Low wives' anxiety x high husbands' anxiety	.030	.033	.898 (208)	.370	[−.036, .096]
- High wives' anxiety x low husbands' anxiety	.027	.032	.851 (208)	.395	[−.035, .089]
- Low wives' anxiety x low husbands' anxiety	−.048	.029	−1.640 (208)	.102	[−.104, .009]
Low wives' anxiety x low husbands' anxiety vs.					
- Low wives' anxiety x high husbands' anxiety	−.078	.032	−2.462 (208)	.015	[−.139, −.016]
- High wives' anxiety x low husbands' anxiety	−.074	.033	−2.222 (208)	.027	[−.140, −.009]
Low wives' anxiety x high husbands' anxiety vs.					
- High wives' anxiety x low husbands' anxiety	−.003	.031	−.103 (208)	.918	[−.064, .058]

Note. Simple slopes tests were conducted to follow up all significant interactions between wives' attachment anxiety and husbands' attachment anxiety. These tests examined differences in cortisol patterns for prototypical partner pairings; "high" represents values one standard deviation above the mean and "low" represents values one standard deviation below the mean.

Table 8

Simple Slopes Tests of Differences in Husbands' Cortisol Patterns for Prototypical Pairings of Wives' Attachment Anxiety x Husbands' Attachment Anxiety

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Husbands' reactivity: Rate of change at anticipation (laboratory sample 2)					
High wives' anxiety x high husbands' anxiety vs.					
- Low wives' anxiety x high husbands' anxiety	.085	.148	.575 (209)	.566	[−.205, .375]
- High wives' anxiety x low husbands' anxiety	.138	.139	.994 (209)	.321	[−.134, .410]
- Low wives' anxiety x low husbands' anxiety	−.241	.128	−1.881 (209)	.061	[−.492, .010]
Low wives' anxiety x low husbands' anxiety vs.					
- Low wives' anxiety x high husbands' anxiety	−.326	.139	−2.347 (209)	.020	[−.598, −.054]
- High wives' anxiety x low husbands' anxiety	−.379	.148	−2.562 (209)	.011	[−.669, −.089]
Low wives' anxiety x high husbands' anxiety vs.					
- High wives' anxiety x low husbands' anxiety	.053	.138	.384 (209)	.701	[−.217, .323]

Note. Simple slopes tests were conducted to follow up all significant interactions between wives' attachment anxiety and husbands' attachment anxiety. These tests examined differences in cortisol patterns for prototypical partner pairings; "high" represents values one standard deviation above the mean and "low" represents values one standard deviation below the mean.

Table 9

Final Estimation of Level 2 Predictors of Wives' Observer-Rated Careseeking Behaviors

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Strength/clarity of initial distress signal					
Intercept	5.745	.081	70.555 (408)	.000	[5.586, 5.904]
Husbands' avoidance	−.340	.141	−2.408 (408)	.016	[−.616, −.064]
Husbands' anxiety	.114	.101	1.127 (408)	.261	[−.084, .312]
Wives' avoidance	−.282	.160	−1.758 (408)	.080	[−.596, .032]
Wives' anxiety	.021	.086	.241 (408)	.810	[−.148, .190]
Wives' avoidance x husbands' anxiety	.153	.174	.882 (408)	.378	[−.188, .494]
Wives' anxiety x husbands' avoidance	.127	.108	1.180 (408)	.239	[−.085, .339]
Wives' avoidance x husbands' avoidance	.326	.192	1.693 (408)	.091	[−.050, .702]
Wives' anxiety x husbands' anxiety	−.061	.120	−.512 (408)	.609	[−.296, .174]
Maintenance of clear distress signal					
Intercept	5.927	.077	76.723 (408)	.000	[5.776, 6.078]
Husbands' avoidance	.003	.134	.024 (408)	.981	[−.260, .266]
Husbands' anxiety	.017	.096	.174 (408)	.862	[−.171, .205]
Wives' avoidance	−.302	.152	−1.987 (408)	.048	[−.600, −.004]
Wives' anxiety	−.054	.082	−.657 (408)	.512	[−.215, .107]
Wives' avoidance x husbands' anxiety	.168	.165	1.018 (408)	.309	[−.155, .491]
Wives' anxiety x husbands' avoidance	.148	.102	1.446 (408)	.149	[−.052, .348]
Wives' avoidance x husbands' avoidance	.198	.183	1.087 (408)	.278	[−.161, .557]
Wives' anxiety x husbands' anxiety	−.138	.114	−1.214 (408)	.226	[−.361, .085]
Approach to attachment figure					
Intercept	5.707	.090	63.562 (404)	.000	[5.531, 5.883]
Husbands' avoidance	.182	.156	1.168 (404)	.244	[−.124, .488]
Husbands' anxiety	−.123	.112	−1.106 (404)	.269	[−.343, .097]
Wives' avoidance	−.495	.177	−2.801 (404)	.005	[−.842, −.148]
Wives' anxiety	−.205	.095	−2.165 (404)	.031	[−.391, −.019]
Wives' avoidance x husbands' anxiety	.190	.192	.991 (404)	.322	[−.186, .566]
Wives' anxiety x husbands' avoidance	.097	.119	.821 (404)	.412	[−.136, .330]

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' avoidance x husbands' avoidance	.232	.212	1.092 (404)	.275	[−.184, .648]
Wives' anxiety x husbands' anxiety	.093	.132	.703 (404)	.483	[−.166, .352]
Ability to be comforted					
Intercept	4.584	.096	47.770 (397)	.000	[4.396, 4.772]
Husbands' avoidance	−.230	.166	−1.384 (397)	.167	[−.555, .095]
Husbands' anxiety	.094	.119	.794 (397)	.428	[−.139, .327]
Wives' avoidance	−.585	.190	−3.087 (397)	.002	[−.957, −.213]
Wives' anxiety	−.266	.101	−2.632 (397)	.009	[−.464, −.068]
Wives' avoidance x husbands' anxiety	.410	.203	2.015 (397)	.045	[.012, .808]
Wives' anxiety x husbands' avoidance	−.127	.126	−1.011 (397)	.313	[−.374, .120]
Wives' avoidance x husbands' avoidance	.224	.226	.993 (397)	.321	[−.219, .667]
Wives' anxiety x husbands' anxiety	.092	.140	.656 (397)	.512	[−.182, .366]
Careseeking (secure base use summary)					
Intercept	5.356	.079	67.612 (406)	.000	[5.201, 5.511]
Husbands' avoidance	−.072	.137	−.526 (406)	.599	[−.341, .197]
Husbands' anxiety	.046	.098	.469 (406)	.639	[−.146, .238]
Wives' avoidance	−.419	.156	−2.688 (406)	.007	[−.725, −.113]
Wives' anxiety	−.207	.084	−2.472 (406)	.014	[−.372, −.042]
Wives' avoidance x husbands' anxiety	.174	.169	1.028 (406)	.304	[−.157, .505]
Wives' anxiety x husbands' avoidance	.037	.105	.352 (406)	.725	[−.169, .243]
Wives' avoidance x husbands' avoidance	.315	.187	1.681 (406)	.093	[−.052, .682]
Wives' anxiety x husbands' anxiety	.145	.117	1.240 (406)	.216	[−.084, .374]

Table 10

Final Estimation of Level 2 Predictors of Husbands' Observer-Rated Careseeking Behaviors

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Strength/clarity of initial distress signal					
Intercept	5.325	.082	64.994 (408)	.000	[5.164, 5.486]
Husbands' avoidance	−.335	.142	−2.359 (408)	.019	[−.613, −.057]
Husbands' anxiety	.239	.102	2.338 (408)	.020	[.039, .439]
Wives' avoidance	−.004	.161	−.024 (408)	.981	[−.320, .312]
Wives' anxiety	−.258	.086	−3.001 (408)	.003	[−.427, −.089]
Wives' avoidance x husbands' anxiety	.069	.175	.393 (408)	.695	[−.274, .412]
Wives' anxiety x husbands' avoidance	.020	.108	.184 (408)	.854	[−.192, .232]
Wives' avoidance x husbands' avoidance	.355	.193	1.844 (408)	.066	[−.023, .733]
Wives' anxiety x husbands' anxiety	.195	.120	1.621 (408)	.106	[−.040, .430]
Maintenance of clear distress signal					
Intercept	5.425	.078	69.800 (408)	.000	[5.272, 5.578]
Husbands' avoidance	.003	.135	.020 (408)	.984	[−.262, .268]
Husbands' anxiety	.062	.097	.642 (408)	.521	[−.128, .252]
Wives' avoidance	−.179	.153	−1.175 (408)	.241	[−.479, .121]
Wives' anxiety	−.255	.082	−3.127 (408)	.002	[−.416, −.094]
Wives' avoidance x husbands' anxiety	.099	.166	.593 (408)	.554	[−.226, .424]
Wives' anxiety x husbands' avoidance	−.058	.103	−.569 (408)	.570	[−.260, .144]
Wives' avoidance x husbands' avoidance	.445	.183	2.433 (408)	.015	[.086, .804]
Wives' anxiety x husbands' anxiety	.143	.114	1.249 (408)	.212	[−.080, .366]
Approach to attachment figure					
Intercept	5.200	.091	57.002 (404)	.000	[5.022, 5.378]
Husbands' avoidance	.011	.157	.072 (404)	.943	[−.297, .319]
Husbands' anxiety	.004	.113	.037 (404)	.970	[−.217, .225]
Wives' avoidance	−.262	.180	−1.457 (404)	.146	[−.615, .091]
Wives' anxiety	−.312	.097	−3.215 (404)	.001	[−.502, −.122]
Wives' avoidance x husbands' anxiety	−.131	.193	−.676 (404)	.500	[−.509, .247]
Wives' anxiety x husbands' avoidance	−.232	.120	−1.927 (404)	.055	[−.467, .003]

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' avoidance x husbands' avoidance	.422	.214	1.966 (404)	.050	[.003, .841]
Wives' anxiety x husbands' anxiety	.416	.135	3.094 (404)	.002	[.151, .681]
Ability to be comforted					
Intercept	4.676	.097	48.101 (397)	.000	[4.486, 4.866]
Husbands' avoidance	−.116	.167	−.691 (397)	.490	[−.443, .211]
Husbands' anxiety	.079	.120	.657 (397)	.512	[−.156, .314]
Wives' avoidance	−.501	.191	−2.629 (397)	.009	[−.875, −.127]
Wives' anxiety	−.287	.102	−2.808 (397)	.005	[−.487, −.087]
Wives' avoidance x husbands' anxiety	−.234	.205	−1.139 (397)	.255	[−.636, .168]
Wives' anxiety x husbands' avoidance	−.148	.127	−1.169 (397)	.243	[−.397, .101]
Wives' avoidance x husbands' avoidance	.459	.226	2.037 (397)	.042	[.016, .902]
Wives' anxiety x husbands' anxiety	.308	.142	2.171 (397)	.031	[.030, .586]
Careseeking (secure base use summary)					
Intercept	5.092	.080	63.488 (406)	.000	[4.935, 5.249]
Husbands' avoidance	−.068	.138	−.492 (406)	.623	[−.338, .202]
Husbands' anxiety	.077	.099	.779 (406)	.436	[−.117, .271]
Wives' avoidance	−.203	.158	−1.284 (406)	.200	[−.513, .107]
Wives' anxiety	−.318	.085	−3.726 (406)	.000	[−.485, −.151]
Wives' avoidance x husbands' anxiety	−.069	.171	−.402 (406)	.688	[−.404, .266]
Wives' anxiety x husbands' avoidance	−.106	.106	−.995 (406)	.320	[−.314, .102]
Wives' avoidance x husbands' avoidance	.349	.189	1.847 (406)	.066	[−.021, .719]
Wives' anxiety x husbands' anxiety	.259	.119	2.181 (406)	.030	[.026, .492]

Table 11

Final Estimation of Level 2 Predictors of Wives' Observer-Rated Caregiving Behaviors

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Interest in the partner					
Intercept	5.742	.082	70.223 (408)	.000	[5.581, 5.903]
Husbands' avoidance	.121	.142	.852 (408)	.395	[−.157, .399]
Husbands' anxiety	.022	.102	.211 (408)	.833	[−.178, .222]
Wives' avoidance	−.209	.161	−1.305 (408)	.193	[−.525, .107]
Wives' anxiety	−.162	.086	−1.884 (408)	.060	[−.331, .007]
Wives' avoidance x husbands' anxiety	.352	.175	2.013 (408)	.045	[.009, .695]
Wives' anxiety x husbands' avoidance	.075	.108	.696 (408)	.487	[−.137, .287]
Wives' avoidance x husbands' avoidance	−.070	.192	−.367 (408)	.714	[−.446, .306]
Wives' anxiety x husbands' anxiety	.233	.120	1.934 (408)	.054	[−.002, .468]
Recognition of distress					
Intercept	6.573	.059	112.390 (408)	.000	[6.457, 6.689]
Husbands' avoidance	.075	.101	.735 (408)	.463	[−.123, .273]
Husbands' anxiety	−.001	.073	−.009 (408)	.993	[−.144, .142]
Wives' avoidance	.015	.115	.128 (408)	.898	[−.210, .240]
Wives' anxiety	−.060	.061	−.972 (408)	.331	[−.180, .060]
Wives' avoidance x husbands' anxiety	.027	.125	.215 (408)	.830	[−.218, .272]
Wives' anxiety x husbands' avoidance	−.154	.077	−1.994 (408)	.047	[−.305, −.003]
Wives' avoidance x husbands' avoidance	.207	.137	1.506 (408)	.133	[−.062, .476]
Wives' anxiety x husbands' anxiety	.157	.086	1.830 (408)	.068	[−.012, .326]
Interpretation of distress					
Intercept	6.270	.069	90.587 (407)	.000	[6.135, 6.405]
Husbands' avoidance	.091	.120	.757 (407)	.450	[−.144, .326]
Husbands' anxiety	−.053	.086	−.611 (407)	.541	[−.222, .116]
Wives' avoidance	−.118	.136	−.865 (407)	.387	[−.385, .149]
Wives' anxiety	−.055	.073	−.751 (407)	.453	[−.198, .088]
Wives' avoidance x husbands' anxiety	.050	.148	.339 (407)	.735	[−.240, .340]
Wives' anxiety x husbands' avoidance	−.084	.091	−.921 (407)	.358	[−.262, .094]

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' avoidance x husbands' avoidance	.188	.163	1.156 (407)	.249	[−.131, .507]
Wives' anxiety x husbands' anxiety	.135	.102	1.321 (407)	.187	[−.065, .335]
Responsiveness to distress					
Intercept	5.459	.091	59.932 (407)	.000	[5.281, 5.637]
Husbands' avoidance	.228	.158	1.450 (407)	.148	[−.082, .538]
Husbands' anxiety	.051	.113	.451 (407)	.652	[−.170, .272]
Wives' avoidance	−.441	.179	−2.461 (407)	.014	[−.792, −.090]
Wives' anxiety	−.143	.096	−1.492 (407)	.136	[−.331, .045]
Wives' avoidance x husbands' anxiety	.189	.195	.973 (407)	.331	[−.193, .571]
Wives' anxiety x husbands' avoidance	−.056	.120	−.470 (407)	.639	[−.291, .179]
Wives' avoidance x husbands' avoidance	.225	.214	1.053 (407)	.293	[−.194, .644]
Wives' anxiety x husbands' anxiety	.328	.134	2.455 (407)	.014	[.065, .591]
Caregiving (secure base support summary)					
Intercept	5.647	.084	67.253 (407)	.000	[5.482, 5.812]
Husbands' avoidance	.164	.146	1.128 (407)	.260	[−.122, .450]
Husbands' anxiety	.025	.105	.237 (407)	.813	[−.181, .231]
Wives' avoidance	−.405	.165	−2.457 (407)	.014	[−.728, −.082]
Wives' anxiety	−.158	.088	−1.788 (407)	.075	[−.330, .014]
Wives' avoidance x husbands' anxiety	.190	.180	1.060 (407)	.290	[−.163, .543]
Wives' anxiety x husbands' avoidance	−.025	.111	−.221 (407)	.825	[−.243, .193]
Wives' avoidance x husbands' avoidance	.231	.197	1.169 (407)	.243	[−.155, .617]
Wives' anxiety x husbands' anxiety	.271	.124	2.193 (407)	.029	[.028, .514]

Table 12

Final Estimation of Level 2 Predictors of Husbands' Observer-Rated Caregiving Behaviors

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Interest in the partner					
Intercept	5.441	.081	66.955 (408)	.000	[5.282, 5.600]
Husbands' avoidance	.060	.141	.423 (408)	.673	[−.216, .336]
Husbands' anxiety	−.104	.101	−1.035 (408)	.302	[−.302, .094]
Wives' avoidance	−.159	.160	−.994 (408)	.321	[−.473, .155]
Wives' anxiety	−.246	.086	−2.865 (408)	.004	[−.415, −.077]
Wives' avoidance x husbands' anxiety	.103	.174	.593 (408)	.553	[−.238, .444]
Wives' anxiety x husbands' avoidance	−.060	.107	−.561 (408)	.575	[−.270, .150]
Wives' avoidance x husbands' avoidance	.423	.192	2.202 (408)	.028	[.047, .799]
Wives' anxiety x husbands' anxiety	.175	.120	1.460 (408)	.145	[−.060, .410]
Recognition of distress					
Intercept	6.510	.058	111.995 (408)	.000	[6.396, 6.624]
Husbands' avoidance	−.024	.101	−.241 (408)	.809	[−.222, .174]
Husbands' anxiety	−.055	.072	−.755 (408)	.451	[−.196, .086]
Wives' avoidance	−.069	.114	−.599 (408)	.550	[−.292, .154]
Wives' anxiety	−.072	.061	−1.180 (408)	.239	[−.192, .048]
Wives' avoidance x husbands' anxiety	.104	.124	.840 (408)	.402	[−.139, .347]
Wives' anxiety x husbands' avoidance	.078	.077	1.018 (408)	.309	[−.073, .229]
Wives' avoidance x husbands' avoidance	−.003	.137	−.024 (408)	.981	[−.272, .266]
Wives' anxiety x husbands' anxiety	−.082	.086	−.958 (408)	.338	[−.251, .087]
Interpretation of distress					
Intercept	6.024	.069	87.318 (407)	.000	[5.889, 6.159]
Husbands' avoidance	−.091	.120	−.763 (407)	.446	[−.326, .144]
Husbands' anxiety	−.076	.086	−.889 (407)	.374	[−.245, .093]
Wives' avoidance	−.042	.135	−.311 (407)	.756	[−.307, .223]
Wives' anxiety	−.113	.073	−1.558 (407)	.120	[−.256, .030]
Wives' avoidance x husbands' anxiety	.271	.147	1.847 (407)	.065	[−.017, .559]
Wives' anxiety x husbands' avoidance	.117	.091	1.286 (407)	.199	[−.061, .295]

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' avoidance x husbands' avoidance	−.071	.163	−.437 (407)	.662	[−.390, .248]
Wives' anxiety x husbands' anxiety	−.020	.101	−.197 (407)	.844	[−.218, .178]
Responsiveness to distress					
Intercept	5.124	.090	56.725 (407)	.000	[4.948, 5.300]
Husbands' avoidance	−.164	.157	−1.044 (407)	.297	[−.472, .144]
Husbands' anxiety	.107	.112	.956 (407)	.340	[−.113, .327]
Wives' avoidance	−.268	.178	−1.506 (407)	.133	[−.617, .081]
Wives' anxiety	−.365	.095	−3.832 (407)	.000	[−.551, −.179]
Wives' avoidance x husbands' anxiety	.112	.193	.583 (407)	.560	[−.266, .490]
Wives' anxiety x husbands' avoidance	.033	.119	.280 (407)	.780	[−.200, .266]
Wives' avoidance x husbands' avoidance	.410	.213	1.922 (407)	.055	[−.007, .827]
Wives' anxiety x husbands' anxiety	.133	.133	.996 (407)	.320	[−.128, .394]
Caregiving (secure base support summary)					
Intercept	5.325	.084	63.632 (407)	.000	[5.160, 5.490]
Husbands' avoidance	−.079	.145	−.547 (407)	.585	[−.363, .205]
Husbands' anxiety	.017	.105	.163 (407)	.870	[−.189, .223]
Wives' avoidance	−.294	.164	−1.789 (407)	.074	[−.615, .027]
Wives' anxiety	−.288	.088	−3.265 (407)	.001	[−.460, −.116]
Wives' avoidance x husbands' anxiety	.198	.179	1.106 (407)	.269	[−.153, .549]
Wives' anxiety x husbands' avoidance	−.010	.110	−.093 (407)	.926	[−.226, .206]
Wives' avoidance x husbands' avoidance	.382	.197	1.932 (407)	.054	[−.004, .768]
Wives' anxiety x husbands' anxiety	.119	.123	.961 (407)	.337	[−.122, .360]

Table 13

Final Estimation of Level 2 Predictors of Wives' and Husbands' Subjective Distress in Anticipation of the Conflict Discussion

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' anticipatory subjective distress					
Intercept	2.745	.080	34.273 (209)	.000	[2.588, 2.902]
Husbands' avoidance	.057	.139	.409 (209)	.683	[−.215, .329]
Husbands' anxiety	.015	.100	.147 (209)	.883	[−.181, .211]
Wives' avoidance	.301	.158	1.905 (209)	.058	[−.009, .611]
Wives' anxiety	.496	.084	5.882 (209)	.000	[.331, .661]
Wives' avoidance x husbands' anxiety	−.141	.172	−.824 (209)	.411	[−.478, .196]
Wives' anxiety x husbands' avoidance	.036	.106	.335 (209)	.738	[−.172, .244]
Wives' avoidance x husbands' avoidance	−.272	.190	−1.429 (209)	.154	[−.644, .100]
Wives' anxiety x husbands' anxiety	−.004	.118	−.036 (209)	.971	[−.235, .227]
Husbands' anticipatory subjective distress					
Intercept	2.634	.081	32.720 (209)	.000	[2.475, 2.793]
Husbands' avoidance	.217	.139	1.555 (209)	.121	[−.055, .489]
Husbands' anxiety	.433	.100	4.326 (209)	.000	[.237, .629]
Wives' avoidance	.243	.159	1.529 (209)	.128	[−.069, .555]
Wives' anxiety	.095	.085	1.121 (209)	.264	[−.072, .262]
Wives' avoidance x husbands' anxiety	.015	.172	.087 (209)	.931	[−.322, .352]
Wives' anxiety x husbands' avoidance	−.312	.107	−2.928 (209)	.004	[−.522, −.102]
Wives' avoidance x husbands' avoidance	.153	.191	.800 (209)	.425	[−.221, .527]
Wives' anxiety x husbands' anxiety	.114	.118	.962 (209)	.337	[−.117, .345]

Table 14

Final Estimation of Level 2 Predictors of Wives' and Husbands' Subjective Distress during the Conflict Discussion

Predictor	Estimate	*SE*	*t (df)*	*p*	95% CI
Wives' subjective distress during conflict					
Intercept	2.181	.069	31.567 (209)	.000	[2.046, 2.316]
Husbands' avoidance	−.053	.120	−.442 (209)	.659	[−.288, .182]
Husbands' anxiety	−.139	.086	−1.615 (209)	.108	[−.308, .030]
Wives' avoidance	.617	.136	4.524 (209)	.000	[.350, .884]
Wives' anxiety	.236	.073	3.241 (209)	.001	[.093, .379]
Wives' avoidance x husbands' anxiety	−.375	.148	−2.534 (209)	.012	[−.665, −.085]
Wives' anxiety x husbands' avoidance	−.089	.091	−.971 (209)	.333	[−.267, .089]
Wives' avoidance x husbands' avoidance	−.206	.164	−1.256 (209)	.210	[−.527, .115]
Wives' anxiety x husbands' anxiety	.011	.101	.110 (209)	.913	[−.187, .209]
Husbands' subjective distress during conflict					
Intercept	1.903	.063	30.330 (209)	.000	[1.780, 2.026]
Husbands' avoidance	.024	.109	.224 (209)	.823	[−.190, .238]
Husbands' anxiety	.271	.078	3.480 (209)	.000	[.118, .424]
Wives' avoidance	.188	.124	1.518 (209)	.131	[−.055, .431]
Wives' anxiety	−.054	.066	−.819 (209)	.414	[−.183, .075]
Wives' avoidance x husbands' anxiety	.253	.134	1.882 (209)	.061	[−.010, .516]
Wives' anxiety x husbands' avoidance	−.003	.083	−.037 (209)	.971	[−.166, .160]
Wives' avoidance x husbands' avoidance	.077	.149	.517 (209)	.605	[−.215, .369]
Wives' anxiety x husbands' anxiety	−.105	.092	−1.141 (209)	.255	[−.285, .075]